

BEST PRACTICES

FOR INTEGRATING
SUSTAINABLE
DEVELOPMENT
COMPONENTS
INTO SECONDARY
EDUCATION

GUIDEBOOK



Best Practices for Integrating Sustainable Development Components into Secondary Education. Author: Almagul Mukhamedkhanova, Narxoz University, Almaty, 2025

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Additional materials are available on the open educational platform for sustainable development: sdglessons.net.

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INTRODUCTION

The integration of education for sustainable development (ESD) into secondary education content and school curricula is an important step in building functional literacy and global competences of learners.

The Sustainable Development Goals represent a global action plan for improving people's lives and preserving the planet by 2030, covering a wide range of topics such as reducing inequality, fighting poverty, improving health, ensuring quality education, protecting the environment, human rights, and other aspects. The inclusion of the sustainable development component in the learning process in secondary education organizations can contribute to the development of students' understanding of the importance of global responsibility, as well as to the development of critical thinking and active citizenship.

It is necessary to highlight the main aspects of the concept of sustainable development: economic growth, social progress, environmental preservation, based on which it is important to form global competences of students.

By integrating the issues of creating conditions for stable economic development without harming future generations, social progress, social justice, equality of opportunity and access to resources, environmental protection, conservation of natural resources and biodiversity, reducing the negative impact on nature in the course of studying the concept of sustainable development, teachers can help students to develop the ability to understand and analyze global world and regional problems, find effective solutions and act responsibly in any situation.

Examples of teachers' introduction of the concept of sustainable development into the content of secondary education are:

- 1. Integration of environmental topics into the curricula.** For example, studying the impact of climate change on ecosystems and ways to reduce the carbon footprint.
- 2. Project activities.** Student participation in projects aimed at solving real social and environmental problems.
- 3. Development of critical thinking through discussion and debate.** Discussion of current world problems and search for possible solutions.

Thus, sustainable development is an important concept that contributes to the formation of global competences in students.

Effective practices include various teaching methods that integrate the sustainable development component in the learning process, involve students in practical activities (research, project activities, start-ups, business projects, volunteer actions, etc.) and create a favorable educational environment.

To effectively integrate ESD component in the teaching process, it is necessary to analyze students' knowledge of sustainable development, current needs of the educational organization, as well as requests of students and teachers. This will help to determine what

kind of sustainable development goals for which subjects can be supplemented in school lessons, which of them are the most demanded and synchronize with the content of the lesson topic in different subjects.

Integrating the basics of the ESD concept into the school curricula is an important step in shaping the future responsible and conscious generation of young people. Effective practices include various technologies, innovations, teaching methods, use of artificial intelligence, involvement of students in practical activities, volunteering and social projects, and life skills formed in students will be necessary for successful adaptation to changes and overcoming difficulties (ability to communicate effectively, listen and persuade others, critical thinking, ability to analyze information, make informed decisions, understanding and acceptance of cultural diversity).

The Government of the Republic of Kazakhstan has supported and actively promotes the realization of the 2030 Sustainable Development Goals, including Goal 4.7 «Quality Education».

In August 2020, an initiative was launched to establish an Environmental Education Council, which also aims to integrate sustainable development issues into curricula.

As part of the implementation of the project to integrate the Sustainable Development Goals into the content of Kazakhstan's secondary education with the support of the Embassy of Finland, the Sustainable Kazakhstan Research Institute (SKRI) of Narxoz University has been carrying out research work with UNESCO and the I. Altynsarin National Academy of Education since 2020.

The Academy's analysis of the content of the Kazakhstan's secondary education standard and the model curricula in 2020 also resulted in **recommendations for integrating the concept of sustainable development, values, concepts related to the 2030 Agenda**, providing a unique opportunity to influence long-term changes in the content of Kazakhstani curricula and, as a consequence, to demonstrate education's commitment to sustainable development.

The project analyzed the content of the model curricula for 15 school subjects, and the recommendations developed for integrating sustainable development into their content were discussed and explained at training seminars in Astana, Almaty, Semey and Kostanai with the participation of teachers from urban and rural schools. A course for methodological support of teachers was also developed on the sdglessons.net platform.

In connection with the **introduction of changes** in the content of the curricula of a number of school subjects, additions were made to the content of the model curricula for grades 5-9: **«Kazakh Language and Literature», «History of Kazakhstan», «World History»** and others, **taking into account the ESD component**. In a number of formulations of learning objectives in the curricula for these subjects, the theme of sustainable development was actualized. The content part of a number of learning objectives for history emphasized sustainable development issues, including industrialization, innovation and infrastructure, inequality reduction, responsible consumption and production, partnership for sustainable development and others. The content of the Kazakh language and Kazakh literature curriculum has been supplemented with texts and works that include a sustainable development component.

In 2024, the UNESCO Almaty Cluster Office together with SKRI of Narxoz University organized a webinar «How to integrate the Sustainable Development Goals into current and future educational reforms in Kazakhstan» with the participation of school leaders, teachers and staff of the National Academy of Education of the Ministry of Education of the Republic of Kazakhstan, which was another advancement of cooperation on the integration of sustainable development into official educational policy.

In connection with the renewal of the State Compulsory Standard of Primary and Basic Secondary Education in 2025, the Y. Altynsarin National Academy of Education continues to work on ensuring the compliance of the content of the new standard of secondary education and school subject curricula.

Formation of functional literacy of students, ensuring flexibility, and competitiveness of graduates in all aspects of life, recognition and preservation of national and universal values, commitment to sustainable development will be prioritized in the content of Kazakhstani secondary education. The updated content of curricula with integration of ESD component in preparation for the transition to the new State Compulsory Educational Standard will strengthen the practical orientation of learning, adaptability and readiness of the young generation to the challenges of modernity and innovation, their understanding of global problems of human civilization and effective decision-making.

This guidebook contains the developments of teachers trained in workshops and trainings on integrating ESD into secondary education organized by SKRI of Narxoz University. The practices described below present approaches to direct and indirect integration of the Sustainable Development component.

The teacher's competence to use the possibilities of indirect integration of the sustainable development component into the learning process is very important, as it allows to cover the 17 Sustainable Development Goals in the educational process to the maximum extent possible, to include sustainable development topics in short-term lesson plans for all subjects from 1st to 11th grades, as well as in the development of lessons for the Global Competencies course and in the educational process within the framework of the Birtutas Tarbiye programme.

Forty-seven schoolteachers presented their lessons with the inclusion of sustainable development component.

We express our gratitude to the directors and teachers of educational organizations of Abay region, Kostanai region for their successful practices and effective work to promote sustainable development in educational organizations of the country.

We thank Brendan Duprey, Director of the Sustainable Kazakhstan Research Institute, Head of the Framework Programme «Integration of ESD component in the content of the State Compulsory Educational Standard, model curricula of secondary schools in the Republic of Kazakhstan (1-11 grades)», and Olena Bondarenko, director of the project «Institutional Approach to Education for Sustainable Development in Kazakhstan», for their participation in the development and assistance in the preparation of the manual. Successful practices of teachers on sustainable development were presented within the framework of the support of the Embassy of Finland in Kazakhstan.

The material presented in the guidebook will be useful for teachers, methodologists and class teachers.

SECTION 1.

BEST PRACTICES FOR INTEGRATING SUSTAINABLE DEVELOPMENT COMPONENTS INTO SECONDARY EDUCATION

The sustainable development component can be integrated into every school subject using a variety of methods and approaches.

Integration of education for sustainable development (ESD) is possible in the learning process through:

1. **Creating curricula** based on ESD principles and improving the learning process with the integration of sustainable development.

2. **Developing short-term lesson plans** for academic subjects that include sustainable development topics (social humanities, natural sciences, mathematics, language subjects).

3. **Introduction of elective courses or training modules** that include sustainable development issues such as climate change, biodiversity conservation, social justice, equality, etc.

4. **Project activities.** Organization of school projects related to sustainable development, environmental issues, social responsibility (on energy saving, reducing inequality, responsible consumption and production, planning and creation of green areas on the school territory, etc.).

5. **Conducting lessons in nature** (eco-trails, hikes and expeditions allowing pupils to directly observe natural processes and learn to take care of the environment), in museums (discuss human rights, problems of inequality and cultural diversity, development of civilizations, industrialization and the process of urbanization, gender and social issues).

6. **Conducting group and individual research projects in schools** on sustainable development topics.

Let us consider **the best practices of Kazakhstani teachers in integrating the sustainable development component into the learning process** in various academic subjects. For example, it has become a good practice to include environmental research and project implementation in the lessons of natural sciences, geography, biology, and language subjects, as students independently conduct research on the state of the local ecosystem, study the state of water resources and the forest zone near the school. The students collect data, analyze water and soil, identify plant and animal species, and assess the level of pollution. Based on the data collected, they develop proposals for improving the environmental situation ([Appendix 1](#)).

Formation of understanding of the relationship between human activity and global problems of mankind, the state of nature, study of climate change, education of responsibility for the environment are reflected in the development of lessons in the subjects «Geography», «History of Kazakhstan», «World History», «Knowledge of the World» and others.

Thus, when studying Geography, the teacher organizes a discussion of issues related to climate change. The students study the causes and consequences of global warming, consider examples of adaptation measures in different countries; additionally, the teacher offers to work on projects aimed at reducing greenhouse gas emissions and improving the energy efficiency of the school. This practice allows students to develop critical thinking and competences aimed at making decisions in different life situations and solving regional and country-specific environmental problems.

Raising students' awareness of the global nature of climate change, developing analytical skills, and encouraging the search for solutions to minimize negative impacts are important learning outcomes of such lessons ([Appendix 2](#)).

When developing short-term lesson plans in History, it has been a successful practice to include social projects in the lesson plan. Thus, in addition to studying the lesson topic, teachers encourage students to develop social projects aimed at solving local and regional problems. For example, a history lesson plan on Kazakhstan includes projects supporting low-income families, organizing charity events, and helping the elderly.

Studying the issue of social inequality in different historical periods, discussing its consequences and ways to reduce inequality in society, and proposing solutions to problems such as hunger and poverty have been aimed at fostering social responsibility and an active civic position among students. Additionally, through project-based work, students learn to plan, coordinate efforts, and evaluate the results of their activities ([Appendix 3](#)).

An important theme of intercultural interaction has been integrated into short-term lesson plans for subjects such as «World History,» «History of Kazakhstan,» «Geography,» «Knowledge of the World,» and «Natural Science». The students need to understand that intercultural interaction should be effective, mutually beneficial, and peaceful in a civilized world.

Intercultural interaction is studied during the learning process and raises questions about the formation of cultural identity, the development of one's own culture, and the recognition of the values of other cultures.

For example, a short-term lesson plan in History for sixth-grade students includes topics and issues related to specific Sustainable Development Goals (SDGs) such as «No Poverty,» «Good Work and Economic Growth,» and «Partnerships for the Goals.»

A particularly important aspect is that the teacher managed to address the issue of intercultural communication and its stereotypes by assigning project work to several groups of students. This work was aimed at helping students understand their own identity and the diversity of cultures, as well as developing intercultural communication and friendly interactions. Students got tasks to analyze information on intercultural interaction, formulate key points, draw conclusions, and present their projects.

In most lesson plans developed by teachers, learning objectives align with the principles of sustainable development or relate to one or more areas of sustainable development, including economic, social, and environmental aspects. For instance, learning objectives in Biology, Geography, and History focus on fostering an understanding of the importance of conserving natural resources and developing critical thinking skills regarding human behavior's impact on the environment. A key advantage of such lesson plans is the integration of interdisciplinary connections, demonstrating the relationship between sustainable development and various subjects ([Appendix 4](#)).

Notable lesson plans incorporating sustainable development components include those in the «Global Competencies» course, which is a mandatory subject for students in grades 5–11. The course content focuses on developing global competencies, which include:

- **Environmental thinking:** understanding the interconnections between humans and nature, and recognizing the consequences of one's actions on the environment.
-

- **Cultural awareness:** respect for cultural diversity and the ability to work in multinational teams.
-
- **Civic engagement:** active participation in local, national, and global initiatives.
-

The effectiveness of learning in the «Global Competencies» course is evident in its practical focus. The inclusion of hands-on tasks allows students to apply their knowledge to real-world situations, such as conducting experiments to assess air or water pollution levels, developing energy-saving plans for their school, creating eco-projects for the local community, designing safety plans, forming healthy lifestyle teams, and developing start-ups in sustainable development fields.

Teachers emphasize pressing sustainability issues such as climate change, waste management, biodiversity conservation, and social justice. They encourage students to express their opinions on issues affecting the development of society, regions, countries, and the world as a whole, and to contribute to finding solutions.

Another successful practice by teachers in integrating SDGs into secondary education is the development of lessons using artificial intelligence and digital technologies to support the learning process. Digital educational platforms such as «SDG Academy» and «World's Largest Lesson» provide educational materials and interactive exercises on sustainability topics, including applications, video materials, AI-powered chatbot, electronic textbooks, virtual classrooms, and communities where students can exchange ideas and experiences related to sustainable development.

