

**THE PROGRAM OF COMPREHENSIVE DEVELOPMENT OF
INTELLECTUAL AND CREATIVE ABILITIES OF PUPILS
OF GRADES 1-11**



Pavlodar, 2026

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The program is recommended for the dissemination and generalization of pedagogical experience at the district and regional levels (Conclusion dated March 31, 2026, approved by the Chairman of the Educational and Methodological Council of the Innovative Center for Educational Development of the Pavlodar Region Department of Education).

Team of authors: Utilova A.M., Asainova A. Zh., Shakenova T. Zh., Zhangazy G.S.

The program for the comprehensive development of intellectual and creative abilities of students in grades 1-11 is aimed at developing flexible, critical and creative thinking among schoolchildren, as well as the ability to independent cognitive and research activities. The content of the program is based on the principle of age-related continuity and the gradual complication of cognitive tasks: from the development of basic mental operations in elementary school to the development of research thinking, project activities and the generation of innovative ideas at subsequent levels of education.

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1. Explanatory Note

Relevance. The modern education system is focused on developing the intellectual potential of students, developing the ability to think independently, critically analyze information and generate new ideas. In the context of accelerating social, technological and scientific changes, there is an increasing need for a personality capable of flexibly responding to new challenges, making non-standard decisions and acting effectively in situations of uncertainty.

In the modern world, the following cognitive and personal qualities of students are of particular importance:

- flexibility of thinking and the ability to adapt intellectually;
- ability to solve complex and non-standard problems;
- formation of research and analytical skills;
- the ability to think creatively and generate original ideas.

The development of these qualities should be carried out systematically and consistently at all levels of school education. In this regard, the development of programs aimed at the comprehensive development of intellectual and creative abilities of students during the entire period of schooling is of particular relevance.

The program for the integrated development of intellectual and creative abilities of students in grades 1-11 is focused on creating an integrated system for the formation of cognitive, research and creative skills of students. It provides for the gradual and consistent development of thought processes - from basic operations of analysis, comparison and establishment of patterns in elementary school to the formation of research thinking, the ability to project and generate innovative ideas at the primary and high school levels.

The program pays special attention to the development of critical thinking, imagination, the ability to intellectual search and independent cognitive activity. The program is implemented through a system of intellectual exercises, creative tasks, game and research practices aimed at developing students' analytical and creative abilities.

The content of the program is based on the principle of gradually increasing the complexity of tasks and expanding the range of cognitive tasks, which ensures age-related continuity and sustainable development of students' intellectual potential at all stages of school education.

The program has been developed in accordance with the regulatory framework of the Republic of Kazakhstan and reflects the strategic directions of modernization of the education system. It is based on the provisions of the following documents:

- The Law of the Republic of Kazakhstan "On Education";
- The concept of development of preschool, secondary, technical and vocational education of the Republic of Kazakhstan for 2023-2029, approved by Resolution of the Government of the Republic of Kazakhstan dated March 28, 2023 №248;
- The State mandatory standard of preschool education and training, primary, basic secondary and general secondary education, approved by the Order of the Minister of Education of the Republic of Kazakhstan dated August 3, 2022 №348 "On approval of the State mandatory standards of preschool education and training,

primary, basic secondary and general secondary, technical and vocational, post-secondary education";

- Standard rules for the activities of educational organizations of relevant types and types, approved by Order of the Minister of Education and Science of the Republic of Kazakhstan dated October 30, 2018 №595 (with amendments and additions);

- Order of the Minister of Education and Science of the Republic of Kazakhstan dated April 3, 2013 №115 "On approval of standard curricula in general education subjects, elective courses and electives for general education organizations" (with amendments and additions);

- Conceptual foundations for the development of students' giftedness in the education system of the Republic of Kazakhstan, developed by the Republican Scientific and Practical Center "Daryn" and aimed at identifying, supporting and developing gifted children;

- Strategic documents of the Republic of Kazakhstan aimed at the development of human capital, intellectual potential of the individual and the formation of skills of the 21st century.

