



## **On approval of state compulsory educational standards for all levels of education**

### *Invalidated Unofficial translation*

Order of the Minister of Education and Science of the Republic of Kazakhstan dated October 31, 2018 № 604. Registered with the Ministry of Justice of the Republic of Kazakhstan on November 1, 2018 № 17669. Has become invalid by the order of the Minister of Education of the Republic of Kazakhstan dated 08.03.2022 № 348 (shall be enforced ten calendar days after the day of its first official publication).

### *Unofficial translation*

**Footnote. Has become invalid by the order of the Minister of Education of the Republic of Kazakhstan dated 08.03.2022 No. 348 (shall be enforced ten calendar days after the day of its first official publication).**

In accordance with subparagraph 5-1) of Article 5 of the Law of the Republic of Kazakhstan dated July 27, 2007 "On Education" **I HEREBY ORDER:**

#### 1. To approve:

1) The state compulsory standard for preschool education and training in accordance with Appendix 1 to this order;

2) The state compulsory standard for primary education in accordance with Appendix 2 to this order;

3) The state compulsory standard for basic secondary education in accordance with Appendix 3 to this order;

4) The state compulsory standard for general secondary education in accordance with Appendix 4 to this order;

5) The state compulsory standard for technical and vocational education in accordance with Appendix 5 to this order;

6) The state compulsory standard for post-secondary education in accordance with Appendix 6 to this order;

**7) invalidated by order of the Minister of Science and Higher Education of the Republic of Kazakhstan No. 2 dated July 20, 2022 (shall be enforced ten calendar days after the day of its first official publication);**

**8) invalidated by order of the Minister of Science and Higher Education of the Republic of Kazakhstan No. 2 dated July 20, 2022 (shall be enforced ten calendar days after the day of its first official publication).**

2. The Department of Technical and Vocational Education of the Ministry of Education and Science of the Republic of Kazakhstan, in accordance with the procedure established by law, shall ensure:

1) the state registration of this order with the Ministry of Justice of the Republic of Kazakhstan;

2) within ten calendar days from the date of state registration of this order, sending its hardcopy and its electronic form in both Kazakh and Russian languages to the Republican State Enterprise on the Right of Economic Management "Republican Center for Legal Information" for official publication and inclusion into the Reference Control Standard Bank of Regulatory Legal Acts of the Republic of Kazakhstan;

3) the placement of this order on the Internet resource of the Ministry of Education and Science of the Republic of Kazakhstan;

4) within ten working days after the state registration of this order with the Ministry of Justice of the Republic of Kazakhstan, representation of the information to the Department of Legal Service of the Ministry of Education and Science of the Republic of Kazakhstan on the implementation of measures provided for in subparagraphs 1), 2) and 3) of this paragraph.

3. Control over the execution of this order shall be entrusted to Aimagambetov A. K., Vice-Minister of Education and Science of the Republic of Kazakhstan.

4. This order shall enter into force upon the expiry of ten calendar days after the day of its first official publication, with the exception of:

1) sub-paragraph 6) of paragraph 10 of the State Compulsory Standard for Pre-school Education and Training and row line number 9, of the section "Communicative - Linguistic Skills" of Appendix 2 to the State Compulsory Standard of Pre-school Education and Training, which shall be effective as of September 1, 2020 ;

2) Paragraphs 20 and 22 of the State Compulsory Standard for Pre-school Education and Training, which shall be effective as of September 1, 2019;

3) paragraph 1 of chapter 2, paragraph 1 of chapter 3 and paragraph 1 of chapter 4 of the State Compulsory Standard for Primary Education, which shall come into force on September 1, 2019 for 4th grades;

4) paragraph 1 of chapter 2, paragraph 1 of chapter 3 and paragraph 1 of chapter 4 of the State Compulsory Standard for Basic Secondary Education, which shall be enacted as of September 1, 2019 for 9th grades;

5) paragraph 1 of chapter 2, paragraph 1 of chapter 3 and paragraph 1 of chapter 4 of the State Compulsory Standard for General Secondary Education, which shall be enacted as of September 1, 2019 for 10th grades and as of September 2020 for 11th grades.

In addition, paragraphs 19 and 21 of the State Compulsory Standard for Pre-school Education and Training, paragraph 2 of chapter 2, paragraph 2 of chapter 3 and paragraph 2 of chapter 4 of the State Compulsory Standard for Primary Education, paragraph 2 of chapter 2, paragraph 2 of chapter 3 and paragraph 2 of chapter 4 of the

State Compulsory Standard for Basic Secondary Education shall be valid until September 1, 2019; paragraph 2 of chapter 2; paragraph 2 of chapter 3; and paragraph 2 of chapter 4 of the State Compulsory Standard for General Secondary Education shall be valid until September 1 November 2020.

*Minister of Education and Science  
of the Republic of Kazakhstan*

*E. Sagadiyev*

Appendix 1  
to order No. 604 of the Minister of  
Education and Science of the  
Republic of Kazakhstan  
of October 31, 2018,

## **State Compulsory Standard for Preschool Education and Training**

### **Chapter 1. General Provisions**

1. This State Compulsory Standard for Pre-School Education and Training ( hereinafter - the standard) is developed in accordance with sub-paragraph 5-1) of Article 5, Article 56 of the Law of the Republic of Kazakhstan dated July 27, 2007 "On Education" and determines the requirements for:

1) the content of pre-school education and training with a learning result-based approach;

2) the maximum volume of student workload;

3) the level of training of pupils;

4) the term of training.

2. The following terms and their definitions shall be used in this standard:

1) parenting skills - the skills necessary to meet the physical, intellectual and emotional needs of the child, ensure his/her social development, the formation of appropriate behavior;

2) socialization - the process of entering a child into a social environment through the mastery of knowledge, skills and abilities, norms, rules necessary for a full life in society;

3) social skills - methods and techniques of social interaction, which the child masters in the preschool years;

4) integration - the process of establishing communication between the structural components of the content;

5) early learning - the implementation of a set of measures aimed at the physical, intellectual and emotional development of the child since birth to three years;

6) object-spatial developing environment - a system of conditions that ensures the personal, intellectual, social and emotional development of a child at preschool age;

7) inclusive education is a process that provides equal access to the education and training of all pupils, taking into account special educational needs and individual opportunities;

8) day regimen - a rational distribution of time and the correct mutual sequence of various types of children's activities and rest during the day, contributing to the normal development of the child and strengthening his/her health;

9) care - organization of care, food, sanitary and hygienic, health procedures for children of the tender age;

10) the result of learning is an indicator of the level of development of the child;

11) self-study skills - the skills accumulated by the child independently and under the guidance of adults in order to understand the environment and successfully prepare for school;

12) standard academic program - a program that determines the content and scope of knowledge, skills, abilities and competencies to be mastered for each organized educational activity;

13) standard curriculum - a document regulating the list, volume, duration of organized educational activities per week by age groups;

14) organized learning activities - a joint activity of a teacher and pupils, aimed at learning and acquiring skills;

15) individual curriculum – an education plan developed by a tutor and/or specialists of the school psychological counselling service based on the Standard Curriculum with due account for his/her individual capabilities and needs;

16) individual educational programme – an educational programme developed by a tutor and/or specialist of the school psychological counselling service based on the Standard Curriculum with account taken of his/her individual capabilities and needs;

17) children with learning disabilities - children who experience permanent or temporary difficulties in learning process due to health, those who need special, general educational programmes and educational programmes of additional education.

**Footnote. Paragraph 2 as amended by order of the Minister of Education and Science of the Republic of Kazakhstan dated 05.05.2020 No. 182 (shall be enforced upon expiry of ten calendar days after the day of its first official publication).**

3. Pre-school organisations and pre-school classes shall provide for the upbringing and education of children with learning disabilities not exceeding three in number per each group. If there are children with learning disabilities in the group, the group shall be formed in the ratio of three educatees per child with learning disabilities.

**Footnote. Paragraph 3as amended by order of the Minister of Education and Science of the Republic of Kazakhstan dated 05.05.2020 No. 182 (shall be enforced upon expiry of ten calendar days after the day of its first official publication).**

## **Chapter 2. The requirements for the content of pre-school education and training with a focus on learning outcomes**

4. Pre-school organizations and pre-school grades of organizations of secondary education of the Republic of Kazakhstan shall carry out educational activities in accordance with:

1) standard curricula for preschool education and training approved by order of the Minister of Education and Science of the Republic of Kazakhstan № 557 of December 20, 2012 "On Approval of Standard Curricula for Preschool Education and Training of the Republic of Kazakhstan" (registered with the Register of State Registration of Regulatory Legal Acts under No. 8275) (hereinafter referred to as the standard curricula);

2) a standard academic program for preschool education and training, approved by order No. 499 of the Acting Minister of Education and Science of the Republic of Kazakhstan dated August 12, 2016 "On Approval of a Standard Academic Program for Preschool Education and Training" (registered with the Register of State Registration of Regulatory Legal Acts under № 14235 ) (hereinafter referred to as the standard academic program).

5. The content of the standard curriculum shall be aimed at:

1) achieving the goals and objectives presented in the form of expected learning outcomes;

2) formation of motor, communication, cognitive, creative, social knowledge, knowledge and skills, self-learning skills including in young children;

3) creating psychological and pedagogical conditions for education and training;

4) creating equal starting opportunities for teaching pre-schoolers in primary education organisation;

5) ensuring the principles of continuity and consistency with respect to teaching, developmental and educational objectives between pre-school education and training and primary education;

6) preparation for educational activities with due regard for the educatees' individual and age characteristics;

7) formation of social and personal qualities aimed at developing creativity, communication skills, critical thinking and skills to interact in a team."

8) formation of spiritual and moral skills based on national traditions and values common to humanity within the framework of the "Rukhani Zhangyru" Programme.

**Footnote. Paragraph 5 as amended by order of the Minister of Education and Science of the Republic of Kazakhstan dated 05.05.2020 No. 182 (shall be enforced upon expiry of ten calendar days after the day of its first official publication).**

6. When teaching children with special educational needs in an inclusive education environment, an individual curriculum and an individual program shall be developed taking into account the characteristics of the child.

7. Learning outcomes, as indicators, shall provide monitoring of a child's development and shall be the basis for planning their individual development.

8. The content of pre-school education and training shall be based on the educational areas: Health, Communication, Cognition, Creativity, Social Environment, and shall be implemented through their integration via the organization of various activities.

9. "Health" educational area.

The objective of the "Health" educational area shall be to raise a healthy, physically developed child, to form a conscientious attitude among educatees towards their health.

The "Health" educational area shall include assistance to parents in acquiring skills for the care and development of children from an early age; formation of educatees' cultural skills and health habits, motor experience through the development of basic movements; development of physical qualities and needs for physical activity; conducting various national outdoor games, competitive games in teams; performing sports exercises; exposure to the elements of sports games; development of creative abilities and skills of interaction in a team.

The content of the "Health" educational area shall be aimed at protecting and strengthening the child's health; developing skills of safe behavior in everyday life, outdoors, in the nature, in emergency situations; enriching the motor experience of educatees through improving basic movements using creative, cognitive and verbal abilities.

For children with intellectual disabilities (mild and moderate mental retardation), education and training shall include the formation of general physical skills, walking and running skills, coordination of movements, primitive skills of using hygiene and physical education equipment, evoking an emotional response and a desire to participate in games, performing actions according to instructions.

Organised learning activities of the "Health" educational area shall include:

1) physical training (adaptive physical training for educatees with learning disabilities);

2) behavior-based safety principles.

**Footnote. Paragraph 9 as amended by order of the Minister of Education and Science of the Republic of Kazakhstan dated 05.05.2020 No. 182 (shall be enforced upon expiry of ten calendar days after the day of its first official publication).**

10. "Communication" educational area.

The objective of the "Communication" educational area shall be to form oral speech, master communication skills in various life situations as well as to form the prerequisites for reading and writing.

The "Communication" educational area shall include the development of educatees' oral and coherent speech in various types of children's activities through exposure to the culture, customs and traditions of the people of Kazakhstan, dramatic reading and retelling, fostering phonic culture of speech, enriching active vocabulary, mastering speech norms, learning national and Russian languages.

The content of the "Communication" educational area shall be aimed at developing communication skills, oral speech in various types of children's activities, enriching vocabulary, fostering interest in children's literature.

For children with intellectual disabilities (mild and moderate mental retardation), education and training shall include the formation of verbal and non-verbal communication skills, creation of a speech environment, encouraging speech activity, interest in the world around them, the ability to participate in various forms of communicative activities.

Organised learning activities in the "Communication" educational area shall include:

- 1) speech development;
- 2) literature-based reading;
- 3) basic literacy;
- 4) Kazakh Language (in groups with Russian as the language of instruction), Russian Language (in groups with Kazakh as the language of instruction);

**Footnote. Paragraph 10 as amended by order of the Minister of Education and Science of the Republic of Kazakhstan dated 05.05.2020 No. 182 (shall be enforced upon expiry of ten calendar days after the day of its first official publication).**

#### 11. "Development of Knowledge" educational area.

The objective of the "Development of Knowledge" educational area shall be the pre-schooler's personal enhancement to master basic skills of cognitive activity, the ability to work in a team to interact with the world around him/her.

The "Development of Knowledge" educational area shall include the formation of quantitative skills, ideas about geometric shapes and forms, orientation in space and time; constructing from construction, natural, expendable materials and parts of construction kit; extension of knowledge on the objects and phenomena of animate and inanimate nature; development of creative thinking.

For children with intellectual disabilities (mild and moderate mental retardation), education and training shall be aimed at developing the skills of polysensory



perception and orientation in space, differentiation of incoming sensory information, accumulation of sensory experience, mastery of actions with objects and activation of mental actions, forming elementary mathematical representations.

Organised learning activities in the "Development of Knowledge" educational area shall include:

1) sensorics (in groups for toddlers aged 1 to 3 years), the fundamentals of mathematics (in groups for pre-schoolers aged 3 to 6 years);

2) construction;

3) natural science.

**Footnote. Paragraph 11 as amended by order of the Minister of Education and Science of the Republic of Kazakhstan dated 05.05.2020 No. 182 (shall be enforced upon expiry of ten calendar days after the day of its first official publication).**

12. "Creative Activities" educational area.

The objective of the "Creative Activities" educational area shall be the formation of a creative individual as a personality, development of creative abilities, emotional and sensory sphere, imagination, thinking, a taste for art, fostering patriotism through exposure to the national visual arts.

The "Creative Activities" educational area shall include drawing, modelling, paper crafting, formation of the educatees' skills and abilities of perception and understanding of works of art, the ability to work in a team, aesthetic attitude to the world around them; ideas about art forms, implementation of independent creative activities of educatees.

For children with intellectual disabilities (mild and moderate mental retardation), education and training shall include the formation of images of the physical reality in the process of creative activities, clarification, reification and generalization of representations of the subjects.

Organised learning activities of the "Creative Activities" educational area shall include:

1) drawing;

2) modelling;

3) paper crafting;

4) music."

**Footnote. Paragraph 12 as amended by order of the Minister of Education and Science of the Republic of Kazakhstan dated 05.05.2020 No. 182 (shall be enforced upon expiry of ten calendar days after the day of its first official publication).**

13. "Society" educational area.

The "Society" educational area shall be aimed at positive socialization of educatees of early and preschool age, attracting them to socio-cultural norms, traditions of the family, society and the state, formation of spiritual and moral values.



The "Society" educational area shall include the acquisition of social and self-learning skills; understanding of moral standards of behavior in society and values common to humanity; a child's ability to communicate with age-mates and adults; development of independent behaviour; formation of respectful attitude to others, the sense of belonging to their family, emotional generosity, empathy; knowledge of and respect for the history and culture of the Kazakh people and other peoples, the extension of representations of the native land; formation of interest in different types of work and people of different professions.

Formation of social and self-learning skills in early childhood in the family and preschool organisation shall be aimed at protecting life and health promotion, developing social and socio-communication skills: cultural skills and health habits, rules of conduct, familiarizing them with the discipline and the daily routine, developing cognitive functions (the ability to see the difficulties encountered, to notice changes in moods, emotional state), education of ethical norms that are the basis for building interpersonal relationships, creating an atmosphere of kindness, attention, care and mutual assistance in the family and preschool organisation, comfortable socialization of the individual, accumulation of experience of emotional and moral relations, ensuring the continuity of traditions in upbringing, in various types of children's activities, cultivating love for their native land, their country and interest in its history.

For children with intellectual disabilities (mild and moderate mental retardation), education and training shall be aimed at developing self-service skills to satisfy organic needs, behaviour and attitudes in society, inclusion in the social and domestic environment, and provision of a variety of socio-cultural skills.

Organised learning activities of the "Society" educational area shall include:

- 1) self-knowledge;
- 2) acquaintance with the surrounding world.

3) excluded by the order of the Minister of Education and Science of the Republic of Kazakhstan dated 05.05.2020 No. 182 (shall be enforced upon expiry of ten calendar days after the day of its first official publication).

Footnote. Paragraph 13 as amended by order of the Minister of Education and Science of the Republic of Kazakhstan dated 05.05.2020 No. 182 (shall be enforced upon expiry of ten calendar days after the day of its first official publication).

### **Chapter 3. Requirements for the maximum educational load of pupils**

14. The maximum amount of study load of pupils shall be established in standard curricula.

15. The volume of the weekly study load for children with the Kazakh language of instruction shall be as follows:

- 1) early age group (from the age of 1) - 7 hours with a duration of 7-10 minutes;
- 2) junior group (from the age of 2) - 9 hours with a duration of 10-15 minutes;
- 3) middle group (from the age of 3) - 11 hours with a duration of 15-20 minutes;
- 4) senior group (from the age of 4) – 12 hours with a duration of 20-25 minutes;
- 5) pre-school training group, pre-school training class (from the age of 5) - 17 hours with a duration of 25-30 minutes.”;

The volume of the weekly study load for children with Russian as the language of instruction shall be as follows:

- 1) early age group (from the age of 1) - 7 hours with a duration of 7-10 minutes;
- 2) junior group (from the age of 2) - 9 hours with a duration of 10-15 minutes;
- 3) middle group (from the age of 3) - 11.5 hours with a duration of 15-20 minutes;
- 4) senior group (from the age of 4) - 12.5 hours with a duration of 20-25 minutes;
- 5) pre-school group, pre-school class (children from the age of 5) - 18 hours with a duration of 25-30 minutes.

**Footnote. Paragraph 15 as amended by order of the Minister of Education and Science of the Republic of Kazakhstan dated 05.05.2020 No. 182 (shall be enforced upon expiry of ten calendar days after the day of its first official publication).**

#### **Chapter 4. Requirements for the level of training of pupils**

16. A pupil of a pre-school organization shall master the amount of knowledge, skills, abilities and competencies to be mastered by age groups for each educational area and for each organized educational activity, defined in the standard academic program:

17. Requirements for the level of training of pupils shall be determined in the standard academic program in the form of expected results based on the monitoring of the pupil’s achievements in accordance with his age:

- 1) first level - the child reproduces certain actions and knowledge;
- 2) the second level - the child is aware of his/her actions and has a certain stock of knowledge;
- 3) the third level - the child applies what he/she knows and can , independently and creatively uses knowledge, skills and abilities.

18. A graduate of a pre-school organization and a pre-school class organization of secondary education shall have the following qualities:

- 1) physically developed;
- 2) inquisitive;
- 3) confident and active;
- 4) emotionally responsive;

5) owning social skills and ways of interacting with peers and adults, self-learning skills;

6) having primary ideas about himself/herself, his/her family, society (the nearest society), the state (country), the world and nature;

7) possessing the necessary skills and abilities for training in the organization of secondary education.

19. Excluded by order of the Minister of Education and Science of the Republic of Kazakhstan dated 05.05.2020 No. 182 (shall be enforced upon expiry of ten calendar days after the day of its first official publication).

20. The list of skills and abilities of children from birth to admission to grade 1 is given in Annex 2 to the State Compulsory Standard for Preschool Education and Training.

Footnote. Paragraph 20 as amended by order of the Minister of Education and Science of the Republic of Kazakhstan dated 05.05.2020 No. 182 (shall be enforced upon expiry of ten calendar days after the day of its first official publication).

## **Chapter 5. Requirements for the duration of training**

21. Excluded by order of the Minister of Education and Science of the Republic of Kazakhstan dated 05.05.2020 No. 182 (shall be enforced upon expiry of ten calendar days after the day of its first official publication).

22. Age periodization and age groups (age of children – age-last-birthday at the commencement of the school year) shall be as follows:

1) toddler age-0-3 years:

infancy-from birth;

early age-from 1 year (early age group);

younger age-from 2 years (junior group);

2) pre-school age-3-6 years:

middle age-from 3 years (middle group);

senior age-from 4 years (senior group);

pre-school age-from 5 years (pre-school group, pre-school class).

The length of the standard curriculum for pre-school education and training shall be 5 years.

Footnote. Paragraph 22 as amended by order of the Minister of Education and Science of the Republic of Kazakhstan dated 05.05.2020 No. 182 (shall be enforced upon expiry of ten calendar days after the day of its first official publication).

## The list of skills of pupils from 1 year to 6 (7) years

Footnote. Appendix 1 Excluded by order of the Minister of Education and Science of the Republic of Kazakhstan dated 05.05.2020 No. 182 (shall be enforced upon expiry of ten calendar days after the day of its first official publication).

Appendix 2  
to the State Compulsory  
Standard of Preschool  
Education and Training

## List of skills and abilities of children from birth till the enrolment in Grade 1

Footnote. Appendix 2 as amended by order of the Minister of Education and Science of the Republic of Kazakhstan dated 05.05.2020 No. 182 (shall be enforced upon expiry of ten calendar days after the day of its first official publication).

ser. No.	List of skills	Toddler age (0-3 years )			Pre-school age (3-6 years )		
		Infancy (from birth)	Early age (from the age of 1)	Younger age (from the age of 2)	(Pre-school) middle age (from the age of 3)	(Pre-school) senior age (from the age of 4)	Preschool age (from the age of 5)
1	2	3	4	5	6	7	8
Health-saving skills							
1	Cultural skills and health habits	Starts moving when seeing feeding items. Helps to hold the bottle, grabs the cup.	Eats with a spoon on his/her own, dresses with the help of an adult, asks to go to the potty, knows its place and informs on the need in a timely manner.	Possesses primitive personal hygiene skills.	Knows and follows the rules of personal hygiene.	Knows the sequence of hygiene procedures.	Performs hygienic, cold training procedures independently.
2	Physical training	Knows how to grab the fingers of adults. Reaches objects and grabs with both hands, transfers the object from hand to hand.	Can walk and run in the intended direction. Likes going up and down stairs.	Possesses the basic skills of running, climbing, jumping.	Possesses the basic skills of performing basic types of movements.	Knows how to perform essential movements on his/her own.	Performs basic movements with creativity.

3	Independent motion activity	Stands up with support, moves around the space. Takes items out of the container, thrashes about in the water.	Knows how to play nearby, finds bright, attention-grabbing objects in space by himself/herself.	Knows how to play in a small subgroup.	Knows how to follow the elementary rules of team play.	Knows how to play various games by himself/herself including national ones, follows the rules of the game.	Possesses the skills of organizing outdoor games in a team, has formed elementary self-control over motor activity.
4	Health habits	Demonstrates increasing ability for self-soothing and falling asleep.	Keeps of a day regime.	Shows positive emotions during cold training procedures and exercise caution in dangerous situations.	Knows the elementary rules of health habits, performs cold training techniques after explanation by an adult.	Knows and follows the essential rules of healthy living. Knows how to treat animals plants and insects.	Consciously abides by safety rules. Understands the importance and necessity of cold training procedures. Observes the regime of the day.
Communication and language skills							
1	Communication standards	Reacts to sound and its source. Babbles and imitates sounds.	Imitates new words; uses lightweight names for familiar objects and actions and the first full words.	Knows how to come into contact with agetates and relatives.	Understands the speech of an adult, knows how to listen to questions and answer them.	Knows how to come into contact with adults, children and fulfill their requests.	Knows the rules of conduct in public venues and follows them. Knows the elementary rules of communication, speech etiquette.
2	Grammatical system of speech	-----	Knows how to use simple words and designate objects and actions in an elementary way.	Knows how to express his/her thoughts in order to be understood.	Knows how to apply the necessary words and phrases.	Knows how to consistently compose compound and complex sentences using the questions of an adult.	Knows how to construct sentences in a correct manner. Seeks to speak in a grammatically correct manner.
		Reacts with gestures or voice when	Knows how to clearly pronounce	Knows how to correctly articulate	Knows how to pronounce words	Knows how to pronounce all the	Knows how to speak correctly, expressively.



8	Basic literacy	-----	-----	-----	-----	-----	<p>sound analysis of words, consisting of three sounds. Knows how to listen to and highlight the stressed syllable.</p> <p>Has elementary writing skills : can hold a pencil, pen, draw, hatch, outline.</p> <p>Knows how to orient himself/herself on a sheet of paper, books .</p>
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Cognitive skills

1	Orientation in the properties of objects	Is able to memorize and search for an object.	Knows how to group homogeneous objects according to one of the following characteristics (size, shape) . Distinguishes between four primary colors.	Distinguishes basic colors, shape, size, texture of objects.	Knows and names the characteristic differences of objects as a way of comparison ( overlay, \ apposition).	Knows how to name the signs and characteristic differences of objects on the basis of tactile, auditory and olfactory perception.	Knows how to consider objects, determine their properties and attributes.
2	Learning the surrounding world	Explores objects in various ways (i.e., throwing, observing the actions of others).	Has knowledge about himself/herself, family. Recognizes animals, plants,	Shows curiosity, special interest in people and their actions.	Possesses the ability to notice and name the simplest changes in nature, weather. Understands and names	Understands the simplest cause-and-effect relationships in living, inanimate nature and social life.	Knows how to systematize, group and solve cognitive tasks in a visual-effective and visual-figurative plan. Has the ability to find



			objects near the house, kindergarten.		the meanings of traffic signals.		similarities and differences.
3	Constructive skills	Tries different ways of doing things.	Knows how to compose elementary structures with the help of an adult.	Reproduces simple constructions after an explanation by an adult (knows how to overlay, place, joint).	Knows how to use building material through a variety of means. Knows and names their main details.	Manifests independence when choosing a material for construction, seeks to construct. Knows how to work in a team.	Owns several simple generalized construction methods and uses the same methods to obtain different results.
4	Fundamentals of environmental literacy	Reacts emotionally to the natural world; notices plants, animals in the environment.	Knows how to distinguish living beings, plants, shows interest in them.	Knows how to show a benevolent and careful attitude towards animals.	Knows how to carry out elementary work assignments together with adults to care for plants.	Owns some norms of behavior in nature.	Understands the diversity of the surrounding world. Knows the distinctive features and characteristics of plants, their habitat. Knows how to look after the animals of the school petting zoo.
5	Elementary mathematical representations	Plays with toys or objects of different sizes and shapes.	Understands instructions of an adult and can find objects in the space.	Possesses the essential skills of orientation in space.	Knows how to demonstrate elementary ideas about time and space.	Has an idea of the time (parts of the day: morning, day, night; days: today, yesterday, tomorrow) concepts: fast, slow.	Knows the structural characteristics of geometric shapes, quantitative relations in the forward and reverse order.
6	Search and experimental activities	Takes an interest in researching objects, manipulates or learns new objects. Compare objects in size, although not	Possesses the ability to push objects into various hollows (holes) in	Performs actions with various objects (disjoint, joint, construct).	Knows how to experiment independently and in a team with familiar materials.	Knows how to purposefully experiment, model with new materials and determine the most common	Knows how to consistently and effectively experiment, establish the simplest cause-and-effect

		always for the intended purpose.	accordance with their shape.			features between objects.	fect relationships.
7	Working with information	Observes and reacts to his/her reflection in the mirror	Receives information through the senses (through tactile sense, olfaction, touch).	Shows interest in various sources of information.	Identifies interesting information.	Understands the need for new information.	Understands and knows how to present new information, to whom it will be interesting.
Creative skills							
1	Musical activities	Experiences joy when playing funny games with an adult, hits the surface after seeing the drum beating. Performs actions with musical items.	Is able to transfer the festive mood of a dance melody with simple movements.	Knows musical instruments, distinguishes between high and low sounding of a musical phrase, shows a desire to sing together with adults.	Distinguishes the tempo of a piece of music, distinguishes sounds by pitch, reacts to the beginning and end of a melody. Listens to a n d perceives folk melodies.	Distinguishes the timbres of the voice, sings in a long drawn-out manner, pronounces words clearly; performs dance, musical and rhythmic movements. Listens to a n d perceives the works of Russian composers.	Possesses the simplest skills of playing children's musical instruments. Performs folk songs, dances. Has the ability to singing improvisation.
2	Productive activities	Emotionally reacts to bright objects: pictures, flowers (puts in his/her mouth, nods, knocks, hits, throws objects).	Leaves bright spots, strokes on a sheet of paper (paint, markers, crayons, pencils); models flat, round shapes.	Possesses the skills of modeling (makes holes, decorates objects). Knows how to draw straight vertical, horizontal wavy lines on a sheet of paper.	Possesses the basic technical skills and abilities necessary for the visual art activities.	Has an idea of the types of visual arts (painting, sculpture, folk art). Names the houses of ancestors, household items, parts of the national costume.	Independently chooses technical methods and means of image in accordance with the character of the image.
						Rhythmically arranges geometric	Shows interest in folk and decorative arts, design, chooses and

3	Aesthetic perception of the surrounding world	-----	When looking at bright colors of paints, demonstrates admiration, joy.	Demonstrates joy, emotional response when looking at folk toys.	Shows interest in various types of folk applied art. Uses materials carefully.	shapes and plant elements based on folk art. Possesses the elementary skills of making various items.	gives reasons for methods of work, uses materials for work rationally, emotionally responds to the beauty of nature, clothing and interior decoration.
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Social skills

1	Cultural behaviour skills	Responds to greeting, farewell.	Knows how to satisfy a request expressed in a simple sentence.	Understands norms and rules of behavior, uses words of greeting, farewell, gratitude.	Has knowledge on human relationships, understands the emotional state.	Shows elementary care for his/her relatives and people around him/her.	Knows how to ask for help if necessary, respects the desires of other people. Knows the norms of behavior.
2	Interaction with adults and agetates	Recognizes immediate family members. Smiles, waves, or laughs in response to positive interactions with adults. Shows likes and dislikes for actions, interaction.	Interacts with adults in various entertainment games. Knows how to listen carefully to an adult and performs simple assignments.	Shows responsiveness, benevolence, sympathy for relatives, agetates.	Knows how to enter into stable play groups and communicate with agetates on cognitive topics.	Performs joint labor activities with adults, knows how to interact in a team. Realizes his/her position among agetates and his/her personal "Me". Complies with moral norms and rules of behavior when communicating with adults and agetates.	Knows how to cooperate with adults and agetates, set a common goal and discuss their results, get involved in joint activities with adults.
		Expresses primary	Knows how to use the	Knows the name of his/her city, the capital of	Shows love and care for his/her		Respects family values. Shows love

3	Representati on of moral standards	emotions Uses body movements and sound when in need of help.	words necessary to express desires and establish relationships with others.	Kazakhstan. Understands what is "good" and what is "bad" through the works of oral folk art.	relatives. Knows how to evaluate his/her own actions and the actions of fairy tale characters.	Has an idea of the traditions of the people of Kazakhstan	and respect for his/her small homeland, for the culture of his /her native country.
*** For children with learning disabilities including mild and moderate mental retardation, the expected learning outcomes shall be determined according to individual and special standard curricula.							