Thus, incorporating SDGs into lessons not only enhances students' knowledge but also fosters a conscious attitude toward the world they live in and a readiness to take action for its improvement.

Some successful teaching practices include:

- Collaboration with sustainability organizations, such as local environmental groups, businesses, and public movements.
- Inviting speakers and experts to conduct lectures, workshops, and excursions.
- Developing an assessment system that evaluates not only academic achievements but also students' personal qualities, such as responsibility, initiative, and willingness to collaborate. Elements of self-assessment are also used to help students evaluate their own progress and identify areas for further development.

The proposed lesson plans across different subjects, as well as the «Global Competencies» course, which integrates sustainability elements, demonstrate a creative approach to short-term lesson planning, as well as teachers' willingness to experiment and actively engage students in collaborative learning. The focus is placed on critical, creative, and responsible thinking about the global challenges facing human civilization. This approach has enabled educators to develop unique, engaging, and valuable lesson plans that integrate sustainability components ([Appendix 5](#)).

One example is a lesson plan in Mathematics that includes solving real-world problems related to sustainable development, such as resource optimization, indicators of quality-of-life improvement, and energy savings with renewable sources, modelling urban growth

dynamics, urbanization processes, air pollution, and climate change. These lessons allow students to apply mathematical knowledge in real-life contexts, develop logical thinking, and strengthen the connection between theory and practice.

Another interesting practice was a literature lesson for students of the sixth grade, where students analyzed literary works in terms of sustainable development. By selecting a work from the curriculum, analyzing its content, and discussing sustainability issues, students were able to not only understand the author's perspective but also express their own views ([Appendix 6](#)).

Appendix 1

Raimbekova S.Zh.

*Municipal Public Institution «Secondary School No. 49»
Semey city*

Section: VI. Water is the source of life

Grade: 8

Lesson Topic:
Reservoirs of Kazakhstan

Learning objectives according to the curriculum

8.1.5.1. Predict the content based on a fragment of the text listened to.

8.3.3.1. Formulate problematic questions based on the text, allowing to put forward ideas, interpretations, assumptions and answer different types of questions. Determine the main idea of the text, revealing the author's position, determine its relevance

Conduct a study of the state of the local ecosystem, water resources.

Learning objectives

Extract the necessary information from various sources, determining its relevance, reliability, usefulness and value.

Value instilling

Instilling the values of love for the surrounding world, the Earth, animals.

Take care of the natural corners of the native land.


Instilling moral values: goodness, happiness, human freedom.

Sustainable development goals

1. Healthy lifestyle and well-being.
2. Clean water and sanitation.
3. Responsible consumption and production.
4. Preservation of marine ecosystems.

Criteria

Determine the «magical» properties of water based on literary texts; divide into semantic parts, draw conclusions.

LESSON STAGE/TIME	ACTIONS OF THE TEACHER	ACTIONS OF THE STUDENTS	ASSESSMENT	RESOURCES
Beginning of the lesson	<p>I. Organizational moment.</p> <p>Students, let us talk about it now. What does a person need for normal life? Air is a vital factor. Without air, a person can live only a few minutes. Air can be called a person's eternal companion. In addition, for the normal functioning of the body, a person needs food. Light and air are the main energy sources. To be healthy, a person must do physical exercise. Movement is also one of the main factors of human life. In addition, what do you think, without what else can a person live?</p> <p>The five main builders of health are air, sunlight, food, physical exercise, water.</p>	<p>Students determine the topic of the lesson.</p> <p>Answer questions, talk about the properties of water.</p> <p>View the presentation, answer questions.</p> <p>Draw conclusions about a healthy lifestyle and sanitation, and about the main role of water in human life.</p>		<p>Russian Language and Literature. A textbook for the 8th grade of a secondary school with a non-Russian language of instruction. / B.H.Ismagulova. F.T.Sametova / Arman-PV</p>
Predicting the topic of the lesson	<p>What conclusion can we draw?</p> <p>What are we going to talk about in class today?</p> <p>What does the lesson epigraph tell you?</p> <p><i>(Guess the lesson topic)</i></p> <p>We are starting the section «Water is the source of life».</p> <p>Questions about water are very relevant. Water is the source of life and one of the most valuable wealth of man. Not only normal life, but also the very existence of humankind depends on water. It is no coincidence that since ancient times, people have settled along the banks of rivers and lakes, trying to build their homes as close to the water as possible.</p>	<p>Answer questions, make sentences.</p>	<p>Descriptors</p> <p>Answers of students</p> <p>Formative evaluation method «Oral commentary»</p>	<p>Video “Healthy Lifestyle”</p> <p>Watch a video about the role of water sources</p>

LESSON STAGE/TIME	ACTIONS OF THE TEACHER	ACTIONS OF THE STUDENTS	ASSESSMENT	RESOURCES
Open Mic Strategy	<p>II. Updating knowledge.</p> <ol style="list-style-type: none"> 1. Proverbs and sayings about water. 2. Advance assignment <i>(Students were given the task of preparing material about the rivers and lakes of the East Kazakhstan region).</i> Using the regional component. Rivers and lakes of the Abay region. 3. Students' answers to the advance assignment. 4. Responsible consumption and production. <p>III. Learning new material.</p> <p>Working with the text «Alakol» <i>(Read the text, supplement their knowledge from known sources, answer questions, make presentations)</i></p> <p>1st group – Geographers 2nd group – Historians 3rd group – Chemists 4th group – Writers</p>	<p>Talk about the rivers and lakes of the Abay region. Discuss in detail the healing properties of Lake Alakol</p> <p>Conducting research (make presentations, defend them)</p>	<p>Peer assessment</p> <p>A minute of physical activity</p>	<p>Students collect data, conduct water and soil analyses, identify plant and animal species, and assess pollution levels. Based on the data collected, they develop proposals to improve the environmental situation.</p>
Mini-research and project defense	<p>1st group – «Geographers» draw a conclusion based on the text they read, make reasoning, reason, and put forward ideas from a geographical point of view.</p> <p>2nd group – «Historians» formulate problematic issues and put forward ideas from a historical point of view</p> <p>3rd group – «Chemists» formulate a point of view and determine the chemical composition of Lake «Alakol»</p> <p>4th group – «Writers» determine the main idea of the text and give descriptions of the lake.</p> <p>Jointly propose solutions for preserving the water balance, fauna and flora, and the ecology of the region.</p>			

Differentiation

How do you plan to support learners?

- Students can be offered reading texts of varying levels of difficulty about environmental issues
- Students who work at a fast pace can be offered additional tasks to identify and solve the problem of caring for the nature of their native land

Assessment

How do you plan to see what students have learned?

Observation of the teacher during the implementation of the technique "2 stars and 1 wish".

Peer assessment using the strategy "Thumb".

After completing the differentiated task by options (reading and analyzing the text), the teacher evaluates the completed work based on the descriptors.

Interdisciplinary connections

Compliance with Sanitary Regulations and Norms

Minute of Physical Activity

Informational and communicative competence

*We checked our posture
And brought our shoulder blades together
We walk on our toes
We walk on our heels*

Connections with values

Reflection

Were the lesson/learning objectives realistic?

Use this section to reflect on the lesson. Answer the most important questions about your lesson from the left column.

What did the students learn today?

What was the atmosphere in the classroom?

Did the differentiation I implemented work?

Did I manage to stay within the timeframe?

What deviations were made from the lesson plan and why?

Overall assessment

What two aspects of the lesson went well (think about both teaching and learning)?

1:

2:

What could have improved the lesson (think about both teaching and learning)?

1:

2:

What did I discover during the lesson about the class or individual students' achievements/difficulties that needs to be addressed in future lessons?

ASSESSMENT CRITERIA

DESCRIPTORS

Be able to express and prove your judgments

Investigates environmental issues and the conservation of land and water ecosystems using additional sources of information.

Reviews the texts read.

Draws conclusions based on reading results.

Demonstrates a good level of literacy.

Appendix 2

Marzhangul Kassymbayevna Uzbekova

General Secondary School No. 19
Semey, Abai Region

A short-term plan. The Kazakh language

Section:
Weather and Climate Change

Grade: 7

Lesson topic:
Effects of climate change

Learning objectives in accordance with the curriculum:

7.2.5.1. Formulation of problem questions based on the text

7.3.5.1 Write a succinct text based on reading and listening materials on actions taken in relation to climate change, with the replacement of key words and phrases with synonymic rows

The purpose of the lesson:

- Formulation of problem questions about the effects of climate change;
- Based on the collected materials, writing a succinct text on actions related to climate change.

SDGs corresponding to the learning objectives:

13. Actions taken in relation to climate change are a direct goal.
12. Responsible consumption and production.
15. Conservation of terrestrial ecosystems – indirect goals.

Evaluation criteria:

- Communicates his/her thoughts fully and competently;
- Can write a succinct text

Instilling values:

- Respect for the native land
- Nature protection, care

Interdisciplinary connections:

Natural Sciences, Literature, Geography

Resources:

Textbook, pictures, a mobile phone for feedback, stickers.

Methods:

Questions and answers, conversation, explanation, game, visualization. Reflection.

Previous reading:

Climate and nature

The beginning of the lesson**Psychological climate**

Greeting. In order to arouse students' interest, attract attention to the lesson, and raise their spirits, it is necessary to conduct an icebreaker exercise **"If your heart is kind, your wishes will come true"**, i.e. to create an environment of cooperation before the lesson begins.

Saying nice things and wishes to each other, having viewed images obtained using a QR code (the sun, a flower, a book, an umbrella).

**Arousing interest**

Predicting a topic using images related to the topic. To fix the past lesson using the brainstorming method.

To do this, I use games on the Wordwall platform.

The "Praise bracelet" method.



Wordwall platform

The middle of the lesson:

Recognition of meaning

Task 1

The listening task
Listen to the video and develop questions on the issue being raised

Description:

The student listens to the video
The student develops questions about issues

Task 2

Read the text and enter the key words

Description:

The student reads the text carefully
The student writes out key words

The Smiley Face method

Task 3

Based on the reading and listening materials, write a succinct text on the topic
"What conditions, in your opinion, affect climate change?"

Description :

The student writes a succinct text using the reading and listening materials

www.azattyq.org/a/world_climate_change/28870133.html

Kazakh language textbook

LESSON STAGES	PLANNED TYPE OF WORK	RESOURCES
The end of the lesson: Reflection	Conducting a survey via WhatsApp 1. Was the lesson clear? - Yes, it was clear - It was clear, but I have some questions. 2. Do you think that the information obtained at the lesson will be necessary in life? - Of course, it will be necessary - I do not know, I have not thought about it. - No, I will not need it. 3. Do you understand that it is important for humanity not to pollute nature, to protect it, and to treat it with care? - Yes, I got it - It made me think about it	Mobile phone
Homework	Write your thoughts on the topic "The main causes of climate change" (100-120 words)	

ANALYZATION	EVALUATION	HEALTH AND SAFETY
Lesson objectives Were the learning objectives realistic? <hr/> What did the students learn today? <hr/> What was the learning environment like? <hr/> Did my separate teaching work? <hr/> Did I use my time effectively? <hr/> What changes did I make to my plan and why? <hr/> What difference would it make if I taught this lesson again? <hr/> Was the topic relevant to life? <hr/>		Use the space indicated below to reflect on your lesson. Answer the questions on the left that relate to your lesson.

Appendix 3

Teacher **Gulnur Bolatovna Otarshinova**

Municipal Public Institution “General Secondary School No. 21”

A short-term plan. World History

Section: Part 2. World War I: causes and consequences

Grade: 9

Lesson topic:

What are the causes of World War I?

Learning objectives according to the curriculum:

8.3.2.1. Determining the prerequisites and causes of the First World War;

ESD component:

- 1. The fight against hunger** (The First World War is a big problem. It has exposed millions of people around the world to poverty and hunger)
 - 2. Peace, justice and effective institutions** (understanding human rights violations during war, i.e. ensuring the creation of a peaceful and just society for sustainable development, encouraging efficiency and responsibility at all levels)
 - 3. Partnership for sustainable development** (sustainable development seeks a balance between economic growth, social justice, and environmental protection. Understanding the goals of sustainable development and their importance in the fight against poverty and inequality.).
-

LESSON PROGRESS

LESSON STAGE/TIME	TEACHER'S ACTIONS	STUDENT'S ACTIONS	EVALUATION	RESOURCES
Organization	Organization. Greeting. Counting students.	Students share their thoughts	Praise	
Self-check	Checking homework			
Remembering past knowledge	Evocation of thought: What could have caused the First World War? To introduce students to the topic and purpose of the lesson watching videos on the topic https://youtu.be/vNbtK2ua0Z4 Germany, feeling deprived of the colonial division of the world, sought, at the same time, to form an alliance with Great Britain against France, while tried to isolate Great Britain with other countries on the continent, and it conducted these actions simultaneously. However, Great Britain established good relations with France, and Russia joined the interests of France. As a result, Germany, which found itself at an impasse in the middle of Europe, had no choice but to ally with Austria-Hungary and Italy. Thus the Triple Alliance appeared. Later it was also called the Quadruple Alliance. At the beginning of the twentieth century, the system of international relations began to deteriorate. New powerful forces, such as the united Germany and Italy, emerged in the international arena. Their conflict with Great Britain, France, Russia, Austria-Hungary and other imperialist states was inevitable. In the late nineteenth and early twentieth centuries, the conflicts between the first imperialists marked the beginning of the future world war.	Moving on to a new topic through student responses		

Task 1.