The program was developed within the framework of modern approaches to the identification and development of students' giftedness and is focused on the integrated development of intellectual, academic, creative, research, leadership and project giftedness through specially organized cognitive activities.

Scientific and methodological level: modification

Novelty, pedagogical expediency: the novelty of the program for the integrated development of intellectual and creative abilities of students in grades 1-11 is to create an integrated system for the formation of cognitive and creative competencies of students throughout the school period. Unlike traditional programs that focus primarily on mastering the educational content of individual disciplines, this program is aimed at developing universal intellectual thinking mechanisms that ensure students' ability to analyze, synthesize, generate ideas and solve non-standard tasks. The pedagogical expediency of the program is determined by the need for the systematic development of students' intellectual and creative abilities, which is achieved through the use of intellectual exercises, creative and problematic tasks that contribute to the formation of analytical, critical and divergent thinking, the development of research skills, imagination and cognitive activity. The implementation of the program ensures the consistent development of students' cognitive abilities and creates conditions for the disclosure of their intellectual potential.

The content of the program has been developed taking into account the age-related patterns of cognitive development of students and is based on a spiral principle. Each subsequent stage of learning is based on the mental operations and cognitive mechanisms formed at the previous stage, providing a gradual complication of the intellectual activity of students.

In elementary school (grades 1-4), the main focus is on the development of associative, logical and analytical thinking. At this stage, students master basic mental operations: comparison, classification, analysis, establishment of cause-effect relationships and search for patterns.

In the middle school (grades 5-8) The focus shifts to the development of divergent, critical and creative thinking. Students learn to look at a problem from different perspectives, generate alternative ideas, evaluate the reliability of information, argue their own point of view, and make informed decisions.

In high school (grades 9-11), research, engineering, design, and innovative thinking receive priority. At this stage, students master the skills of problem formulation, hypothesizing, conducting research, developing projects, and creating practice-oriented solutions.

The program provides a consistent transition from mastering basic mental operations to solving complex research and design tasks. This approach corresponds to modern scientific ideas about the development of students' thinking and is based on the achievements of cognitive psychology, neuropsychology, neuropedagogy and theory of developmental learning.

Taking into account the above, the purpose of the course program is formulated: the development of analytical, critical, creative and research thinking of students through solving problematic tasks, completing research assignments and developing projects taking into account age characteristics.

Objectives of the program

1. To form students' analytical and logical thinking by performing tasks aimed at analyzing, comparing and establishing cause-effect relationships.

2. Develop students' critical and creative thinking through solving problematic and non-standard tasks.

3. To develop students' cognitive and research skills that ensure independent search, analysis and interpretation of information, as well as the performance of educational research and project assignments.

The theoretical significance of the program is to substantiate and systematize pedagogical approaches to the development of intellectual and creative abilities of students, as well as to expand scientific and methodological ideas about the formation of critical, creative and research thinking in the educational process.

The practical significance of the program is the use of a system of intellectual, creative and research tasks in educational and extracurricular activities to form students' analytical, critical and creative thinking and enhance their cognitive activity.

Expected results:

- at least 70-80% of students analyze, compare and establish causal relationships when performing intellectual tasks.

- at least 65-75% of students use critical and creative thinking when solving problematic and non-standard tasks.

- at least 70% of students independently search, analyze and interpret information, successfully complete educational research and project assignments.

Ways to verify the expected results:

- Performing diagnostic tasks for analysis, comparison and establishment of cause-effect relationships.

- Solving problematic and non-standard tasks, followed by an analysis of the correctness and originality of solutions.

-Performing mini-studies and project assignments with an assessment of the level of independence and the use of research skills.

-Monitoring the activities of students in the process of performing intellectual and creative tasks.

-Analysis of the results of completed work (logical tasks, creative tasks, research works).