Appendix 2  
to order № 604 of the Minister of  
Education and Science of the  
Republic of Kazakhstan  
dated October 31, 2018

## **State compulsory standard of primary education**

### **Chapter 1. General Provisions**

1. This state compulsory standard of primary education (hereinafter - the Standard) is developed in accordance with subparagraph 5-1) of Article 5 and Article 56 of the Law of the Republic of Kazakhstan dated July 27, 2007 "On Education" (hereinafter - the Law) and determines the requirements for the content the volume of academic load, the level of training of students and the duration of training.

2. In the Standard, terms and definitions shall be applied in accordance with the Law. In addition to them, the following terms and definitions shall be included:

1) the basic content of primary education - the composition, structure and volume of the content of primary education, subject to compulsory study in educational institutions, regardless of their type, type and form of ownership, as well as the language of instruction;

2) assessment - the process of matching the achieved learning outcomes with the expected results based on the developed criteria;

3) assessment criteria - specific measures, on the basis of which the evaluation of students' educational achievements is carried out;

4) monitoring of the educational process - systematic observation, diagnosis, analysis, assessment and forecast of the state/condition, the dynamics of changes in the results and conditions for the implementation of the educational process in educational organizations;

5) education values - benchmarks in building a system of learning objectives, which serve as the basis for determining the content of education, are the leading factor in shaping the student's personality;

6) educational activity - the process of purposeful, pedagogically grounded, consistent interaction of the subjects of education, during which the tasks of teaching, developing and educating a person are solved, including taking into account the special educational needs and individual abilities of students;

7) educational field - an integral part of the basic content of primary education, including a set of related academic subjects;

8) summative assessment - a type of assessment that is carried out at the end of a certain study period (a quarter), as well as the study of sections / cross-cutting themes in accordance with the academic program;

9) inclusive education - creation of conditions for equal access to education for all students, taking into account special educational needs and individual opportunities;

10) the invariant component of the study load is an integral component of the standard curriculum, which defines the subjects required for study by all students in educational institutions, regardless of their type, type and form of ownership, as well as the language of instruction;

11) the variable component of the study load is an integral component of the standard curriculum, which is determined by the organization of education according to the educational needs of students;

12) expected learning outcomes - a set of competencies expressing what a student will know, understand, demonstrate upon completion of the learning process, including taking into account the special educational needs and individual abilities of students;

13) extracurricular activities - an integral part of the whole educational process in the organization of education, one of the forms of organization of free time for students, implemented over and above the academic load, determined by the standard curriculum;

14) standard curriculum - a document regulating the list of academic disciplines (subjects) and defining the volume of the invariant and variable components of the academic load of the corresponding level of education;

15) formative assessment - a type of assessment, which is carried out in the course of everyday work in the classroom, is a current indicator of student performance, provides an operational relationship between the student and the teacher during the training, feedback between the student and the teacher and allows to improve the educational process;

16) elective course - a course of choice of students, an integral part of the variable component of the curriculum, aimed at expanding the educational training of students.

3. The application of the Standard shall be aimed at:

1) improving the quality of training and education through the achievement of a system of primary education goals, presented in the form of expected learning outcomes;

- 2) the creation of conditions for learning Kazakh, Russian and foreign languages;
- 3) a combination of academic and practical orientation of primary education, providing for students to master the basics of theoretical knowledge and the development of skills to apply this knowledge to solve problems of an applied nature;
- 4) gradual build-up of subject knowledge and skills, ensuring the depth and complexity of the content of academic subjects, taking into account the age possibilities of students;
- 5) the implementation of the principle of unity of upbringing and education, based on the interrelations and interdependence of the values of education and the system of expected learning outcomes, which determine the content basis of the daily educational process;
- 6) ensuring the protection of children's health, as well as the creation of favorable conditions for meeting the special educational needs of students and their needs for additional educational services;
- 7) ensuring the equivalence of primary education in a variety of types and types of secondary education organizations;
- 8) support and development of innovative practices in educational institutions;
- 9) the organization of an objective assessment of the activities of educational organizations to ensure the quality of education.

4. The volume of knowledge and the content of academic subjects of the invariant component in educational institutions for students with mild mental retardation and moderate mental retardation shall be carried out in accordance with the standard curricula (hereinafter referred to as SC), approved by Order № 500 of the Minister of Education and Science of the Republic of Kazakhstan dated November 8, 2012 "On Approval of the standard curricula for primary, basic secondary and general secondary education of the Republic of Kazakhstan" (registered with the Register of State Registration of Regulatory Legal Acts under № 8170) and programs approved by order № 115 of the Minister of Education and Science of the Republic of Kazakhstan dated April 3, 2013 "On Approval of the Standard Curricula in General Subjects, Elective Courses and Options for Educational Institutions" (registered with the Register of State Registration of Regulatory Legal Acts under the number 8424).

## **Chapter 2. Requirements for the content of education with a focus on learning outcomes**

### **Paragraph 1. Requirements for the updated content of primary education with a focus on learning outcomes**

5. The following values shall be defined as basic values in the content of primary education:

- 1) Kazakhstan patriotism and civil responsibility;

- 2) respect;
- 3) cooperation;
- 4) work and creativity;
- 5) openness;
- 6) lifelong education.

6. The purpose of primary education shall be to create an educational environment attractive for the harmonious formation and development of the student's personality, possessing the basics of the following skills of a wide range:

- 1) functional and creative application of knowledge;
- 2) critical thinking;
- 3) research;
- 4) use of information and communication technologies;
- 5) the use of various methods of communication, including language skills;
- 6) the ability to work in a group and individually.

7. The content of primary education shall be focused on learning outcomes and shall be determined taking into account the following aspects:

- 1) compliance with the dynamic needs of modern society;
- 2) the need to develop critical, creative and positive thinking;
- 3) the desirability of strengthening the integration of the content of school subjects;
- 4) ensuring the unity of training, education and development.

8. The content of primary education shall be implemented in the framework of the policy of trilingual education. The goal of trilingual education shall be to form a multilingual personality - a citizen of Kazakhstan who speaks at least three languages, knows how to conduct a dialogue in various fields, appreciates the culture of his/her people, understands and respects the culture of other nations.

9. Trilingual education shall be practically implemented by:

- 1) ensuring the level of mastery of Kazakh, Russian and foreign languages in accordance with international standards;
- 2) the organization of extracurricular activities in Kazakh, Russian and foreign languages.

10. The content of the educational field "Language and Literature" shall be implemented in academic subjects:

1) "Literacy", "Kazakh language" in grades with the Kazakh language of instruction, "Russian language" in grades with the Russian language of instruction, "Kazakh language" in grades with non-Kazakh language of instruction, "Russian language" in grades with non-Russian language of instruction, "Literary reading", "Foreign language";

2) in educational institutions with the language of instruction of ethnic groups compactly residing in the territory of Kazakhstan, the educational subject "Native



Language" of this ethnic group shall be additionally included in the educational field "Language and Literature". The subject "Mother Tongue" for educational organizations with the Uigur / Uzbek / Tajik language of instruction shall be included in the invariant component of the standard curriculum.

10-1. The objectives of pre-ABC-book and within the ABC-book period of such subjects as "Alippe" / "Ana Tili" shall be implemented by "Alippe" textbook in the first half of the year, the post-ABC-book period – by "Ana Tili" textbook in the second half of the year for school students with the Kazakh language of instruction; "ABC-Book"/"Literacy Learning" shall be implemented by "ABC-Book" textbook in the first half of the year, in the post-ABC-book period – by "Literacy Learning" textbook in the second half of the year for school students with Russian as the language of instruction.

**Footnote. The rules were supplemented with clause 10-1 in accordance with the order of the Minister of Education and Science of the Republic of Kazakhstan dated 05.05.2020 No. 182 (shall be enforced upon expiry of ten calendar days after the day of its first official publication); as amended by the order of the Minister of Education and Science of the Republic of Kazakhstan dated 28.08.2020 No. 372 (shall be enforced after the day of its first official publication).**

11. The content of the subjects of the "Language and Literature" educational area shall provide for the formation of ideas on the unity and diversity of national cultures of Kazakhstan, on the state language as the basis of national self-awareness, a communicative approach aimed at developing skills in four types of speech activity.

The content of language subjects shall be aimed at developing students' interest and a positive attitude to learning languages through play and cognitive activities, as well as the formation of initial communication skills for information exchange, developing the ability to work with text as speech material, use phrases and expressions from the text in specific situations.

**Footnote. Paragraph 11 as amended by order of the Minister of Education and Science of the Republic of Kazakhstan dated 05.05.2020 No. 182 (shall be enforced upon expiry of ten calendar days after the day of its first official publication).**

12. The study of the Kazakh language / Russian language / mother Tongue as a language of instruction shall be based on the use of literary texts for the development of students' speech skills, the ability to work independently with different types and types of texts.

13. Teaching the second (Kazakh / Russian - depending on the language of instruction) and the third language (foreign) shall be focused on the organization of the level learning of the language.

14. The content of the "Mathematics and Computer Science" educational area shall be implemented in the following academic subjects: "Mathematics", "Digital Literacy".

Footnote. Paragraph 14 as amended by order of the Minister of Education and Science of the Republic of Kazakhstan dated 05.05.2020 No. 182 (shall be enforced upon expiry of ten calendar days after the day of its first official publication).

15. The content of the educational field "Mathematics and Informatics" shall be aimed at developing in students the initial mathematical knowledge to describe various objects and phenomena of the surrounding reality;

on the assimilation of oral and written computational algorithms;

on the development of general methods of solving problems, skills to build logical judgments based on measurement and computational skills;

the formation of skills to use elementary tools of information and communication technologies, the ability to search, select, transfer information, design objects and processes, apply the simplest methods of working with tables, charts, graphs and diagrams for analyzing, interpreting and presenting data.

16. The content of the educational field "Natural Science" shall be implemented in the academic subject "Natural Science".

17. The content of the subject "Natural Science" shall provide an elementary level of scientific knowledge within the framework of the "Man-Nature" system. This academic subject shall be aimed at the development of students' natural curiosity, research skills, the formation of scientific understanding and vision of the surrounding world. The content of the subject shall be structured according to the principle "from simple to complex, from familiar to unfamiliar." Understanding the causes and understanding of the relationship of phenomena and processes of animate and inanimate nature, awareness of the diversity and complexity of the surrounding world will expand the horizons of students.

The subject "Natural History" shall be a propaedeutic course for the study of independent subjects "Biology", "Physics", "Geography", "Chemistry" at subsequent levels of education, and also shall lay the foundation for research skills important to any branch of knowledge.

18. The content of the educational area "Man and Society" shall be implemented in the educational subjects "Knowledge of the World", "Self-Knowledge".

19. The content of the subjects of the educational area "Man and Society" shall be focused on providing propaedeutic knowledge within the framework of the "Man - Society" system. The content of subjects shall be aimed at studying the social phenomena of the past and present and their interrelations, the relationship of people in the family and society; to create a sense of pride in their homeland, an awareness of their place in the family, local, regional, national and global community; understanding of the values of Kazakhstan society and universal values; for each student to disclose his/her natural abilities and creative potential; to develop a respectful attitude towards the culture of one's own and other peoples, personal responsibility for one's actions,

development of empathy in relation to the feelings of other people; on the education of humane attitudes towards man and the environment.

20. The content of the educational field "Technology and Art" shall be represented by the educational subjects "Music", "Artistic work".

21. The content of the subjects of the educational field "Technology and Art" shall be aimed at the formation of a holistic perception of the surrounding world, its cognition by means of visual art and music; development of initial ideas about the role of fine art, applied art and music in human life, respectful attitude to the Kazakh national decorative and applied art, musical traditions and customs, art of other nations of the world; education of moral and aesthetic attitude to various types of art as a reflection of human life, shall be aimed at the artistic and musical-creative development of primary school students.

22. The content of the educational field "Physical Training" shall be implemented in the academic subject "Physical Training".

23. The content of the subject "Physical Training" shall be aimed at the development of physical qualities, interest in the independent implementation of general developmental exercises; to adhere to a healthy lifestyle culture; on the formation of ideas about the role of physical culture in human life, the ability to independently find information about sports, national sports and the use it for health promotion; on the formation of a culture of communication with peers in terms of training, gaming and competitive activities.

24. The compulsory study of the course "Basics of Life Safety" shall be provided in grades 1-4. The content of the training course shall be implemented within the framework of the subject "Learning the World": in 1-3 grades with an annual academic load of 6 hours, in grade 4 - 10 hours by primary school teachers.

25. The content of the course "Road Traffic Rules" shall be implemented in grades 1-4 - 6 hours in each grade by teachers at the expense of class hours and outside school hours with an indication of the theme and date in the annual work plan of the supervising teacher.

26. The organization of education shall carry out educational activities in accordance with the license obtained and throughout the entire period of its validity, shall comply with the qualification requirements for educational activities and the list of documents confirming compliance with them, approved by order № 391 of the Minister of Education and Science of the Republic of Kazakhstan of June 17, 2015 (registered with the Register of Regulatory Legal Acts under № 11716).

## **Paragraph 2. Requirements for the content of education with a focus on learning outcomes**

**Paragraph 2 was valid until 01.09.2020 in accordance with subparagraph 5) of paragraph 4 of this order.**

### **Chapter 3. Requirements for the maximum amount of study load of students**

#### **Paragraph 1. Requirements for the maximum amount of study load of students on the updated content of primary education**

40. The maximum amount of weekly study load of students in elementary school shall not be more than 29 hours.

41. The total volume of the academic load of students, including the invariant and variable components, as well as the weekly and annual academic load by grades shall be established by the standard curriculum.

42. Class division into two groups shall be allowed in urban general educational organizations when filling grades in 24 or more students, in rural - in 20 and more students:

- 1) in the Kazakh language in non-Kazakh grades;
- 2) in Russian in grades with non-Russian language of instruction;
- 3) in a foreign language;
- 4) on digital literacy;
- 5) by self-knowledge.

In cases of implementation of restrictive measures by the relevant state bodies, the introduction of quarantine, emergency situations of a social, natural and man-made nature, the division of the grade into groups shall be carried out in all academic subjects with filling in one grades up to 15 students.

**Footnote. Paragraph 42 - as amended by the order of the Minister of Education and Science of the Republic of Kazakhstan dated 28.08.2020 No. 372 (shall be enforced after the day of its first official publication).**

43. Within the framework of inclusive education, the division of a class into groups according to paragraph 42 of this Standard shall be carried out while reducing the occupancy rate of the class of the total number of students by three per each child with special educational needs.

#### **Paragraph 2. Requirements for the maximum amount of study load of students**

**Paragraph 2 was valid until 01.09.2020 in accordance with subparagraph 5) of paragraph 4 of this order.**

### **Chapter 4. Training Requirements for Students**

#### **Paragraph 1. Requirements for the level of training of students on the updated content of primary education**

54. The level of training of students shall be determined through the expected learning outcomes, which are designed taking into account the specifics of each educational area, combining several related subjects: Language and Literature, Mathematics and Computer Science, Natural Science, Man and Society, Technology and Art", "Physical Training".

55. Expected results after completion of primary education in the field of "Language and Literature".

Kazakh language / Russian language / Mother Tongue, Literary Reading:

1) listening and speaking: the student understands and conveys the main content of the conversation, the text read or heard; determines how the speaker's point of view is presented, draws conclusions; understands the topic of discussion and participates in its discussion, observing the speech norms; consciously uses in speech synonyms, antonyms, homonyms, words with direct and figurative meaning; uses various techniques of retelling the content of narrative and descriptive texts using emotionally-colored means of expressiveness; applies various techniques of retelling the content of artistic works; talks about what is read and heard, shares his/her thoughts and emotions; argues his/her point of view, following a logical sequence; independently compiles coherent, logical, reasoned statements in accordance with the proposed topic and the communicatively given installation; participates in dialogue using various methods of speech communication; analyzes the ideas of spiritual and moral values based on the read, heard information;

2) reading: the student reads the works of oral folk art and children's literature, analyzes the character of the characters and assesses their actions; distinguishes artistic texts from non-artistic; determines the main idea and composition of works of art; determines the genre of the work, justifies his/her answer / choice; determines the figurative and expressive means used by the author to create an image; draws conclusions about the attitude of the writer to his/her heroes; reads texts using specific types and strategies of reading; predicts the course of events in the works; determines the types of text (description, narration and reasoning); reads stories / poems expressively; expressively recites poems by heart; determines universal values in works of fiction;

3) writing: the student writes his/her own texts of various types, genres and styles, selecting the appropriate words; writes in accordance with the studied grammatical, spelling and punctuation norms; writes texts using various forms of presentation (figures, charts, graphs, tables); observes hygienic and calligraphic writing skills; synthesizes small texts on topics related to the culture and customs of the people of Kazakhstan, expressing their moral position.

Kazakh language (in grades with non-Kazakh language of instruction) / Russian language (in grades with non-Russian language of instruction):

1) listening: the student understands the meaning of audiovisual material that is relevant to the social, social and cultural areas of communication; understands the topic, main idea, main and secondary information of the text with sufficient completeness, depth and accuracy; understands how the style of speech changes depending on the situation of communication, the place of communication and participants of communication (communication), predicts the content of the story / novel, taking into account different opinions;

2) speaking: the student transmits the content of the stories and stories, including using preliminary notes and a plan; formulates questions and expresses his/her point of view about the read, heard text; independently makes coherent, logical statements in accordance with the proposed topic and the communicatively specified installation; participates in the dialogue, expressing his/her communicative intention in different speech situations of the social, social and cultural spheres of communication;

3) reading: the student reads texts using different types and strategies of reading; understands the key information, conclusions and assessments of the author in a text containing unfamiliar words; distinguishes between artistic and non-fiction texts; Finds the right information in various sources; demonstrates an understanding of the ideas, events and motives of the actions of the heroes; finds out the meaning of unfamiliar words and phrases using dictionaries and reference books; defines universal values in works of art of Kazakh and world literature;

4) writing: the student makes short records of the text he/she has listened to, the information he/she has read, and the event he/she has seen (titles, particular facts, opinions); uses the appropriate lexical units to create narrative / non-narrative texts, taking into account grammatical, spelling and punctuation norms.

Foreign language:

1) listening: the student understands the main content of a short conversation on familiar topics, recognizes the sound of familiar words and phrases; understands short questions about color and numbers; uses contextual clues to predict the content and meaning of a short conversation on familiar topics; understands the general meaning of short stories that sound slow and clear;

2) speaking: the student formulates basic statements and statements about himself/herself, formulates questions; answers the questions; pronounces with the correct intonation and stress the main words and phrases when describing objects and events; expresses that he/she likes and dislikes;

3) reading: the learner uses an illustrated dictionary; reads and understands small belle letter style and non-belle letter style texts on social and everyday topics; determines the basic meaning of small texts; determines specific information and details in small texts;

4) writing: the learner correctly writes frequently used words, demonstrating knowledge of the differences between their spelling and pronunciation; writes short sentences under dictation; puts punctuation marks at the end of sentences correctly.

56. Expected learning outcomes in the educational field "Mathematics and Computer Science": At the end of primary education, the student:

1) knows the meaning of the concepts: "figure", "number", "coordinate ray", "fraction of number", "ordinary fraction", "mixed number, numeric expression, alphabetic expression, equation, inequality, degree measure of angle, percentage, many/much, "symmetry", "information", "object", "file", "folder", "label", "model", "computer network", "Internet"; the value of the discharge units in the decimal number system; flat and spatial geometric shapes and their elements; formulas for calculating the perimeter, square, and rectangle; rules of addition and subtraction of fractions with the same denominators; assignment of operating system objects; types of representation and units of information; main parts of the computer; input and output devices; the appointment of application, service programs and operating systems, safety regulations when working at the computer;

2) understands the meaning and order of arithmetic operations on natural numbers, quantities and relations between them; simple dependencies between quantities; the meaning of the operations "intersection" and "union" of sets; conversion of percentages into fractions, fractions into percentages; the difference between constants and variables; the appointment of the main parts of the computer, input and output devices, operating system interface elements; the impact of computer technology on human health; the importance of protecting information and devices from viruses/malware; the need to accompany information with links to authors;

3) apply mathematical symbols, arithmetic actions and their properties for writing expressions, converting numerical expressions, solving problems; verbal and written methods of calculating over natural numbers; standard and non-standard units of measurement of quantities (length, area, volume, mass, time); measurement tools; mathematical language and graphic models for recording task conditions; algorithms for solving equations and inequalities; formulas for calculating the perimeter and area (square, rectangle, right triangle); Euler-Venn diagrams for representing relationships between sets of elements; the ability to find part of the number and the number of its parts; information and communication technology tools for collecting, storing, processing and transmitting information; application programs for working with various types of information, to create models; the Internet services for solving tasks; rules of work at the computer;

4) analyzes rational methods of oral and written account; features of geometric shapes; the results of comparing the values of numerical expressions and expressions with variables; dependencies between different quantities (quantity, cost, speed, time,



distance, duration of work, amount of work); patterns with finding the missing elements of the sequence; simple combinatorial and logical tasks; recording the conditions of tasks in the form of a diagram, drawing, table; data and results associated with the account, measurement; application capabilities; the consequences of violating ethical and legal standards on the network; information from various sources, selected in accordance with the stated requirements;

5) synthesizes, classifies objects according to their characteristics and spatial arrangement; mathematical model of dependence between quantities; the simplest models of real objects and processes of the real world in the form of images and drawings; the task and the inverse to it by the proposed data or a mathematical model; sequence according to a given pattern; object and situation models for solving practical problems using information and communication technologies; knowledge of the capabilities of application programs and network services for solving various problems ;

6) evaluates the measurement result; the truth or falsity of simple statements about numbers, quantities, geometric figures; data presented in the form of a graph, table, chart; model compliance with specified criteria; the possibility of using applications and network services to solve problems.

57. Expected learning outcomes in the field of natural sciences. Upon completion of primary education, the student shall:

1) know the planets of the solar system and their features; basic natural science concepts of the Earth and its nature, the Universe; methods of scientific knowledge: observation, experiment, experience; safety fundamentals in planning and conducting research; rules of conduct for natural disasters; the life cycle of humans, plants, animals and fungi; features of the structure and location of the main organs of man, plants, animals and fungi and their functions; classification of plants, animals and fungi ; basics of the process of photosynthesis; individual properties of light; some physical forces and their causes; certain types of energy; composition and properties of the most common substances on Earth; properties of various bodies and some areas of their application; main types of minerals and their value, the main mineral deposits in the Republic of Kazakhstan;

2) understand the importance of respecting the environment and preserving biodiversity on Earth; the need for personal hygiene; protective functions of the body; the importance of the components of nature for living organisms; features of organisms as a means of adaptation to the environment; simple differences in vertebrates and invertebrates; the need for a rational use of natural resources;

3) use separate research methods to study natural objects, processes and phenomena; standard and non-standard units of measurement of natural objects, phenomena and processes; simple instruments for measuring some characteristics of

natural objects, processes and phenomena; relevant scientific terminology to explain the study; knowledge of the simple traits of plant and animal species in one's locality to compile their classification;

4) analyze the causal relationships between the components of nature; properties of materials to determine their applicability; animal and plant world of a certain territory; similar and distinctive features of different habitats; own research data and materials from various sources;

5) synthesize acquired knowledge and skills for planning and conducting research on objects and phenomena of animate and inanimate nature; information materials in the form of drawings, diagrams, graphs, diagrams, tables; ideas on environmental issues; imitation and graphical models of objects, phenomena and processes of the micro- and macrocosm;

6) assess the factors of development and the state of natural objects, phenomena and processes; human activities and the impact of scientific and technological progress on the environment; the impact of scientific and technological progress on human life; the correspondence of the obtained results of own research to the forecast made.

58. The expected results of training in the educational area "Man and Society". Upon completion of primary education, the student shall:

1) know the structure, composition and functions of the family, the school community, where the student's daily life takes place; basic social functions of a person; initial information about the relationship "man - society"; concepts of "safety", "health" and their leading signs; the characteristics of the individual, family, community and society as a whole, their significance and role in human life; main types of household items, their composition, properties and sources; general information about the geography and history of Kazakhstan; main traditions and folklore of the people of Kazakhstan; the role and place of Kazakhstan in the world; state symbols of Kazakhstan; human values; the rules of positive and friendly communication, the rules of etiquette, the rights and obligations of the student, the rules of a healthy lifestyle;

2) understand their civic identity in the form of self-awareness as a young citizen of Kazakhstan and their belonging to a particular ethnic group; the value of the family, small homeland and homeland; values of a multinational Kazakhstan society; the significance of the state symbols of Kazakhstan; norms of moral behavior in society; their involvement in the life of the school, village, city, country; the importance of serving the community; functional and structural features of different types of settlements; the importance of matching thoughts, words and actions, responsibility for them; the value of national traditions and customs; the role of travel in people's lives and the development of society; the importance of self-knowledge and human

self-development; the content of the concepts "work", "mutual understanding", "cheerfulness", "optimism", "goodwill", "generosity", "open-heartedness", "patriotism", "creativity" and their significance; the need for a healthy lifestyle; the importance of nature as a source of life; the importance of respect for nature;

3) apply cognitive methods to study social processes and phenomena, fulfill educational tasks and works of a creative, cognitive, research, design nature; personal experience and knowledge in the field of travel, simple financial relations; knowledge of a healthy lifestyle, personal hygiene, nutrition, and daily regimen; basic knowledge in the provision of first aid; own and public experience in adapting to the surrounding world; rules of etiquette; rules of communication to maintain positive, friendly relationships in the family and team;

4) analyzes the position of Kazakhstan in the world; the role and importance of the studied social phenomena and processes in people's lives; similarities and differences in the cultural and ritual traditions of the people of Kazakhstan; factors of personal development, family, school community; the importance of basic resources in human life; health and safety factors; manifestations of human feelings and actions of people, their causes and effects; own emotional state;

5) synthesize knowledge and skills for systematization and classification of social phenomena and processes; knowledge and skills to identify specific topical issues of society; own solutions for orientation in space (place), time (chronology), social environment (society); communication models in family, interpersonal and public spheres; own projects for life safety, travel organization; decisions on their own spiritual and moral development;

6) evaluate their own behavior and the actions of other people from the position of moral norms; the importance of family, society, country in the life of every person; the role of tradition and folklore in modern life; the significance of consumer goods by degree of significance and value; degree of satisfaction with their work at the lesson; the level of their progress in interpersonal, social and financial-economic relations; own emotional and physical condition; behavior of people from the position of generally accepted moral standards.