Fill in the table.

The countries of the Triple Alliance	Year of formation	The Entente countries	Year of formation

New knowledge

Task 2.

Match events and years.

Learning a new topic in practice

Providing evaluation criteria

	The Boers were defeated in the Boer War	A	1913
	At the height of the war, the Reichstag approved a new program to strengthen naval weapons	B	June, 1900
	The Russian Japanese War	C	1907
	The Triple Entente Treaty was created	D	1899-1902
	An agreement to define the political borders of the Balkan Peninsula was signed in London.	E	1904-1905

1-D. 2-B. 3-E. 4-C. 5-A.

Descriptor:

Student

- Matches the given events and years.
- Knows the time of events.

LESSON STAGE/TIME	TEACHER'S ACTIONS	STUDENT'S ACTIONS	EVALUATION	RESOURCES
	<p>Task 3.</p> <p><i>Choose the correct answers to the given questions.</i></p> <ol style="list-style-type: none"> How many countries participated in the First World War, which lasted more than four years? <ul style="list-style-type: none"> A. 40 B. 39 C. 38 D. 41 What was the name of the alliance formed against Germany and the Triple Alliance? <ul style="list-style-type: none"> A. The Quadruple Alliance B. The Entente C. Union of Five D. The European Union When did German troops invade the territory of France through Belgium according to the "Schlieffen plan"? <ul style="list-style-type: none"> A. In September 1914 B. In October 1914 C. In April 1914 D. In August 1914. <p>1-C. 2-A. 3-D.</p>	Learns a new topic through a test	Providing evaluation criteria	

LESSON STAGE/TIME	TEACHER'S ACTIONS	STUDENT'S ACTIONS	EVALUATION	RESOURCES			
	<p>Task 4. The Fishbone Method</p> <p>The student analyses the prerequisites and causes of the First World War.</p> <p><i>The beginning</i> – Why did political contradictions arise between large capitalist countries at the beginning of the twentieth century?</p> <p><i>Bones</i> – identify the prerequisites and causes, the purpose of the First World War.</p> <p><i>The tail</i> – draw conclusions.</p> <table border="1"><tr><td></td><td></td><td></td></tr></table>				Students defend the results of their work in front of the class.	The teacher listens to the students' response attentively and gives feedback.	
Consolidation	<p>Summarizing the lesson results</p> <p>I suggest you watching this video https://youtu.be/vNbtK2ua0Z4</p> <p>Homework assignment § 5</p>	Summarizing the lesson topic					
Feedback	<p>“Plus, minus, interesting”</p> <p>“Plus” – students write about the positive facts, the knowledge gained.</p> <p>“Minus” – students write thoughts “I can’t” or “I don’t understand”.</p> <p>In the “Interesting” column, students write what was interesting for them, or what they learned more about.</p>	Students write what they know about the topic, what they want to know, and what they knew before about it	Students evaluate their level using assessment criteria.	Copybook			

A short-term (lesson) plan. The course of Global Competencies.

Section: Exploring issues
of local, global, and cultural
significance

Grade: 10

Lesson topic:
Air pollution

**The purpose of the
lesson:**

To systematize the knowledge acquired by students about the air, to
explain the importance of maintaining clean air, breathing fresh air; to
form an idea about the sources of air pollution and its prevention.


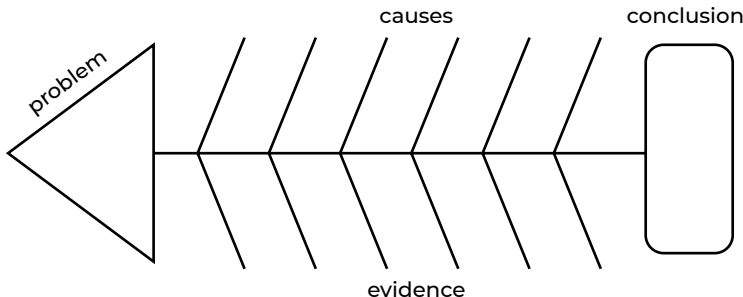
Responsibilities:

- development of ecological culture;
- develop the free expression of their opinions;

Expected result:

Popularization of human values.

LESSON PROGRESS

SEQUENCE / TIME	TEACHER'S ACTIONS	STUDENT'S ACTIONS	EVALUATION	RESOURCES
The beginning of the lesson	Organizational stage Using the "Reflection" method , students share information they know about a new topic. <ul style="list-style-type: none"> – What do we know about air pollution? – Which regions of Kazakhstan belong to the ecological zone? 	The student shares his/her thoughts. Moving on to a new topic through student responses	Teacher's Praise	Topic-related images
	 <p>Prove it with examples</p> <p>Thus, by answering the leading questions, the purpose and criteria for the success of the lesson are determined.</p> <p>To introduce students to the topic and purpose of the lesson</p>	The student makes his/her assumptions and leads the discussion.		
The middle of the lesson	Task 1. The "Fishbone" group work method The issue: air pollution 	<i>The descriptor:</i> <ul style="list-style-type: none"> – the student identifies the causes of air pollution; – provides evidence of air pollution; – defines a way to prevent air pollution; 	Rating, giving "two stars, one suggestion"	Information text Handout papers Photo Support-drawings Table

SEQUENCE / TIME	TEACHER'S ACTIONS	STUDENT'S ACTIONS	EVALUATION	RESOURCES								
	<p>Task 2. The “PRES” formula “Position-Reason-Explanation-Summary”.</p> <p>The PRES formula: “Air pollution is a global problem”</p> <p>Step 1: “I think...”</p> <p>Step 2: “because I’ll explain it this way...”</p> <p>Step 3: “I can prove it with the following facts, examples...”</p> <p>Step 4: “in this regard, I have come to the following conclusion...”</p> <p>Task 3. Individual work “File” method</p> <p>Analyze the opinion “Prevention of air pollution is in our hands”</p> <table><tr><td>“F” – define the basic fact</td><td></td></tr><tr><td>“I” – define the main idea</td><td></td></tr><tr><td>“L” define the main issue</td><td></td></tr><tr><td>“E” – analyze the raised issues from your own point of view</td><td></td></tr></table>	“F” – define the basic fact		“I” – define the main idea		“L” define the main issue		“E” – analyze the raised issues from your own point of view		<p><i>The descriptor:</i></p> <ul style="list-style-type: none">– the student determines the importance of maintaining clean air and breathing fresh air;– describes the sources of air pollution and ways to prevent it	<p>The best answer</p> <p>“Self-assessment”</p>	<p>Formative Assessment Sheet</p>
“F” – define the basic fact												
“I” – define the main idea												
“L” define the main issue												
“E” – analyze the raised issues from your own point of view												
The end of the lesson	<p>Homework:</p> <p>A “stories” format “What needs to be done to purify the air of Rudny city”</p>	<p><i>The descriptor:</i></p> <ul style="list-style-type: none">– completeness and accuracy of the topic;– creative thinking;– material selection	<p>Students evaluate their level with assessment criteria</p>	<p>Instagram</p>								

SEQUENCE / TIME	TEACHER'S ACTIONS	STUDENT'S ACTIONS	EVALUATION	RESOURCES
Feedback	Padlet board https://padlet.com/gisazhanbota1997/padlet-fwspggjpbe39tag6	Students write what they know about the topic, what they want to know, what they knew before about it	Students evaluate their level with assessment criteria	

A short-term plan. The Kazakh language T2

Section: 5. The past and future of our independent country

Grade: 7

Lesson topic:

Doszhan Dukenbai.

“Keyuana, who saw the four kings”

Learning objectives in accordance with the curriculum:

11.1.5.1 To determine the main idea from the text, analyzing the author’s position and attitude to the raised problem, the method of influencing the listener.

11.5.1.4 To use semantic types of pronouns in the construction of a text in accordance with stylistic features.

The purpose of the lesson:

- The student determines the main idea from the text, analyzing the author’s position and attitude to the raised problem, the method of influencing the listener
- He/she can use semantic types of pronouns in the construction of a text in accordance with stylistic features.

ESD component:



2. The fight against hunger (analyzing the difficulties and hunger that the character- mother experienced in childhood, in the context of a global problem)

8. Labor and economic growth (conveying the importance and benefits of labor to society through the main character. Explaining to the younger generation about the impact of people holding simple positions on society)

10. Peace, justice and effective institutions (explaining to students the principle of peace that has lasted for centuries through the role of Keyana)

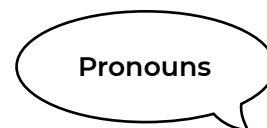
Language goals

LESSON PROGRESS

LESSON STAGE/TIME	TEACHER'S ACTIONS	STUDENT'S ACTIONS	EVALUATION	RESOURCES
The beginning of the lesson <i>5 min.</i>	Introduce the purpose of the lesson	<i>Share your thoughts</i>	Handshake	Slide
				
The middle of the lesson <i>6-37 min.</i>	Task 1. Individual work Explanatory dictionary: <i>Keyuana</i> is an elderly mother of advanced age <i>The horn tax and hoof tax</i> are types of taxes, when people handed over cattle bones, hooves, and horns if the cattle was killed, during the famine that took place in the 1930s.	<i>Listening Pronunciation</i> The student listens to the text attentively. Defines the sentence that defines the main idea. Expresses his/her thoughts with arguments. <ul style="list-style-type: none"> • What did the Author want to say? • Do you think the story has anything to do with reality? 	The "Thumb"  <i>The descriptor:</i> – the student performs a task	Textbook page 71 Slide

Task 2. Pair work*Pronunciation*

The student asks a friend at the desk what he/she knows about the events mentioned in the text, and uses pronouns correctly depending on their meaning.



Mutual assessment

An actively participating student becomes the owner of the "Golden Key"



Slide

Textbook page 72

Task 3. Teamwork

The teacher gives directions

Writing

Based on the content of the text, the student tells about the situation of that time

Hunger	Mass death of livestock
People could not find food	Goloshchekin's Policy
Let there be no hunger, and there will be no hooves left	Nomadic Kazakh
Hoof tax	Horn tax
Karataban Jute	Aktaban shubyryndy
The red coup	Alakol sualama

The descriptor:

5-point

- the student expresses his/her opinion
- shares his/her thoughts



Task 5. Individual work*Writing*

The student fills in the “Exit Page”.

- In today's lesson, what task were you active in?
- What task was unclear? Why?
- Did you use the pronouns correctly?

Weighing thoughts

“My impressions of the topic”

What thought came up?	What did I feel?	What did I like?

1. Тұрақты дамуды қалай түсінесіз?
2. Бүгінгі сабақтың тақырыбы тұрақты дамумен қалай байланысты? Түсіндіріңіз.



Dictionary

Textbook, page 72

Slide

The end of the lesson
3 min.

Giving homework: using the example of the main character's life, write a 50-100-word reflection on the topic “Peaceful life is a happy life”.

Feedback
The “Basket of Knowledge”

Students express their knowledge gained in the lesson through the color of the basket.

Educational portfolio



Evaluation

The teacher gives the final score according to the formative assessment.

Short-term (academic) plan. The history of Kazakhstan

Section: 7.2 Colonization and national liberation struggle**Grade:** 7**Lesson topic:****The National Liberation Movement led by Kenesary Qasymuly.****Research question: Why did the national liberation struggle led by Kenesary Khan acquire a nationwide character?****Learning objectives in accordance with the curriculum:**

7.3.1.5. Identification of the cause-and-effect relationships of the national liberation struggle of the population against colonialism.

7.3.1.6. Assessment of the roles of the leaders of the national liberation uprising.

The purpose of the lesson:


The students will find out the cause of the national liberation movement led by Kenesary Qasymuly, and study the course and results.