Approbation: it was conducted on the basis of KSU "Gymnasium School №. 22 named after S. Toraigyrov" of the Department of Education of the city of Ekibastuz and KSU "Specialized Lyceum School "Zhas Daryn" of the Department of Education of the Pavlodar region" as part of the educational activities of students. The results of the testing showed positive dynamics in the development of cognitive activity and intellectual abilities of students. Most of the students showed an increase in the level of analytical thinking, an improvement in the ability to solve non-standard tasks, as well as an increase in interest in performing research and creative tasks.

2. Educational and thematic plan

№	Topic	Number of hours	Type of occupation	
			Theoretical	Practical
	Grades 1-4			
	Section 1. Imagination and associative thinking			
1	Visual associations of "What does it look like?"	2	1	1
2	Chains of associations	2	1	1
3	Creative transformation of objects	2	1	1
4	Creating unusual stories	2	1	1
	Section 2. Divergent and creative thinking			
5	"How many solutions are there?"	2	1	1
6	Incredible combinations of ideas	2	1	1
7	Generating original ideas	2	1	1
	Section 3. Logical and analytical thinking			
8	Search for patterns	2		
9	Logical tasks and puzzles	2	1	1
10	Classification and systematization of objects	2	1	1
11	Solving intellectual problems	2	1	1
	Section 4. Critical and inventive thinking			
12	Truth or fiction. Find the error	2	1	1
13	Improvement of existing facilities	2	1	1
14	Come up with a new device	2	1	1
	Section 5. Research and project thinking			
15	Learning to ask research questions	2	1	1
16	Mini-studies	2	1	1
17	Observation and conclusions	2	1	1
	Total	34		
	Grades 5-8			
	Section 1. Cognitive thinking strategies			
1	How thinking works. Problem solving strategies	2	1	1
2	Information analysis and identification of patterns	2	1	1
3	Models of reasoning and argumentation	2	1	1
	Section 2. Divergent and creative thinking			
4	Generating ideas	2	1	1
5	The method of "incredible combinations"	2	1	1
6	Search for multiple solutions to the same problem	2	1	1
	Section 3. Logical and analytical thinking			
7	Complex logical tasks. Intellectual Puzzles	2	1	1
8	Proof and refutation strategies	2	1	1
	Section 4. Critical thinking			
9	Information analysis and error detection	2	1	1
10	Facts and interpretations	2	1	1
11	Decision-making in difficult situations	2	1	1
	Section 5. Exploratory thinking			
12	Setting research questions	2	1	1

13	Formulation of hypotheses	2	1	1
14	Analysis of results and conclusions	2	1	1
Section 6. Team problem solving				
15	Brainstorming as an idea generation tool	2	1	1
16	Team idea generation	2	1	1
17	Development of a team intellectual project	2	1	1
	Total	34		
Grades 9-11				
Section 1. Strategic thinking				
1	Modern models of thinking	2	1	1
2	Strategies for solving complex problems	2	1	1
3	Analysis of complex situations	2	1	1
Section 2. Critical thinking				
4	Information verification and argumentation	2	1	1
5	Logical errors and manipulations	2	1	1
6	Decision-making in conditions of uncertainty	2	1	1
Section 3. Creative and divergent thinking				
7	Methods of generating ideas	2	1	1
8	and non-standard solutions to problems	2	1	1
9	Creating innovative ideas	2	1	1
Section 4. Analytical thinking				
10	Data and information analysis	2	1	1
11	Building logical models	2	1	1
12	Solving complex intellectual tasks	2	1	1
Section 5. Engineering and innovative thinking				
13	Designing innovative ideas	2	1	1
14	Development of prototype solutions	2	1	1
Section 6. Research activities				
15	Formulation of a scientific problem	2	1	1
16	Hypotheses and research methods	2	1	1
17	Analysis and interpretation of research results	2	1	1
	Total	34		

3. Program content

Grades 1-4

Section 1. Imagination and associative thinking - 8 hours

Visual associations of "What does it look like?". Chains of associations. Creative transformation of objects. Creating unusual stories.