59. The expected results of training in the educational field "Technology and Art". Upon completion of primary education, the student shall:

1) know the main types and genres of art; main types of lines and shapes; primary and secondary colors; basic materials and tools for drawing and decorative art work; basic techniques and methods of work in various types of art; the best examples of works of world and domestic artists; expressive means and methods for conveying creative ideas; basics of music literacy; rules for playing songs and listening to music; main types, genres and styles of Kazakh traditional music; names and classification of musical instruments of the national and symphonic orchestra; types of choirs and

orchestras; the best samples and famous performers of Kazakh traditional and classical music, music by composers of Kazakhstan and music of the peoples of the world; basic computer music programs;

2) understand the connection between art and life; the interrelation of the technique of execution with the appropriate look, style, and genre of art; features and significance of national traditions and customs in the decorative and applied arts of Kazakhstan; the value of works of art in the culture of the Kazakh people and other nations of the world ; the role of music in a person's life; the relationship of music with other arts; traditional music as a reflection of the culture of the Kazakh people and other nations of the world; the fundamental role of folk music in composer music;

3) apply the rules of composition in the image of objects; expressive means of art; various sources of information and information and communication technologies for the development of ideas; various art materials, tools and techniques for creating creative works; knowledge of the types, styles and genres of art in the creation of creative works; safety rules; knowledge of the basics of musical literacy for the transfer of feelings, mood when singing, playing musical instruments individually and in an ensemble, choir / orchestra, to create simple compositions, improvisations, creative projects, including using computer music programs; knowledge of the types, styles and genres of music in explaining musical phenomena, phenomena of the surrounding reality through the language of sounds;

4) analyze information from various sources to plan its activities; styles and genres of art of the Kazakh people and other nations of the world; materials and techniques used to create works of art; properties and qualities of art materials and tools during experimental, research work; the process and results of their own creative activity; the role and importance of music in people's lives; similarities and differences, as well as the content of traditional Kazakh music and the music of the peoples of the world; features of musical instruments of folk and symphonic orchestras; various sounds and sound effects for composing and improvisation of their own musical and creative works;

5) synthesize methods and techniques, properties and capabilities of materials for creating creative works; information from various sources, including the use of information and communication technologies for the development of ideas; knowledge, skills, information for creative projects and ideas, including the use of musical computer programs; elements of different types of art to create creative work; 6) evaluate the main purpose, images and ideas in art and music works; expressive means and properties of materials for creating creative work; independently / collectively performed works on artistic work; the moral and aesthetic side of the studied music, the results of creative activity, the role of music and artistic creativity in life.

60. Expected results in the educational field "Physical Training". Upon completion of primary education, the student shall:

1) know the basic physical exercises that contribute to the development of the body, the rules and techniques for their implementation; safety regulations when performing physical exercises; rules for doing warm up and hitch; ways to control physical changes in the body during exercise; methods of developing parts of the body and muscles to improve physical fitness;

2) understand the importance of physical culture for health promotion; the role of physical culture and sports in the development of the country and the formation of pride for it; levels of difficulty of the exercises; the need to achieve the required intensity various physical activities; the importance of supporting physical, mental and emotional health; risks arising from various physical exercises;

3) apply the skills to perform self-employment / teamwork to achieve agreed goals; knowledge of the rules and compositional techniques during the execution of a set of physical exercises; the correct sequence of physical exercises, demonstrating an understanding of time, space and motor coordination skills; special exercises to eliminate physical developmental deficiencies and possible health risks; basic principles of healthy nutrition and motor/movement regime;

4) analyze his/her own achievements and experience in performing physical exercises to manage future training and behavior in a group; improvement of individual abilities and degree of confidence in various types of physical activity; situations of cooperation and fair competition in achieving common goals;

5) synthesize certain combinations of movements from types of movements, as well as strategies, using various sports tactics; knowledge and skills to adapt to different situations of physical activity;

6) assess the difficulties and risks arising during the performance of various physical activities; own and others' physical abilities; their ability to participate in sports activities inside and outside the school.

61. Homework assignments shall be given to students, taking into account the possibility of performing them (in astronomical hours) in grade 2 - no more than 50 minutes, in grade 3-4 - no more than 1 hour and 10 minutes.

62. Evaluation of the educational achievements of students shall be carried out through the use of criteria for assessing the knowledge of students. Evaluation criteria shall be used to measure the level of learning achievement of students, including taking into account the special educational needs and individual abilities of students.

63. Evaluation shall be carried out in accordance with the system of learning objectives presented in the curriculum for each academic subject, based on tracking students' learning achievements in a specific section / cross-cutting topic.

64. The assessment of the educational achievements of students shall be carried out in the form of formative, summative assessment.

65. Evaluation at the primary education level shall be carried out from the 2nd grade using formative and summative assessment.

**Footnote. Paragraph 65 - as amended by the order of the Minister of Education and Science of the Republic of Kazakhstan dated 28.08.2020 No. 372 (shall be enforced after the day of its first official publication).**

66. The order of the criteria-based evaluation of the educational achievements of students in educational institutions that implement primary education curricula shall be determined by the authorized body in the field of education.

67. For students with special educational needs, conditions shall be created for their education, correction of developmental disorders and social adaptation.

## **Paragraph 2. Requirements for the level of training of students**

**Paragraph 2 was valid until 01.09.2020 in accordance with subparagraph 5) of paragraph 4 of this order.**

## **Chapter 5. Requirements for the duration of training**

73. The term of mastering the general education curriculum of primary education shall be four years.

74. The duration of the school year in grade 1 - 33 school weeks, in grades 2-4 - 34 school weeks.

75. The duration of the vacation time in the school year shall be at least 30 days.

76. Vacations shall be provided three times per school year - in the autumn, winter and spring. For students of the 1st grade in the third quarter, the vacation time of one week shall be provided additionally.

Appendix 3  
to order No. 604 of the Minister of  
Education and Science of the  
Republic of Kazakhstan  
of October 31, 2018,

## **State compulsory standard for basic secondary education**

### **Chapter 1. General Provisions**

1. This state compulsory standard for basic secondary education (hereinafter - the Standard) is developed in accordance with subparagraph 5-1) of Article 5 and Article 56 of the Law of the Republic of Kazakhstan dated July 27, 2007 "On Education" ( hereinafter - the Law) and determines the requirements for the content, the maximum amount of study load, the level of training of students and the duration of training.

2. In the Standard, terms and definitions shall be applied in accordance with the Law. In addition to them, the following terms and their definitions shall be included:

1) assessment - the process of correlating the learning outcomes achieved by the students with the expected results based on the developed criteria;

2) assessment criteria - specific measures, on the basis of which the evaluation of students' educational achievements is carried out;

3) educational field - an integral part of the basic content of basic secondary education, including a set of related academic subjects;

4) values of education - benchmarks in building a system of learning objectives, based on universal values, which are the leading factor in shaping the personality of the student;

5) the level of preparation of the student - the degree of mastering the content of secondary education by the student, expressed in personal, system-activity and substantive results;

6) the basic level of mastering the content of education - the level of mastering by students of the mandatory minimum amount of knowledge and skills;

7) advanced level of mastering the content of education - the level of students mastering an expanded and in-depth amount of knowledge and skills.

8) special educational needs - the needs of children experiencing permanent or temporary difficulties in obtaining education due to health, in need of special, general educational curricula and educational programs of additional education;

9) summative assessment - a type of assessment that is carried out at the end of a certain study period (quarter), as well as studying sections in accordance with the curriculum;

10) working curriculum - a document developed by a general educational organization on the basis of a standard curriculum taking into account the educational needs of students.

11) inclusive education - creating conditions for equal access to education for all students, taking into account special educational needs and individual capabilities;

12) the basic content of basic secondary education - the composition, structure and volume of the content of basic secondary education, subject to compulsory study in educational institutions, regardless of their type, type and form of ownership, as well as the language of instruction;

13) the invariant component of the study load is an integral component of the standard curriculum, which defines the subjects required for study by all students in educational institutions, regardless of their type, type and form of ownership, as well as the language of instruction;



14) the variable component of the study load is an integral component of the standard curriculum, which is determined by the organization of education in accordance with the educational needs of students;

15) the maximum amount of study load is the amount of study time required for mastering the content of study subjects of the invariant and variable (school and student) components of the standard curriculum and established according to the levels of basic secondary education and school years.

16) expected learning outcomes - a set of competencies expressing what a student will know, understand, demonstrate upon completion of the learning process, including taking into account the special educational needs and individual abilities of students;

17) extracurricular activities - an integral part of the whole educational process, a form of organization of free time for students;

18) standard curriculum - a document regulating the list of academic disciplines (subjects) and defining the volume of the invariant and variable components of the academic load of the corresponding level of education;

19) formative assessment - a type of assessment, which is carried out in the course of everyday work in the classroom, is a current indicator of students' academic performance, provides an operational relationship between the student and the teacher during the training, feedback between the student and the teacher and allows to improve the educational process;

20) Elective course - a course of choice of students, an integral part of the variable component of the curriculum, aimed at expanding the educational training of students.

### 3. Application of the Standard shall be aimed at:

1) improving the quality of training and education through the achievement of a system of goals for basic secondary education, presented in the form of expected learning outcomes;

2) the creation of conditions for the study of Kazakh, Russian and foreign languages;

3) a combination of academic and practical orientation of basic secondary education, providing for students to master the basics of theoretical knowledge and develop the ability to apply this knowledge to solve problems of an applied nature;

4) ensuring the gradual deepening of subject knowledge and skills, taking into account the age possibilities of students;

5) the implementation of the principle of unity of education and upbringing, based on the interconnectedness and interdependence of the values of education and the system of expected learning outcomes that define the content basis of the educational process;

6) ensuring the protection of children's health, as well as the creation of favorable conditions for meeting the special educational needs of students and the need for additional educational services;

7) ensuring the equivalence of basic secondary education in a variety of types and types of organizations of secondary education;

8) support and development of innovative practices in educational institutions;

9) the organization of an objective assessment of the activities of educational organizations to ensure the quality of education.

4. Educational organizations shall provide a health-saving environment through the use of various pedagogical technologies of training, education and development.

5. The volume of knowledge and content of school subjects of the invariant component in educational institutions for students with mild mental retardation and moderate mental retardation shall be carried out in accordance with the standard curriculum (hereinafter - SC), approved by order № 500 of the Minister of Education and Science of the Republic of Kazakhstan of November 8, 2012 "On Approval of the Standard Curricula for Primary, Basic Secondary, General Secondary Education of the Republic of Kazakhstan" (registered with the Register of State Registration of Regulatory Legal Acts under № 8170) and Standard Curricula Approved by Order № 115 of the Minister of Education and Science of the Republic of Kazakhstan dated April 3, 2013 "On Approval of the Standard Curricula in General Subjects, Elective Courses and Electives for General Education Organizations" (registered with the Register of State Registration of Regulatory Legal Acts under the number 8424).

6. Special educational programs shall be developed on the basis of general educational curricula and shall be aimed at the training and development of individuals (children) with special educational needs, taking into account the psychophysical features and cognitive abilities of students and pupils, determined taking into account the recommendations of psychological, medical and pedagogical consultations.

## **Chapter 2. Requirements for the content of education with a focus on learning outcomes**

### **Paragraph 1. Requirements for the updated content of basic secondary education with a focus on learning outcomes**

7. As the basic values in the content of basic secondary education the following shall be defined:

1) Kazakhstan patriotism and civil liability;

2) respect;

3) cooperation;

4) work and creativity;

5) openness;

6) lifelong education.

8. On the basis of inculcating the values of education, the following shall be developed in students:

- 1) readiness to serve to the interests of Kazakhstan;
- 2) respect for the norms of the Constitution and laws of the Republic of Kazakhstan and their observance;
- 3) social responsibility and ability to make decisions;
- 4) the motivation to master the state language;
- 5) respect in relation to the culture and traditions of the people of Kazakhstan, the cultural diversity of the world;
- 6) adherence to the ideas of spiritual harmony and tolerance;
- 7) a positive attitude towards the world and the preservation of ecological balance;
- 8) creative and critical thinking;
- 9) communication and the ability to effectively use information and communication tools and technologies;
- 10) motivation for learning and self-improvement throughout life.

9. The purpose of basic secondary education shall be the formation of a general culture of the individual, the adaptation of the individual to life in society, the creation of a basis for the informed choice and mastering of a profession, specialty, including taking into account the special educational needs and individual abilities of students.

10. The main objectives of basic secondary education shall be the formation and development of students:

- 1) spiritual and moral qualities;
- 2) basic knowledge of the basics of science;
- 3) self-study skills and personal self-development;
- 4) skills in the implementation of educational, project, research activities;
- 5) skills of critical and creative thinking;
- 6) skills of self-realization and interaction in society.

11. The content of basic secondary education shall focus on learning outcomes and shall be determined by academic programs for academic subjects, which are developed based on the requirements of the Standard.

12. The content of basic secondary education shall be established on the basis of the integration of academic training, the development of students' autonomy and spiritual and moral education, which is implemented through a combination of educational, design and research activities with purposefully organized educational work.

13. The content of basic secondary education shall be determined taking into account the following guidelines:

- 1) compliance with the dynamic needs of modern society;

- 2) the need to develop critical, creative and positive thinking;
- 3) the expediency of strengthening the integration of the content of educational subjects;
- 4) ensuring compliance with the principle of continuity and continuity of the content of education between the levels of primary education and basic secondary education;
- 5) maintaining a balance between academic and practical orientation of the content of education;
- 6) ensuring the unity of training, education and development.

14. The organization of the educational process at the level of basic secondary education shall be focused on the implementation of the principle of unity of training and education, including taking into account the special educational needs and individual abilities of students. When organizing training, a priority role shall be given to teaching as the leading activity of students.

15. In the process of learning, education issues shall be resolved through each subject. All types of educational work shall be aimed at addressing the issues of cognition and mastering of subjectively new knowledge by students, on the study of national traditions, culture and inculcation of universal human values.

16. The organization of various forms of extracurricular activities shall provide in the aggregate for the realization of spiritual and moral, civic-patriotic, artistic and aesthetic, labor and Physical Training of students.

17. The organization of the educational process shall involve the use of interactive teaching methods that are based on the organization of learning by the students themselves, by showing activity in discussing issues, in arguing a point of view, in initiating a search and making a constructive decision.

18. Along with teaching compulsory school subjects, elective courses, extracurricular classes, and students' participation in research projects shall be provided

19. Ensuring consistency in the development of skills of project and research activities of students shall be one of the basic principles of the organization of the educational process in educational institutions.

20. The basic content of basic secondary education shall be implemented in the framework of the policy of trilingual education. The objective of trilingual education shall be to form a multilingual personality - a citizen of Kazakhstan who speaks at least three languages, who is able to successfully conduct a dialogue in various fields of activity, appreciates the culture of his people, understands and respects the culture of other nations.

21. Trilingual education shall be practically implemented through:

- 1) level learning of Kazakh, Russian and foreign languages;

2) the organization of the study of individual subjects in the Kazakh, Russian, foreign language, regardless of the language of instruction;

3) the organization of extracurricular activities and elective courses in Kazakh, Russian and foreign languages.

22. The basic content of each educational area of basic secondary education shall be determined taking into account the need not only to teach the basics of science, but also to ensure the further development of spirituality, social and cultural experience, which will contribute to effective socialization.

23. The content of the educational field "Language and Literature" shall be implemented in school subjects:

1) "Kazakh Language", "Kazakh Literature" for grades with the Kazakh language of instruction, "Russian Language", "Russian Literature" for grades with the Russian language of instruction;

2) "Kazakh Language and Literature" for grades with non-Kazakh language of instruction, "Russian Language and Literature" for grades with non-Russian language of instruction;

3) "Foreign Language";

4) in educational institutions with the language of instruction of ethnic groups compactly residing in the territory of Kazakhstan, the language and literature educational area additionally includes the native language and literature of this ethnic group. The subjects "Mother Tongue" for grades with the Uighur / Uzbek / Tajik language of instruction, "Literature" ("Uighur Literature", "Uzbek Literature", "Tajik Literature") shall be included in the invariant component of the standard curriculum.

24. The content of the educational field "Language and Literature" shall ensure the use of interdisciplinary connections with other linguistic and non-linguistic academic disciplines; successful socialization of students; development of language skills of students in accordance with their age characteristics, needs and interests; understanding of the importance of learning languages in the modern world; development of spiritual and moral values; understanding the holistic picture of the multilingual and multicultural world; establishing interpersonal and intercultural contacts in the process of communication; fostering respect for different points of view through familiarization with the cultures of other countries; the ability to work independently with various information sources in the language being studied, including with Internet resources; development and use of creative and critical thinking.

25. The content of the educational field "Mathematics and Computer Science" shall be implemented in the training subjects "Mathematics", "Algebra", "Geometry", "Computer Science".

26. The content of the educational field "Mathematics and Computer Science" shall provide the formation of the ability to define and understand the role of mathematics

and computer science in the world; ideas about mathematics as a universal language of science, means of modeling phenomena and processes; to ensure the continuity of secondary education levels, interdisciplinary and intra-subject communication in the study of mathematics and computer science; mastering basic mathematical knowledge and skills necessary for continuing education at the level of general secondary education and studying related disciplines, their application in everyday life; mastering the system of basic knowledge on the theoretical foundations of programming technology and modern information and communication technologies, formation of skills to apply and transform models of real objects and processes using information and telecommunication technologies in the study of computer science and other subjects; development of functional literacy, logical, algorithmic and operational thinking, spatial imagination, ability to use various languages of mathematics and computer science (verbal, symbolic, analytical, graphic), to perceive and critically analyzes information presented in various forms.

27. The content of the educational field "Natural History" shall be implemented in the subjects of "Natural Science", "Physics", "Chemistry", "Biology", "Geography".

28. The content of the educational field "Natural Science" shall ensure the formation of functional knowledge and skills, planning skills, analysis and processing, interpretation, systematization, work on the algorithm, improvement of research, experimental and experimental skills, evaluation and formulation of conclusions; deepening understanding of the fundamental concepts, laws, theories and principles underlying the modern natural science picture of the world, methods of scientific knowledge of nature, global and local problems of mankind based on a comprehensive study of nature, the economy and society; development of ecological culture, scientific, project and spatial thinking; fostering patriotic feelings, responsible and caring attitude to the environment; implementation of vocational guidance of students in natural sciences.

29. The content of educational subjects of the educational area "Man and Society" shall be implemented in the educational subjects "History of Kazakhstan", "World History", "Fundamentals of Law", "Self-knowledge".

30. The content of the educational area "Man and Society" shall be focused on the formation in students of the basics of knowledge of the social and humanitarian sciences in the framework of the "Man - Society" system. The content of school subjects shall be focused on developing students' skills of historical thinking, understanding and comprehension of the past and present and their interconnection, the ability to study, analyze and make sound conclusions on the materials of historical, legal, economic, political, sociological sources of information and build independent judgments on their basis; make your own informed decisions; to foster patriotism, the formation of legal literacy, an understanding of the ideals and values of a democratic

legal society, active citizenship for the implementation of effective interaction and choice of communication tools in the conditions of social and cultural communication; to develop the ability to determine personal attitudes to the system of universal, ethno-cultural values, to the socio-economic and political situation, to observe and evaluate social phenomena and events necessary for the implementation of moral choices.

31. The content of the educational field "Technology and Art" shall be implemented in the training subjects "Music", "Artistic work".

32. The content of the educational field "Technology and Art" shall be aimed at the formation of a holistic perception of the picture of the surrounding world, the general culture of the younger generations, the development of the aesthetic, spiritual, moral and emotional sphere of students based on national and world artistic values of society, the development of basic ideas about the role of art and technology in human life, understanding and respect for the traditions, customs, culture and various types of art of the Kazakh people and other nations of the world; the further development of knowledge, skills and abilities of artistic, musical and project activities in various types of art; basic technological knowledge, skills and abilities, including the use of computer digital technologies; the development of vocal and instrumental skills, including various digital music technologies; the independent development of various ways of knowing the world through artistic and musical means of expression and modern technology.

33. The content of the educational field "Physical Training" shall be implemented in the academic subject "Physical Training".

34. The content of the educational field "Physical Education" shall be focused on the promotion of health, the development of basic physical qualities and the enhancement of the functional capabilities of the organism; the formation of a culture of movements, the enrichment of motor experience with physical exercises with a general developmental and corrective tendency; teaching skills and abilities in Physical Training and sports and fitness activities, self-organization of physical exercises; mastering technical actions and techniques of basic and national sports; fostering patriotism, love for one's Motherland, and fostering moral and volitional qualities.

35. The course "Traffic Road Rules" in grades 5–8 shall be conducted for 10 hours in each grade at the expense of classroom hours and after hours, with an indication of the topic and date of classes on a separate page of the class journal.

36. The organization of education shall carry out educational activities in accordance with the license received and throughout the entire period of its validity it shall comply with the qualification requirements for educational activities and the list

of documents confirming compliance with them, approved by order № 391 of the Minister of Education and Science of the Republic of Kazakhstan dated June 17, 2015 (registered with the Register of Regulatory Legal Acts under № 11716).

#### **Paragraph 2. Requirements for the content of education with a focus on learning outcomes**

Paragraph 2 was valid until 01.09.2020 in accordance with subparagraph 5) of paragraph 4 of this order.

#### **Chapter 3. Requirements for the maximum amount of study load of students**

##### **Paragraph 1. Requirements for the maximum volume of academic load of students on the updated content of basic secondary education**

54. The maximum amount of weekly study load of students at the level of basic secondary education shall be no more: 32 hours in grade 5, 33 hours in grade 6, 34 hours in grade 7, 36 hours in grade 8.

55. The total volume of the study load of students, constituting the invariant and variable components, as well as the weekly and annual study load by classes shall be set by the standard curricula.

56. The weekly study load shall include all types of class assignment determined in the standard curriculum (invariant and variative components). The curricula of special education organisations shall contain a mandatory corrective component with account taken of the type of developmental disorder. Invariant, corrective and variative components in the curricula of special education organisations shall be established with due account for the students' special educational needs.

Progress in subjects of optional variative component selected from an invariant component shall be assessed as "passed"/"failed".

Footnote. Paragraph 56 is as amended by order of the Minister of Education and Science of the Republic of Kazakhstan dated 05.05.2020 No. 182 (shall be enforced upon expiry of ten calendar days after the day of its first official publication).

57. The division of the class into two groups shall be allowed in urban educational institutions when the class is filled with 24 or more students, and in rural ones – with 20 or more students for such subjects as:

- 1) Kazakh Language and Literature - in classes with non-Kazakh language of instruction;
- 2) Russian Language and Literature - in classes with the non-Russian language of instruction;
- 3) Foreign Language;
- 4) Artwork;
- 5) Computer Studies;



## 6) Physical Training.

Footnote. Paragraph 57 is as amended by order of the Minister of Education and Science of the Republic of Kazakhstan dated 05.05.2020 No. 182 (shall be enforced upon expiry of ten calendar days after the day of its first official publication).

58. Within the framework of inclusive education, the division of a class into groups in the above subjects shall be carried out while reducing the total number of students by three per each child with special educational needs.

### **Paragraph 2. Requirements for the maximum amount of study load of students**

Paragraph 2 was valid until 01.09.2020 in accordance with subparagraph 5) of paragraph 4 of this order.

## **Chapter 4. Training Requirements for Students**

### **Paragraph 1. Requirements for the level of training of students on the updated content of basic secondary education**

65. General educational academic programs of basic secondary education shall be aimed at mastering students, including students with special educational needs, the basic foundations of the system of sciences, the formation of their high culture of interpersonal and inter-ethnic communication, self-determination of personality and vocational guidance, as well as pre-profile training of students.

66. The level of training of students shall be determined through the expected learning outcomes, which are designed taking into account the specifics of each educational field, combining several related subjects: Language and Literature, Mathematics and Computer Science, Natural Science, Man and Society, Technology and art ", " Physical Training ".

67. The expected learning outcomes in educational areas (and academic subjects) shall serve as the basis for determining the basic content of basic secondary education.

68. In the curricula of basic secondary education, the expected learning outcomes in educational areas (and academic subjects) shall be specified for the purpose of instruction in sections of each academic subject.

69. The system of expected learning outcomes shall create an opportunity to build individual trajectories for the development of students, including students with special educational needs, and to gradually move them towards the achievement of long-term educational goals.

70. Expected results at the end of basic secondary education in the field of language and literature.

Kazakh Language (for classes with Kazakh language of instruction) / Russian Language (for classes with Russian language of instruction) / , Native Language (for classes with Uygur / Uzbek / Tajik language of instruction):

1) listening and speaking:

the student understands the texts of social, cultural, educational and professional areas of communication; recognizes openly and hiddenly expressed forms of speech behavior, assessment; carries out oral speech communication in various life situations; acts as an initiator and supports the dialogue, using a variety of language means for the realization of various goals and tactics of verbal communication; builds a monologue, synthesizing problematic information; defends and argues his/her own opinions; evaluates the attitude of the speaker to the subject of speech, expressing his/her own opinion; predicts the content of the text by its title / beginning / final; complies with grammatical, stylistic norms when making their own statements;

2) reading:

the student understands and interprets the main and detailed information (text, numeric, graphic) texts of various types, genres and styles; recognizes the hidden meaning of the text; uses reading strategies, including exploratory, commented, selective reading with notes, reading to extract specific information, analytical reading, reading with a specific purpose; extracts necessary information from various sources, analyzing and synthesizing it; compares the structural, linguistic and stylistic features of texts of the social, social, cultural, educational and cognitive areas of communication; evaluates the text in terms of relevance and value of information, distinguishing between fact and opinion;

3) writing:

The student creates texts of different types, genres and styles, synthesizing heard and read information; creates texts (including printed), using various forms of information representation; writes his/her own text of a problematic nature (article, essay, writing, etc.), demonstrating the ability to analyze and evaluate the proposed information; compares structural-compositional, language features of texts of different types, genres and styles; corrects and edits texts using reference material; makes a simple, complex and detailed plan for a specific topic; observes grammatical. spelling, punctuation and stylistic norms.

Kazakh Language and Literature (for classes with non-Kazakh language of instruction) / Russian language and literature (for classes with non-Russian language of instruction):

1) listening:

the student understands the main content of the text, as well as functionally significant semantic information reflecting the speaker's intentions; extracts special information from the text; understands the meaning of terms and key text units in the

social, cultural, and educational fields; evaluates the content of the text, distinguishing between fact and opinion; identifies the main problems in the texts of different styles and genres; analyzes the text, revealing the connections and relationships between facts and phenomena, the events referred to in the text; predicts the content of statements pursuant to illustrations/keywords/title / beginning;

2) speaking:

the student maintains a dialogue within the framework of the topics studied, reasoning, expressing his/her own opinion and evaluating events, opinions and problems; builds a monologue, using the techniques of attracting attention and considering the target audience; analyzes and synthesizes information on the proposed topic; evaluates statements on a specific topic; uses lexical and grammatical means of language, observing speech norms;

3) reading:

the student understands the content of continuous and non-continuous texts of a certain complexity within the framework of the studied topics; identifies features of texts of different types, styles and genres; recognizes the explicit and hidden meaning of words, the meaning of means of artistic representation; extracts the necessary information from various sources, determining its relevance, reliability, usefulness and value; analyzes and synthesizes the content of the text, formulating reasonable conclusions and critical assessment of the read; compares texts, determining the theme, idea, problematics of a work of art, the position of the author; uses certain reading strategies;

4) writing:

the student writes texts of different types, genres and styles of speech based on what is heard and read, using a variety of language tools; writes problematic texts, extracting information from various sources; creates graphs, tables, diagrams based on solid texts; makes a simple, complex and detailed plan for a specific topic; compares, analyzes and evaluates the content of texts of different types and styles; observes grammatical, spelling and punctuation norms; uses trails and artistic and visual language tools.