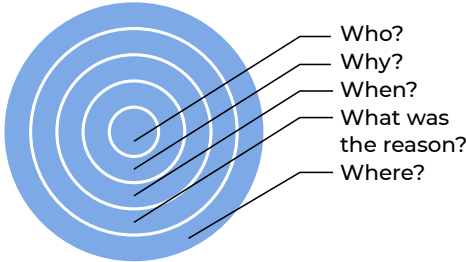

Values:

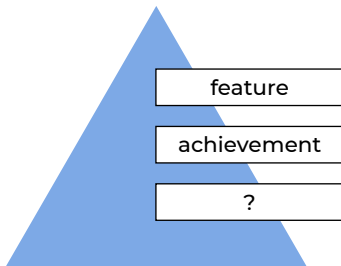
The Month of Justice and Responsibility;

Quote of the Week:The pleasure of the flesh is in its health,
The pleasure of the soul is in knowledge

LESSON PROGRESS

LESSON STAGE/ TIME	TEACHER'S ACTIONS	STUDENT'S ACTIONS	EVALUATION	RESOURCES
The beginning of the lesson	<p>1. Organization Greeting. Checking students' readiness for classes. Establishing a psychological climate. Dividing them into groups using the "Castlots" method.</p> <p>2. The "Flash card" method on the topic "The Kazakh uprising in the Bukey Horde of 1836-1838". Questions are provided through the service wordwall.net/ru/resource/39339775</p> <p>After receiving answers to the homework questions on the topic, the teacher explains that the new lesson is directly related to the topic.</p> <p>Under the heading "Bring pictures to life", a series of pictures is organized in the classroom and students are asked the following questions:</p>	<p><i>The descriptor:</i> the student answers questions based on the information they read.</p>	<p>The teacher's praiseworthy words</p> <p>Great! Well done! Very well</p>	<p>wordwall.net/ru/resource/39339775 Topic-related images</p> <p>e-history.kz Collection of pictures</p>
	<p>After receiving answers to the homework questions on the topic, the teacher explains that the new lesson is directly related to the topic.</p> <p>Under the heading "Bring pictures to life", a series of pictures is organized in the classroom and students are asked the following questions:</p> <div data-bbox="371 831 842 1002">  </div> <ul style="list-style-type: none"> – What do you see in the pictures? – What was special? <p>Try to guess the topic... The student justifies his/her assumptions.</p> <p>After the students' answers are listened to, this lesson focuses on the main problem being studied. The topic of the new lesson is explored, the purpose of the lesson and the evaluation criteria are presented. The focus is on the historical concept and the research issue.</p>	<p>The student with special educational needs answers the questions.</p>	<p>Groups evaluate each other using a descriptor.</p> <p>The student with special educational needs is supported.</p>	

LESSON STAGE/ TIME	TEACHER'S ACTIONS	STUDENT'S ACTIONS	EVALUATION	RESOURCES
The middle of the lesson	<p>Task 1. “Movie Metaphor” method Video work.</p> <p>Using the knowledge gained from the provided text and video, the student answers the questions</p> <p>Teamwork</p> <p>“Understand, analyze, convey” – working with text.</p> <p>The text is distributed to the students, and the essence of the task is explained. Based on the content of the text, the features and significance of the national liberation movement led by Kenesary Qasymuly are analyzed.</p> <p>Group 1: According to the “5W” strategy.</p> <p>The students write answers to questions Who? Why? When? What was the reason? Where?, and describe the course of the national liberation movement led by Kenesary Qasymuly.</p> <p>Group 3 determines the causes and consequences of the defeat of the national liberation movement against colonialism led by Kenesary Qasymuly, using the “Film” method.</p>	<p>Students watch videos, answer questions from the video, listen to and complement each other's answers.</p> <ul style="list-style-type: none"> • They describe the course of the national liberation movement led by Kenesary Qasymuly; • Identify the causes and consequences of the defeat of the national liberation movement against colonialism led by Kenesary Qasymuly; • Names features and achievements of the national liberation movement against colonialism led by Kenesary Qasymuly. 	<p><i>The descriptor:</i> Students</p> <ul style="list-style-type: none"> • define the interval of the year in which the uprising took place; • mark the territory affected by the uprising on the map; • name the driving forces of the uprising; • describe the purpose of the uprising; <p><i>The descriptor:</i> Students</p> <ul style="list-style-type: none"> • identify the reasons for the defeat of the national liberation movement against colonialism led by Kenesary Qasymuly; • write the consequences of the defeat of the national liberation movement against colonialism led by Kenesary Qasymuly. 	<p>Textbook for 8th (7th) grade of General Secondary School Z.E. Kabyldinov, J.N. Kaliev, A. T. Beisembayeva Almaty “Atamura” 2018 Pp. 88-90</p> <p>Support-drawings</p> <p>“Two-sided explanatory diary”</p>
	 			

LESSON STAGE/ TIME	TEACHER'S ACTIONS	STUDENT'S ACTIONS	EVALUATION	RESOURCES
	<p>Group 3 name the features and achievements of the national liberation movement against colonialism led by Kenesary Qasymuly, using the “Text Pyramid” method.</p>  <p>Interpretation “Why did the national liberation struggle led by Kenesary batyrs become nationwide?”</p> <p>Pair work Using the program learningapps.org/25158049 students place historical events of the national liberation movement led by Kenesary Qasymuly on the timeline.</p> <p>The word of mouth game – working with quotes Students will be presented with famous personalities' quotes about Kenesary Qasymuly. Students, based on the quotes below, first consult in pairs, then in groups and give assessment of Kenesary's personality.</p> <ol style="list-style-type: none"> 1. L. Meyer 2. T. V Atkinson 3. N. Konshin <p><i>“Until recently, power in our steppe was concentrated in the hands of one person, whom the Kazakh people recognized as their own. This person was Kenesary Qasymov, whose name was mentioned above... In general, he had a special ability to attract people...Kenesary was characterized by blind courage”</i> L. Meyer</p> <p><i>“Kenesary seems to be training wonderful Kazakh warriors.....All the qualities of Genghis Khan's troops, which have become famous in history, are numerous in them”</i> T.V. Atkinson</p>	<p>Students will be presented with famous personalities' quotes about Kenesary Qasymuly. Students, based on the quotes below, consult first in pairs, then they give an assessment of Kenesary Qasymuly's personality in a group.</p> <p>Historical portrait of Kenesary Qasymuly.</p> <p>Studying the problem of social inequality, discussing the consequences and possibilities of reducing inequality in society, recommendations for solving the problems of hunger and poverty characteristic of this period of history.</p>	<p><i>The descriptor:</i> Students</p> <ul style="list-style-type: none"> • name 3 features of the national liberation movement against colonialism led by Kenesary Qasymuly; • name 3 achievements of the national liberation movement against colonialism led by Kenesary Qasymuly. <p><i>The descriptor:</i> Students</p> <ul style="list-style-type: none"> • characterized Kenesary Qasymuly's personal qualities; • define his military capabilities; • clarify his justice and heroism. <p><i>The descriptor:</i> Students</p> <ul style="list-style-type: none"> • determine the time of the beginning of the uprising; • describe the course of the uprising; • write about active military operations of Kenesarytroops; • determine the outcome of the uprising. 	<p>“The skeleton of a fish”</p> <p>learningapps.org/25158049</p> <p>Thematic table</p> <p>Additional sources</p>

LESSON STAGE/ TIME	TEACHER'S ACTIONS	STUDENT'S ACTIONS	EVALUATION	RESOURCES
	<p><i>"He was a special person in every way. Being much higher than his supporters, he always fairly resolved personal disputes and the aggravation of generic relations. ...We cannot say anyone who would be a hero of the entire Kazakh nation" N. Konshin</i></p> <p>Individual work Create a historical portrait of Kenesara Qasymuly by completing the task below</p> <ul style="list-style-type: none"> • Characteristics of the era in which the person lived; • The person's living environment; • His place in society, actions, activity as a person. • His human qualities, features; • Summarizing the results with a historical assessment of the personality; • The student's opinion about personality, attitude. 		<p>The descriptor:</p> <ul style="list-style-type: none"> • the student describes the era in which Kenesary lived; • defines the environment in which the person lived; • analyzes the person's place in society, his activity as a person; • defines his human qualities and characteristics; • gives historical assessment of the personality and makes conclusions; • represents an opinion and point of view about the person. 	
The end of the lesson	<p>Summarizing the lesson results "What else would Khan change nowadays?"</p> <p>Feedback. The "Padlet" method</p> <ul style="list-style-type: none"> • What have I found out, what have I learned? • What did I not quite understand? • What do I want to know? <p>Homework Students write an essay on the topic "Kenesary Khan – is a Spark of Honor and Revenge" Criteria:</p> <ul style="list-style-type: none"> • Assessment of the roles of Khan, batyrs; • Give at least three arguments; • Final thought. <p>The number of words is 150.</p>	<p>The student writes:</p> <ul style="list-style-type: none"> • what did he/she learn about the topic? • what was interesting? • what he/she wants to know? <p>Education of social responsibility, formation of an active civic position of students.</p>	<p>The teacher evaluates using a descriptor.</p>	A4 sheet

Appendix 4

Teacher **Serikkhanuly Alibi**

Short-term plan. History of Kazakhstan

Section: Trade, production and exploration of the world

Grade: 6

Lesson topic:
How did the Silk Road connect East and West?

Learning Objectives in accordance with the Curriculum:

6.4.1.2 – explain the role of international trade and travel in the Middle Ages.


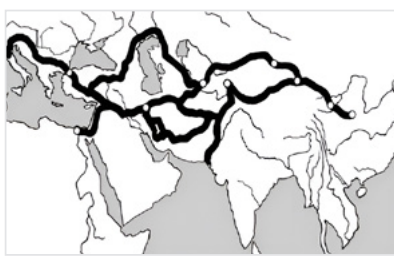
Lesson objectives:

Explain the background of the Great Silk Road; its functions and importance in the development of international trade and travel in the Middle Ages.

Sustainable Development Goals:

1 – Eradication of poverty
8 – Decent work and economic growth
17 – Partnership for sustainable development

LESSON PROGRESS

LESSON STAGE / TIME	ACTIONS OF THE TEACHER	ACTIONS OF THE STUDENTS	ASSESSMENT	RESOURCES
Stage I Organizational and motivational	Organizational moment. Greetings. The class is divided into 4 groups by cards with the group name: "History", "Trade", and «Geography».	The students look at the slide, draw conclusions, and express their opinions		History of development, artifacts The Rise and Fall of the Silk Road Silk Road images Presentation
	Brainstorming. <ol style="list-style-type: none"> 1. What did the advances in economy and craft development in countries around the world lead to? <p>The goal of the case study #8 – thanks to the Great Silk Road skilled artisans began to receive fair payment for their work and improve their standard of living and the economy in their country.</p> <ol style="list-style-type: none"> 2. What types of activities were city dwellers engaged in? 3. Give associations with the word «trade»? 4. What sustainable development goals can today's topic be associated with? Explain why. <p>Look at this slide and answer the questions (Slide 1)</p> <ul style="list-style-type: none"> • What information can be extracted from this map? • What relationships connected the countries of the world? • What is the topic of the lesson and the learning objectives?  <p>Students write down the new topic in their notebooks.</p> <p>A question for the class before watching the video.</p> <ul style="list-style-type: none"> • What is the relationship between the Great Silk Road and the "Old World"? 			
		Watching the video. Students answer the question and exchange opinions.	Feedback from the teacher	Video. The Great Silk Road www.youtube.com/watch?v=wKnNzPZcV2E

LESSON STAGE / TIME	ACTIONS OF THE TEACHER	ACTIONS OF THE STUDENTS	ASSESSMENT	RESOURCES
Stage II Theoretical and practical	<p>Work in groups (by rows) by stations (Appendices 1-5)</p> <p>Task 1. Station. "History"</p> <ol style="list-style-type: none"> 1. Why was the route called the Great and Silk? In which country did silk fabric production first appear? 2. When did the Silk Road appear? Highlight 2-3 reasons for the appearance of the Silk Road in the text. What information is available about its appearance? Work with the source. 3. What was the significance of the Silk Road? Give 3-4 arguments. <p>(Texts 1-2)</p> <p>Task 2. Station. "Trade"</p> <ol style="list-style-type: none"> 1. What goods were exhibited for international trade? (cloth, silk, wine, bread, iron and gold, horses and camels) 2. What goods did the inhabitants of the East and Central Asia who settled along the Silk Road trade? (Chinese mirrors, objects and things made and brought from Central Asia and Iran) 3. What goods were brought to China? (Arabian horses, camels, elephants, rhinoceroses, peacocks, grapes, peaches, melons, spices, sugar, vegetables, berries, dried fruits) 4. What influence did the Silk Road have on the economy and culture? Provide 2-3 examples. <p>(Texts 3)</p> <p>Goal of the case study #1 – by selling their surplus goods in the markets, people began to raise their standard of living, and poverty in the cities on the Silk Road decreased to a minimum.</p>	<p>Assessment criteria:</p> <ol style="list-style-type: none"> 1. give correct answers to questions 2. identify 4-5 countries participating in the Silk Road; 3. name the goods transported via the Silk Road; 4. correctly plot the main directions and routes of the Silk Road on the outline map; 5. give 2-3 examples (arguments) that testify to the economic, cultural, political ties established as a result of trade via the Silk Road 6. make reasoned conclusions (3-4) <p>(And) Students complete work at stations, using the texts in the appendices.</p>	<p>The assessment itself according to the assessment sheet. (Appendix 5)</p> <p>Assessment criteria:</p> <ol style="list-style-type: none"> 1. Meaningfulness 2. Briefness of presentation according to the regulations 3. Aesthetics <p>Peer assessment according to the technique "Two stars and one wish"</p>	Appendices 1-5

Task 3. Station. "Geography"

1. Which countries were involved in the trade? Put the route of the Great Silk Road on the outline map.

Goal of the case study #17 – all countries on the Silk Road were interested in the development of their states, and for sustainable development it was necessary to maintain good relations and continue trade with their neighbors.