The form of summarizing the section: performing a creative task to create an associative story or image.

Section 2. Divergent and creative thinking - 6 hours

"How many solutions are there?". Incredible combinations of ideas. Generating original ideas.

Section summary form: solving a creative problem with multiple choice answers.

Section 3. Logical and analytical thinking - 8 hours

Search for patterns. Logical tasks and puzzles. Classification and systematization of objects. Solving intellectual problems

The form of summarizing the results of the section: performing a set of logical and analytical tasks.

Section 4. Critical and inventive thinking - 6 hours

Truth or fiction. Find the error. Improvement of existing facilities. Come up with a new device.

The form of the summary of the section: development and presentation of the idea of improving the facility.

Section 5. Research and project thinking - 6 hours

We are learning to ask research questions. Mini-studies. Observation and conclusions.

Summary form of the section: protection of a mini-study or a mini-project.

Grades 5-8

Section 1. Cognitive thinking strategies - 6 hours

How thinking works. Problem solving strategies. Information analysis and identification of patterns. Models of reasoning and argumentation.

Section summary form: completing an analytical case assignment.

Section 2. Divergent and creative thinking - 6 hours

Idea generation. The method of "incredible combinations". Search for multiple solutions to the same problem

Section summary form: development of several alternative solutions to a problematic situation.

Section 3. Logical and analytical thinking - 4 hours

Complex logical tasks. Intellectual puzzles. Strategies of proof and refutation.

The form of summing up the results of the section: the solution of the logical workshop.

Section 4. Critical thinking - 6 hours

Information analysis and error detection. Facts and interpretations. Decision-making in difficult situations.

The form of summing up the section: the analysis of the information case and the reasoning of the decision.

Section 5. Exploratory thinking- 6 hours

Formulation of research questions. Formulation of hypotheses. Analysis of the results and conclusions.

The form of summarizing the results of the section: the implementation of educational research.

Section 6. Team problem solving - 6 hours

Brainstorming as an idea generation tool. Team generation of ideas. Development of a team intellectual project.

Summary form of the section: team project protection.

Grades 9-11

Section 1. Strategic thinking - 6 hours

Modern models of thinking. Strategies for solving complex problems. Analysis of complex situations.

The form of summarizing the results of the section: solving a strategic case.

Section 2. Critical thinking - 6 hours

Information verification and argumentation. Logical errors and manipulations. Decision-making in conditions of uncertainty.

Summary form of the section: expert analysis of the problem situation.

Section 3. Creative and divergent thinking - 6 hours

Methods of generating ideas. Non-standard solutions to problems. Creating innovative ideas.

The form of summarizing the section: the development of an innovative idea and its presentation.

Section 4. Analytical thinking - 6 hours

Data and information analysis. Building logical models. Solving complex intellectual tasks.

The form of summarizing the results of the section: performing an analytical task with justification of the decision.

Section 5. Engineering and Innovative thinking - 4 hours

Designing innovative ideas. Development of prototype solutions.

Section summary form: presentation of a prototype or design solution.

Section 6. Research activity - 6 hours

Formulation of a scientific problem. Hypotheses and research methods. Analysis and interpretation of the research results.

The form of summarizing the results of the section: protection of research work.

The content of the program is aimed at the integrated development of various components of students' giftedness. Each section contributes to the formation of intellectual, creative, research, leadership and design qualities of a person necessary for successful self-realization in modern society.