Kazakh Literature / Russian Literature / Uygur Literature / Uzbek Literature / Tajik Literature.

Upon completion of basic secondary education, a student shall:

1) know the main stages of the development of literature; the content of works of different genres, features of the reflection of the life, traditions of the people in folklore ; literary terms and literary trends, genera and genres, the imaginative nature of works of art, learn by heart poetic texts and fragments of prose texts (optional), quotations from the studied works;

2) understand the significance of the national artistic heritage in world culture; the role of literature as one of the most important achievements of culture, the value of fiction in human life; literary terms and literary trends, genus and genres, topic, idea, the subject matter of the work, the position of the author in the work, the imaginative nature of works of art; openly expressed and hidden meanings of works;

3) apply acquired knowledge and skills in the preparation of a message, report, essay, literary interview; the dialogue of literary heroes (based on what they read) to create a written story - the characteristics of one of the heroes or a group of heroes (group characteristics), two heroes (comparative characteristics), when preparing a short written review of a self-read book; when creating your own analytical text, in the process of creating your own interpretation of the studied text with the involvement of information and communication technologies; to determine the actual range of reading and evaluation of works of art, participation in debates or public speaking; to find the necessary information; special terms and concepts for the analysis of the studied works ; gained knowledge when discussing current issues; acquired skills, ways of creative activity for self-expression, participation in cultural events;

4) analyzes works of a different genre nature, articulating their attitude to what they read; the theme, idea and features of the composition, plot of the work, language features of the work, key episodes, actions and actions of the characters; features of the style of the writer; compares them with works of world literature and works of other types of art;

5) synthesize the knowledge and skills obtained to select a path for analyzing a work that is adequate to the genre-generic nature of the artistic text; to compare facts, details with historical facts; creating different types of plan; to create written texts using various resources; correlate the value component of the works with the values of the Kazakh and other peoples;

6) evaluate the works under study from the point of view of compositional, stylistic unity, linguistic design and the effectiveness of achieving the stated communicative tasks; interpretation of a literary text created by other art forms.

Foreign Language:

listening:

the student understands the main content of the texts in the framework of the studied topics; determines the main facts, omitting minor; understands detailed information within the framework of the studied topics; draws up complex questions based on what he/she heard in order to obtain additional information; extracts the meaning of what is heard, based on the context help; distinguishes specific information within the studied topics; recognizes inconsistencies in the arguments given in the framework of the studied topics;

2) speaking:

the student transmits the main content of the text in the framework of the studied topics, building a logical course of events; uses formal and informal styles; presents information within the framework of the studied topics; predicts the possible content of the text by title, illustration, key words, excerpts from the text within the studied topics ; asks simple and complex questions for specific information; interacts with peers (as a couple, group) to perform training tasks; compares and contrasts texts within the studied themes; gives an opinion, justifying his point of view;

3) reading:

the student determines the main content of texts of different styles and genres within the framework of the studied topics; distinguishes detailed information in the text of different styles and genres within the framework of the studied topics; uses various information resources (reference materials, dictionaries, the Internet, etc.); recognizes specific information in the text and different styles, genres of texts within the framework of the topics studied; predicts the text content by title, text fragment, illustrations, keywords; determines the attitude or opinion of the author; evaluates information from various texts;

4) writing:

the student fills the tables, charts, diagrams, questionnaires, forms; makes a plan, writes, edits and corrects the text within the framework of the studied topics; makes extracts from the text in accordance with communicative tasks; describes real and / or fictional events from the past, present, and future, based on knowledge from previously studied topics; connects and harmonizes sentences and paragraphs among themselves in the text within the framework of the topics studied; correctly and properly puts punctuation marks in the text within the framework of the topics studied; creates texts of various styles and genres, following the relevant rules and format.

71. The expected results of training in the educational field "Mathematics and Computer Science".

Upon completion of basic secondary education, a student shall:

1) know the basic concepts of elementary mathematics, statistics and probability theory; classification of numbers; calculation operations for real numbers; basic formulas of elementary mathematics; the concept of a function, its properties and a graph; methods for solving algebraic equations, inequalities and their systems; polygon classifications; properties and signs of the main types of flat figures; rules of combinatorics; classical, statistical and geometric definitions of the probability of an event; methods of collecting and processing statistical data;

an algorithm for using a mathematical model to solve an applied problem; bases of scientific ideas about information, information processes, technologies and models; the role of information technology in modern society and the life of every person; basics of building computer systems and networks, as well as their interaction with software;

methods of solving problems through modeling, algorithmization and programming; rules for proper and safe operation with various digital devices;

2) understands the academic language of mathematics; way to write numbers in standard form; the relationship between the roots and the coefficients of the square trinomial the importance of using mathematical models to solve various applied problems; the meaning of such mathematical categories as the axiom and theorem; principles of geometric constructions and measurements on the plane; the meaning of the numerical characteristics of the sample and the general population; the role of graphical representation of statistical data in the conduct of quantitative and qualitative analysis; the interaction of the main devices of the computer; the need for software to work with the system; computer use of binary code to represent all data and instructions; the relationship between units of measurement information; economic, legal and ethical aspects of the use of information and information and communication technology tools;

3) applies mathematical knowledge to solve practical problems; algorithms for solving mathematical problems; mathematical terminology in appropriate contexts; computational operations on real numbers; accurate and approximate calculations in oral and written form; properties of flat figures in solving geometric problems; mathematical models for solving various applied problems; computing equipment and software for solving mathematical problems;

modern software of information and communication technologies for the collection, presentation, processing, storage and transmission of the necessary information; computer models of objects and processes (physical, biological, economic and informational) for their visualization and research; the basic rules for writing algorithms and the possibilities of programming languages for solving practical problems; local and global network capabilities to collaborate on creating, viewing and editing documents;

4) analyzes patterns and compiles mathematical models based on them; statistical data using various forms of their presentation; transformations performed on rational and irrational expressions; solutions of equations, inequalities and their systems; mutual arrangement of geometric shapes; properties of functions; conditions of text problems for the compilation of mathematical models; data presented in the form of graphs, charts and various charts; computer models for the study of real and imaginary objects and processes; various ways to solve the problem on a computer to determine the most rational; programming code in the programming language to identify existing errors and their subsequent correction;

5) synthesizes algorithms for solving mathematical problems; conclusions on the results of processing and analyzing statistical data; evidence based arguments with the help of axioms and theorems; methods for solving construction problems using

geometric transformations; information in the form of texts, tables, databases, graphics and multimedia for the presentation and implementation of their ideas; models of objects and processes (physical, biological, economic) in spreadsheets, 3D-editors, as well as programming environments;

6) evaluate the results of calculations in the context of the task; location of the graph of the function depending on the values of the specified parameters; approximate values of quantities and their recording in a standard form; the absolute and relative frequency of the event with an increase in the number of experiments performed; the quality, importance, usefulness and effectiveness of the information; selection of computer configuration and software, depending on the needs of the user; computer model for compliance with real objects; algorithm efficiency and results of its execution; negative impact of information and communication technology on human health.

72. Expected learning outcomes in the field of natural sciences.

Upon completion of basic secondary education, a student shall:

1) know the initial geographical, biological, physical and chemical concepts; the role of the natural sciences in modern life; the essence of the basic biological, physical, chemical laws and theories; the contribution of outstanding scientists to the formation and development of the natural sciences; energy sources, its types and common areas of their application, safety regulations during experimental and practical work; units of measurement of physical and chemical quantities; concepts, formulas, laws and physical constants of the following sections: mechanics (kinematics, dynamics, statics, conservation laws), thermal physics (molecular physics and thermodynamics), electricity and magnetism (electrostatics, direct and alternating electric current, magnetic field, electromagnetic induction), optics (geometric and wave), elements of quantum physics, atomic physics, astronomy; atomic-molecular teaching, the structure of the atom and the properties of elements; chemical symbolism; classification of substances; biological, chemical, and physical phenomena; types of chemical bonds and the structure of the substance; types, signs and patterns of chemical reactions; the most important classes of inorganic and organic compounds and their properties; theory of electrolytic dissociation; periodic law and the structure of the periodic table of chemical elements; the most important branches of the chemical and metallurgical industry of Kazakhstan; fundamentals of microbiology, molecular, cellular biology; components of the internal environment and the system of organs of the plant and animal organism; main groups of plants and animals; the value of living organisms for humans and the natural complex; basics and laws of evolutionary development; breeding methods; structure of biogeocenoses and agrocenoses; the influence of environmental factors on living organisms, the impact of human activity on the environment; geographic research methods; territorial complexes; essence,

classification, features of distribution and distribution of geographical objects, processes and phenomena; features of the functioning and scope of modern geographic information systems; composition, properties, structure, patterns, the main stages of development of the geographical shell and geographic environment, geospheres; types, classification and map elements; features of the nature of continents and oceans, individual territories, countries and the Republic of Kazakhstan; the territorial and sectoral structure, conditions and factors of development of the modern world economy, individual regions, countries and the Republic of Kazakhstan; goals, forms of international economic relations; types, structure, functions, factors of location and dynamics of development of human settlements; global and regional demographic problems, features of demographic policy in certain regions, countries and the Republic of Kazakhstan; economic and political-geographical situation, the administrative-territorial division of the Republic of Kazakhstan; natural resource potential of the regions of Kazakhstan; country typology; models of economic systems; types of international relations; conservation and sustainable development measures; features of demographic policy in certain regions, countries and the Republic of Kazakhstan; economic and political-geographical situation, the administrative-territorial division of the Republic of Kazakhstan; natural resource potential of the regions of Kazakhstan; country typology; models of economic systems; types of international relations; conservation and sustainable development measures; features of demographic policy in certain regions, countries and the Republic of Kazakhstan; economic and political-geographical situation, the administrative-territorial division of the Republic of Kazakhstan; natural resource potential of the regions of Kazakhstan; country typology; models of economic systems; types of international relations; conservation and sustainable development measures;

2) understand the physical meaning of the quantities, basic terms and laws of mechanics, electricity and magnetism, optics, atomic physics, astronomy; the importance of biological, physical and chemical phenomena, processes in human life; conditions for chemical reactions; oxidation and reduction processes; distinction between classes of organic and inorganic substances; international nomenclature; IUPAC International Union of Pure and Applied Chemistry; technologies and scientific principles of the production of substances and their derivatives; the importance of microbiology in medicine, agriculture and industry; processes occurring in the cells at the level of molecules and organoids; the structure of the internal environment and the functions of the systems of organs of the plant and animal organism, the principles of classification of the main groups of plants and animals; metabolic processes; global and local environmental problems; the role of the Red Book in the conservation of biodiversity on Earth; the essence of natural and socio-economic patterns, processes and phenomena; features of the modern geographical space, territorial complexes; the



relationship of geographical objects, processes and phenomena; causes, stages, consequences, significance of processes in a geographical envelope and geographic environment; geopolitical processes, the role and spheres of influence, the nature of the interaction of subjects of geopolitics; the regional and international importance of the Baikonur spaceship site; the relationship of geographical objects, processes and phenomena; causes, stages, consequences, significance of processes in a geographical envelope and geographic environment; geopolitical processes, the role and spheres of influence, the nature of the interaction of subjects of geopolitics; the regional and international importance of the Baikonur spaceship site; the relationship of geographical objects, processes and phenomena; causes, stages, consequences, significance of processes in a geographical envelope and geographic environment; geopolitical processes, the role and spheres of influence, the nature of the interaction of subjects of geopolitics; the regional and international importance of the Baikonur spaceship site;

3) apply basic physical, chemical, biological, geographical concepts and terms to describe objects, processes and phenomena in animate and inanimate nature; safe methods of conducting experimental and research work; laws and formulas of physics, chemistry, biology, geography in solving educational and applied problems, performing practical and laboratory work; graphic methods for presenting results; International System of Units; knowledge gained to explain the conditions of physical and chemical phenomena and processes; binary nomenclature when describing various groups of organisms; methods for determining the quantitative and qualitative characteristics of the components of the geographical envelope and geographic environment; cartometry (map measuring) techniques, orientation and navigation skills ;

4) analyzes data obtained as a result of a natural science experiment; information presented in graphical and tabular form; dependence of the properties of a substance on its qualitative and quantitative composition and structure; causal relationships between properties and fields of use of substances; the value of microelements and macronutrients for the proper functioning of the human body; laws of biological processes and phenomena; structure and functions of organ systems of living organisms; problems associated with the use of transgenic technologies; processes of circulation of substances in the biogeocenosis; causal relationships between processes and phenomena occurring in the geographical envelope and geographical environment; advances in science and the use of scientific discoveries; geographic location factors; natural science, socio-economic foundations of social production; geographical and geopolitical position, features and factors of political, economic and social development of Kazakhstan, its role and place in the world;

5) synthesize collected and processed data, information for presentation in the form of a table, graph, message, report, presentation; scientific models and evidence for hypotheses, arguments, and explanations; plan for the experiment and research; knowledge of the processes occurring in animate and inanimate nature, for the systematization, classification and identification of empirical rules, principles and laws ;

6) evaluate the results of the experiment; laboratory risks; the impact of various physical and chemical processes on human life and the environment; the state of natural biogeocenoses and agrocenoses; the impact of technological principles of production on the preservation of balance between components of nature; the importance of proper use of minerals and natural resources; the degree of suitability and use of geographical features, processes and phenomena for various purposes and activities.

73. The expected results of training in the educational area "Man and Society".

Upon completion of basic secondary education, a student shall:

1) know the periodization of national and world history; main events, phenomena, processes of the history of Kazakhstan and the world from antiquity to the present day; historical figures who played an important role in national and world history; the most important achievements of national and world culture in the course of historical development; basic concepts of historical science; types of historical sources; concept and subject of law; modern legal systems; fundamental legal and social values: human rights, democracy, civil society and the rule of law, law and order; basic concepts and content of the basic branches of Kazakhstan law; sources of law; the value of values and norms based on humanism, honesty, duty to the fatherland and tolerance; basics of moral behavior, socially significant orientations, condition the attitude of man to himself/herself, to the world around him/her, to humanity as a whole; shall have an idea of positive and negative qualities, emotions and feelings of a person;

2) understand the essence of the main events, phenomena and processes that characterize the integrity and continuity of development of national and world history throughout all periods of history; characteristic features of the socio-political, economic and socio-cultural development of Kazakhstan and various countries of the world; historical conditionality of modern social processes, cultural diversity of mankind; features of the historical path of Kazakhstan, its role and place in world history; the role and place of prominent personalities in national and world history; his/her own civil and national identity in the form of self-awareness as a citizen of the Republic of Kazakhstan; the need to respect the domestic and world history, the culture, traditions, rights and freedoms of people, democratic principles of public life; the origin of the state and law, their relationship; the content of the basic concepts and categories of the basic branches of Kazakhstan law; the content of the rights, duties and

responsibilities of a citizen as a participant in specific legal relations; the need for legal regulation of social relations in key areas of social life; the need to respect the rights of the individual; the need for constant self-knowledge and self-development of man; the interrelationship of universal, ethnocultural and national values; responsibility for their own words and actions; its role in the family, community and society; the importance of conscious choice of future profession; the importance of mutual assistance in life; the value of life and health, the importance of the practical use of knowledge about healthy lifestyles; the content of the basic concepts and categories of the basic branches of Kazakhstan law; the content of the rights, duties and responsibilities of a citizen as a participant in specific legal relations; the need for legal regulation of social relations in key areas of social life; the need to respect the rights of the individual; the need for constant self-knowledge and self-development of man; the interrelationship of universal, ethno-cultural and national values; responsibility for their own words and actions; its role in the family, community and society; the importance of conscious choice of future profession; the importance of mutual assistance in life; the value of life and health, the importance of the practical use of knowledge about healthy lifestyles; the content of the basic concepts and categories of the basic branches of Kazakhstan law; the content of the rights, duties and responsibilities of a citizen as a participant in specific legal relations; the need for legal regulation of social relations in key areas of social life; the need to respect the rights of the individual; the need for constant self-knowledge and self-development of man; the interrelationship of universal, ethnocultural and national values; responsibility for their own words and actions; its role in the family, community and society; the importance of conscious choice of future profession; the importance of mutual assistance in life; the value of life and health, the importance of the practical use of knowledge about healthy lifestyles; the need for legal regulation of social relations in key areas of social life; the need to respect the rights of the individual; the need for constant self-knowledge and self-development of man; the interrelationship of universal, ethnocultural and national values; responsibility for their own words and actions; its role in the family, community and society; the importance of conscious choice of future profession; the importance of mutual assistance in life; the value of life and health, the importance of the practical use of knowledge about healthy lifestyles; the need for legal regulation of social relations in key areas of social life; the need to respect the rights of the individual; the need for constant self-knowledge and self-development of man; the interrelationship of universal, ethnocultural and national values; responsibility for their own words and actions; its role in the family, community and society; the importance of conscious choice of future profession; the importance of mutual assistance in life; the value of life and health, the importance of the practical use of knowledge about healthy lifestyles; the need for legal regulation of social relations in key areas of social life; the need to respect the rights of the individual; the need for constant self-knowledge and self-development of man; the interrelationship of universal, ethnocultural and national values; responsibility for their own words and actions; its role in the family, community and society; the importance of conscious choice of future profession; the importance of mutual assistance in life; the value of life and health, the importance of the practical use of knowledge about healthy lifestyles; collective and community; the importance of conscious choice of

future profession; the importance of mutual assistance in life; the value of life and health, the importance of the practical use of knowledge about healthy lifestyles; collective and community; the importance of conscious choice of future profession; the importance of mutual assistance in life; the value of life and health, the importance of the practical use of knowledge about healthy lifestyles;

3) apply the skills of historical thinking: to solve life problems and problems; in determining the location of various objects, identifying changes on the historical map; when comparing historical personalities, events, phenomena, processes; in characterizing the political, socio-economic and cultural development of Kazakhstan and other countries of the world; in determining their own position in relation to the phenomena of modern life, based on their historical conditionality; when working with historical materials; legal information in practice and daily life; when choosing forms of behavior and actions that correspond to the law in typical life situations regulated by law; in determining the ways of implementing rights and freedoms, as well as the protection of violated rights; when contacting the relevant authorities and organizations for qualified legal assistance; when participating in discussions on current social and legal issues; creative approach to solving problems aimed at serving the community; for the constructive decision of various questions according to moral standards; while building friendly relations with other people and the outside world;

4) analyzes historical events, phenomena, processes in order to determine cause-effect relationships; historical development of Kazakhstan and other countries, identifying common features and peculiarities; motives and results of historical personalities; social, economic, political and cultural processes, development trends of Kazakhstan and individual states of the world through historical parallels; various types of historical sources to answer problematic questions; different points of view on the same historical events, phenomena and processes; information presented in different sign systems (text, map, table, scheme, audiovisual series); norms and mechanisms governing legal relations in society; basic rights and obligations of subjects of legal relations; simple practical situations related to legal relations in society; features of the legal status and legal responsibility of minors; legal information obtained from various sources; forms and methods of formation in people of the ability to personal self-determination, self-realization, self-control; the needs of the material and non-material plan and their commensurability with the desires and possibilities;

5) synthesize information from various sources for the classification, systematization, generalization and differentiation of the studied phenomena, objects and processes, the determination of the characteristic features of historical phenomena, processes with the identification of general laws; historical information for orientation

in modern political, socio-economic and cultural processes taking place in society; model of behavior in various practical situations, taking into account legal and moral norms for social adaptation in society;

6) evaluate historical events, processes, phenomena, personalities in the context of their influence on national and world history, their various interpretations; the authenticity of various types of historical sources; prospects of modern civilization, its problems and development difficulties, the role of modern Kazakhstan society in the world economy, politics and culture; the activities of state and legal institutions of society, their own possible contribution to their development; positive and negative phenomena in society; the significance of the rule of law and legality; their ability to be creative in addressing specific issues; their ability to cooperate in a team for a constructive solution of the tasks set in accordance with moral standards.

74. Expected learning outcomes in the educational field "Technology and Art".

Upon completion of basic secondary education, a student shall:

1) know the classification and characteristics of various styles, trends and genres of arts; visual and expressive means of art and music; history of the origin of styles and genres of arts; traditions and customs in decorative and applied arts of the Kazakh people and other nations of the world; masterpieces of world and national art and music; classification of folk and classical musical instruments; main types and properties of natural, artificial, artistic materials; basic technologies of manual, mechanical, artistic processing of individual materials; basic cooking technologies; general characteristics of the main types of electrical work; classification of electrical materials; classification of technological machines, instruments, devices and tools; operational and functional characteristics of technological machines and equipment; basics of designing, modeling and processing textiles; modern information technology and software used in the field of art; safety regulations when working with equipment and tools;

2) understand the significance and role of various types of art and technology in the life of man and society, in the protection and preservation of the environment; the value of works of musical and visual arts of the Kazakh people and other nations of the world; the relationship of styles and styles of art with a historical era; features of the transfer of creative intent by various means of art; the influence of the properties of natural and artificial materials on the functional and aesthetic quality of products; the importance of collective and group work for decision-making, the development of ideas and the creation of creative products;

3) apply the techniques and methods of creating creative projects in various forms of art, when conducting simple electrical installation work; artistic methods and techniques for transferring the features of images, objects and phenomena of the surrounding world, including using computer programs and applications; knowledge of

various properties of artistic, constructive materials in the creation and manufacture of products, as well as the works of art; basic materials processing technologies for creating prototypes of new products, including the use of information and communication technologies; various ways to promote creative products to implement their ideas in the commercial field; ways of planning and organizing your work; ways of transmitting environmental problems of the world through art;

4) analyzes creative ideas and ideas in the works of various types of art; methods, techniques and materials used in the works of artists and their own works; created prototypes of products for the purpose of their qualitative improvement; consumer potential results of creative work; the impact of socio-historical, regional, scientific, technical, cultural factors on works of art; the impact of art, technology and production on the environment and human activity;

5) synthesize creative projects for various types of art, including the use of information and communication technologies; methods and techniques of work in various techniques with the use of various materials and tools; various ideas for composing improvisations and arrangements in various styles and genres; knowledge and skills in the humanities and natural sciences to create creative works; design and design solutions for the creation of products taking into account the technological and operational properties of materials;

6) evaluate the main idea, images and ideas in the works of various types of art; artistic and aesthetic value of works of national and world art; independently / collectively executed artistic, technical works; product capabilities for functionality, ergonomics and efficiency; consumer qualities of the product of labor and service capabilities of technological operations.

75. Expected results in the educational field "Physical Training".

Upon completion of basic secondary education, a student shall:

1) know the rules and safety techniques when practicing Physical Training; rules and techniques for performing motor actions, complexes of physical exercises of various directions; methods and techniques for monitoring the current state of health during classes (according to external and internal features) and physical exercise regimes (according to heart rate);

2) understand the need to preserve and promote health in order to increase the level of efficiency; the role of exercise in the mode of the day; the influence of Physical Training on the functional state of the body systems; the need for a healthy lifestyle; levels of complexity of the performed motor actions; the need to achieve the required intensity of various physical loads at different stages of physical fitness;

3) apply motor skills in a wide range of activities to achieve physical improvement; forecasting individual and joint Physical Training classes, taking into account their own and team interests; knowledge and skills to enrich your own physical exercise

experience and the experience of others; tactics and strategies in sports games and cyclic sports specified in the curriculum; knowledge of the rules in the exercise of judging school competitions in program sports;

4) analyzes achievements and experience in physical exercises for managing future training and behavior in a team; readiness and ability to self-development and self-education based on optimization of activities; various methods of managing physical changes in the body during short-term and long-term exercises;

5) synthesize types of movements and their sequence into improved combinations of movements; knowledge and skills to maintain a healthy and safe lifestyle; knowledge and tools of critical thinking for research and problem solving within the framework of Physical Training; assimilation of the rules of individual and collective safe behavior in emergency situations that threaten the life and health of people;

6) assess their own physical abilities and the abilities of others; difficulties and risks arising from the performance of various physical exercises; the effect of exercise on various aspects of health; its potential to participate in vigorous creative activity in the selection and formation of a healthy lifestyle and participation in sports activities inside and outside the school.

The content of the course "Fundamentals of Life Safety" in grades 5-9 shall be implemented within the framework of the course "Physical Training" with an annual workload of 15 hours by teachers of Physical Training. Classes on the basics of life safety shall be mandatory and shall be held during school hours.

76. Evaluation of the educational achievements of students shall be carried out through the use of criteria for assessing students' knowledge. Evaluation criteria shall be used to measure the level of learning achievement of students.

77. Evaluation criteria shall be developed in accordance with the objectives of training for each curriculum, including taking into account the special educational needs and individual abilities of students.

78. The evaluation of the educational achievements of students shall be carried out in the form of formative and summative assessment.

79. Criteria for assessing students' knowledge shall be developed and approved by the authorized body in the field of education.

80. For students with special educational needs, conditions shall be created for their education, correction of developmental disorders and social adaptation.

## **Paragraph 2. Requirements for the level of training of students**

Paragraph 2 was valid until 01.09.2020 in accordance with subparagraph 5) of paragraph 4 of this order.

## **Chapter 5. Requirements for the duration of training**

96. The term of mastering the general education curriculum of basic secondary education shall be five years.

97. Duration of the school year - 34 school weeks.

98. Duration of vacation time in the school year shall not be less than 30 days. Vacations shall be available three times per school year - in autumn, winter and spring.

Appendix 4  
to order No. 604 of the Minister of  
Education and Science of the  
Republic of Kazakhstan  
dated October 31, 2018

## **State compulsory standard for general secondary education**

### **Chapter 1. General Provisions**

1. This state compulsory standard for general secondary education (hereinafter - the Standard) is developed in accordance with subparagraph 5-1) of Article 5 and Article 56 of the Law of the Republic of Kazakhstan dated July 27, 2007 "On Education" ( hereinafter - the Law) and determines the requirements for the content the maximum amount of study load, the level of training of students and the duration of training.

2. In the Standard, terms and definitions shall be applied in accordance with the Law. In addition to them, the following terms and their definitions shall be included:

1) assessment - the process of matching the learning outcomes achieved by the students with the expected results based on the developed criteria;

2) assessment criteria - specific measures, on the basis of which the evaluation of students' educational achievements is carried out;

3) final certification of students - a procedure carried out in order to determine the degree of their mastering the volume of academic disciplines stipulated by the state compulsory standard of the appropriate level of education;

4) values of education - benchmarks in building a system of learning objectives, based on universal values, which are the leading factor in shaping the student's personality;

5) special educational needs - the needs of children experiencing permanent or temporary difficulties in obtaining education due to health, in need of special, general educational curricula and educational programs of additional education;

6) the basic content of general secondary education - the composition, structure and volume of the content of general secondary education, subject to compulsory study in educational institutions, regardless of their type, type and form of ownership, as well as the language of instruction;



7) summative assessment - a type of assessment that is carried out at the end of a certain academic period (quarter, trimester, academic year), as well as the study of sections in accordance with the curriculum;

8) inclusive education - the creation of conditions for equal access to education for all students, taking into account special educational needs and individual capabilities;

9) the invariant component of the study load is an integral component of the standard curriculum, which defines the subjects required for study by all students in educational institutions, regardless of their type, type and form of ownership, as well as the language of instruction;

10) the variable component of the study load is an integral component of the standard curriculum, which is determined by the organization of education in accordance with the educational needs of students;

11) expected learning outcomes - a set of competencies that express what a student will know, understand, demonstrate upon completion of the learning process;

12) extracurricular activities - an integral part of the integral educational process, a form of organization of free time of students;

13) standard curriculum - a document regulating the list of academic disciplines (subjects) and determining the volume of the invariant and variable components of the academic load of the corresponding level of education;

14) formative assessment - a type of assessment, which is carried out in the course of everyday work in the classroom, is a current indicator of student performance, provides feedback between the student and the teacher and allows you to improve the educational process.