2. Indicate the route of the Silk Road on the map. Zhetysu is the main region of the Silk Road to the east. South Kazakhstan is the main gateway to the west. (*Appendix 2*)
3. Where did the Silk Road begin?
4. What is the total length of the Silk Road?
5. Based on the text you have studied, what can you say about the progress of interaction between different cultures and problems of eliminating poverty and destitution?

(*Text 4*)

After completing the tasks in groups, they form a common cluster on the topic. Poster defense.

Discuss solutions to the problem of eliminating poverty and hunger.

Stage III Reflexive- final

How did the Silk Road connect the East and the West?

Conclusions:

- A) Establishment of trade and diplomatic relations;
- B) Mutual influence and enrichment of cultures;
- C) Religious exchange.

The Great Silk Road was one of the main forms of cultural, economic, political, and religious exchange between the civilizations of the Old World.

Questions:

- Why do we still talk about the enormous historical importance of the Silk Road today?
- How are modern international relations developing in terms of the further development of the Great Silk Road with the participation of various countries of the world?

Recently, they have begun to return to further research and study of the Silk Road, its reconstruction, expansion, and development of political, economic, and cultural ties between the peoples of Eurasia. In 1987, at the XXIV session of UNESCO, the International Project for the Comprehensive Study of the Great Silk Road was approved. Greece, Sri Lanka and the former Soviet Union, as well as Portugal, Egypt, Italy, China, Indonesia, Mongolia, and Oman took part in it. Two major programs are being implemented: “Man, the Environment, Resources of the Land and Seas*” and the “Culture and the Future” project. In connection with the implementation of this project, the National Committee “Zhibek Zholy” (“Silk Road”) was created in Kazakhstan in 1991.

The reconstruction of the Kazakhstan section of the ancient caravan roads was carried out. The atmosphere of the Silk Road itself will be revived – craft shops, oriental bazaars, festive performances of fakirs, tightrope walkers, etc.

Since 2008, construction of the transcontinental highway “Western Europe – Western China” has begun. It was one of the first examples of the real implementation of the idea of the “New Silk Road”. For the peoples of Eurasia, the Great Silk Road has always been a place of dialogue, cultural exchange, mutual enrichment of spiritual values, and a path from the past to the future.

LESSON STAGE / TIME	ACTIONS OF THE TEACHER	ACTIONS OF THE STUDENTS	ASSESSMENT	RESOURCES
Reflection “Tree of Success”	<p>At the end of the lesson, reflection is carried out using the “Tree of Success” method.</p> <p>There is a picture of a tree on the board, each student tries to evaluate themselves by sticking an “apple” sticker with their name on it, where they evaluate their knowledge based on the results of the lesson.</p>	<p>Identify and evaluate key elements of arguments, claims, reasons, and evidence on intercultural interaction</p> <p>Collect sources on intercultural interaction and correctly compile a bibliography of literature on the topic</p>		Picture Tree Stickers
Homework	<p>Questions:</p> <ol style="list-style-type: none"> 1. What factors influence collective well-being and sustainable development? 2. What role do local, national and global initiatives play in ensuring intercultural cooperation and interaction? 3. National identity: are there pros and cons? 			

Text 1. The Foundation of the Silk Road. The «Winged» Horses of Davan and the Beginning of the Great Silk Road

The foundation of the Silk Road dates back to the 2nd century BCE when the Chinese envoy Zhang Qian visited the countries of Central Asia on a diplomatic mission. Before this time, the route from Europe to Asia was cut off at the borders of China, as the vast mountain ranges of Asia – Tian Shan, Kunlun, Karakoram, Hindu Kush, and the Himalayas – had long concealed the ancient Chinese civilization from the rest of the world.

The discovery of the rich western trade route happened by chance. One of the nomadic tribes allied with China was displaced by another tribe that was openly hostile to the Chinese. The former ally fled westward, and the Chinese emperor sent an envoy, led by Zhang Qian, in pursuit. After crossing the harsh Taklamakan Desert and the Tian Shan mountains and enduring a decade-long captivity, Zhang Qian finally reached the former allies in the oases of Central Asia.

Zhang Qian was astonished by what he saw: in the Fergana Valley alone, he counted over 70 large and small urban settlements with developed artisanship and agriculture. The inhabitants of these oasis cities conducted extensive trade with India, the Near and Middle East, and the ancient Mediterranean world. Upon his return to China, Zhang Qian informed the emperor about the lands west of China and their riches. He also described the purebred “winged” horses of Davan, which were far superior to the small Chinese horses. The emperor immediately desired to obtain these horses, as they provided a significant advantage in warfare against nomads. Soon, Chinese envoys were sent to Central Asia, bringing silk as part of their gifts.

Thus, the ancient civilizations of Central Asia and China met, followed later by the Mediterranean and Indian civilizations. Two great trade routes converged into one. One route, coming from the West, connected the Mediterranean lands to Central Asia and had been explored by the Greeks during Alexander the Great's campaigns. The other, leading from the East, stretched from the Han Empire into Central Asia and was mapped by Zhang Qian, who traveled through Davan, Kangju, Sogdiana, and Bactria from north to south.

However, trade routes connecting the East and West had already existed earlier. These were individual segments of what would later become the Great Silk Road. The development of trade was facilitated by the extraction of semi-precious stones in the mountains of Central Asia – lapis lazuli, jade, carnelian, and turquoise – highly valued in the East. A “lapis lazuli route” existed, along which the stone was transported from Central Asia to Iran, Mesopotamia, and even Egypt. At the same time, a “jade route” was established, linking the regions of Khotan and Yarkand with northern China. Additionally, carnelian was exported from Sogdiana and Bactria to the Near East, while turquoise was shipped from Khwarezm. Over time, all these routes merged into the Great Silk Road.

Throughout history, there were three periods when the Silk Road was almost entirely controlled by a single state: by the Turkic Khaganate in the 6th century, the Mongol Empire under Genghis Khan in the early 13th century, and the Timurid Empire in the late 14th century. However, due to the vast length of the trade routes, maintaining unified control over them was extremely difficult.

2. Legends:

1. According to one version, the discovery of silk is attributed to a fourteen-year-old empress, the wife of the legendary Yellow Emperor, known as Lady Su-Ling Lao-Tsu. While drinking tea under a mulberry tree, a silkworm cocoon accidentally fell into her cup. Upon discovering the tiny worm, the young empress unraveled the secret of silk. The legend states that she was the one who ordered the cultivation of mulberry silkworms. It is said that the secret of silk production was carefully guarded until 140 BCE when it was discovered by the kingdom of Khotan in Tibet. This happened when a Chinese princess, who later became the wife of a Khotanese prince, smuggled silkworm eggs hidden in her headdress.
2. Another legend tells that around 550 CE, the Byzantine Emperor Justinian sent two Persian monks to Khotan (now a town in the Xinjiang Uyghur Autonomous Region in western China) to uncover the secret of this mysterious new fabric. The monks returned with mulberry seeds, and later, a few silkworms were found hidden inside a bamboo stick, which they secretly transported to Japan via Korea. Emperor Justinian, in turn, tried to keep the secret of silk production, but by the 9th century CE, knowledge of silk-making had reached Europe. Eventually, historians named the trade route by which silk was transported to the West the Silk Road.

Text 3. Goods of the Great Silk Road

The goods transported along the Great Silk Road mainly traveled from east to west. As its name suggests, the primary commodity on this route was silk. Due to its lightweight, compactness, immense demand, and high value, silk was an ideal trade item for long-distance transportation.

As early as the Middle Ages, the Venetian merchant Marco Polo referred to these caravan routes as “silk roads.” The term “Great Silk Road” was officially introduced into academic use in 1877 by the German researcher Ferdinand von Richthofen in his monumental work China.





At the early stages of the Silk Road's development, the Chinese received highly prized horses from Central Asia, along with alfalfa seeds and grapevines. While the ancient world had long cultivated vineyards and produced wine, for the Chinese – who had been largely isolated from other civilizations – grapes were a novelty. Moreover, Chinese envoys were astonished to learn that wine could be made not from rice but from these unfamiliar berries. Through caravan trade, China later acquired several other agricultural products, including beans, onions, cucumbers, carrots, pomegranates, walnuts, figs, and more.

From Central Asia and the Eastern Mediterranean, China imported various woolen products, such as carpets, curtains, bedspreads, and rugs. These items made a strong impression on the Chinese, who were unfamiliar with wool processing, linen weaving, or carpet-making techniques. Parthian tapestry fabrics and carpets were highly valued in ancient China.

Central Asia also exported camels, which were in great demand in China, as well as military equipment, gold, silver, semi-precious stones, and glassware. Among these, Samarkand glass was especially prized for its high quality and was once considered a luxury item. Additionally, Central Asian exports included leather, wool, cotton fabrics, gold-embroidered textiles, exotic fruits (such as watermelons, melons, and peaches), fat-tailed sheep, hunting dogs, leopards, and lions.

From China, caravans transported porcelain tableware to the West, including vases, cups, goblets, and snow-white plates with elegant designs. The secret of producing thin and resonant porcelain was known only to the Chinese, making it extremely expensive in European markets. Other Chinese exports included bronze ornaments, bronze mirrors with intricate patterns, umbrellas, lacquerware, medicines, and perfumes. Chinese paper, one of the most remarkable inventions of Chinese technology, was also highly valued. Additional Chinese exports included gold, leather, tea, rice, woolen and linen fabrics, coral, amber, asbestos, ivory, rhino horns, tortoise shells, spices, ceramics, ironware, glazes, cinnamon, ginger, bronze weapons, and mirrors.

From India, the Silk Road brought textiles, spices, gemstones, dyes, and ivory. From Iran, traders imported silverware. Goods transported to Rome included spices, incense, precious stones, ivory, and sugar, while Rome exported European paintings and luxury goods in return.

To Eastern Europe, Central Asia supplied rice, cotton, woolen, and silk fabrics. From Eastern Europe to Khwarezm, merchants brought leather, furs, wild animals, tanning bark, livestock, and slaves. From Northern Europe, in addition to furs and leather, honey and slaves were also transported along the Silk Road.

Text 4. Countries on the Great Silk Road

China –
Kyrgyzstan –
Kazakhstan –
Tajikistan –
Uzbekistan –
Turkmenistan –
Iran –
Azerbaijan –
Georgia



Routes of the Great Silk Road

The Great Silk Road was never a single highway. Instead, it was a network of caravan routes that branched out through various mountain passes and circumvented deserts.

Initially, the Silk Road began in Chang'an, the ancient capital of China, and ran along the northern Tianshan Mountains to Dunhuang, a city at the edge of the Great Wall of China. Here, the main route split into northern and southern branches, skirting the Taklamakan Desert from both sides. The Northern Route passed through Turfan and the Ili River Valley. The Middle Route (Southern Route) led from Chaochang to the southern shore of Issyk-Kul, then through Khotan and Yarkand, eventually reaching Bactria (northern Afghanistan). From Bactria, the Southern Route split into two further paths: one led to India, the other continued westward to Merv, where it merged with the Northern Route.

From Merv, the road passed through Nisa (the capital of Parthia), Iran, Mesopotamia, and then continued through Baghdad to Damascus, eventually reaching the Mediterranean.

During the 6th–8th centuries, the primary Silk Road route ran through Syria – Iran – Central Asia – Southern Kazakhstan – Talas Valley – Chuy Valley – Issyk-Kul Basin – Eastern Turkestan.

One of the most active sections of the Silk Road was in Central Asia, where caravan trade led to the rise of wealthy cities, trading settlements, and caravanserais. Important cities along the route included: in Turkmenistan: Merv, in Uzbekistan: Bukhara, Samarkand, Urgench, Khiva, in Kazakhstan: Otrar, Turkestan, Taraz, Ispidzhab, in Kyrgyzstan: Jul, Suyab, Novokent, Balasagun, Barskoon, Tash-Rabat, Osh, Uzgen. Today, these cities form a historical “necklace” of sites that serve as major destinations for Silk Road tourism in Central Asia.

5. Assessment sheet on the topic: The Great Silk Road

ASSESSMENT CRITERIA	GROUP NO.	NAMES	1 – STRENGTHS 1 – RECOMMENDATIONS
	ACHIEVED	POTENTIAL	
The student identifies 4-5 countries participating in the Silk Road;			
The student correctly specifies the main directions and routes of the Silk Road on a contour sheet			
The student provides 2-3 examples (arguments) that demonstrate the economic, cultural, and political ties established as a result of trade along the Silk Road and the importance of intercultural interaction			
The student correctly presents information and evidence, justifying the importance of collective well-being and sustainable development			
The student correctly identifies the origin of the goods			
The student makes reasoned conclusions about the need for active participation in local, national, and global initiatives (3-4)			
The student was able to reasonably link the topic of the lesson to the problems of sustainable development (2-3 examples)			

Appendix 5

Teacher **Mumbayeva A.S.**

Municipal Public Institution "Altynsarin Secondary School" of Kostanay district

Short-term plan. Course "Global Competencies"

Section: Life Safety

Grade: 6


Lesson topic:
Safety. Suspicious objects.
Rescue service.