Table 1 - Development of the components of giftedness by means of the program

№	Program section	The developed components of giftedness
1	Imagination and associative thinking	intellectual, creative
2	Divergent and creative thinking	creative, intellectual
3	Logical and analytical thinking	intellectual, academic
4	Critical thinking	intellectual, academic
5	Inventive and engineering thinking	creative, project-based
6	Exploratory thinking	research, academic
7	Research activities	research, project
8	Team problem solving	leadership, communication, project
9	Strategic thinking	intellectual, leadership
10	Project activities	design, research, leadership

As a result of mastering the program, the development of intellectual, academic, creative, research, leadership and project talent of students is ensured, which corresponds to modern approaches to the support and development of gifted children in the education system.

4. Methodological support of the program: it includes a set of pedagogical methods, forms of organization of activities, teaching materials and teaching tools aimed at developing analytical, critical and creative thinking of students.

The program is implemented using teaching methods that correspond to the age characteristics of students and the specifics of the types of thinking being formed.

Table 2 - Teaching methods according to age group and direction of thinking development

Age group	Emerging types of thinking	Basic teaching methods
Grades 1-4	associative, logical, analytical	game technologies, visual modeling, heuristic conversation, exercises for comparison and classification, solving logical problems
Grades 5-8	divergent, critical, creative	brainstorming, case method, problem-based learning, discussions, debates, methods of generating ideas
Grades 9-11	research, engineering, design, innovation	research method, project-based learning, design thinking, STEM approach, real-world situation analysis, project development and protection

The choice of teaching methods is determined by the patterns of age-related cognitive development of students. As mental processes become more complex, there is a transition from predominantly playful and visual-practical teaching methods to problem-based search, research and design methods. This approach ensures the consistent development of students' intellectual and creative abilities and corresponds to modern scientific ideas about the development of thinking at school age.

The forms of organization of students' activities include individual, pair and group work, intellectual games, creative tasks, mini-studies, discussions, problem solving, project development and protection.

Table 3 - Forms of organization of activities

Age group	Forms
Grades 1-4	games, creative workshops, group assignments
Grades 5-8	discussions, case studies, intellectual tournaments
Grades 9-11	research, startup projects, project teams

Differentiation of forms of activity organization ensures that the educational process meets the age characteristics of students and promotes the gradual development of intellectual and creative abilities. As students grow up, there is a transition from predominantly playful and practice-oriented forms of activity to research, project, and innovative forms of work that require a higher level of independence and responsibility.

In the process of implementing the program, digital educational resources and online platforms are used to ensure interactivity of learning, visualization of educational material and organization of independent activities of students. Depending

on the age of the students, the educational platforms BilimLand, OnlineMektep, LearningApps, Wordwall, Google Classroom, Canva, Padlet, Kahoot, Quizizz, as well as digital services for creating smart maps, presentations and project products can be used.

5. Referens

1. Bill Lucas, Ellen Spencer. Teaching Creative Thinking: Developing Learners Who Generate Ideas and Can Think Critically. - London: Crown House Publishing, 2021.
2. Ronald A. Beghetto. Creativity in the Classroom: Teaching for Creative Thinking. - Cambridge University Press, 2021.
3. Anna Craft. Creativity and Education Futures.- London: Trentham Books, 2022.
4. Berry A. Education in the 21st Century: STEM, Creativity and Critical Thinking. -Springer, 2021.
5. Badger R., Firth S. Creativity for Teachers: A Cognitive Science Approach. - Routledge, 2023.
6. Thornhill-Miller B., et al. Creativity, Critical Thinking, Communication and Collaboration: Assessment of 21st Century Skills. - 2023.
7. Fauzi W. N. A. Creative Thinking in Global Primary Education: Pedagogical Approaches. - 2025.
8. Markova E. S. Критическое мышление как ключевая компетенция современного образования. - 2024.
9. Adlini M. N. Designing Educational Resources for 21st-Century Skills. -2024.
10. Ismailov T. Pedagogical Mechanisms for Developing Creative and Critical Thinking in Education. - 2025.
11. Romero M. Evaluating the Development of Creativity and Critical Thinking in Education. - 2026.
12. Ahzari S., Asrizal, Usmeldi. Effects of Teaching Materials on Critical and Creative Thinking Skills. - 2026.
13. Renzulli, J. S. The Three-Ring Conception of Giftedness: A Developmental Model for Promoting Creative Productivity. – Mansfield Center, CT: Creative Learning Press, 2005.
14. Renzulli, J. S., Reis, S. M. The Schoolwide Enrichment Model: A Comprehensive Plan for Educational Excellence. – Mansfield Center, CT: Creative Learning Press, 2014.
15. Gardner, H. Frames of Mind: The Theory of Multiple Intelligences. – New York: Basic Books, 2011.
16. Gardner, H. Multiple Intelligences: New Horizons in Theory and Practice. – New York: Basic Books, 2006.
17. Sternberg, R. J. Wisdom, Intelligence, and Creativity Synthesized. – Cambridge: Cambridge University Press, 2003.
18. Sternberg, R. J., Davidson, J. E. Conceptions of Giftedness. – New York: Cambridge University Press, 2005.