3. The application of the standard shall be aimed at:

1) improving the quality of training and education through the achievement of a system of goals for general secondary education, presented in the form of expected learning outcomes;

2) implementation of the policy of trilingual education by creating the necessary conditions for the organization of the educational process in Kazakh, Russian and foreign languages;

3) a combination of academic and practical orientation of general secondary education, involving the assimilation by students of theoretical knowledge and the development of skills to apply this knowledge to solve problems of an applied nature;

4) ensuring the gradual deepening of subject knowledge and skills, taking into account the age possibilities of students;

5) the implementation of the principle of unity of education and upbringing, based on the interconnectedness and interdependence of the values of education and the system of expected learning outcomes that define the content basis of the educational process;

6) ensuring the protection of children's health, creating favorable conditions for meeting the special educational needs of students and the need for additional educational services;

7) ensuring the equivalence of general secondary education in a variety of types and types of secondary education organizations;

8) support and development of innovative practices in educational institutions;

9) the organization of an objective assessment of the activities of educational organizations on the quality of education.

## **Chapter 2. Requirements to the content of education with a focus on learning outcomes**

### **Paragraph 1. Requirements for the updated content of general secondary education with a focus on learning outcomes**

4. General secondary education shall be aimed at instilling learners of national and universal values that are common to all levels of education and shall be designed to become a stable personal orientation of the student, motivating his/her behavior and activities.

5. The following values shall be defined as basic values in the content of general secondary education:

- 1) Kazakhstan patriotism and civil responsibility;
- 2) respect;
- 3) cooperation;
- 4) work and creativity;
- 5) openness;
- 6) lifelong education.

6. On the basis of inculcating the values of education, the following shall be developed in students:

- 1) readiness to serve the interests of Kazakhstan;
- 2) respect for and compliance with the norms of the Constitution and the laws of the Republic of Kazakhstan;
- 3) social responsibility and decision making skills;
- 4) the motivation to master the state language;
- 5) respect for the culture and traditions of the people of Kazakhstan, the cultural diversity of the world;
- 6) adherence to the ideas of spiritual harmony and tolerance;
- 7) a positive attitude towards the world and the preservation of ecological balance;
- 8) creative and critical thinking;
- 9) communication and the ability to effectively use information and communication tools and technologies;

10) motivation for learning and self-improvement throughout life.

7. The purpose of general secondary education shall be:

the creation of an educational space conducive to the provision of academic preparation of students for continuing education in the university and professional self-determination based on the development of a wide range of skills:

- 1) functional and creative application of knowledge;
- 2) critical thinking;
- 3) research;
- 4) use of information and communication technologies;
- 5) the use of various methods of communication;
- 6) the ability to work in a group and individually;
- 7) problem solving and decision making.

8. Skills of a wide range as results at the level of general secondary education shall allow students to harmoniously combine national and universal values, to show functional literacy and competitiveness in any life situation, as well as to solve educational and applied tasks.

9. The main objectives of general secondary education shall be:

1) the implementation of profile training in natural-mathematical, social and humanitarian areas based on a combination of compulsory subjects and major subjects of choice;

2) provision of academic training of students for admission to higher educational institutions based on a combination of advanced and standard levels of study of academic subjects;

3) purposeful development of spiritual and moral qualities, communication, social, research skills and abilities to solve problems on the basis of universal human values, positively directed critical and creative thinking;

4) promoting the professional self-determination of graduates in accordance with their interests and abilities;

5) promoting the formation of graduates' positive motivations for continuing education throughout their lives, readiness to regulate the process of learning and career growth in life.

10. The content of general secondary education shall be established on the basis of the integration of academic training of students for admission to organizations of higher and (or) postgraduate education and the purposeful development of students' autonomy.

11. Academic training of students shall be ensured by strengthening the fundamental nature of education aimed at mastering the scientific methods of understanding the world.

12. The content of general secondary education shall be focused on learning outcomes and shall be determined taking into account the following aspects:

1) compliance with the dynamic demands of modern society and the level of science development;

2) development of critical, creative and positive thinking;

3) strengthening the integration of the content of academic subjects on the basis of interdisciplinary and interdisciplinary approaches;

4) adherence to the principle of continuity and continuity of the content of education between the levels of basic secondary education and general secondary education;

5) maintaining a balance between academic and practical orientation of the content of education;

6) ensuring the unity of training, education and development.

13. Along with teaching compulsory school subjects, students shall be given a choice of core subjects at the advanced and standard levels of education.

14. Profile training shall be carried out on the basis of taking into account individual interests and needs of students. In this regard, a flexible system for selecting subjects at two levels of study shall be proposed. The learner, at his/her discretion, shall choose meaningful educational subjects of in-depth and standard levels of study. A greater number of hours shall be devoted to profiling subjects at the in-depth level than at standard-level study subjects. Non-core academic subjects shall be studied at the standard level.

15. The organization of the educational process at the level of general secondary education shall be focused on the implementation of the principle of unity of education, upbringing and development. When organizing the educational process, the priority role shall be given to the teaching as the leading activity of students. The teaching shall involve the use of interactive teaching methods, which are based on the organization of learning by the students themselves by taking an initiative to search, being active in discussing issues, arguing a point of view, making a constructive decision.

16. In the process of learning, education issues shall be resolved through each subject. All types of educational work shall be aimed at addressing the issues of knowledge and development of subjectively new knowledge by students, the study of national traditions and culture, awareness of human values.

17. The organization of various forms of extracurricular activities in the aggregate shall provide for the realization of spiritual and moral, civic-patriotic, artistic and aesthetic, labor and Physical Training of students.

18. Ensuring consistency in the development of skills of project and research activities of students shall be one of the basic principles of the organization of the educational process in educational institutions.

19. The content of general secondary education shall be implemented within the framework of the policy of trilingual education. The goal of trilingual education shall be to form a multilingual personality - a citizen of Kazakhstan who speaks at least three languages, who is able to successfully conduct a dialogue in various fields of activity, appreciates the culture of his/her people, understands and respects the culture of other nations.

20. Trilingual education shall be practically realized through:

- 1) the level learning of Kazakh, Russian and foreign languages;
- 2) the organization of the study of individual subjects in the Kazakh, Russian and foreign languages, regardless of the language of instruction;
- 3) the organization of extracurricular activities of students and various extracurricular activities in the Kazakh, Russian and foreign languages.

21. The practical orientation of general secondary education shall be realized through the development of educational, communication, social, research skills during the educational process and educational activities.

22. The basic content of general secondary education shall be specified by the curriculum, which is developed according to the expected learning outcomes, established taking into account the characteristics of specialized education: compulsory academic subjects and major academic subjects in natural-mathematical and social-humanitarian fields.

23. Content on compulsory academic subjects for all areas of profile training.

1) Kazakh Language, Kazakh Literature (for classes with the Kazakh language of instruction) / Russian Language, Russian Literature (for classes with the Russian language of instruction) / Mother Tongue, Native Literature (for classes with the Uighur / Uzbek / Tajik language of instruction).

The content of the subjects shall be aimed at the development of communication skills that ensure fluency in the language in various fields and situations of communication; development of speech activity and critical thinking; development of the ability to carry out information retrieval, extract and transform the necessary information. In the process of learning a language, high-level thinking skills shall be formed, such as comparing, analyzing, synthesizing, evaluating information, and applying acquired knowledge in real life situations.

The content shall be focused on the development of figurative and analytical thinking, creative imagination, reading culture and understanding of the author's position; development of oral and written speech of students; mastering the texts of works of art in the unity of form and content, basic historical and literary information and theoretical and literary concepts. In the process of studying, there shall be a deepening analysis of works of art with the involvement of literary concepts and the necessary information on the history of literature.

The study of academic subjects shall involve expanding the range of knowledge about the structure and functioning of the language in various fields and situations of communication; stylistic resources, basic standards of the literary language and speech etiquette; enrichment of vocabulary and expansion of the range of grammatical means. The skills acquired in the process of learning a language by effectively using language units at various levels shall enable students to evaluate from the point of view of normativity, correspondence to the scope and situation of communication.

The important components of the content of subjects shall be the upbringing of a spiritually developed personality, the formation of a humanistic worldview, civic consciousness, a sense of patriotism, love and respect for literature and the values of domestic and world culture;

2) Kazakh Language and Literature (for classes with non-Kazakh language of instruction) / Russian Language and Literature (for classes with non-Russian language of instruction).

The content of objects shall pursue the goals determined by the status of the Kazakh language as a state language and the status of the Russian language as a language officially used along with the Kazakh language. The study of these subjects shall promote the use of language in educational activities and everyday life, the introduction of students to the culture of the peoples of Kazakhstan, shall ensure their readiness for inter-ethnic communication.

The basis of the content of school subjects shall be the focus on mastering all types of speech activity and the basics of the culture of speech and writing, skills and abilities to use the language in various fields and situations of communication corresponding to the experience and interests.

In the process of studying language and literature, students shall master knowledge of the language as a sign system and social phenomenon, its structure and knowledge of the development of literature. The study of language and literature shall be aimed at further improving the knowledge of the norms of the literary language, enriching the vocabulary and grammatical structure of students' speech; further development of the ability to analyze and evaluate linguistic phenomena and facts and literary works;

3) Foreign Language.

The content of the subject “Foreign Language” shall be focused on the formation of a multilingual, multicultural personality; to improve communicative competence by enriching the vocabulary through the content of authentic texts of different styles, which allows for the sociocultural enrichment of the world perception and worldview in the development of foreign language communicative competence; on the development of research skills and creative approach to solving various educational problems.

The content of the subject "Foreign Language" shall provide for the development of skills to analyze, summarize, classify professionally relevant information, effectively use the language for communication in scientific and professional activities, as well as the skills of conducting personal, business correspondence, composing a resume, essay on a given topic, which together promote increased motivation to learn a foreign language. The students shall be given the opportunity to integrate the content of the subject "Foreign Language" with other academic subjects through interdisciplinary connections to develop the ability to establish a causal relationship between the facts, work with information, extracting the main and fragmentary parts from foreign sources

The development of spiritual and moral values, education of a patriotic attitude towards Motherland, people and tolerance towards people of another culture, as well as ethics of interpersonal relations in a family, school through the development of skills to use socio-cultural material in communication with peers, teacher, native speaker;

#### 4) Algebra and the Elements of Analysis, Geometry.

The content of the subjects "Algebra and Elements of Analysis" and "Geometry" shall be aimed at developing students' mathematical culture and the system of mathematical knowledge and skills necessary for successful learning at the next levels of education, as well as solving practical problems. The mathematics course shall contribute to the development of functional literacy, abstract and logical thinking, spatial imagination, as well as an understanding of the role of mathematics in shaping the general culture of a person. The content lines of the mathematics course shall be focused on the systematization and development of students' ideas about the mathematical laws of the world around them, their understanding that mathematical tools and methods shall be used to describe and study phenomena and processes in almost all fields of knowledge.

The content of academic subjects shall provide for the further development of educational, cognitive and general intellectual skills. Skills such as comparison, classification, synthesis, analysis, synthesis, abstraction, specification, shall be applied to formulate the problem, put forward and test a hypothesis in the course of understanding the mathematical laws. The content of school subjects shall be structured by the main sections of mathematics, covering topics of the school course of mathematics: "Numbers", "Algebra", "Statistics and Probability Theory", "Mathematical Modeling and Analysis", "Geometry";

#### 5) Computer Science.

The content of the course "Computer Science" shall be aimed at developing the skills to search, analyze, critically evaluate, select, organize, transmit and process information, model objects and processes; on mastering the methods and means of information technology, methods of solving problems. The academic program of this

course shall provide for the development of skills for appliance , analyzing and transforming information models of real objects and processes; algorithmic and computational thinking; development of intellectual and creative abilities by means of computer models.

The content of the subject shall provide for the consideration of the implementation of information processes through computer technology, working with computer systems and models, the study of information protection methods, system approaches to modeling, formalization and visualization using interactive computer models. The course shall contain the following content lines: "Computer Systems", "Information and Information Processes", "Algorithmization and Programming" and "Health and Safety";

6) History of Kazakhstan. The content of the subject "History of Kazakhstan" shall be aimed at the formation of in-depth knowledge of the key issues of the ethnic, political, socio-economic and cultural history of Kazakhstan.

The subject of study shall expand and deepen the students' understanding of the essence and characteristics of the cultural and historical development of Kazakhstan in different historical periods. The subject "History of Kazakhstan" shall provide for the development of historical thinking skills necessary for the analysis, classification, systematization, synthesis and assessment of events, phenomena and processes in the history of Kazakhstan. The axiological function of this academic subject shall be to build patriotism, instilling respect for national and universal values;

7) Self-knowledge.

The content of the subject "Self-knowledge" shall be aimed at uncovering the spiritual and moral potential of a person, the development of the desire for self-knowledge and self-improvement on the basis of human values; awareness of their role in the family, team, society, the need to develop high moral qualities, skills of serving the community; understanding of the relationship of physical and spiritual health, their involvement in the life of the country, city, village, school, family and responsibility for thoughts, words and deeds.

The study of the subject "Self-Knowledge" shall provide for the expansion of knowledge about the spiritual culture of mankind, the relationship of physical and spiritual health; mastering the skills of reflection, self-understanding and self-actualization; development of the ability to analyze their actions, make moral choices and make decisions in various life situations, set their own goals and outline ways to achieve them in accordance with moral norms, build relationships in the family , team, and society on a spiritual and moral basis;

8) Physical Education.

The content of the subject "Physical Training" shall provide: the expansion of knowledge about the patterns of physical activity, sports training, the importance of



physical training for future work, preparation for military service; increase the functional abilities of the body in accordance with the age and sex characteristics of students; improvement of technical and tactical actions and techniques in basic sports; development of competence in individual and collective forms of Physical Training, health and sports activities, the development of creative skills in the organization of outdoor activities and sports competitions; the formation of an adequate self-esteem of the individual, moral self-awareness, worldview, collectivism, development of purposefulness, confidence, endurance, composure; creating conditions for the development and formation of the Olympic reserve in various sports.

The study of the subject "Physical Training" shall allow students to apply subject knowledge, skills and abilities in everyday life; assess the need for improved motor competence and physical development; develop moral qualities and recognize the need for fair play and continuous self-development; understand the need for personal hygiene; to assess the degree of influence of physical exercises on the physical and energetic system of a person, the levels of one's own physical development and motor fitness, the functional state of the body and physical performance;

#### 9) Initial military and technological training.

The content of the subject shall ensure the formation of a conception of the fundamentals of military affairs, robotics and IT technologies, the formation of students' ideas about service in the Armed Forces of the Republic of Kazakhstan and knowledge of the basics of military affairs, knowledge of the content of the military oath and the requirements of general military regulations; promoting the development of life skills and abilities of students; preparing students for service in the Armed Forces of the Republic of Kazakhstan on the basis of their solid mastery of theoretical knowledge and practical skills; the formation of a coherent system of logically interconnected concepts, a holistic view of service in the Armed Forces of the Republic of Kazakhstan; the formation of a worldview of citizenship among young people, a belief in the need to protect the sovereignty of the Republic of Kazakhstan, conscious readiness for a responsible attitude to military service; development of healthy interest in the Armed Forces of the Republic of Kazakhstan, their traditions, features of service in the types and types of troops, the military profession.

The subject shall hold an important place in the general system of military-patriotic and moral education of students, in the development of their self-awareness, cognitive interests, communication skills, volitional qualities, primary practical skills, military skills, theoretical fundamentals of robotics, automobile driving, the use of digital photos - and video equipment. The subject shall be focused on the development of a strong-willed, decisive, physically healthy, functionally militarily literate person by familiarizing himself/herself with the history of the development of the Kazakh army and studying its current state.

24. The content of education in the academic subjects of the advanced level of education in the natural-mathematical direction.

1) Biology.

The content of the subject "Biology" shall be aimed at deepening students' knowledge of the diversity of living organisms, the evolution of the surrounding world, the laws and laws of natural phenomena; on the development of practical skills of observation, classification, systematization, comparison, analysis, evaluation of objects and information, the establishment of cause-effect relationships.

The content line of the in-depth course on the subject "Biology" shall provide for the development in students of a deeper understanding of the essence of natural biological phenomena and processes, understanding the influence of human activity on the plant and animal world, as well as human health. Understanding the characteristics of living nature, the essence of evolutionary processes shall allow students to assess the ecological situation and understand the need for careful attitude to the living world. The basis for structuring the content of the subject "Biology" at the level of general secondary education shall consist of the leading system-forming ideas: the diversity, structure and functions of living organisms; reproduction, heredity, variability and evolutionary development; organisms and the environment; applied integrated science;

2) Chemistry.

The content of the chemistry course shall be aimed at deepening knowledge of the significance of the diversity of chemicals and their transformations, the development of the careful use of natural resources; Expansion of students' understanding of the diversity of natural substances on the basis of deepening knowledge of the chemistry of natural phenomena, developing a wide range of experimental and practical skills, using critical thinking and a creative approach to the studied processes. The subject of study shall reveal the possibilities of creating new substances, teach us to evaluate the ecological situation of the environment on the basis of the available data and thus provides a deep connection with life.

The content line of the in-depth course shall provide students with an understanding of the essence of the chemical phenomena and processes occurring around them and encourages them to maintain a healthy lifestyle; provide the ability to use chemical knowledge to select high-quality products and tools in daily practice, to improve the quality of everyday life. The content of general secondary education in the subject "Chemistry" shall be structured in the following sections: "Particles and Their Structure", "Patterns of Chemical Reactions", "Energetics in Chemistry", "Chemistry Around Us", "Chemistry and Life";

3) Physics.

The advanced course of physics shall be aimed at the development of students' ideas about physics as a science of nature, methods and methodology of scientific

knowledge, the role and relationship of theory and experiment in the process of knowledge.

The content of the subject shall be aimed at deepening students' knowledge about the laws of mechanics, thermal physics, electricity and magnetism, optics and atomic physics as general laws of nature. On the basis of scientific methods of knowledge, ideas about the physical picture of the world shall be expanded and the scientific worldview of students shall be formed. The course of physics shall involve the development of skills for observing natural phenomena, describing and summarizing the results, and using measuring instruments to study physical phenomena. In the content of the in-depth course, it shall be possible to plan and conduct experiments aimed at identifying empirical dependence based on the collection and analysis of experimental results.

Advanced general education training in physics shall involve the use of knowledge gained to explain the causes of various natural phenomena and processes, the principles of operation of the most important technical devices, hypotheses and model building;

#### 4) Geography.

An advanced course of geography shall be aimed at enriching knowledge about the patterns of development of nature, population, geopolitics and economics, the formation of a comprehensive knowledge of the world necessary for an objective knowledge of the features of natural, social, economic and political processes.

The content of the school subject shall involve the development of geographical thinking, a sense of personal responsibility for the current and future state of the environment and humanity, which together contribute to the formation of value orientations among students.

The content of geographical education shall be aimed at the formation of ideas about the spatial diversity of the modern world, about its common and regional features and dynamics; analysis and synthesis of spatial-temporal patterns of interaction and interrelations of society and nature, the development of an understanding of cause-effect relationships and spatial-temporal patterns between geographical phenomena and processes; the formation and development of skills to use geographic knowledge to explain and evaluate a variety of natural, socio-economic and environmental phenomena and processes, the interpretation and use of geographic information in everyday practice.

25. The content of education in the academic subjects of the standard level of natural-mathematical direction shall be as follows:

1) Graphics and Design. The subject "Graphics and Design" shall be aimed at studying the fundamentals of the theory of graphic images and mastering the methods of geometrical-graphic modeling, developing the project creative activity of students,

forming their graphic culture. The entire set of content of the subject shall be determined by the following educational lines: "Graphic Methods and Means of Visualizing Information", "Basic Types of Images and Their Construction. Image Transformation", "Shaping and Design. Form Conversion", "Elements of Technical, Architectural and Informational Graphics", "Design. Project Graphics. Creative Tasks";

### 2) World History.

The content of the subject "World History" shall be aimed at the formation of knowledge on the key problems of ethnogenesis, political genesis and cultural genesis of human civilization. This course shall be focused on deepening students' understanding of the essence of the world cultural and historical process in its unity and diversity. The subject "World History" shall provide for the development of the skills of historical thinking necessary for analyzing, classifying, systematizing, generalizing and evaluating events, phenomena and processes of world history. The axiological goal of this school subject shall be to instill in students a respect for national and universal values;

### 3) Fundamentals of Law.

The content of the subject "Fundamentals of Law" shall be aimed at the formation of legal literacy, understanding of the ideals and values of a democratic legal society. This course shall deepen the understanding of the essence and features of various legal areas by students. The subject "Fundamentals of Law" shall envisage the development of the skills of legal thinking necessary for analyzing, classifying, systematizing, generalizing and evaluating processes on the basis of legal norms, laws and regulatory legal acts. The axiological function of this academic subject shall be based on the formation of legal literacy, values of legal consciousness.

26. The content of education in school subjects in-depth level of education in the social and humanitarian areas.

### 1) World History.

The content of the subject "World History" shall be aimed at the formation of in-depth knowledge of the key problems of ethnogenesis, political genesis and cultural genesis of human civilization. This course shall be focused on deepening students' understanding of the essence of the world cultural and historical process in its unity and diversity. The advanced course of the academic subject "World History" shall provide for the development of the skills of historical thinking necessary for analyzing, classifying, systematizing, summarizing and evaluating events, phenomena and processes of world history. The axiological goal of this school subject shall be to instill in students respect for national and universal values;

### 2) Geography.

The content of the subject "Geography" shall be aimed at forming the geographical picture of the world as a dynamically developing system of fundamental geographical

laws and objective laws. The content shall be constructed on the basis of a regional geographic approach, which makes it possible to understand modern geographical features and regional characteristics. The course of geography shall be aimed at shaping the students' scientific outlook on the basis of the understanding of the inseparability of the unity of nature and society, the role of geography in harmonizing the relationship between man and nature.

This course shall involve the development of an understanding of the interaction of nature and society based on the study of contemporary global problems of mankind and ways to solve them; awareness of the importance of environmental protection and rational environmental management, geographic approaches to the problem of sustainable development in Kazakhstan and the world. The content line of the subject "Geography" shall include knowledge of the spatial-temporal patterns and features of the functioning and development of geographical objects, processes and phenomena, skills of the functional application of geographical knowledge to explain and evaluate natural, socio-economic and geopolitical phenomena and processes;

### 3) Fundamentals of Law.

The content of the school subject "Fundamentals of Law" shall be aimed at the formation of legal literacy, understanding of the ideals and values of a democratic legal society. This course shall deepen the understanding of the essence and features of various legal areas by students. The subject "Fundamentals of Law" shall provide for the development of the skills of legal thinking necessary for the analysis, classification, systematization, synthesis and evaluation of processes based on legal norms, laws and regulatory legal acts. The axiological function of this academic subject shall be based on the formation of legal literacy, values of legal consciousness;

### 4) Foreign Language.

The subject "Foreign Language" shall be aimed at developing language skills of students in four types of speech activity (listening, speaking, reading, writing).

Upon completion of general secondary education, students shall reach the B1 language level (intermediate - B1.2) in accordance with the Common European Framework of Reference for Languages (Common European Framework of Reference, CEFR). This course shall increase students' confidence when communicating in various life situations, provide access to higher education not only in Kazakhstan, but also abroad, and shall expand access to authentic texts of literary works in the original language.

This academic subject shall be aimed at the formation of intercultural and communicative competences, a positive attitude to a different language and culture, raising the general culture, broadening the outlook and knowledge about the country of the language being studied, developing linguistic abilities and language guesswork, culture of verbal behavior, interest in learning a foreign language, mastering the main

characteristics of a secondary linguistic personality, capable and ready for independent foreign language communication.

27. The content of education in the academic subjects of the standard level of study in the social and humanitarian field.

1) Physics.

The subject of study shall be aimed at developing students' understanding of physics as a science of nature, methods and methodology of scientific knowledge, the role and relationship of theory and experiment in the process of knowledge.

The content of the subject shall be aimed at expanding the understanding of the physical picture of the world and the formation of the scientific worldview of students. The course of physics shall involve the development of skills for observing natural phenomena, describing and summarizing the results, and using measuring instruments to study physical phenomena. General education training of students in physics shall involve the use of knowledge gained to explain the causes of various natural phenomena and processes, the principles of operation of the most important technical devices;

2) Chemistry.

The content of the course of chemistry shall be aimed at the development of knowledge about the significance of the diversity of chemicals and their transformations, the development of the careful use of natural resources; Expansion of students' understanding of the diversity of natural substances based on the deepening of knowledge about the chemistry of natural phenomena, the development of practical skills, the use of critical thinking and a creative approach to the studied processes. The subject shall teach us to assess the environmental situation of the environment on the basis of available data and thereby provides a link with life.

The content line of the subject shall provide students with an understanding of the essence of chemical phenomena and processes occurring around them and encourages them to maintain a healthy lifestyle; shall provide the ability to use chemical knowledge to select high-quality products and tools in daily practice, to improve the quality of everyday life activities;

3) Biology.

The content of the subject "Biology" shall be aimed at developing students' knowledge of the diversity of living organisms, the evolution of the surrounding world, the laws and objective laws of natural phenomena; on the development of practical skills of observation, classification, systematization, comparison, analysis, evaluation of objects and information, the establishment of cause-effect relationships.

The content line of the subject "Biology" shall provide for the development of students' understanding of the essence of natural biological phenomena and processes, understanding the impact of human activity on the plant and animal world, as well as

human health. Understanding the characteristics of living nature, the essence of evolutionary processes shall allow students to assess the ecological situation and understand the need for careful attitude to the living world. The basis for structuring the content of the subject "Biology" at the level of general secondary education shall consist of the leading system-forming ideas: the diversity, structure and functions of living organisms; reproduction, heredity, variability and evolutionary development; organisms and the environment; applied integrated science.

28. Content of education in the academic subjects of the standard level of education in natural-mathematical and social and humanitarian areas.

1) Fundamentals of Entrepreneurship and Business. The subject "Fundamentals of Entrepreneurship and Business" shall be aimed at studying the basic concepts and laws of the sphere of entrepreneurship, taking into account Kazakhstani and international practice, shall have a practice-oriented learning model that contributes to the formation of entrepreneurial thinking and developing students' skills of the 21st century.

This subject shall be developed for schools of the Republic of Kazakhstan in accordance with the message of the President of the Republic of Kazakhstan "Third Modernization of Kazakhstan: Global Competitiveness" in the context of one of the declared priorities - a radical improvement and expansion of the business environment through the implementation of the Program of productive employment and mass business development. The content line of the academic subject shall represent a completely new course integrating material on Entrepreneurship, Business using coaching and training elements.

The subject shall be aimed at developing students' business thinking and obtaining basic knowledge of the fundamentals of entrepreneurship, business and economics; instilling responsibility for their choices and the formation of entrepreneurial thinking, an active life position; creating a practical base of skills for future independent activities in the current market conditions.

29. The organization of education shall carry out educational activities in accordance with the license obtained and throughout the entire period of its validity it shall comply with the qualification requirements for educational activities and the list of documents confirming compliance with them, approved by order № 391 of the Minister of Education and Science of the Republic of Kazakhstan dated June 17, 2015 (registered with the Register of Regulatory Legal Acts under № 11716).

## **Paragraph 2. Requirements for the content of education with a focus on learning outcomes**

Paragraph 2 was valid until 01.09.2020 in accordance with subparagraph 5) of paragraph 4 of this order.

## **Chapter 3. Requirements for the maximum amount of study load of students**

## **Paragraph 1. Requirements for the maximum volume of academic load of students on the updated content of general secondary education**

48. The maximum amount of weekly study load of students at the level of general secondary education in each class shall not be more than 39 hours per week.

49. The total volume of the study load of students, constituting the invariant and variable components, as well as the weekly and annual academic load of classes shall be established by the standard curriculum.

50. The weekly study load shall include all types of study work defined by a standard curriculum (invariant and variable components). The curricula of special (correctional) educational organizations shall provide for a mandatory correction component, taking into account the type of developmental disorder. The invariant, correctional and variable components in the curricula of special (correctional) educational organizations shall be established taking into account the special educational needs of students.

51. The division of the class into two groups shall be allowed in urban educational institutions when the class is filled with 24 or more students, and in rural ones – with 20 or more students for such subjects as:

- 1) Kazakh Language and Literature - in classes with non-Kazakh language of instruction;
- 2) Russian Language and Literature - in classes with the non-Russian language of instruction;
- 3) Foreign Language;
- 4) Artwork;
- 5) Computer Studies;
- 6) Physical Training.