Goal: Contribute to shaping public awareness and civic responsibility in the younger generation.

Objectives: Develop a safety culture and skills for safe behavior in life situations among students.

LESSON PROGRESS

LESSON STAGES	PLANNED ACTIVITIES IN THE LESSON METHODOLOGICAL RECOMMENDATIONS	RESOURCES
1. Organizational moment. Resolving case studies.	<p>Humans have created and established many rules for convenience and safety in various situations. Today, we will discuss the rules of conduct when discovering an unfamiliar object in public transport or on the street. There are often cases where citizens come across suspicious items that could pose a danger to society. Similar objects are found in transport, on stairwells, near apartment doors, in institutions, and in public places. How should one behave upon discovering them? What actions should be taken?</p> <p>Remember: explosive devices are often disguised as ordinary household items, such as bags, packages, boxes, toys, and so on.</p>	Presentation

LESSON STAGES	PLANNED ACTIVITIES IN THE LESSON METHODOLOGICAL RECOMMENDATIONS	RESOURCES
2. Introduction to the topic	<ol style="list-style-type: none"> Why do you think any object found on the street or in an entrance hall could be dangerous? What rules of conduct do you know when discovering suspicious objects? <p>Rules for handling a suspicious object:</p> <ul style="list-style-type: none"> It is strictly forbidden to touch, open, move, or take any other action with the discovered object. It is not recommended to use mobile phones or other radio communication devices near such an object. You must immediately report the discovery of a suspicious object to an adult. <ol style="list-style-type: none"> What dangers can exist outside the home, and how can they be prevented? <p>“Brainstorming” Activity</p> <p>You go outside every day.</p> <ul style="list-style-type: none"> What dangers might children your age face on the way to school or during a walk? <p>Students will list various dangers, and the teacher will ask them to explain why they are dangerous. The teacher will then create a list of dangers on the board or on a large sheet of paper using colorful markers. This list should be updated throughout the lesson and kept visible for the duration of the session.</p>	<p>Watching the video: “Attention! Suspicious Object!” www.youtube.com/watch?v=H3PXUxbym54</p>
3. Conversation about the object	<p>Safety formula</p> <ul style="list-style-type: none"> anticipate danger, i.e. be careful with others, do not agree to fulfill any requests to transfer incomprehensible objects; avoid danger, if possible, do not appear in unfamiliar places without adult supervision; act decisively and clearly if necessary. <p>In any emergency, call the rescue service at “112”. Rescuers will always come to your aid! It is strictly forbidden to touch, open, move or take any other actions with the discovered object.</p>	

Discussion after watching the video “Global Problems of Humanity”

www.youtube.com/watch?v=B9cIMfpbBlw

1. What global problems need to be solved in the modern world?
2. How can safety in human life be ensured?

4. Creative activities, group work

Group Work

Cards with tasks

Situation Analysis “What If...”

- What if you were walking down the school corridor in silence and suddenly heard a ticking sound but saw nothing around? What would you do?
- What if you entered an apartment building and saw a suspicious object (a package, a box, a toy left unattended)? What would you do?
- What if a stranger offered you sweets, an expensive phone, or a toy? What would you do?

Group Task:

1. Identify which Sustainable Development Goals (SDGs) relate to today’s topic and explain how they are connected.
2. Create a safety reminder for behavior in different situations:
 - Group 1: Safety on the way to school
 - Group 2: Safety in the yard
 - Group 3: Safety when crossing the road
 - Group 4: Safety when interacting with strangers on the street

Once the work is completed, students return to the list of dangers and attach their safety reminders to a poster.

Short-term plan. Course “Global competencies”**Section:** Entrepreneurship Basics**Lesson topic:****Startup culture and sustainable development****Learning objectives in accordance with the curriculum:**

Understand the essence of the phenomenon and concepts: “Startup Culture”, “Sustainable Development”, their relationship

Know the history of the emergence of startup culture.

Be able to implement the principle of reasonable risk in the implementation of your own startup ideas and taking into account the principles of sustainable development

Lesson objectives:

- understand what sustainable development and startups are
- learn to distinguish between the concepts of a startup and an existing business
- understand how a startup business model is structured
- explain why it is necessary to take into account the Sustainable Development Goals when developing startups

LESSON PROGRESS

LESSON STAGE/ TIME	ACTIONS OF THE TEACHER	ACTIONS OF THE STUDENT	RESOURCES
Beginning of the lesson <i>5 min.</i> The preparation for active and conscious assimilation of the material	Greeting. The teacher greets the students: “Hello, everyone! We are happy to see each other and ready for creative work together. On your desks, you will find colored strips: red, blue, and green. Take a close look at them and choose the one that best represents your current emotional state.	The students greet the teacher.	Colored paper, markers

LESSON STAGE/ TIME	ACTIONS OF THE TEACHER	ACTIONS OF THE STUDENT	RESOURCES
	<p>Red – You are full of energy and ready to work actively. Green – You feel calm and indifferent to what will happen in the lesson. Blue – You are eager to learn something new.</p> <p>Thank you! I hope that everyone will work well today, and by the end of the lesson, we will all be in a great mood! “</p>		
5 min.	<p>The lesson content: During the lesson, students will be introduced to the concepts of startup and sustainable development. They will learn to distinguish between a startup and an existing business, understand the methodology of the “lean startup” approach, and consider sustainable development in their project planning.</p> <p>After introducing the topic, students can be asked to explain the terms “sustainable development” and “startup.” The results of their interpretations can be recorded in a mind map on the board or a flipchart. It is important to highlight that there are multiple definitions of a startup. The relevant definitions should be discussed. Ask students: Do these definitions contradict each other, or do they complement one another?</p>	The students listen to the teacher.	Slide #2 definitions of concepts: “Sustainable Development”, “Startup Culture”
5 min.	<p>Discussion Question: When do you think the term “sustainable development” first appeared, and why do you think so?</p> <p>Text for Discussion: “Thoughts about the finite nature of natural resources and the need to limit uncontrolled consumption were first expressed by ancient Greek philosophers. The concept of sustainable development is associated with the English clergyman and economist Thomas Robert Malthus. In the early 18th century, Malthus hypothesized that while population growth follows a geometric progression, the growth of food production and resources follows an arithmetic progression. In the end, this imbalance leads to disasters such as famine, wars, and even revolutions.</p> <p>A significant surge in ideas about resource limitations and the importance of conscious production and consumption occurred 170 years after Malthus’s works were first published. In 1972, the international organization “The Club of Rome” released its first report – the famous “Limits to Growth” -, which presented mathematical modeling of resource depletion due to population growth. The model included 12 scenarios, five of which described catastrophic population declines to 1-3 billion people due to excessive consumption. The remaining seven scenarios were more favorable and relied on increasing environmental, demographic, and social awareness of humanity.”</p>		

5 min.

Sustainable development – also known as harmonious development or balanced development – is a process of economic and social change in which natural resources, investment direction, scientific and technological progress, personal development, and institutional changes are coordinated with each other. This process strengthens both the current and future potential to meet human needs and aspirations.

Startup – a voluntary association of people with common goals, values, and ideas. A startup brings together efforts to create a new product that is distinct from existing alternatives in the market. At the core of a startup is an innovative idea or a newly developed technology.

Difference between a startup and an existing Business

A startup is a company with a short operational history.

Write down a definition for the word “startup culture” based on your knowledge.

You have 2 minutes to complete the task.

Discuss the goals of the startup with the class, and go into more detail about solving customer problems.

Task 1

Think about and determine what consumer problems the following products can solve.

- a) a taxi service;
- b) a photo school;
- c) a mobile application for creating photo collages;
- d) a service that unites all the restaurants in the city in one application;
- e) a mobile application for communicating with city akimat employees.

Answers to the task may vary, but completing the task requires a clear understanding of the customer’s needs and the essence of their satisfaction.

Task 2

Give an example of a startup and explain why you think it is a startup and not a company.

To better understand what a startup is, it is necessary to compare some aspects of its functioning with the peculiarities of a company. Review Table 1 in the textbook and discuss the similarities and differences between a startup and a company. Students should be given enough time to think. Encourage students to give as many arguments as possible in favor of the fact that a particular enterprise is a startup.

15 min.

Exchange of opinions using the “Question in a circle” method.

The students justify their thoughts.

1. What kind of startup would you open? Describe your business idea.
2. What do you think startups are needed for in our country?

Come up with a business development model based on the principles of a “lean startup”.

- a) a school for teaching children programming;
- b) a platform for finding travel companions for mountain hikes;
- c) a service for exchanging books read;
- d) a service selling perfume samples;
- e) an application for calculating the cost of a vacation abroad.

To understand how a startup works, it is necessary to consider its business model – answers to questions about how a startup can make a profit by solving problems and satisfying customer needs.

Point out to the class that there is a special type of startup – a lean one. Ask them to guess what this means. Discuss the lean startup diagram with the class:

1. Generalization of possible business options (measure).
2. Testing hypotheses and receiving feedback by “going outside the office” (learn).
3. Creating minimum viable products and testing them (build).

To complete the task, you can divide the students into groups, using cards containing the names of startups as a means of division.

Task 3

In 2015, 17 sustainable development goals were developed at the UN summit. The document with these goals was agreed upon by the leaders of 193 countries.

Read and explain what the text says:

“Long-term global economic development, aimed only at maximizing profits and minimizing costs and having no other fundamental foundations, has led to serious degradation of the natural, social and even spiritual environment. Environmental issues, global climate change, social and gender inequality are just some of the systemic crises and global challenges that countries, corporations and people have faced in the late 20th and early 21st centuries. This clash has led to a revision of the global view of the world and an awareness of the importance of sustainable development.

What is sustainable development, which has been discussed at the international level under the auspices of the UN for 40 years, but in recent years has become especially relevant for business and public administration? “

Questions:

1. Why do all countries and our country need sustainable development?
2. How is doing business related to sustainable development?
3. What do you propose to achieve sustainable development in Kazakhstan?

Task 4

How can the startups being developed be related to the Sustainable Development Goals?

Select a topic for developing a startup and the corresponding Sustainable Development Goals in the table:

Startup topic	Sustainable Development Goal	Justification

5 min.

“So, you have become familiar with different interpretations of the concept of “startup” and have formed an idea of what features distinguish such “temporary structures”. Comparing the work of companies and startups, you have understood how they differ. In addition, the description of the startup business model given in this lesson will help you understand the intricacies of its functioning and its impact on sustainable development. You have learned about the “lean startup” methodology and now know how to properly create products using minimum resources. You also understood that changes for the better and the work of a startup can be adjusted with the help of pivots.”

5 min.

Reflection

Cinquain on the topic of the lesson

Glossary

Sustainable development	(also harmonious development, balanced development) is a process of economic and social change in which natural resources, investment direction, orientation of scientific and technological development, personal development and institutional changes are coordinated with each other and strengthen the current and future potential to meet human needs and aspirations.
A business model	is a conceptual description of entrepreneurial activity. The concept of a business model is closely related to other approaches to describing a business, such as corporate strategy, business processes and the value chain.
A business idea	is an idea that can be used to build a new company or a new line of business in an existing company. A business idea is aimed at creating goods or services that can be sold for money, thanks to the new business model formulated in the business idea.
A business plan	is a plan, a program for implementing business operations, a company's actions, containing information about the company, the product, its production, sales markets, marketing, organization of operations and their effectiveness.
A business strategy	is a set of measures, plans and management decisions for an enterprise to achieve a winning position in the market, meet consumer demand and maximize profits. A business strategy allows you to create optimal conditions for the long-term development of a company in the market. It includes defining a mission and setting goals, choosing methods of communication with consumers and developing the company's positioning in the market.
A distribution channel	is a set of firms or individuals who assume or help transfer to someone else the right of ownership of a specific product or service on their way from the manufacturer to the consumer.
A prototype	is a quick, rough implementation of a future system.

Sources used

1. Materials (video lessons) of the educational online platform Atameken Academy (atameken.co).
2. Fundamentals of economic knowledge. Entrepreneurship and business. Textbook for grades 10–11. – Almaty, 2002.

Appendix 6

Teacher **Maksutova Aizhan**

Short-term plan. Russian Language

Section: IV. What I want to be when I grow up

Grade: 5

Lesson topic:

What do crafts smell like?

Animate and inanimate nouns.

Learning objectives in accordance with the curriculum:

5C.1. understand the general content of a message no longer than 3-5 minutes, defining the topic of the text;

5G3. observe orthoepic norms.

Objectives of the lesson:

- Deepen students' knowledge of proper and common nouns;
- Teach to distinguish between animate and inanimate nouns.
- Develop reading skills, text analysis and oral expression.
- Develop environmental thinking and respect for work.
- Foster respect for national crafts and traditions through examples from culture.