19. Torrance, E. P. Torrance Tests of Creative Thinking: Norms and Technical Manual. – Lexington, MA: Ginn & Company, 2008.

20. Республиканский научно-практический центр «Дарын». Методические рекомендации по выявлению, сопровождению и развитию одаренных детей в организациях образования Республики Казахстан. – Астана: РНПЦ «Дарын», 2023. – 78 с.

21. Республиканский научно-практический центр «Дарын». Концептуальные подходы к развитию одаренности обучающихся в системе образования Республики Казахстан. – Астана: РНПЦ «Дарын», 2022. – 56 с.

«Утверждаю»
Председатель учебно-методического совета
Аушаханова Б.Т.
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**Заключение
на инновационный педагогический опыт в сфере среднего образования**

Место работы: НАО «Павлодарский педагогический университет им.Элкей Марғұлан/КГУ «Специализированная школа-лицей «Жас Дарын» управления образования Павлодарской области»

Авторы: Утилова А. М., Асаинова А. Ж., Шакенова Т. Ж., Жанғазы Г.С.

Тема: Программа обучения учащихся 1-11 классов с учетом уровня, степени и параметров одаренности

1. **Актуальность представленной работы** обусловлена необходимостью создания условий для всестороннего развития интеллектуальных и творческих способностей учащихся в системе непрерывного образования с 1 по 11 классы.
2. **Научно-методический уровень работы** является комбинаторным, так как авторы эффективно сочетают современные образовательные технологии, методы развития креативного и критического мышления с практическим опытом педагогической деятельности.
3. **Степень новизны работы** работа содержит элементы новизны, проявляющиеся в разработке комплексной программы, обеспечивающей системное развитие интеллектуальных и творческих способностей учащихся на всех уровнях школьного обучения.
4. **Научность работы** содержание работы соответствует современным образовательным подходам, включает теоретическое обоснование и практические механизмы реализации программы, направленные на развитие личности обучающихся.
5. **Оценка внутреннего единства и методологической основы** работа отличается логической последовательностью, целостностью структуры и наличием обоснованной методологической базы, прослеживающейся на всех этапах реализации программы.
6. **Обоснованность и достоверность результатов работы** являются обоснованными и достоверными, так как подтверждаются анализом педагогической практики и результатами внедрения программы в образовательный процесс.
7. **Практическая значимость работы** заключается в возможности использования программы педагогами для организации системной работы по развитию интеллектуального и творческого потенциала учащихся.
8. **Апробация результатов программы** прошли апробацию в образовательной практике и показали свою эффективность, что подтверждается соответствующими материалами.
9. **Соответствие требованиям к оформлению** работа соответствует установленным требованиям к оформлению научно-методических материалов.
10. **Выводы и рекомендации** представленная программа имеет высокую практическую значимость, может быть рекомендована к внедрению в образовательных организациях и распространению педагогического опыта на областном уровне.

Секретарь учебно-методического совета



К.А. Мундунова