**Footnote. Paragraph 51 is as amended by order of the Minister of Education and Science of the Republic of Kazakhstan dated 05.05.2020 No. 182 (shall be enforced upon expiry of ten calendar days after the day of its first official publication).**

51.1. When conducting lessons on the subjects of the invariant component, except for the subjects specified in paragraph 51, the division of a class into groups shall be permitted in urban and rural educational organisations and in small schools regardless of the number of students.

**Footnote. The rules were supplemented with clause 51.1 in accordance with the order of the Minister of Education and Science of the Republic of Kazakhstan dated 05.05.2020 No. 182 (shall be enforced upon expiry of ten calendar days after the day of its first official publication).**

## **Paragraph 2. Requirements for the maximum amount of study load of students**



Paragraph 2 was valid until 01.09.2020 in accordance with subparagraph 5) of paragraph 4 of this order.

#### **Chapter 4. Requirements for the Level of Training of Students**

##### **Paragraph 1. Requirements for the level of training of students on the updated content of general secondary education**

66. Standard academic programs for general secondary education shall be developed on the basis of differentiation, integration, and vocational orientation of the content of education with the introduction of specialized education in natural-mathematical and social-humanitarian areas.

67. The level of training of students, including students with special educational needs, shall be determined through the expected learning outcomes, which are designed taking into account the direction of specialized training: compulsory subjects and major subjects of natural-mathematical and social-humanitarian directions.

68. The expected learning outcomes in compulsory school subjects shall serve as the basis for determining the basic content of general secondary education.

69. The compulsory school subjects shall include: "Kazakh Language" and "Kazakh Literature" (for classes with the Kazakh language of instruction), "Russian Language" and "Russian Literature" (for classes with the Russian language of instruction), "Mother Tongue", "Native Literature" (for classes with Uigur / Uzbek / Tajik language of instruction), "Kazakh Language and Literature" (for classes with non-Kazakh language of instruction), "Russian Language and Literature" (for classes with non-Russian language of instruction), "Foreign Language", "Algebra and the Elements of Analysis", "Geometry", "Computer Science", "History of Kazakhstan", "Self Knowledge", "Physical Training", "Basic Military Training and Technology."

70. The expected learning outcomes in the main academic subjects of each direction shall be presented in accordance with the standard and in-depth levels of education and shall serve as the basis for determining the content of academic subjects taking into account the specific features of the teaching profile.

71. The subjects of the advanced level of education in the natural-mathematical direction shall be: "Biology", "Chemistry", "Physics", "Geography". In this area of profile education, standard-level academic subjects shall include: "World History", "Fundamentals of Law", "Fundamentals of Entrepreneurship and Business", "Graphics and Design".

72. The study subjects of the advanced level of study in the social and humanitarian field shall include: "Foreign Language", "World History", "Geography", "

Fundamentals of Law”. In this area of profile education, standard-level academic subjects shall include: “Physics”, “Chemistry”, “Biology”, “Basics of Entrepreneurship and Business”.

73. In the curricula of general secondary education, the expected learning outcomes shall be concretized for the purpose of learning by sections of each academic subject.

74. The system of expected learning outcomes shall create an opportunity for building individual trajectories for the development of students, including students with special educational needs, and gradual advancement of them towards the achievement of long-term educational goals at the level of general secondary education

75. Expected learning outcomes at the completion of general secondary education in compulsory subjects. Kazakh Language (for classes with Kazakh language of instruction) / Russian Language (for classes with Russian language of instruction):

1) listening and speaking:

the student understands texts related to different spheres of communication and styles, analyzing openly and covertly expressed forms of speech behavior, evaluation; achieves various goals of communication in the situation of prepared and unprepared monological and dialogical communication, including public communication; implements the tactics of speech behavior, seeking to influence the listener; analyzes and critically evaluates information from the text heard, expressing their point of view; predicts the content of the text; complies with the structure and norms of the use of linguistic units, taking into account their stylistic differentiation;

2) reading:

the student understands and interprets the content of texts of various types, styles and genres, including scientific and technical subjects; recognizes the hidden meaning of the text and the meaning of the means of artistic representation introduced into the text; reveals the language, composition and genre features of complex texts; uses different reading strategies depending on the tasks facing the reader; performs information retrieval, extracts and converts the necessary information; compares compositional, linguistic, genre and stylistic features of texts of various genres and styles; critically evaluates the content of the problematic text, drawing conclusions and proposing solutions;

3) writing:

the student creates texts of different types, genres and styles, incl. impacting character; creates continuous and non-continuous texts using the techniques of folding and unfolding information; writes texts of a creative, academic nature, essay on global issues, arguing his/her opinion and using research skills; synthesizes information

obtained from various written or oral sources, and presents it in the form of a clearly reasoned coherent message; corrects and edits texts; makes different types of plans; observes grammatical, spelling, punctuation and stylistic norms.

Kazakh Literature (for classes with the Kazakh language of instruction) / Russian Literature (for classes with the Russian language of instruction):

1) knows the basic laws of the historical and literary process; memorizes poetic texts and fragments of prose texts (optional); historical and literary information and theoretical and literary concepts in the framework of the topics studied; historical and cultural context of the studied works and the basic facts of the life and creative path of their authors;

2) understands the spiritual, moral and aesthetic value of literature; communication of literature with history, art; a work of art in the unity of form and content; theme, idea, problematics of the work, position of the author in the work; the imaginative nature and hidden meaning of artistic works; nationally determined differences and similarities between works of Russian, Kazakh and world literature;

3) applies artistic and imaginative means and stylistic techniques in oral or written statements on a literary theme, when creating their own analytical text, interpreting the text studied, in debates, public speaking, expressing active citizenship and showing spiritual and moral qualities; conceptual language of literary criticism when analyzing the content of works of art;

4) analyzes various literary works and their critical and artistic interpretations; features of the plot, composition, the role of graphic expressive means, key episodes, actions and actions of the characters, especially the style of the writer; ideas about the moral ideal of the Kazakh and other peoples in works of art and folklore;

5) synthesizes written texts using various resources for generalizing artistic works, comparing the content of works with historical facts; reasoned judgment on the problem of the artwork, the spiritual and moral content of the content of the work;

6) evaluates works from the point of view of the relevance of the content and its significance for the formation of the spiritual and moral qualities of a person; oral and written statements from the point of view of compositional, stylistic unity and language design; interpretations of a work of art created by other types of art; works of art to determine the actual reading circle.

Native Language, Native Literature (for classes with the Uighur / Uzbek / Tajik language of instruction):

1) listening and speaking:

The student understands texts related to different areas of communication and styles, analyzing openly and covertly expressed forms of speech behavior, evaluation; achieves various goals of communication in the situation of prepared and unprepared monological and dialogical communication, including public communication;

implements the tactics of speech behavior, seeking to influence the listener; analyzes and critically evaluates information from the text heard, expressing their point of view; predicts the content of the text; complies with the structure and norms of the use of linguistic units, taking into account their stylistic differentiation;

2) reading:

the student understands and interprets the content of texts of various types, styles and genres, including scientific and technical subjects; recognizes the hidden meaning of the text and the meaning of the means of artistic representation introduced into the text; reveals the language, composition and genre features of complex texts; uses different reading strategies depending on the tasks facing the reader; performs information retrieval, extracts and converts the necessary information; compares compositional, linguistic, genre and stylistic features of texts of various genres and styles; critically evaluates the content of the problematic text, drawing conclusions and proposing solutions;

3) writing:

the student creates texts of different types, genres and styles, including those of impacting character; creates continuous and non-continuous texts using the techniques of folding and unfolding information; writes texts of a creative, academic nature, essay on global issues, arguing his/her opinion and using research skills; synthesizes information obtained from various written or oral sources, and presents it in the form of a clearly reasoned coherent message; corrects and edits texts; makes different types of plans; abides by grammatical, spelling, punctuation and stylistic norms;

4) knows the main trends in the development of literature, its connection with the history of the development of society; biographical information of prominent literary figures, the main stages in the development of world literature; main theoretical literary concepts; the content of works intended for detailed and reviewing, and reproduces their specific content (main characters, main storylines and events);

5) understands the place and role of works in the historical, cultural and literary processes; national values reflected in fiction; the process of the functioning of literature in its historical development; the ideological meaning of the works and the ways of its realization, the artistic structure of the work and the means used by the author; the meaning of the structural elements of the work (plot and composition, the ambiguity of artistic detail, its connection with the problematics of the text, figurative and expressive means of artistic speech, etc.); author's intention, the attitude of the writer to the heroes and events, the author's position; mood, which is imbued with the product;

6) applies acquired knowledge and skills when preparing an oral or written statement on a literary topic, when creating their own text of an analytical nature, interpreting the text studied; to determine the actual range of reading and evaluation of

works of art in terms of ideological and thematic originality; in debates, public speeches, expressing an active civic stand and showing spiritual and moral qualities; for independent analysis of works of art;

7) analyzes a literary work as an artistic whole, conceptually interpreting it and interpreting the content; works of different genre-clan nature, revealing a universal, concrete historical and actual view of the reflected epoch; the problems inherent in the work of the author, and reflects on them;

8) synthesizes the content of works to create annotations, reviews; information from various sources, including from the Internet, to create creative works, summarizing their own ideas and extracted information; approaches to identifying the spiritual and moral content of the content of works for its correlation with the values of the Kazakh and other nations; methods of analysis of the work, adequate genre-generic nature of the artistic text;

9) assesses the artistic merit of the works; originality of national literature and its significance in the context of world culture; product in terms of the relevance of the content and its value for the formation of spiritual and moral qualities of a person; verbal and written statements from the point of view of compositional, stylistic unity, linguistic formulation, the effectiveness of achieving the stated communicative tasks; interpretation of a literary text created by other art forms.

Kazakh Language and Literature (for classes with non-Kazakh language of instruction) / Russian Language and Literature (for classes with non-Russian language of instruction):

1) listening:

the student fully understands the content of texts in various spheres of communication, communicative intentions, as well as social and emotional-expressive features of the speaker's speech; perceives information at the level of critical understanding; evaluates the listened text from the point of view of its expressiveness, image-creativity;

2) speaking:

the student effectively uses a variety of language tools in accordance with the communicative attitude, creating a reasoned monologue or dialogical statement; talks on the subject of works of art, expresses his attitude to the heroes of the works and their actions; critically evaluates various sayings; observes the norms of language, speech behavior and etiquette; predicts the cause and effect of the problem; synthesizes ideas related to the socio-economic, spiritual, moral, patriotic, cultural and historical development of society, offering possible solutions to problems;

3) reading:

the student understands in detail the content of continuous and non-continuous texts, revealing a hidden meaning; determines the meaning of unfamiliar words from

the context; identifies features of academic texts in the framework of the topics studied ; extracts information from different sources; compares works of literature with their representation in other types of art, analyzing ideas about the moral ideal of the Kazakh and other nations in works of art and folklore; uses different reading strategies depending on the tasks;

4) writing:

the student creates texts of different types and styles in accordance with the theme, purpose, problems and situation of communication, observing grammatical, spelling, punctuation and stylistic norms; creates continuous and non-continuous texts of various subjects on the basis of research and synthesis of the obtained information; makes various kinds of plans for texts; writes creative works on works of fiction, assessing the problems of cultural and linguistic diversity, patriotism and the spiritual and moral development of the individual; uses artistic trails and stylistic techniques for more accurate expression of thoughts and feelings.

Foreign Language:

1) listening:

the student understands the main content of authentic texts of various genres, dialogues on familiar and partially familiar topics; retrieves the most functionally meaningful information, including detailed and specific, for filling in forms, tables, charts; understands the meaning of terms and key units of texts from various educational areas, as well as other areas of communication; distinguishes between fact and opinion; extracts and compares inconsistencies in the texts of the average volume of different genres and styles within the framework of the studied themes, guesses the meaning of unfamiliar words by context;

2) speaking:

the student engages in dialogue in situations of formal and informal daily communication; correctly draws up his/her own statements using the lexical and grammatical means of the language; expresses the emotional-evaluative attitude to the surrounding reality, realizing the pre-proposed tactics of verbal communication; analyzes and compares texts, arguing their point of view; reason, giving an assessment of events, opinions and problems; draws conclusions and offers its own solutions to the given problem;

3) reading:

the student understands the main content of journalistic, popular science, artistic texts of a certain complexity; uses different reading strategies; determines the time and cause-effect relationship of events and phenomena; analyzes and compares word meanings using book and electronic resources; critically evaluates the content of texts of different genres and styles;

4) writing:

The student draws up a plan, thses of a written message, edits and corrects texts of various genres and styles; abides by grammatical, spelling, punctuation and stylistic norms; writes a reasoned text based on media information; writes problematic texts, expressing his/her own attitude to the problem; creates business writings and documents; writes essays on various topics (150-200 words).

Algebra and the basics of the analysis, Geometry:

1) knows the definitions of exponential, logarithmic functions, their properties and graphs; the concept of a complex function; concept of inverse function; determining inverse trigonometric functions; methods for solving trigonometric, exponential, logarithmic equations and inequalities; methods for solving rational and irrational equations; methods for solving rational inequalities; types of polyhedral, bodies of revolution and their development; formulas for the area and volume of polyhedral and bodies of revolution; stereometry axioms and their consequences; concept of vector in space; sphere equation; basic concepts of statistics; concepts of discrete and continuous random variables; determining the limit of a function at a point and at infinity; determines the continuity of a function at a point and on a set; definition of the derivative function; equation of the tangent to the function graph determination of anti-derivative function, indefinite and definite integral; formulas for finding the area of a flat figure and the volume of the body with the help of a definite integral.

For the natural-mathematical direction, he/she additionally knows the methods for solving irrational inequalities; formulas for addition and multiplication of probabilities; Bernoulli formula; types of distribution of discrete random variables; equations of a straight line and a plane in space; definition of the differential function;

2) understands the notation of a polynomial with one variable in the standard form; the terms "total population", "sample", "variance", "standard deviation"; the geometric and physical meaning of the derivative; integration as a process inverse to differentiation, a system of axioms of stereometry and consequences of axioms, methods of proof and solutions of geometric problems. For the natural-mathematical direction, he/she additionally understands the essence of the method of coordinates; The essence of the formulas shall be the number of permutations, combinations, placements with repetitions;

3) applies algorithms for solving trigonometric, exponential, logarithmic equations and inequalities; algorithms for solving irrational equations; the technique of performing the simplest stereometric drawings; signs and properties of parallel, intersecting and perpendicular straight, parallel and perpendicular planes in solving problems; formulas for finding the surface areas and volumes of geometric bodies; rules of action on vectors for solving geometric problems; collinearity and vector coplanarity conditions; methods for finding critical points and extremum points, intervals of increasing (decreasing) function; differentiation technique and a table of

derivatives for finding derivatives; integral table and Newton-Leibniz formula for finding a definite integral.

For the natural-mathematical direction, he/she additionally applies algorithms for solving irrational inequalities; Newton's binomial for approximate calculations; Bernoulli formula; ways of finding asymptotes for the function graph;

4) analyzes the mutual arrangement of straight lines in space, a straight line and a plane in space, planes in space, a plane and a body of revolution; sections of rotation bodies by a plane; difference of types of random variables and calculates the numerical characteristics of discrete random variables; properties of the function according to its schedule; problems of geometrical and physical content and solves them with the help of a derivative and (or) an integral. For the natural-mathematical direction, it additionally analyzes the cross-section of polyhedrons by the plane (cube, rectangular parallelepiped, pyramid);

5) synthesizes various methods for solving trigonometric, exponential, logarithmic equations and inequalities; methods for solving irrational equations; scan models of polyhedral and rotation bodies; probabilistic models of real phenomena and processes. For the natural-mathematical direction, he/she additionally synthesizes combinatorial formulas for finding the probability of an event; various methods of solving irrational inequalities; properties of inverse trigonometric functions based on their definition and properties of mutually inverse functions;

6) evaluates the solution of trigonometric, exponential, logarithmic equations and inequalities; solving irrational equations; values of indicators of variation of statistical data.

For the natural-mathematical direction, he/she additionally estimates the solution of irrational inequalities.

Computer Science:

1) knows the purpose and basic functions of the system and application software; basics of working with database management systems; life cycle models for software development; basics of web programming, database theory for creating websites; software for developing mobile applications; network protocols and principles of the Internet; security measures designed to ensure data and computer system security;

2) understands the principles of organizing relational databases; basic principles of network technology; principles of processing audio and video information; main trends in the development of information technology;

3) applies information and communication technologies to create information objects and formalizes the results of their work; rules for creating queries in databases; cloud technologies when editing and storing documents; programming elements when developing websites and mobile applications; rules of personal safety in the network and netiquette; audio and video processing software;



4) analyzes queries using several criteria and relational operators to search for information; the task to determine the appropriate methods and approaches to its solution through modeling, algorithmization and programming; the results of processing and computer calculations for compliance with the task; ways to solve the problem in various ways to determine the most effective;

5) synthesizes information in various forms to express their ideas and thoughts; databases using forms and controls; websites for solving user tasks;

6) evaluates the results of its activities in accordance with the goals set in the modeling and development of the project (concreteness, measurability, attainability, realism, correlation); advantages and disadvantages of the software used, including programming tools.

History of Kazakhstan:

1) knows the ancient Central Asian centers of culture and places of their localization; historical types of nomadism; stages of formation and development of the Eurasian steppe civilization; centers of development of urban culture in the territory of Kazakhstan in different historical periods; the achievements of the peoples of Central Asia, which significantly influenced the world cultural and historical progress; ethnic history of the Kazakh people; ethnosocial structure of traditional Kazakh society; the history of the formation of a poly-ethnic society of Kazakhstan; historical stages of development of statehood of Kazakhstan; historical figures who have made a significant contribution to the development of political thought in Kazakhstan; the most important achievements of national culture and science in different historical periods; main historical sources and scientific works on the history of Kazakhstan;

2) understands the essence of the main events, phenomena and processes of the historical development of Kazakhstan; characteristic features of the ancient Central Asian centers of civilization, various types and forms of nomadism, urban and nomadic culture in the territory of Kazakhstan; the significance of the achievements of the peoples of Central Asia for world cultural and historical progress; the influence of the geographic factor on the formation and development of the life support system of the population of Kazakhstan in different historical periods; the influence of external and internal factors on political, socio-economic, cultural changes in Kazakhstan in different historical periods; features of ethnosocial organization of traditional Kazakh society; historical aspects of the development of political thought in Kazakhstan; The contribution of historical personalities to the political, socio-economic and cultural development of Kazakhstan; the value of the cultural heritage of the Kazakhs for the preservation of national identity; the need to respect the culture and traditions of the ethnic groups of Kazakhstan in order to preserve peace and harmony in society;

3) applies the skills of historical thinking in determining the Central Asian centers of culture, the states that existed on the territory of Central Asia and Kazakhstan, in

time and space; identifying features of the formation and development of the culture of nomads of Central Asia; identifying features of the political, socio-economic and cultural development of Kazakhstan in various historical periods; defining the role of historical personalities in the development of Kazakhstan; determination of own position in relation to events and phenomena of the past and present of Kazakhstan;

4) analyzes the historical development of Kazakhstan in the context of world history, identifying common features and features; the influence of various factors (geographic, demographic, migration, political, socio-economic, cultural) on the formation and development of civilizations and states on the territory of Kazakhstan in different historical periods; historical events, phenomena, processes in the history of Kazakhstan in order to determine causal relationships; motives and results of the activities of historical personalities of Kazakhstan; sources and works of scientists on the history of Kazakhstan; main scientific theories concerning the process of ethnogenesis, political genesis and cultural genesis on the territory of Kazakhstan; trends and development prospects of modern Kazakhstan;

5) synthesizes works of a creative, educational, research, design nature using the methods of historical analysis; comparative historical characteristics in order to determine the general laws and peculiarities of the historical development of Kazakhstan and other regions of the world; conclusions and hypotheses for the formation of a historical understanding and a holistic view of the history of Kazakhstan ;

6) assesses the degree of influence of various factors (geographic, demographic, migration, political, socio-economic, cultural, etc.) on the development of Kazakhstan in different historical periods; the activities of historical personalities in the context of their influence on national history; the contribution of the culture of the peoples of Central Asia to the development of world civilization; reliability of historical information; the degree of argumentation of various scientific theories on the problems of the ethnic, political, cultural and socio-economic history of Kazakhstan.

Self-Knowledge:

1) knows human values as the basis of a person's spiritual life; norms of moral behavior in society; about the role of positive thinking in everyday life; about the true spiritual nature; about the purpose of man; about the importance of manifesting selfless love in everyday life, following the voice of conscience;

2) understands the significance of spiritual and moral values, self-knowledge and self-development for the development of a person, the importance of striving for continuous spiritual self-improvement, its role in the family, team, and society; the need to develop high moral qualities, skills of serving the community; the interrelation of physical and spiritual health; their involvement in the life of the country, city, village, school, family; responsibility for thoughts, words and deeds;

3) applies knowledge of universal values in everyday life, the ability to moral choice and the willingness to live in the unity of thought, word and deed, in harmony with oneself; community service skills; the ability to freely express their thoughts, their position in life in creative activities; healthy lifestyle skills, personal experience of moral behavior, experience of serving the community;

4) analyzes his/her own behavior in terms of spiritual and moral values; human relationships; information from various sources, from the standpoint of morality; life situations in terms of moral lessons; the commensurability of desires and opportunities, his/her own goals and the ways to achieve them in accordance with moral norms, spiritual and moral foundations of life in the family, team, and society; solutions to problems based on moral choice; creates conditions for their own spiritual and moral, personal and professional growth; atmosphere of goodwill and mutual understanding in the family, team, society; harmonious relations with oneself and the world around on the basis of the principles of non-violence;

5) synthesizes spiritual and moral knowledge to improve relationships in the family, interpersonal and public spheres, search for ways of spiritual and moral improvement;

6) evaluates his/her actions, his/her emotional state, ways of interaction between man and nature from the point of view of universal human values.

#### Physical Training:

1) knows the rules and safety techniques when practicing physical training; rules and techniques for performing motor actions, complexes of physical exercises of various directions; biodynamic features and content of physical exercises, the basics of their use in solving problems of physical development and health promotion; the physiological bases of the activity of the systems of one's own organism under muscle loads, the possibilities of their development and improvement by means of physical training;

2) understands the psycho-functional characteristics of their own body; the possibility of the formation of individual traits and personality traits through regular physical training classes; the need for a healthy lifestyle; levels of complexity of the performed motor actions; the need to achieve the required intensity of various physical loads at different stages of physical fitness;

3) applies various types of physical exercises for the purpose of self-improvement, leisure activities and a healthy lifestyle; the main technical and tactical actions in the game or the process of performing a specially created set of exercises; individual ways to control the development of the adaptive properties of the body, health promotion and increased physical fitness; ways of organizing independent exercise with different functional orientations, rules for the use of sports equipment and equipment, information and communication technologies; injury prevention during exercise and the provision of first aid;

4) analyzes the functional state of his/her own body when performing physical exercises in order to achieve a health effect and improve physical condition;

5) synthesizes acquired skills in a system of actions in various situations both in physical training classes and in everyday life; healthy and safe lifestyle skills; assimilation of the rules of individual and collective safe behavior in emergency situations that threaten the life and health of people;

6) assesses the importance of physical exercises of general, professional, applied and recreational orientation; levels of physical development and physical fitness; the effectiveness of physical exercise, the functional state of the body and physical performance; dosage of physical activity and the direction of the effects of exercise.

#### Elementary Military and Technological Training:

1) knows the basics of military affairs, mission, organizational structure, standard armament and equipment, the capabilities of a lower tactical unit, the basics of using orientation tools, robotics and IT technologies, and civil defense organizations of the Republic of Kazakhstan; warning system and procedures for the application of modern means of destruction, terrorist threat and natural disasters; characteristics of natural disasters, the organization of rescue and emergency rescue operations in the affected areas; the purpose, structure and procedure for the use of standard weapons, the use of individual and collective protective equipment, radioactive and chemical control devices, as well as the procedure for organizing and conducting evacuation and dispersal of the population; tasks and types of first aid; Traffic regulations;

2) understands the basics of military affairs, robotics and IT-technologies, features of the impact of nuclear, chemical, bacteriological (biological) weapons and other modern means of destruction on people, economic objects, the environment and the environmental consequences of its use; consequences and possible economic, environmental damage in case of emergencies of a natural or man-made nature;

3) acts as a soldier on the battlefield in various conditions of the situation, a scout as part of a post of radiation and chemical observation; uses regular weapons, means of individual and collective protection; renders first aid for injuries, bleeding and burns, open and closed fractures of various parts of the body, frostbite, sun (heat) shock, electric shock, drowning; applies bandage dressings for various types of lesions on different parts of the body; uses Internet connection, uses audio-visual technologies, owns the theoretical fundamentals of driving automobiles, robotics, uses digital photo and video equipment;

4) analyzes possible emergency situations when using modern means of destruction ; possible situations in the event of a natural or man-made emergency;

5) synthesizes algorithms of actions in the event of possible emergency situations in the application of modern means of destruction; action algorithms in the event of possible emergencies of a natural or man-made nature;

6) assesses the consequences of decisions made.

76. Expected results after the completion of general secondary education in academic subjects of the advanced level of education in the natural-mathematical direction.

Physics:

1) knows the physical quantities and concepts of mechanics (kinematics, dynamics, statics, hydroaerostatics, hydrodynamics), molecular physics and thermodynamics; electromagnetism (electrostatics, direct and alternating electric current, magnetic field, electromagnetic induction), optics (geometric and wave), quantum physics; the main stages of the evolution of the universe; methods of transmitting and receiving information, principles for constructing basic radio engineering devices and systems; the history of the emergence and basic principles of nanotechnology;

2) understands the basic laws, principles and postulates of mechanics (kinematics, dynamics, statics, hydroaerostatics, hydroaerodynamics), molecular physics and thermodynamics; basic laws, principles of electromagnetism (electrostatics, direct and alternating electric current, magnetic field, electromagnetic induction), optics (geometric and wave), quantum physics; research methods of nanosystems and nanomaterials; the place of physical science in the modern scientific picture of the world; the role of physics in shaping horizons and solving practical problems;

3) applies fundamental physical concepts, laws, laws and theories; terminology and symbolism of physical science; The main methods of scientific knowledge used in physics: observation, description, measurement, experiment; the possibilities of new information technologies for searching, processing information on physics in computer databases and the Internet; methods of processing measurement results and experiments, determining the relationship between physical quantities;

4) analyzes dependencies presented as power functions; the relationship between two variables, the effects of various physical forces on phenomena, on bodies and objects in the Universe, graphs of the dependence of physical processes and the relationship between variables; principles of operation and characteristics of devices and devices, the scope of use of scientific discoveries; causal relationships between human production and the state of the environment, the scope of nanotechnology; parameters characterizing the state of the Universe and possible ways of its development;

5) synthesizes collected and processed data, information for presentation in the form of a table, graph, message, report, presentation; scientific models and evidence for hypotheses, arguments, and explanations; plan for the experiment and research;

6) evaluates knowledge of laws and their application; the results of observations and experiments; the applicability of methods of scientific knowledge in specific cases;

the consequences of household and industrial human activities related to physical processes from the standpoint of environmental safety.

Chemistry:

1) knows the basic chemical concepts; atomistic theory; theory of the chemical structure of organic substances; classification of substances for various reasons; nomenclature, structure, physico-chemical properties of the main classes of inorganic and organic compounds; special properties and some applications of polymeric materials, metals and alloys, non-metals and their compounds; some applications of nanotechnology;

2) understands the ability of various substances to enter into chemical reactions; energy changes in chemical reactions; basic mechanisms of chemical transformations; fundamentals of the kinetic theory, homogeneous and heterogeneous catalysis, electrochemistry; special properties of transition metals; chemical properties of inorganic and organic compounds, depending on the structure; principles of the study of compounds through instrumental methods of analysis; principles of chemical production of the most important inorganic and organic substances;

3) applies knowledge and skills to explain chemical phenomena occurring in nature, everyday life and in industry; to determine the possibility of chemical transformations under various conditions and assess their effects; methods of qualitative and quantitative analysis of substances; rules of environmentally friendly behavior in the environment; methods for assessing the impact of chemical pollution of the environment on living organisms; critical thinking and knowledge of scientific methods for developing, conducting, observing, recording and analyzing the results of chemical experiments; rules for the safe handling of flammable and toxic substances, laboratory equipment;

4) analyzes the dependence of the properties of substances on their composition and structure; the simplest spectra of substances to determine their structure and properties; the dependence of the rate of chemical reaction and chemical equilibrium on various factors; trends in the properties of elements in the periodic system; various theories of acids and bases, ionic equilibria in solutions;

5) synthesizes genetic relationships between the most important classes of inorganic and organic compounds; evidence-based arguments about the possibility and results of chemical transformations using the theory of chemical bonding and the structure of substances;

6) evaluates the properties of various materials; the influence of various factors on the rate of chemical reactions; the effect of various environmental conditions on chemical equilibrium; the effects of chemical production on the environment and human health; effects of radioactive decay; accuracy of information from different sources.