Sustainable Development Goals (SDG):

SDG 4: Quality Education

SDG 5: Gender Equality

SDG 8: Decent Work and Economic Growth

SDG 12: Responsible Consumption and Production

LESSON PROGRESS

LESSON STAGE/TIME	ACTIONS OF THE TEACHER	ACTIONS OF THE STUDENT	ASSESSMENT	RESOURCES
Beginning of the lesson 5 min.	I. Organizational moment. Greetings. <p>“Hello, everyone! Today we have an unusual lesson. We will go on a journey through the world of crafts and find out what they smell like, and also analyze how nouns are divided into animate and inanimate.”</p> <p>Emotional mood:</p> <p>question to the class: “What do you think crafts are? What do they “smell like”?”</p>	<p>The students greet the teacher and get ready to work.</p> <p>They make suggestions to the teacher’s question.</p> <p>The students listen actively and add.</p>	<p>Formative evaluation method. Verbal praise from the teacher for activity.</p>	<p>Presentation (slide with the title of the lesson).</p>
5 min.	II. Knowledge update (SDG 4) <p>Blitz survey: Review of the topic “Nouns”.</p> <p>Questions:</p> <ul style="list-style-type: none"> • What is a noun? • What types of nouns are there? Give examples. <p>Give examples.</p> <p>Teacher: Since you already know what nouns are, today we will add a new dimension to our knowledge and learn what animate and inanimate nouns are.</p> <p>A short story about the crafts of Kazakhstan (jewelry, carpet making, leather artisanship).</p>	<p>Students recall what they have learned about nouns and give examples.</p> <p>They answer the teacher’s question.</p>	<p><i>Assessment criteria:</i> Answers the question.</p> <p><i>Descriptors:</i> the student gives examples – 1 point.</p> <p>Formative evaluation method. Strategy “2 stars and 1 wish”.</p>	<p>Display of images or objects related to crafts.</p>

LESSON STAGE/TIME	ACTIONS OF THE TEACHER	ACTIONS OF THE STUDENT	ASSESSMENT	RESOURCES
Middle of the lesson 10 min.	III. Learning new material. - <i>What is a craft?</i> A craft is something a person does. A craft is a profession, only craft is an obsolete word, it is rarely used in speech now, profession is more common. Teacher's actions: Explanation of the topic: "Animate nouns are those who live (people, animals), and inanimate ones are objects and natural phenomena". Examples from the world of crafts: <ul style="list-style-type: none"> • Animate: baker, blacksmith, craftsman, weaver • Inanimate: clay, yurt, hammer, asyk. 	Students are introduced to the basic diagram "Animate and Inanimate Nouns"; "Proper and Common Nouns" Students listen attentively to the explanation of the new topic.	<i>Assessment criteria:</i> answer the question by looking at the pictures. <i>Descriptors:</i> student knows the objects that relate to a certain profession – 1 point Formative evaluation method: "Thumb"	Textbook Reference diagram Presentation with examples of animate and inanimate nouns based on Kazakh crafts
	<i>Game "Animate and Inanimate":</i> Students name words, and the class determines which category they belong to.	Students determine the categories of the proposed words.		Game "Animate and Inanimate"
	Reading and working with text (SDG 5) Reading the poem, "What do crafts smell like?" (G. Rodari)	Students carefully read the poem by G. Rodari "What do crafts smell like?"	<i>Assessment criteria:</i> Identify nouns by questions.	Textbook, page 132, exercise 280
	Task: 1. Find animate and inanimate nouns in the text. 2. Discussion question: «Can men and women do any crafts? Discuss the diversity of professions regardless of gender (e.g. «seamstress» and «mechanic», «doctor» and «teacher».) Emphasis that today all professions are available to both men and women. (SDG 5).	They find and write out nouns from the poem. Then they divide these nouns into animate (denoting living beings) and inanimate (denoting objects and phenomena).	<i>Descriptors:</i> student names animate and inanimate nouns – 1b. Formative evaluation method: "Hand signals"	Task cards

LESSON STAGE/TIME	ACTIONS OF THE TEACHER	ACTIONS OF THE STUDENT	ASSESSMENT	RESOURCES
10 мин.	<p>Group work (SDG 8 and SDG 12)</p> <p>Task:</p> <p>In groups, develop a mini-project on the topic:</p> <ul style="list-style-type: none"> • “How do crafts help the economy?” (SDG 8) • “What materials do craftsmen use? Which of them are environmentally friendly?” (SDG 12) <p>Presentation of results:</p> <p>Each group presents its findings (orally or with a poster).</p>	<p>Students formulate what they learned from the discussion:</p> <ul style="list-style-type: none"> • Professions and crafts have no gender boundaries. • Anyone can become a teacher, a mechanic, a doctor or a seamstress if they are interested and ready to learn. <p>Students are divided into two groups.</p> <p>Group 1: Discussion of ideas that touch upon the problems of sustainable development, how crafts and other activities affect the economy:</p> <ul style="list-style-type: none"> • Create jobs (artisans, masters, assistants). • Support local production and small businesses. • Preserve traditions and attract tourists (craft fairs, souvenirs). • Help develop unique products and export them. <p>Group 2: Students list the materials that artisans use: wood, metal, clay, fabric, plastic, paper.</p>	<p><i>Assessment criteria:</i></p> <ul style="list-style-type: none"> • Explain the spelling of proper and common nouns. • Fill out a residence questionnaire. <p><i>Descriptors:</i> Student</p> <ul style="list-style-type: none"> • finds and underlines animate and inanimate nouns – 2b with the appropriate line; • knows his/her address – 1 point. <p>Formative evaluation method: Verbal encouragement of the teacher</p>	Markers, task cards

LESSON STAGE/TIME	ACTIONS OF THE TEACHER	ACTIONS OF THE STUDENT	ASSESSMENT	RESOURCES
		<p>Divide them into environmentally friendly (wood, clay, paper) and non-environmentally friendly (plastic, some chemicals).</p> <p>Discuss why environmentally friendly materials are important (preservation of nature, waste reduction).</p>		
8 min.	<p>IV. Consolidating what has been learned.</p> <p>The teacher invites the students to play <i>the interactive game “Bowling Quiz”</i> to test and consolidate their knowledge on the topic.</p>	Bowling Quiz combines elements of bowling and quizzes. Students are divided into teams and answer questions.	Formative evaluation method: verbal praise of the teacher.	view.genially.com/6750a0f6d664da32e00a957f/interactive-content-bowling-quiz
<p>End of the lesson 5 min.</p>	<p>V. Summing up the lesson.</p> <p>What did we talk about in class today? That is right, about crafts, namely, about professions. Look how many professions we remembered, and learned new ones.</p> <p>Reflection. “Message to the teacher”.</p> <ul style="list-style-type: none"> • Describe with verbs what you did in class • Describe with adjectives what you were in class • Describe with nouns who you were in class <p>Homework: Exercise 279, Learn the poem by G. Rodari “What do crafts smell like?”</p>	<p>About crafts, about new professions.</p> <p>Students write down their homework in their diaries.</p>	Formative evaluation method: verbal praise of the teacher.	<p>Cards</p> <p>Reflection “Message to the teacher”</p>

SECTION 2.

TEACHING PRACTICES FOR INTEGRATION OF SUSTAINABLE DEVELOPMENT INTO THE EDUCATIONAL PROCESS

The use of the sustainable development component in extracurricular activities is relevant for every educational institution, as the possibilities of integrating ESD into educational work are unlimited and open wide opportunities for developing global and real-life practical skills in learners.

It is undeniable that the future of human civilization depends on the level of students' understanding of the importance of the balance between economic growth, social well-being and environmental protection, the impact of human civilization on the development prospects of society and the state, the need to achieve social justice in the world and protect the rights of each person, the need to solve global problems of mankind.

The advantage of extracurricular work on ESD integration is that it provides a unique platform for integration of knowledge, skills and abilities acquired at lessons into real life, skills of application of competencies aimed at achieving sustainable development in different spheres of life.

Integration of ESD component into extracurricular activities is possible through:

1. Participation in competitions and grants aimed at implementing projects in the field of sustainable development.
2. Social initiatives. Volunteer work, participation in social projects, assistance to poor families, elderly people and other vulnerable categories of citizens, creation of green squads, green actions and energy saving actions, collection of recyclable materials, sorting rubbish, etc.
3. Holding charity events, collecting funds and things for the needy.
4. Holding conferences, exhibitions and festivals, discussions and debates on sustainable development topics, where students will be able to express their point of view in a reasoned manner and respect the opinion of others.
5. Partnership of a school with sustainable development organizations and businesses for joint events.
6. Involvement of business representatives to organize master classes and lectures on the practice of implementing sustainable development principles in companies.
7. Visiting eco-centers, nature reserves, nature museums and other organizations to learn about the successful application of sustainable development principles in practice.
8. Internships in organizations working in the field of environmental protection and social entrepreneurship.
9. Publication of a school newspaper or magazine covering sustainable development topics.
10. Preparing interactive assignments such as quizzes, quests, simulations and online games to make the lesson format more engaging and motivating for students (virtual tours of environmental sites or interactive maps to study the impact of climate change on different regions of the world, etc.).
11. Creating and maintaining school websites and blogs where news and results of project activities on sustainable development are published.

Teachers demonstrated their ability to find different ways to include ESD component outside the lesson.

For example, the extracurricular activities developed by teachers include:

1. Ecological campaigns and environmental protection (cleaning parks, planting trees, cleaning riverbanks, separate rubbish collection, planting seedlings, etc.), which not only contribute to the improvement of the environmental situation

in the region, country, world, but also develop a sense of involvement in sustainable development, responsibility for the future of their country, all mankind. Thus, students within the framework of the campaign «Clean Coast» (schools of East Kazakhstan, Almaty, Pavlodar regions, Abay region) cleaned coastal areas from rubbish, sorted waste and drew public attention to the problems of ecology, air and water pollution.

2. Projects within the framework of created eco-clubs, circles, and safety squads aimed at attracting students to the study of sustainable development, problems of industrialization and urbanization, energy conservation, ecology, climate change and others, which promotes in-depth study of these topics and implementation of practical collective or individual projects. In addition, a number of class teachers' projects include research (on energy saving, waste recycling, etc.) (in ESD teachers' developments for students in grades 6-9). Collective projects may include development of projects on alternative energy and recycling, creation of eco-products, socio-cultural research.
3. Involvement in the volunteer movement. Examples of social activism and volunteer activities related to supporting local communities and protecting the environment, sorting rubbish, and others help students realize the importance of personal involvement in solving global problems. Volunteers help care for animals, conduct information campaigns on energy saving and waste sorting (restoring forest areas after fires, caring for rare plants in botanical gardens).
4. Competitions and Olympiads on the topic of sustainable development encourages students to immerse themselves in the topic and search for innovative solutions. Olympiad «Energy of the Future», where models of energy-efficient houses and renewable energy sources made by students are presented.
5. Master classes and workshops on making eco-products, using recycled materials and sustainable consumption, intercultural communication and conflict management help students learn practical skills that they can apply in everyday life, expand their own experience and pass on to others. In the development of the extracurricular activity, the teacher together with the students initiated a workshop «The Second Life of Things», students learn how to use old things into new useful products, for example, to make bags from old jeans or lamps from plastic bottles.

Not many creative competitions and festivals dedicated to the theme of sustainable development are presented in the teachers' projects. This is a good resource and an opportunity for students to express their vision of sustainable development through art (exhibitions of drawings, photo contests, theatre productions and musical performances dedicated to sustainable development and responsible attitude towards the planet). Such a development was presented by a visual arts teacher.

Sustainable development aspects are reflected in the lesson plans of teachers from schools in Almaty and Ust-Kamenogorsk through the organization of excursions and trips to national parks, nature museums, and other ecological sites. For example, a trip to a national park allowed students to become familiar with the unique flora and fauna, engage in discussions about the conservation of endangered species, the preservation of ecology, and natural resources, and explore ways to protect the country's natural wealth.

An example of students' involvement in the greening of the region and their hometown is the initiatives supported by teachers to create eco-teams, conduct mini-research on the greening of the region, create green zones in the city, develop a "Green Map", open school greenhouses and greenhouses, and implement school projects on the greening of the school territory.

The preparation of project work on sustainable development by students involves planning, selecting a goal, studying and taking into account a variety of factors. Thus, the presented developments of teachers (schools of Almaty, Astana, Kostanay region, Abay region) include specific, measurable, and achievable in time-limited (SMART) goals of project work. For example, the goal of one of the projects was to develop a plan to reduce energy consumption in the school.

Another example of teacher-supported project work is forecasting the possible global effects of climate change on a particular region.

When planning the topics of extracurricular activities, the teacher can transform the topics using the sustainable development component; clarify with the students the format of the activity that is convenient for them.

SECTION 3.

MULTICULTURAL APPROACH AND INTERDISCIPLINARITY IN THE INTEGRATION OF SUSTAINABLE DEVELOPMENT INTO THE EDUCATIONAL PROCESS

The multicultural approach plays a significant role in the process as it involves embracing cultural diversity and recognizing the value of different cultural traditions and experiences.