## Biology:

1) knows the structure, composition and functions of proteins, fats, carbohydrates, nucleic acids; basic mechanisms of antigen-antibody reactions; the main provisions of the chromosomal theory of heredity, human chromosomal diseases; types / types of variability, nutrition and metabolism of living organisms; speciation methods; basics of genetics and possibilities of genetic engineering; scheme and stages of life on Earth formation, anthropogenesis; global and regional environmental issues and principles for the protection of natural resources;

2) understands the processes occurring during the dark and light phase of photosynthesis; the mechanism of substance transport, translocation, the occurrence of chromosomal, gene mutations; the essence of genetic engineering manipulations; stages of energy metabolism; the relationship between genetic variation and evolution; patterns of inheritance; mechanism of evolutionary processes; rules of the ecological pyramid; consequences of human impact on the environment;

3) applies schemes and methods for solving problems of molecular biology and genetics; statistical methods for ecosystem analysis, character inheritance and modification variability; methods of qualitative and quantitative analysis of substances; critical thinking and knowledge of scientific methods for developing, conducting, observing, recording and analyzing the results of experiments; rules for the safe handling of drugs, toxic substances, laboratory equipment;

4) analyzes the characteristics of the processes of photosynthesis and chemosynthesis; factors affecting the process of evolution; the structure of RNA and DNA molecules; the processes of mutation and repair, recombination and replication of DNA, the relationship between the structure of DNA and its function; differences between spermatogenesis and oogenesis; species diversity and ecosystem sustainability ; environmental situation in the world and Kazakhstan;

5) synthesizes the scheme of gametogenesis in humans; food chain schemes in ecosystems; collected and processed data, information for presentation in the form of a table, graph, message, report, presentation; scientific models and evidence for hypotheses, arguments, and explanations; plan for the experiment and research; research, educational and creative projects; possible solutions to environmental problems in Kazakhstan;

6) assesses the influence of various factors on the activity of enzymes, the structure of proteins, the productivity of photosynthesis; cytological basis of monohybrid, dihybrid crossing, patterns of modification variability; causes of mutagenesis; ecosystems of their region; ethical issues of genetically modified and transgenic organisms, research in biotechnology.

## Geography:

1) knows the main categories of geography, geoComputer Science, geo-ecology, nature management, geopolitics, geo-economics; geo-ecological, economic-geographical, socio-geographical, political-geographical and geopolitical maps; geographical features and modern problems of environmental management; causes, factors and sources of anthropogenic impact on the geosphere; system and main directions of environmental protection measures; modern systematics of types and types of environmental management and general principles of rational environmental management; differences in the level and quality of life of the population, the geographical features of the sectoral and territorial structure of the economy of individual regions and countries; geographical specificity of individual countries and regions, their differences in the level of socio-economic development, specialization in the system of international geographical division of labor; the content of the modern political map of the world; development indicators of the world economy; structure of state territory and types of states; state borders, their types and dynamics; features of the current geopolitical and geo-economic situation of the Republic of Kazakhstan; Kazakhstan's participation in regional, international political processes, in the international geographical division of labor; geographical aspects of the global problems of mankind; Kazakhstan's participation in regional, international political processes, in the international geographical division of labor; geographical aspects of the global problems of mankind; Kazakhstan's participation in regional, international political processes, in the international geographical division of labor; geographical aspects of the global problems of mankind;

2) understands the modern economic-geographical and political-geographical picture of the world; the need to integrate geography with other sciences; features and dynamics of geo-ecological, social, geo-economic and geopolitical processes; unity and sustainability of the geographical system "nature - population (society) - economy (economy)"; ways to stabilize anthropogenic pressure on the environment; the role of scientific and technological progress in environmental protection; natural, economic and social factors that shape and change the geographical (environmental) environment of human habitation at levels from global to local; the degree of dependence of the quality of life on the quality of the environment; geographical specificity of large regions and countries of the world in the context of globalization; the value and essence of modern integration and geopolitical processes; the role and spheres of influence, the nature of the interaction of subjects of geopolitics, especially the geopolitical zoning of the world, the causes of modern global problems of mankind and the ways to solve them;

3) applies modern methods of geographical research and their combinations; diverse sources of geographic information; elements of the additional characteristics of thematic maps; skills of search, processing, systematization, interpretation,



transformation, storage, transfer and presentation of geographic information in the required context; cartometry techniques; various formulas for making calculations in the required context;

4) analyzes the causal relationships between processes and phenomena occurring in the geographical envelope and geographical environment; the relationship of nature and society and their spatial features; features of location, relationships and other spatial relationships of geographical objects, processes and phenomena; natural, socio-economic foundations of the modern world economy; quantitative and qualitative geospatial data; modern factors of location of industries; world ratings and indices;

5) synthesizes models, research and creative projects, information materials; development of solutions to the problems of the functioning and development of geographical objects; knowledge and skills for the classification, systematization, generalization and differentiation of the studied objects, processes and phenomena; knowledge and skills for explaining processes and phenomena, making forecasts, determining the nature of changes and prospects for the development of geographic objects, processes and phenomena;

6) assesses the degree of reliability of sources of geographic information; parameters and ecological state of geospheres; the degree of natural, anthropogenic and man-made changes in individual territories and their consequences; the effectiveness of environmental protection measures; the level of scientific and technological progress in environmental protection and nature management; environmental quality; the quality of life; indicators and place of various states in ratings and indices; geographical and geopolitical position of territories of any rank; countries of the world on the main socio-economic indicators; morphological features of the state territory.

77. Expected results at the completion of general secondary education in academic subjects of the standard level of education in natural-mathematical direction.

The World History:

1) knows the historical types of civilizations and the places of their localization; historical forms of the state and the stages of formation and development of state-legal institutions; military-political events that influenced the course of world history; world discoveries and achievements that influenced the world cultural and historical progress; history and current state of world culture; basic scientific theories concerning the origin and development of man, society, the peoples of the world and civilizations; historical figures who have made a significant contribution to the development of world social thought; main generalizing scientific works on world history;

2) understands the cultural and historical process in its unity and diversity; characteristic features of civilizations, historical forms and types of the state; the importance of state-legal institutions; the influence of the natural-geographical factor

on the formation and development of world civilizations; the influence of military-political events on the course of history; the importance of the great discoveries and achievements of mankind for the world cultural and historical progress ; the influence of external and internal factors on political, socio-economic, cultural changes in the world in various historical periods; historical aspects of the development of world social thought; the influence of personality on the development of history; the value of universal values for the preservation of peace and stability in the global world;

3) applies the skills of historical thinking in determining the state formations and cultural and civilizational centers of the world in time and space; determination of characteristic features of civilizations, historical forms and types of the state; identifying features of the political, socio-economic and cultural development of the peoples of the world in different historical periods; defining the role of a historical person in world history; determining their own position in relation to events and phenomena of the past and present;

4) analyzes the historical development of the peoples of the world, identifying common features and features; the influence of various factors (geographic, demographic, migration, political, socio-economic, cultural) on the formation and development of society in different historical periods; historical events, phenomena, processes of world history in order to determine cause-effect relationships; motives and results of historical personalities; historical sources; trends and prospects for the development of modern society in the context of globalization;

5) synthesizes works of a creative, educational, research, design nature using the methods of historical analysis; comparative historical characteristics in order to determine the general laws and peculiarities of the historical development of the peoples of the world;

6) assesses the degree of influence of various factors (geographic, demographic, migration, political, socio-economic, cultural) on the development of society in different historical periods; the activities of historical personalities in the context of their influence on world history; the contribution of the culture of various peoples of the world to the formation and development of world civilization; reliability of historical information; the degree of argumentation of various scientific theories on the problems of the ethnic, political, cultural and socio-economic history of the world.

#### Graphics and Design:

1) knows the basic tools, methods, ways of fixing visual information; main types of graphic images; basic design techniques and graphics tools; laws of shaping geometric bodies; general rules for drawing design; general concepts of engineering, construction drawings, elements of topographical drawing; stages of design and manufacture of the product; methods and means of displaying visual information by means of manual and computer graphics;

2) understands the meaning of graphic images in the visualization and transmission of information about the objective world, phenomena and processes; patterns of graphical modeling; the differences between the types of graphic images in the display of the shape of objects, their spatial and metric characteristics; opportunities and features of manual and computer graphics in practice; features of prototyping and modeling;

3) applies tools and materials for graphic works; projection methods; methods of constructing geometric (constructive) forms of the subject; methods for constructing a drawing of surface scans of geometric bodies; methods of converting the type and composition of images; reference documentation for making design and constructive decisions; tools for manual and computer graphics in solving various problems of graphic modeling, prototyping, design;

4) analyzes the properties of images and various ways of transmitting visual information; the geometric shape and design of objects when performing their images; the possibility of using different types of images to identify the shape of the object; integrated drawing for determining the shapes of objects and graphic composition of images;

5) synthesizes contour images to reconstruct the shape of the object; graphic information in source images for their systematization by type and composition; various types of images for full and sufficient display of graphic information; various graphics tools for the transfer and implementation of creative ideas;

6) evaluates the methods of fixing visual information; graphic images of various objects; different ways to convert images; design methods and graphics tools used in the process of project activities; constructive and geometric characteristics of objects; process and result of creative activity.

#### Fundamentals of Law:

1) knows the systems, norms, sources of constitutional law; constitutional political rights; systems, norms, subjects of administrative law; labor law, its importance, the tasks of organizing administrative labor discipline, responsibility for violation of labor discipline, sources, civil law relations, forms of property rights, the scope of application of consumer law; family relationships, rights and duties of parents and children; the concept, signs of criminal law, criminal liability, its types, the concept of protecting the rights of citizens, as well as the need and possibility of its implementation;

2) understands the role and importance of law as the most important social regulator and element of culture of society, the basic legal principles of Kazakhstan society, the system and structure of law, legal relations, the essence of the offense and legal responsibility, legal regulation of the socio-economic sphere, legal activity as a type of implementation of the right;

3) applies evidentiary argumentation of its own position in specific legal situations using regulatory acts, legal knowledge to evaluate specific legal norms in terms of their compliance with the legislation of the Republic of Kazakhstan; the skill of independent search for legal information; legal rules when participating in discussions on current social and legal issues in everyday life;

4) analyzes legal norms, information of a legal nature, obtained from various sources;

5) synthesizes the information obtained in order to correlate their own behavior and the actions of other people with accepted moral and legal norms; knowledge, skills and abilities for collecting and analyzing information in a given context, for assessing the situation, expressing one's attitude, making decisions that do not contradict human and ethnocultural values;

6) independently evaluates the specifics of the application of the legislation of the Republic of Kazakhstan in solving specific problems.

78. Expected results at the completion of general secondary education in academic subjects of advanced level of studies in the social and humanitarian field.

#### Foreign Language.

1) listening: understands the basic meaning of clearly pronounced statements within the limits of the literary norm on known topics, simple informational messages about ordinary everyday issues and topics related to studies and future professional activities; able to follow the main points of a long discussion in general terms; understands a lecture or conversation on educational and professional topics, provided that the subject of the speech is familiar, and the performance itself is simple and has a clear structure; understands detailed technical instructions; most of the television programs on topics of interest, such as interviews, short lectures, reports, when they sound slow and clear;

2) speaking: can describe something or speak in the form of a series of consecutive statements; retell the plot of a book or film and describe your reaction to it; make short, rehearsed announcements on the topic as part of educational activities; make a report on familiar topics, which will be so clear that throughout its length it is possible to follow the thought, and the main provisions of which are clearly explained, to answer a number of questions regarding your speech with the right to ask a certain question; describe your experience, formulating your feelings and reactions to it in a complex coherent text;

3) reading: understands in detail simple texts containing factual information on the topic of interest, a description of events, sensations and desires in personal writings; can read long texts of fiction and non-fiction within certain unfamiliar general and

educational topics; identify the main provisions of different types of newspaper articles , use unfamiliar paper and digital resources to test the meaning and increase understanding;

4) writing: able to write simple connected texts on a wide range of familiar and interesting questions, tying together a number of individual short elements, summarize and communicate their opinions on the collected factual information on familiar everyday and social issues within the field of activity quite freely; write personal writings, telling about the news and your thoughts on abstract topics or topics related to culture: music, movies; make entries in the form of a list of key points during a simple lecture, provided that the topic is familiar, the speech is simple and pronounced clearly in the normative dialect; retell the story in writing.

The World History:

1) knows the historical types of civilizations and the places of their localization; historical forms of the state and the stages of formation and development of state-legal institutions; military-political events that influenced the course of world history; world discoveries and achievements that influenced the world cultural and historical progress; history and current state of world culture; basic scientific theories concerning the origin and development of man, society, the peoples of the world and civilizations; historical figures who have made a significant contribution to the development of world social thought; main generalizing scientific works on world history;

2) understands the cultural and historical process in its unity and diversity; characteristic features of civilizations, historical forms and types of the state; the importance of state-legal institutions; the influence of the natural-geographical factor on the formation and development of world civilizations; the influence of military-political events on the course of history; the importance of the great discoveries and achievements of mankind for the world cultural and historical progress ; the influence of external and internal factors on political, socio-economic, cultural changes in the world in various historical periods; historical aspects of the development of world social thought; the influence of personality on the development of history; the value of universal values for the preservation of peace and stability in the global world;

3) applies the skills of historical thinking in determining the state formations and cultural and civilizational centers of the world in time and space; determination of characteristic features of civilizations, historical forms and types of the state; identifying features of the political, socio-economic and cultural development of the peoples of the world in different historical periods; defining the role of a historical person in world history; determining their own position in relation to events and phenomena of the past and present;

4) analyzes the historical development of the peoples of the world, identifying common features and features; the influence of various factors (geographic,

demographic, migration, political, socio-economic, cultural) on the formation and development of society in different historical periods; historical events, phenomena, processes of world history in order to determine cause-effect relationships; motives and results of historical personalities; historical sources; main scientific theories concerning the process of ethnogenesis, political genesis and cultural genesis; trends and prospects for the development of modern society in the context of globalization;

5) synthesizes works of a creative, educational, research, design nature using the methods of historical analysis; comparative historical characteristics in order to determine the general laws and peculiarities of the historical development of the peoples of the world; conclusions and hypotheses for the formation of a historical understanding and a holistic view of the world cultural and historical process;

6) assesses the degree of influence of various factors (geographic, demographic, migration, political, socio-economic, cultural) on the development of society in different historical periods; the activities of historical personalities in the context of their influence on world history; the contribution of the culture of various peoples of the world to the formation and development of world civilization; reliability of historical information; the degree of argumentation of various scientific theories on the problems of the ethnic, political, cultural and socio-economic history of the world.

#### Geography:

1) knows the place and role of geo-ecology, geo-Computer Science, geopolitics, geoeconomics, regional geography in the system of geographical sciences; basic scientific concepts in the field of environmental management, economic, social, political geography and geopolitics; factors, sources and consequences of anthropogenic impact on the geosphere; environmental risks; signs of an environmental crisis; ecological classification of territories; system and main directions of environmental protection measures; the specifics of regional environmental management systems; basic administrative, economic and legal mechanisms for environmental management; directions of modern environmental policy; environmental quality indicators; quality of life indicators; models of economic systems; key indicators of the development of the world economy and countries of the world; set of international relations between the countries of the world; globalization process; Kazakhstan's participation in regional and international organizations; modern global problems of mankind and their manifestations at the local, regional levels; directions of geopolitical activity of the Republic of Kazakhstan in the light of national interests; historical and cultural regions of the world;

2) understands the spatial diversity of the modern world, its general and regional features; patterns of development of nature, population and economy; problems of interaction between society and nature; features of natural, social, economic and political processes; personal responsibility for the environment; the dynamics of global

and local natural and socio-economic, ecological processes; ways to optimize the interaction of society and nature, stabilize anthropogenic pressure on the environment; the role of scientific and technological progress in environmental protection; the degree of dependence of the socio-economic and political development of the territory on geographical factors; the dependence of the quality of life on the quality of the environment, the origins of modern socio-economic and environmental problems and ways to resolve them; the role and spheres of influence, the nature of the interaction of subjects of geopolitics;

3) applies the methods of geo-ecological, economic-geographical, socio-geographical, political-geographical and geopolitical research and their combination; geospatial data sources; skills of search, processing, systematization, interpretation, transformation, storage, transmission and presentation of geospatial data in the required context; cartometry techniques;

4) analyzes quantitative and qualitative geospatial data; signs of classification of geographical objects, processes and phenomena; causal relationships between processes and phenomena occurring in the geographical envelope and geographical environment; features of location, relationships and other spatial relationships of geographical objects, processes and phenomena; the influence of environmental factors on people's lives and activities; natural, socio-economic foundations of social production; the impact of the proposed economic activity on the state of the environment and public health; signs of an environmental crisis; organizational and legal framework for environmental protection and environmental management; modern factors of location of industries; geoecological, geopolitical and economic processes; international political, economic, socio-cultural, environmental ties and relations; territorial and political systems; structure of the state territory; state borders, their types and dynamics; the system of national interests of the country; geopolitical activity of subjects of geopolitics; world geopolitical space; geographical and geopolitical position, features and factors of political, economic and social development, the role and place of Kazakhstan in the world; geographical and geopolitical position, features and factors of political, economic and social development, the role and place of Kazakhstan in the world; geographical and geopolitical position, features and factors of political, economic and social development, the role and place of Kazakhstan in the world;

5) synthesizes models, research and creative projects, information materials; development of solutions to the problems of the functioning and development of geographical objects; knowledge and skills for the classification, systematization, generalization and differentiation of the studied objects, processes and phenomena;

knowledge and skills for explaining processes and phenomena, making forecasts, determining the nature of changes and prospects for the development of geographic objects, processes and phenomena;

6) assesses the parameters and the ecological state of the geospheres; anthropogenic load on the geosphere and their consequences; geographical and geopolitical position, natural resource potential of territories of any rank; quality of the natural environment; environmental risks; degree of environmental crisis; the effectiveness of environmental protection measures; the level of scientific and technological progress in environmental protection and nature management; environmental quality; the quality of life; indicators and place of various states in international comparisons; advantages and disadvantages of various models of the development of the world economy; the positive and negative impact of globalization on the countries of the world; morphological features of the state territory; the effectiveness of geopolitical activity of subjects of geopolitics; results of international organizations activities activities.

The Basics of Law:

1) know the systems, norms, sources of constitutional law; constitutional political rights; systems, norms, subjects of administrative law; labor law, its importance, the tasks of organizing administrative labor discipline, responsibility for violation of labor discipline, sources, civil law relations, forms of property rights, the scope of application of consumer law; family relationships, rights and duties of parents and children; the concept, signs of criminal law, criminal liability, its types, the concept of protecting the rights of citizens, as well as the need and possibility of its implementation;

2) understands the role and importance of law as the most important social regulator and element of culture of society, the basic legal principles of Kazakhstan society, the system and structure of law, legal relations, the essence of the offense and legal responsibility, legal regulation of the socio-economic sphere, legal activity as a type of implementation of the right;

3) applies evidentiary argumentation of its own position in specific legal situations using regulatory acts, legal knowledge to evaluate specific legal norms in terms of their compliance with the legislation of the Republic of Kazakhstan; the skill of independent search for legal information; legal rules when participating in discussions on current social and legal issues in everyday life;

4) analyzes the information provided in the framework of controversial issues arising in the process of legal relations in a particular area of legislation, legal norms, information of a legal nature, obtained from various sources;

5) synthesizes the information obtained in order to correlate their own behavior and the actions of other people with accepted moral and legal norms; knowledge, skills and



abilities for collecting and analyzing information in a given context, for assessing the situation, expressing one's attitude, making decisions that do not contradict human and ethnocultural values;

6) independently evaluates the specifics of the application of the legislation of the Republic of Kazakhstan in solving specific problems.

79. Expected results after the completion of general secondary education in academic subjects of the standard level of studies in the social and humanitarian field.

Physics.

1) knows the physical quantities and concepts of mechanics (kinematics, dynamics, statics, hydroaerostatics, hydrodynamics), molecular physics and thermodynamics; electromagnetism (electrostatics, direct and alternating electric current, magnetic field, electromagnetic induction), optics (geometric and wave), quantum physics; the main stages of the evolution of the universe; methods of transmitting and receiving information, the history of origin and the basic principles of nanotechnology;

2) understands the basic laws of molecular physics and thermodynamics; basic laws, principles of electromagnetism (electrostatics, direct and alternating electric current, magnetic field, electromagnetic induction), optics (geometric and wave); research methods of nanosystems and nanomaterials; the place of physical science in the modern scientific picture of the world; the role of physics in shaping horizons and solving practical problems;

3) applies fundamental physical concepts, laws, laws and theories; terminology and symbolism of physical science; The main methods of scientific knowledge used in physics: observation, description, measurement, experiment; determine the relationship between physical quantities;

4) analyzes dependencies presented as power functions; the relationship between two variables, the effects of various physical forces on phenomena, on bodies and objects in the Universe, graphs of the dependence of physical processes and the relationship between variables; causal relationships between human production and the state of the environment, the scope of nanotechnology; parameters characterizing the state of the Universe and possible ways of its development;

5) synthesizes collected and processed data, information for presentation in the form of a table, graph, message, report, presentation; scientific models and evidence for hypotheses, arguments, and explanations; plan for the experiment and research;

6) evaluates knowledge of laws and their application; the results of observations and experiments; the consequences of household and industrial human activities related to physical processes from the standpoint of environmental safety.

Chemistry:

1) knows the basic chemical concepts; atomistic theory; theory of the chemical structure of organic substances; classification of substances for various reasons;

nomenclature, structure, physico-chemical properties of the main classes of inorganic and organic compounds; special properties and some applications of polymeric materials, metals and alloys, non-metals and their compounds;

2) understands the ability of various substances to enter into chemical reactions; fundamentals of kinetic theory, homogeneous and heterogeneous catalysis; chemical properties of inorganic and organic compounds, depending on the structure; principles of chemical production of the most important inorganic and organic substances;

3) applies knowledge and skills to explain chemical phenomena occurring in nature, everyday life and in industry; methods for qualitative analysis of substances; rules of environmentally friendly behavior in the environment; methods for assessing the impact of chemical pollution of the environment on living organisms; critical thinking and knowledge of scientific methods for developing, conducting, observing, recording and analyzing the results of chemical experiments; rules for the safe handling of flammable and toxic substances, laboratory equipment;

4) analyzes the dependence of the properties of substances on their composition and structure; the dependence of the rate of chemical reaction and chemical equilibrium on various factors; trends in the properties of elements in the periodic system;

5) synthesizes genetic relationships between the most important classes of inorganic and organic compounds; evidence-based arguments about the possibility and results of chemical transformations using the theory of chemical bonding and the structure of substances;

6) evaluates the properties of various materials; the influence of various factors on the rate of chemical reactions; the effect of various environmental conditions on chemical equilibrium; the effects of chemical production on the environment and human health; accuracy of information from different sources.

Biology:

1) knows the structure, composition and functions of proteins, fats, carbohydrates, nucleic acids; basic mechanisms of antigen-antibody reactions; the main provisions of the chromosomal theory of heredity, human chromosomal diseases; types (types) of variability, nutrition and metabolism of living organisms; basics of genetics and possibilities of genetic engineering; scheme and stages of life on Earth formation, anthropogenesis; global and regional environmental issues and principles for the protection of natural resources;

2) understands the processes occurring during the dark and light phase of photosynthesis; the mechanism of transport of substances, the occurrence of chromosomal, gene mutations; stages of energy metabolism; the relationship between genetic variation and evolution; patterns of inheritance; mechanism of evolutionary processes; consequences of human impact on the environment;

3) applies schemes and methods for solving problems of molecular biology and genetics; statistical methods for ecosystem analysis, character inheritance and modification variability; critical thinking and knowledge of scientific methods for developing, conducting, observing, recording and analyzing the results of experiments; rules for the safe handling of drugs, toxic substances, laboratory equipment;

4) analyzes the characteristics of the processes of photosynthesis and chemosynthesis; factors affecting the process of evolution; the structure of RNA and DNA molecules; mutation processes, the relationship between the structure of DNA and its function; differences between spermatogenesis and oogenesis; species diversity and ecosystem sustainability; environmental situation in the world and Kazakhstan;

5) synthesizes the scheme of gametogenesis in humans; food chain schemes in ecosystems; collected and processed data, information for presentation in the form of a table, graph, message, report, presentation; scientific models and evidence for hypotheses, arguments, and explanations; plan for the experiment and research; research, educational and creative projects; possible solutions to environmental problems in Kazakhstan;

6) assesses the influence of various factors on the activity of enzymes, the structure of proteins, the productivity of photosynthesis; cytological basis of monohybrid, dihybrid crossing, patterns of modification variability; causes of mutagenesis; ecosystems of their region; ethical issues of genetically modified and transgenic organisms, research in biotechnology.

80. Expected results upon the completion of general secondary education in academic subjects of the standard level of education in natural-mathematical and social-humanitarian fields.

#### Fundamentals of Entrepreneurship and Business:

1) understands entrepreneurship as an economic phenomenon and describes its role ; describes the differences between entrepreneurship and business; understands entrepreneurship as a form of self-realization and personal motivation; analyzes the competence of the entrepreneur; evaluates the possibility of achieving their own goals through the prism of business; evaluates its level of development in relation to the potential entrepreneur; Recognizes current trends in entrepreneurship, including in Kazakhstan;

2) knows what markets are in the context of both economics and marketing; understands the value of ideas in entrepreneurship; makes a distinction between the business to business and business to consumer segments; applies ideas generation tools ; proposes an idea design plan; converts the implementation needs of the idea into the requirements for the team; uses team building tools; applies business model tools; identifies the relationship between the constituent parts of the business model; describes the expected consequences of changing the available data; applies business

model building tools; uses the concepts and principles of Lean Start up (Lean Star standard curriculum ) (Lean Manufacturing) in terms of entrepreneurship;

3) explains the concept and functions of marketing; defines the notion of competition; analyzes the forms of influence of various forces on competition; describes the profile of its consumer; understands the essence of distribution channels and distinguishes between their classification; proposes a plan for bringing the value of your product / service to the end user; describes the relationship with each segment of consumers;

4) understands the value of money in the economy; understands the value of income and expenses; understands the difference between assets and liabilities; understands the essence of the concepts of excess and deficiency, assesses their impact on the pricing process; distinguishes between the concepts of "price", "value", "pricing structure"; understands the significance of fixed and variable costs in the pricing process; evaluates the possibilities of creative and innovative approaches in the formation of new profit channels; uses the AB-testing tool (method for evaluating the effectiveness of product variants);

5) understands the nature and value of resources in business; proposes a plan for the most efficient use of business resources; assesses the value of business resources; knows the principles of limited business resources; gives examples of efficient use of resources in conditions of limitedness; understands the essence of intellectual resources in business; develops a strategy for the replenishment of enterprise resources;

6) understands the value of the partnership and its types; evaluates the benefits of outsourcing business; describes key activities; distinguishes between the management of human, material and intellectual resources; explains the rules of sales management; describes the project and its characteristics; applies time management rules in the project; proposes a project plan; uses information tools in the project;

7) understand the key obligations of business to the state; identifies the relationship between the tax regime and the legal form of business; draws up a general income plan for your business idea; explains the formation of the statement of profit and loss; explains the scheme for generating a cash flow statement; identifies the relationship between project profitability and fixed and variable costs;

8) describes the market development forecast; makes a distinction between extensive and intensive way of business development; evaluates the effectiveness of various types of business scaling; understands quality management tools; understands the essence of strategic planning; makes the mission and vision of his future company; distinguishes between strategic and financial business objectives; understands the composition of the legal responsibility of the entrepreneur.

81. The content of the course "Fundamentals of life safety" is implemented in the framework of the course "Initial military and technological training" with an annual

workload of 12 hours by teachers and organizers of basic military training. Classes on the basics of life safety are mandatory and are held during school hours.

82. Evaluation of the educational achievements of students shall be carried out through the use of criteria for assessing the knowledge of students. Evaluation criteria shall be used to measure the level of learning achievement of students.

83. Evaluation criteria shall be developed in accordance with the learning objectives for each study program.

84. The evaluation of the educational achievements of students shall be carried out in the form of formative and summative assessment.

85. Criteria for assessing students' knowledge shall be developed and approved by the authorized body in the field of education.

86. For students with special educational needs, conditions shall be created for their education, correction of developmental disorders and social adaptation.

## **Paragraph 2. Requirements for the level of training of students**

Paragraph 2 was valid until 01.09.2020 in accordance with subparagraph 5) of paragraph 4 of this order.

## **Chapter 5. Requirements for the duration of training**

99. The term of mastering the general education curriculum of general secondary education shall be two years.

100. The duration of the school year in grades 10-11 –shall be 34 school weeks.

101. Duration of vacation time in the school year shall be at least 30 days.

Vacations shall be available three times per school year - in the autumn, winter and spring. Exact terms of holidays shall be established by the authorized body of the Republic of Kazakhstan in the field of education.

Appendix 5  
to Order № 604 of the Minister of  
Education and science of the  
Republic of Kazakhstan  
of October 31, 2018,

## **State Compulsory Standard for technical and vocational education**

Footnote. Appendix 5 - as amended by the order of the Acting Minister of Education and Science of the Republic of Kazakhstan dated 23.07.2021 No. 362 (shall be enforced upon expiry of ten calendar days after the day of its first official publication).

## **Chapter 1. General Provisions**

1. This State Compulsory Standard for technical and vocational education (hereinafter referred to as the SCES) have been developed in accordance with subparagraph 5-1) of Article 5 and Article 56 of the Law of the Republic of Kazakhstan “On Education” and shall determine the requirements for the content of education with a focus on learning outcomes, the maximum amount of teaching load, the level of training of students, the period of study in educational programs for technical and vocational education (hereinafter referred to as the TVE educational programs).

This standard shall be applied by educational organizations implementing TVE educational programs (hereinafter referred to as the TVE organizations), including in military, special educational institutions (hereinafter referred to as the MSEI), regardless of their form of ownership and departmental subordination, and the developers of TVE educational programs.

2. The following terms and definitions shall apply in the SCES:

1) a MSEI component – a list of academic disciplines and the corresponding minimum amounts of credits, determined independently by the MSEI for mastering an educational program;

2) military internship – a type of educational activity in military, special educational institutions aimed at consolidating theoretical knowledge, skills, acquiring and developing practical skills and competencies in the process of fulfilling functional duties related to future professional activities;

3) basic competence – a set of knowledge, skills and abilities necessary for the personal, social and professional activities of the student;

4) basic module – functionally completed structural element of the educational program, aimed at the formation of the basic competence of the student;

5) an individual component of a student – part of the educational program aimed at expanding the practical experience of mastering qualifications through project work;

6) component of the choice of the educational organization – a list of disciplines and (or) modules determined by the TVE organization in accordance with the regional development plan, the requirements of employers, taking into account the WorldSkills standards as part of the development of the educational program;

7) demonstration exam – a form of intermediate and / or final certification that allows the student to practically demonstrate the mastered professional competencies;

8) the thesis (project) – the final independent work of the student, which is a generalization of the results of the student's mastering the educational program of TVE;

9) individual curriculum – a student's curriculum that promotes the realization of individual educational needs within the framework of the mastered educational program of TVE;

- 10) project work – practical and / or creative work of the student, performed under the guidance of a teacher or mentor;
- 11) working syllabus – a document developed by a TVE organization for a specific discipline and (or) module of the working curriculum;
- 12) working curriculum – document developed by a TVE organization, regulating the list, volumes of academic disciplines and / or modules, the sequence of their study, as well as forms of control over their development;
- 13) professional competence – the ability to solve a set of professional tasks based on knowledge, skills, and personal qualities that allow to effectively carry out professional activities;
- 14) professional module – functionally completed structural element of the educational program, aimed at the formation of professional competence;
- 15) consultation – a form of training that provides assistance to students in mastering the educational program;
- 16) credit – numerical expression of the total weight of learning outcomes in a qualification or a separate component of a qualification;
- 17) credit-modular system of education – model of organization of the educational process, based on the unity of credit and modular learning technologies;
- 18) compulsory component – list of academic disciplines and (or) modules mastered by students on a mandatory basis;
- 19) extracurricular classes – additional training to advance knowledge, develop interests, abilities of students within the chosen specialty, not included in compulsory education.

## **Chapter 2. Requirements to the content for technical and vocational education with a focus on learning outcomes**

3. The content of TVE shall be determined by educational programs and shall be focused on learning outcomes.

The content of TVE educational programs shall provide for:

When training of qualified workers:

- 1) studying general education, general humanitarian, general professional, special disciplines or study of general education disciplines, basic and professional modules;
- 2) carrying out laboratory and practical classes;
- 3) passing on-the-job training and professional practice;
- 4) passing the intermediate and final certification.

when training mid-level specialists:

- 1) studying general education, general humanitarian, socio-economic, general professional, special disciplines or study of general education disciplines, basic and professional modules;

- 2) carrying out laboratory and practical classes;
- 3) passing on-the-job training and professional practice;
- 4) performance of a term paper and a thesis (written or practical) work, unless otherwise provided by the working curriculum and plan;
- 5) passing the intermediate and final certification.

In MSEIs, the content of TVE educational programs shall provide for studying general education, general humanitarian, general professional, special disciplines and passing military internship.

4. The list and volume of general education disciplines shall be determined taking into account the profile of the specialty in the following areas: social and humanitarian, natural and mathematical.

The compulsory general education disciplines, regardless of the specialty profile, shall include: "Kazakh language" and "Kazakh literature", "Russian language and literature" (for groups with the Kazakh language of instruction), "Russian language" and "Russian literature", "Kazakh language and Literature" (for groups with the Russian language of instruction), "Foreign language", "Mathematics", "Informatics", "History of Kazakhstan", "Self-knowledge", "Physical Education", "Initial military and technological training".

Depending on the profile of the specialty, TVE organizations shall choose to train two disciplines of advanced and standard levels of education.

The disciplines of the advanced level of education of the natural and mathematical profile shall include: "Physics", "Chemistry", "Biology", "Geography". The disciplines of the standard level of education shall include: "World History", "Biology", "Geography".

The disciplines of the advanced level of education in the social and humanitarian profile shall include "World History", "Chemistry", "Biology", "Geography". The disciplines of the standard level of education shall include: "Physics", "Chemistry", "Graphics and Design".

The disciplines of the advanced level of education in the profile "Art and Culture" shall include "Foreign Language", "World History", "Geography", "Chemistry". The disciplines of the standard level of education shall include: "Physics", "Biology", "Graphics and Design".

The list and volume of general education disciplines in special curricula for persons with special educational needs shall be determined depending on the profile of the specialty by the TVE organization independently.

General education disciplines are studied at 1-2 course and may be integrated in basic and/or professional modules.



Classes in "Physical Education" shall be mandatory and are planned for at least 4 hours a week during the period of theoretical training, of which 2 hours per week are allowed due to extracurricular activities or sports sections.

For MSEIs, classes in "Physical Education" shall be mandatory and are planned for at least 4 hours a week. Exams shall be held at the end of each semester. Classes in sports sections are provided for no more than 4 hours per week.

For specialties that involve increased physical activity (choreography, sports, circus , acting), classes in "Physical Education" are implemented as part of special disciplines or professional modules.

Classes in Initial military and technological training in educational organizations with girls shall be held jointly with boys, and separately - under the section " Fundamentals of Medical Knowledge". Girls shall not be involved in practical exercises in the section "Fundamentals of Military Affairs". At the end of the Initial military training course, field (camp) training sessions shall be held with students ( except for the Art and Culture profile) jointly with local military authorities. During the field training, girls undergo medical and sanitary training in TVE organizations under the guidance of a medical worker. The content of the curriculum "Fundamentals of Life Safety" shall be implemented within the framework of the academic discipline " Initial military and technological training" (except for MSEIs).

5. Educational programs shall be developed by TVE organizations independently with the participation of employers based on these SCES requirements, professional standards (if any), WorldSkills professional standards (if any).

The educational program includes: passport, work curriculum and work study programs.

6. For the purposes of formation of basic competencies, the TVE organization provides for the study of general humanitarian, socio-economic disciplines or basic modules (except for military specialties).

Basic competencies are aimed at the formation of a healthy lifestyle and the improvement of physical qualities, socialization and adaptation in society and the workforce, the development of feelings of patriotism and national identity, the acquisition of entrepreneurial skills and financial literacy, the use of information, communication and digital technologies in professional activities.

TVE educational programs provide for the study of the following basic modules:

- 1) development and improvement of physical qualities;
- 2) application of information, communication and digital technologies;
- 3) application of basic knowledge of economics and the basics of entrepreneurship;
- 4) application of the foundations of social sciences for socialization and adaptation in society and the workforce.

It shall be allowed to include additional basic modules.

The inclusion of the module "Application of the fundamentals of social sciences for socialization and adaptation in society and the workforce" must be provided for in educational programs for the training of mid-level specialists.

At the discretion of the TVE organization, basic modules shall be integrated into professional modules depending on the specialty profile, with the exception of military specialties.

7. The content of professional modules and (or) special disciplines shall take into account modern requirements for environmental and / or industrial safety.

Professional modules (disciplines) shall be determined by the TVE organization independently.

In order to expand the practical experience of mastering the qualification, at the discretion of the TVE organization, an individual component of a student shall be implemented through project work within the framework of professional modules.

8. TVE educational programs, along with theoretical training, provide for the passage of industrial training and professional practice.

Professional practice is subdivided into educational, on-the-job and pre-diploma.

The time frames and content of on-the-job training and professional practice shall be determined by the plan of the educational process and working training programs.

TVE educational programs using dual training shall provide for theoretical training in educational institutions and at least sixty percent of on-the-job training and professional practice on the basis of an enterprise (organization).

In MSEIs, professional practice shall include practical and methodical classes in the disciplines that determine combat training. Classes are held in classrooms, laboratories, exercises and field trips. These classes are aimed at acquiring practical skills and professional competencies in accordance with the qualifications conferred.

The time frames and content of practical classes shall be determined by the working curricula, the schedule of the educational process and the working curricula.

In MSEIs, the amount of study time for professional practice, military training, for the study of general humanitarian, general professional, and special disciplines shall be determined by the relevant authorized body.

9. Assessment of the achievements of learning outcomes shall be carried out by various types of control: current monitoring of progress, intermediate and final certification.

Module tests, end-of-term tests and term projects (papers) shall be carried out at the expense of the study time allotted for the study of the discipline and / or module, exams - within the time allotted for the intermediate and / or final certification.

For MSEIs in all disciplines, an intermediate certification is provided, the main form of which shall be an exam.

Intermediate certification in general education disciplines provides for exams: in the Kazakh language, Russian language and literature for groups with the Kazakh language of instruction; Russian language, Kazakh language and literature for groups with Russian language of instruction; History of Kazakhstan, Mathematics and advanced level discipline.

Exams in general education disciplines shall be held at the expense of credits / hours allocated for the module "General education disciplines".

A qualification exam shall be held after mastering each work qualification in the form of practical work or a demonstration exam in training and production workshops, laboratories and training centers of TVE organizations and / or at the production sites of enterprises.

Final and (or) intermediate certification for specialties in the field of art and culture shall provide for the implementation of creative tasks.

Regulations on the creative task shall be developed by TVE organizations independently.

For MSEIs, the final certification shall include passing a comprehensive exam in special disciplines and passing an exam in the discipline of physical training.

The final certification for persons with special educational needs (with non-intact intellect) shall be carried out in the form of practical work, for other categories it shall be determined by the TVE organization independently.

10. Working syllabuses are developed on the basis of TVE curriculum models, according to Appendices 1, 2 to SCES.

11. Working curricula shall be developed for all disciplines and (or) modules of the curriculum with a focus on learning outcomes and are approved by the TVE organization.

12. Working curricula and plans for the specialty "Choreographic Art" shall be developed taking into account admission from grade 4 (5) and from grade 9 (after grade 9).

13. When developing educational programs, TVE organizations shall:

1) independently determine the volume and content of disciplines/modules while maintaining the total number of credits/hours allocated for compulsory education;

2) determine the sequence, list and number of modules/qualifications within one specialty;

3) choose different learning technologies, forms, methods of organization and control of the educational process.

14. For the training of persons with special educational needs in the context of inclusive education the following shall be developed:

1) special training programs that provide for partial or complete mastering of the TVE educational program, taking into account the peculiarities of psychophysical

development and individual capabilities of students (for persons with non-intact intellect);

2) individual curricula and plans based on the educational program in a TVE specialty, taking into account physical impairments and individual abilities of students (for persons with intact intellect).

15. The content of the educational program based on learning outcomes allows forming trajectories of training with mastering:

working qualifications;

working qualifications and a middle-level specialist;

middle-level specialist.

### **Chapter 3. Requirements to the maximum volume of study load of students**

16. The maximum amount of study load for students shall be no more than 54 hours per week, including the mandatory study load for full-time education - at least 36 hours per week, as well as extracurricular classes and consultations.

17. For MSEIs during trainings, during field trips, at training grounds, all types of practices, military internships, educational work shall be planned at the rate of up to 54 hours of training per week.

18. The amount of study time for compulsory education shall be 60 credits / 1440 hours per academic year.

To assist and develop individual abilities, students shall be provided with consultations and extracurricular activities.

19. The volume of the study load of a student shall be measured in credits/hours based on the learning outcomes mastered by him in each discipline and (or) module or other types of educational work

1 credit is equal to 24 academic hours; 1 academic hour is equal to 45 minutes.

20. The amount of study time for compulsory studies shall be 70% for evening education and 30% for part-time education of the corresponding amount of study time provided for full-time education.

### **Chapter 4. Requirements to the level of training of students**

21. The requirements for the level of training of students shall be determined by the descriptors of the national qualifications framework, sectoral qualifications frameworks, professional standards and reflect the acquired competencies expressed in the achieved learning outcomes.

Descriptors reflect learning outcomes that characterize the ability of students to achieve the following levels of training:

- in the training of qualified workers: conduct activities with a certain degree of independence based on the task, apply basic, general educational and practice-oriented professional knowledge, solve standard and simple practical tasks of the same type, choose methods of action from known ones based on knowledge and practical experience, adjust activities taking into account the results obtained;

- when training mid-level specialists: to manage the standard work of others, taking into account significant social and ethical aspects, to be responsible for their own training and training of others, to apply professional (practical and theoretical) knowledge to carry out activities and practical experience, to solve typical practical problems of a wide range, requiring an independent analysis of the working situation and its predictable changes, choose technological ways to carry out activities, conduct current and final control, evaluate and correct activities.

### Chapter 5. Requirements to the duration of study

22. The terms of mastering the TVE educational programs shall depend on the complexity and / or number of qualifications and are determined by the amount of credits / hours provided according to SCES models.

Appendix 1 to the State  
Compulsory Standard for technical  
and vocational education

### Model syllabus for technical and vocational education

No.	Name of modules and types of academic activities	Amount of credits/hours			
		for persons with special educational needs (with non-intact intellect)	on the basis of basic secondary education	on the basis of general secondary education	On the basis of technical and vocational education, higher education
1	2	3	4	5	6
1	Module "General education disciplines"*	+	60/1440	-	-
2	Basic modules	+	+	+	
3	Professional modules				
3.1	Professional modules by working qualifications**	+	+	+	
3.2	Professional modules professional	+		+	

	modules of a mid-level specialist**		+		
4	Intermediate certification	+	+	+	+
5	Final certification	+	+	+	+
	Total for compulsory study				
	Qualified workers	120/2880	120/2880-180/4320***	60/1440-120/2880***	-
	Mid-level specialist	-	180/4320-240/5760****	120/2880-180/4320****	60/1440
6	Extracurricular classes	no more than 4 hours per week			
7	Consultations	no more than 100 hours per academic year			
	The total number of study load per student in credits/ hours	138/3312	206/4944-274/6576	138/3312-206/4944	69/1656

Note:

\* in the specialty "Choreographic Art" is 38/912 credits / hours.

\*\* on-the-job training and / or professional practice is at least 40% of the professional module.

\*\*\* it is determined depending on the complexity and (or) the number of qualifications.

\*\*\*\* it is determined depending on the amount of study time allotted for the level of skilled workers.

Appendix 2 to the State  
Compulsory Standard for technical  
and vocational education

### Model syllabus for technical and vocational education for the levels of qualified workers and mid-level specialist

No.	Name of cycles, disciplines and training activity	Amount of credits/hours			
		for persons with special educational needs (with non-intact intellect)	on the basis of basic secondary education	on the basis of general secondary education	On the basis of TVE, higher education
1	2		3	4	5
	Qualified workers				
1	General education disciplines	+	60/1440	-	-

2	General humanitarian disciplines	+	+	+	+
3	General professional disciplines	+	+	+	+
4	Special disciplines	+	+	+	+
5	On-the-job training and professional practice*	+	at least 40% of the total study time for compulsory education		
6	Intermediate certification	+	+	+	+
7	Final certification	+	+	+	+
	Total for compulsory study	120/2880	120/2880-180/4320**	60/1440-120/2880**	60/1440
8	Extracurricular classes	no more than 4 hours per week			
9	Consultations	no more than 100 hours per academic year			
	The total number of study load per student in credits/ hours	138/3312	138/3312-207/4968**	69/1656-138/3312**	69/1656
	Mid-level specialist				
1	General education disciplines		60/1440	-	-
2	General humanitarian disciplines		+	+	+
3	Social economical disciplines		+	+	+
4	General professional disciplines		+	+	+
5	Special disciplines		+	+	+
6	On-the-job training and professional practice*		at least 40% of the total study time of compulsory education		
7	Intermediate certification		+	+	+
8	Final certification		+	+	+

	Total for compulsory study	-	180/4320-240/5760	120/2880-180/4320	60/1440
9	Extracurricular classes		no more than 4 hours per week		
10	Consultations		no more than 100 hours per academic year		
	The total number of study load per student in credits/hours		206/4944-274/6576**	138/3312-206/4944**	69/1656

Note:

\* including laboratory and practical classes in general professional and special disciplines, term paper and thesis projecting.

\*\* determined depending on the complexity of the qualifications.

Appendix 6  
to Order No. 604 of the Minister  
of Education and Science  
of the Republic of Kazakhstan  
of October 31, 2018,

## State Compulsory Standard for Post-Secondary Education

**Footnote. Appendix 6 - as amended by the order of the Acting Minister of Education and Science of the Republic of Kazakhstan dated 23.07.2021 No. 362 (shall be enforced upon expiry of ten calendar days after the day of its first official publication).**

### Chapter 1. General Provisions

1. This State Compulsory Standard for Post-Secondary Education (hereinafter referred to as the SCES) have been developed in accordance with subparagraph 5-1) of Article 5 and Article 56 of the Law of the Republic of Kazakhstan “On Education” and shall determine the requirements to the content of education with a focus on learning outcomes, the maximum amount of study load, the level of training of students, the period of study in educational programs of post-secondary education (hereinafter referred to as the educational programs of PSE).

This SCES shall be applied by educational organizations implementing PSE educational programs (hereinafter referred to as the PSE organizations), regardless of ownership and departmental subordination, and by the developers of PSE educational programs.

2. The following terms and definitions shall be used in the SCES:

1) basic competence - a set of knowledge, skills and abilities required for personal, social and professional activities of the student;

2) basic module - a functionally completed structural element of the educational program, aimed at the formation of the basic competence of the student;



- 3) an individual component of a student – part of the educational program aimed at expanding the practical experience of mastering qualifications through project work;
- 4) component of the choice of the educational organization – a list of modules determined by the PSE organization in accordance with the regional development plan, the requirements of employers, taking into account WorldSkills standards as part of the development of the educational program;
- 5) demonstration exam – a form of intermediate and / or final certification that allows the student to practically demonstrate the mastered professional competencies;
- 6) the thesis (project) – the final independent work of the student, which is a generalization of the results of the student's mastering the educational program of PSE.
- 7) individual curriculum - a student's curriculum that promotes to the implementation of individual educational needs within the mastered educational program of post-secondary education;
- 8) project work – practical and / or creative work of the student, performed under the guidance of a teacher or mentor;
- 9) work curriculum - a document developed by a post-secondary organization for a specific module of a work curriculum;
- 10) working syllabus - a document developed by a post-secondary education organization that regulates the list of volumes of training modules, the sequence of their study, as well as forms of control over their development;
- 11) professional competence - the ability to solve a set of professional tasks based on knowledge, skills and abilities, as well as personal qualities that allow you to effectively carry out professional activities;
- 12) professional module - a functionally completed structural element of the educational program, aimed at the formation of professional competence;
- 13) consultation - a form of training sessions that provides assistance to students in mastering the educational program;
- 14) credit – numerical expression of the total weight of learning outcomes in a qualification or a separate component of a qualification;
- 15) credit-modular system of education – model of organization of the educational process, based on the unity of credit and modular learning technologies;
- 16) compulsory component – list of academic disciplines and (or) modules mastered by students on a mandatory basis;
- 17) extracurricular classes – additional training to advance knowledge, develop interests, abilities of students within the chosen specialty, not included in compulsory education.

## **Chapter 2. Requirements to the content of post-secondary education with a focus on learning outcomes**

3. The content of post-secondary education shall be determined by educational programs and focuses on learning outcomes.

The content of PSE educational programs of post-secondary education shall provide for the development of basic and professional modules, including theoretical classes, laboratory and practical work, on-the job training and professional practice.

4. Educational programs shall be developed by PSE organizations independently with the participation of employers based on these SCES requirements, professional standards (if any), WorldSkills professional standards (if any).

The educational program includes: passport, work curriculum and work study programs.

5. The content of PSE educational programs shall provide for the study of educational programs integrated into modules for technical and vocational education with the inclusion of individual modules or disciplines of educational programs for undergraduate studies.

6. PSE educational programs are structured on the basis of a competency-based approach using credit-modular technology.

PSE educational programs shall be developed by PSE organizations based on the combination of relevant content aspects of educational programs necessary for the performance of specific activities and the formation of professional competence.

7. To form basic competencies, the PSE organization provides for the study of basic modules.

Basic competencies are aimed at the formation of a healthy lifestyle and the improvement of physical qualities, socialization and adaptation in society and the workforce, the development of feelings of patriotism and national identity, the acquisition of entrepreneurial skills and financial literacy, the use of information, communication and digital technologies in professional activities.

PSE educational programs provide for studying the following basic modules:

- 1) development and improvement of physical qualities;
- 2) application of information, communication and digital technologies;
- 3) application of the foundations of social sciences for socialization and adaptation in society and the workforce;
- 4) Application of the main laws and mechanisms of the functioning of the modern economic system in professional activities.

At the discretion of the PSE organization, basic modules shall be integrated into professional modules depending on the specialty profile.

It shall be allowed to include additional basic modules.

8. The content of professional modules shall accommodate to modern requirements for environmental and/or industrial safety.

Professional modules shall be determined by the PSE organization independently.

In order to expand the practical experience of mastering the qualification, at the discretion of the PSE organization, an individual component of a student is implemented through project work within professional modules.

9. PSE educational programs, along with theoretical training, provide on-the job training and professional practice.

Professional practice is divided into educational, on-the job and pre-diploma.

The time frames and content of on-the-job training and professional practice shall be determined by the plan of the educational process and working training programs.

PSE educational programs using dual training shall provide for theoretical training in educational institutions and at least sixty percent of on-the-job training and professional practice on the basis of an enterprise (organization).

10. Assessment of the achievements of learning outcomes shall be carried out by various types of control: current monitoring of progress, intermediate and final certification.

Module tests, end-of-term tests and term projects (papers) shall be carried out at the expense of the study time allotted for the study of the module, exams - within the time allotted for the intermediate or final certification.

Final and (or) intermediate certification for specialties in the field of art and culture provides for the implementation of creative tasks.

The PSE organization shall develop the regulation on the creative task independently.

The qualification exam shall be conducted in the form of a practical work or a demonstration exam in the workshops, laboratories and training centers of PSE organizations and / or on the production sites of enterprises.

Final certification for persons with special educational needs shall be carried out in the form of practical work. The form of the final assessment of students is determined by the PSE organization.

11. Working syllabuses are developed based on the PSE Curriculum Model, according to Appendix to the SCES.

12. Working curricula are developed for all modules of the curriculum with a focus on learning outcomes and approved by the PSE organization.

13. When developing educational programs, the PSE organizations shall:

1) independently determine the volume and content of the modules while maintaining the total number of credits / hours allocated for compulsory education;

2) determine the sequence, list and number of modules/qualifications within one specialty;

3) choose different learning technologies, forms, methods of organization and control of the educational process.

14. The content of the PSE educational program shall provide for the preparation of applied bachelors with the development of working qualifications and ensures the continuity of education levels and the transfer of learning outcomes and credits / hours at the next level of education in related specialties (qualifications).

### **Chapter 3. Requirements to the maximum volume of study load of students**

15. The maximum amount of study load for students shall be no more than 54 hours per week, including the mandatory study load for full-time education - at least 36 hours per week, as well as extracurricular classes and consultations.

16. The amount of study time for compulsory education shall be 60 credits / 1440 hours per academic year.

To assist and develop individual abilities, students shall be provided with consultations and extracurricular activities.

17. The volume of the study load of a student shall be measured in credits/hours based on the learning outcomes mastered by him in each discipline and (or) module or other types of educational work.

1 credit is equal to 24 academic hours; 1 academic hour is equal to 45 minutes.

18. amount of study time for compulsory studies shall be 70% for evening education and 30% for part-time education of the corresponding amount of study time provided for full-time education.

### **Chapter 4. Requirements to the level of training of students**

19. The requirements for the level of training of students shall be determined by the descriptors of the national qualifications framework, sectoral qualifications frameworks, professional standards and reflect the acquired competencies expressed in the achieved learning outcomes.

Descriptors shall reflect the learning outcomes that characterize the abilities of students: to independently manage and control the processes of labor and educational activities within the framework of the strategy, policy and goals of the organization, discuss the problem, argue the conclusions and competently operate with information, apply a wide range of theoretical and practical knowledge in the professional field, perform independent search for information necessary to solve professional problems, solve practical problems that involve a variety of ways to solve and choose them, apply a creative approach (or the skills and abilities to independently develop and put forward various, including alternative solutions to professional problems), maintain current and final control, evaluate and correct activities.

### **Chapter 5. Requirements to the duration of study**

20. the terms for mastering the educational programs shall be determined depending on the level of education:

- on the basis of general secondary education 180 credits;
- on the basis of technical and vocational education with the qualification of qualified workers 120 credits;
- on the basis of technical and vocational education with the qualification of a qualified mid-level specialist 60 credits.

Appendix to the State  
Compulsory Standard  
of Post-Secondary Education

### Model of a syllabus for post-secondary education

No.	Name of modules and types of academic activities	Amount of credits/hours		
		On the basis of general secondary education	On the basis of technical and vocational education with the qualification of skilled workers	On the basis of technical and vocational education with the qualification of a mid-level specialist
1	2	3	4	5
1	Basic modules	+	+	+
2	Professional modules			
2.1	Professional modules by the level of qualified workers*	60/1440	-	-
2.2	Professional modules of qualification of an Applied Bachelor*	120/2880**	120/2880**	60/1440
3	Intermediate certification	+	+	+
4	Final certification	+	+	+
	Total for compulsory	180/4320	120/2880	60/1440
5	Extracurricular classes	no more than 4 hours per week		
6	Consultations	no more than 100 hours per academic year		
	Total	206/4944	138/3312	69/1656

Note:

\* On-the-job training and / or professional practice is at least 40% of the professional module.

\*\* The development of professional modules of a related professional modules of a mid-level specialist is provided.

Appendix 7  
to Order № 604 of the Minister  
of Education and Science of the

**State obligatory standard for higher education**

Footnote. Appendix 7 invalidated by order of the Minister of Science and Higher Education of the Republic of Kazakhstan No. 2 dated July 20, 2022 (shall be enforced ten calendar days after the day of its first official publication).

Appendix 8  
to Order No. 604 of the Minister  
of Education and Science  
of the Republic of Kazakhstan  
of October 31, 2018

**State obligatory standard for postgraduate education**

Footnote. Appendix 8 invalidated by order of the Minister of Science and Higher Education of the Republic of Kazakhstan No. 2 dated July 20, 2022 (shall be enforced ten calendar days after the day of its first official publication).