It helps to foster respect for other cultures and promotes the development of a global civic identity. Let us consider how a multicultural approach can be applied in teaching with a sustainable development component.

1. Recognizing cultural context.

Each culture has its own unique perspective on nature, society, and economics. A multicultural approach recognizes the differences and helps learners understand the many ways to achieve sustainable development. For example, traditional indigenous knowledge can provide valuable insights into conservation and resource management.

2. Intercultural Engagement.

Enabling intercultural dialogue and cooperation helps learners develop communication and understanding skills. This is especially important in the context of sustainable development, as many issues require collaborative efforts at the international level. Lessons may include discussion of international agreements and projects aimed at environmental protection and social justice.

In Geography lessons, the teacher suggests organizing a discussion on how different countries are dealing with climate change. Students present their research on national strategies to combat global warming, exchange opinions, and propose joint initiatives. This approach develops their understanding that sustainable development is a global challenge requiring international co-operation.

The traditional knowledge of many cultures is useful for achieving sustainable development. For example, some African cultures have traditions of stewardship of land and water resources. Teachers incorporate such examples into short-term lesson plans, showing how ancient traditions can be applied to the modern world.

Teachers use *a multidisciplinary approach* in many of their lesson designs and classroom activities, bringing together knowledge from different areas of science and art to explore sustainable development issues. For example, literature lessons analyze works by authors from various countries that address themes of ecology and social justice, inequality, hunger eradication, and quality education. This helps students to see how different cultures approach common problems.

The multicultural approach to integrating sustainable development into the learning process fosters a globally oriented worldview and develops students' intercultural interaction skills.

Such lessons helped to make the educational process more interesting and relevant for students and to prepare young people for life in a multipolar world where cooperation and mutual respect are key success factors ([Appendix 7](#)).

The multicultural approach and interdisciplinary connections are clearly visible in the lesson plans of teachers who, during the integration of the sustainable development component into teaching and upbringing, use case studies ([Appendix 8](#)).

The presented case studies demonstrate how different strategies and approaches can be used to achieve sustainable development in various contexts, based on a comprehensive approach that considers economic, ecological, and social aspects.

It is good practice for teachers to use case studies in the learning process. The cases are discussed and analyzed and students develop an understanding of sustainable development principles and essential skills.

Appendix 7

Teacher **Sadybekova Anar Zhumasiyakyzy**

Municipal Public Institution "General Secondary School",
Karaul village, Abay district

Short-term lesson plan. Russian Language and Literature

Section: Values: Friendship and Love

Grade: 5

Topic lesson: "Friendship is a gift"



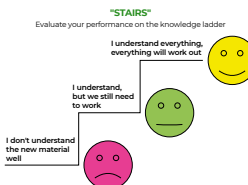
Learning Objectives:


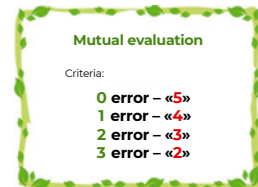

- 5.1.3.1 – understand the main content of folklore and literature/fragments containing familiar lexical and grammatical units, identify the topic
- 5.2.5.1 – participate in a dialogue, correctly understanding the lines and providing feedback
- 5.2.4.1 – create a statement based on an illustration
- 5.3.4.1 – master types of reading (commented), read by roles
- 5.3.7.1 – extract the necessary information on the proposed topic from various sources


Sustainable Development Goals:

- 3 – health and well-being
- 4 – quality education
- 5 – gender equality
- 8 – good work and economic growth
- 10 – reducing inequality

LESSON PROGRESS

LESSON STAGES	ACTIONS OF THE TEACHER	ACTIONS OF THE STUDENT	ASSESSMENT	RESOURCES
Beginning of the lesson	Organizational moment.	Checking homework		Emotional mood
	What word is encrypted: RADBUZH? Make an association to the word "Friendship"	Make an association	Mutual checking	Marker, A3
	Showing the video "Why people are friends and what kind of friends there are" Questions: 1. Have you heard of sustainable development? What does it mean? 2. Why is it important for the peoples of the world to be friends and support each other? 3. Why is it necessary to reduce inequality between people?	Complete the cluster and share your opinion Discussion in groups Presentation of groups		iite.unesco.org/wp-content/uploads/2023/11/11.-Pochemu-lyudi-druzhat-i-kakie-byvayut-druzya.mp4
	II. Updating knowledge • What new things did we learn from the video "Why do people make friends and what kinds of friends there are"? • What new words did we learn? • How many friends can a person have? • How many friends do you have?	Finish the sentences: Friendship is when... A friend is someone who... With a friend, I am ready to...		

LESSON STAGES	ACTIONS OF THE TEACHER	ACTIONS OF THE STUDENT	ASSESSMENT	RESOURCES
Middle of the lesson	III. Studying new material Ex. 192. Familiarize yourself with the meaning of the word friendship. What is the name of the dictionary where you can find out the meaning of the word? Ex. 193. Read the sentences. Compare the highlighted words. Why such words are called related? Working with “Your Assistant”. Root of the word. Single-root words. Find single-root words to the word “Friend”	Find single-root words to the word “friend”	 <p>Give yourself a grade</p> <p>Well done!</p> <p>We must try harder!</p> <p>You can do better!</p> <p>Great!</p> <p>Good!</p>	Polylingualism: words with the same root – tuberles sozder; forms of the same word – bir sozdin torleri; root of the word – sozdin tuberi Main terms and phrases: gift – a present, friend, girlfriend, girlfriend, friendly, to befriend, to make friends, friendship, friendly
	A minute of physical activity “Related words” If I name a pair of related words, you clap your hands. If I name a pair of words that are not related, you squat.	Try to count how many pairs of related words will be named. <i>Winter-winter, mushroom-mushrooms, grass-grass, child-children, friend-girlfriend, friend-friendship, friend-comrade, help-help, oak-oak, friend-friend</i>	 <p>Mutual evaluation</p> <p>Criteria:</p> <p>0 error – «5»</p> <p>1 error – «4»</p> <p>2 error – «3»</p> <p>3 error – «2»</p>	A minute of physical activity “Related words”
IV. Mastering the material studied		Task 1. First, write out rows of cognate words, then forms of the same word. Indicate the root and ending in all words. Task 2. Find related words and forms of the same word. Write them out. Indicate the roots in them. What do you think is the purpose of using cognate words in tongue twisters and proverbs?	 <p>Reflection</p> <p>“Two stars – one wish”</p>	Linguistic game. Are these word rows related? Correct the mistakes.

LESSON STAGES	ACTIONS OF THE TEACHER	ACTIONS OF THE STUDENT	ASSESSMENT	RESOURCES
		Task 3. Think about what words are associated with the concept of “Sustainable Development”		
	The teacher asks questions based on the text, using the “Question Attack” technique.	Task for the video: <ul style="list-style-type: none"> • What new words did you learn? • What is friendship? • What are real friends like? • How can you make new friends? 		“Question Attack” technique
End of the lesson	The “True and False Statements” technique allows identifying the level of assimilation of the information received in this lesson.	For independent study, we offer “case study”. Make a cinquain for the word “friendship”	 <p>Evaluate yourself:</p> <ul style="list-style-type: none"> "I worked better than usual today" "I am satisfied with my work" "I could have done a better job" 	
	Reflection	<ul style="list-style-type: none"> • How was the lesson? • What was successful? • What was unsuccessful? • What do you want to change? • What support do you need? 		

A short-term plan. Adjusting the amount of water. Target organs

Section: Transportation of substances

Grade: 10

Topic lesson:

Adjusting the amount of water.

Target organs

**The purpose
of the training
according to the
curriculum:**

10.1.5.2 – explanation of the role of Antidiuretic Hormone (ADH) in controlling the amount of water;

**The purpose
of the lesson:**

- to be able to explain the effect of water levels in the body on thirst:
- explanation of the main causes of dehydration:
- explanation of the mechanism of ADH operation on the nephron circuit:
- learning about target organs.

Values:

- discipline, determination, self-control
 - sobriety, discretion, law-abiding,
 - respect others, respect others' opinions
 - honesty, objectivity, sincerity
-

LESSON PROGRESS

COURSE/TIME OF CLASSES	TEACHER'S ACTIONS	STUDENT'S ACTIONS	EVALUATION	RESOURCES
The beginning of the lesson 2 min.	I. Organizational stage: a) the teacher creates a positive psychological climate through the game "Cube" ; b) instructs to form a group according to the "color of the stickers" .	Students create a positive atmosphere in the classroom with the help of the game "Cube" . They are grouped according to the "sticker colors" .	<i>Feedback:</i> Appreciated by praise.	Colored stickers
4 min.	II. Homework assignment It is requested using a digital platform approach. Reabsorption wordwall.net/resource/65338546 The teacher introduces students to a new topic by asking questions in a brainstorming way	Students <ul style="list-style-type: none"> respond using a digital platform approach, recalling their knowledge of past topics; define the topic and purpose of the lesson using the brainstorming approach. 	<i>Feedback:</i> Appreciated by praise. "Well done!" "Excellent answer", etc.	Video
The middle of the lesson 15 min.	IV. Group Work. The teacher provides brief information on a new topic and organizes group work. Group 1 analyzes and explains about "Regulation of water exchange". Group 2 – "Target organs".	Students in groups analyze the characteristics written on the sheets with the teacher's instructions, determine which one is suitable, put it on a flipchart, compare and explain.	<i>Feedback:</i> Given by the "two stars, one wish" method	A4 sheet Marker Flipchart

15 min.

Tasks to consolidate the lesson.**Task 1**

The "true" or "false" approach

CONCLUSIONS	TRUE	FALSE
The central joints are neurons in the anterior part of the hypothalamus	●	
The afferent joint includes the kidneys, sweat glands, intestines, and lungs		●
Target organs are the organs that are most affected by high blood pressure	●	
The kidneys suffer from the myocardium		●

Students

- determine whether a statement is "true";
- determine whether the statement is "false".

The descriptor:

the students determine whether the statement is "true" or whether the statement is "false".
The total score is 4.

2-additional task sheets

Task 2

Connecting the topic in accordance with the 17 global Sustainable Development Goals

White A3 page



COURSE/TIME OF CLASSES	TEACHER'S ACTIONS	STUDENT'S ACTIONS	EVALUATION	RESOURCES
	<p>Task 3</p> <p>Test</p> <p>1. What is the main function of water in the body?</p> <ul style="list-style-type: none"> a) as an energy source b) as a transport of substances and as a solvent c) in the production of thermal energy d) in the supply of nutrients <p><i>Correct answer: b</i></p> <p>2. Specify the main water-regulating hormone in the human body:</p> <ul style="list-style-type: none"> a) Insulin b) Epinephrine c) Antidiuretic Hormone (ADH) d) Thyroxine <p><i>Correct answer: c</i></p> <p>3. Which organs are called target organs?</p> <ul style="list-style-type: none"> a) organs secreting hormones b) organs carrying nutrients c) organs responsible for certain hormones d) organs of the immune system <p><i>Correct answer: c</i></p> <p>4. What is the name of the hormone that enhances the reabsorption of water by the kidneys?</p> <ul style="list-style-type: none"> a) Cortisol b) Aldosterone c) Testosterone d) Insulin <p><i>Correct answer: b</i></p>	Students perform the task on a digital platform.		

COURSE/TIME OF CLASSES	TEACHER'S ACTIONS	STUDENT'S ACTIONS	EVALUATION	RESOURCES
	<p>5. What happens when there is a lack of ADH?</p> <ul style="list-style-type: none"> a) Hypoglycemia b) Increased blood sugar levels c) Diabetes d) Diabetes insipidus <p><i>Correct answer: d</i></p> <p>6. What hormone is released when the osmotic pressure of the blood increases?</p> <ul style="list-style-type: none"> a) Adrenaline b) Antidiuretic Hormone (ADH) c) Glucagon d) Growth hormone <p><i>Correct answer: b</i></p> <p>(From EBK)</p> <p>Presenting tasks on a digital platform wordwall.net/resource/39552465 Regulation of water exchange wordwall.net/resource/82112973</p>			
The end of the lesson 4 min.	<p>Feedback</p> <p>Offers to give feedback via "SMS"</p>	<p>Feedback</p> <p>Create feedback via "SMS"</p>	<p><i>Feedback:</i> via "SMS"</p>	
1 min.	<p>Homework assignment to read § 54</p>			

A short-term plan. The Kazakh language

Section: 5. Musical art and the Kazakh sacred dombra. Morphology

Grade: 7

Lesson topic:

Music is the highest art in the world.

The earliest works of Kazakh Musical Art

Learning objectives in accordance with the curriculum:

7.2.7.1 using information from the Internet, encyclopedias, newspapers and magazines, textbooks, making reference to the author

7.3.6.1 checking the correctness of the use of words in the text in accordance with the topic, making lexical adjustments with the replacement of synonymic rows, editing

The purpose of the lesson:

Students can refer to the author, using information from the Internet, encyclopedias, newspapers and magazines, textbooks. They can make lexical adjustments and edit, checking the correct use of words in the text in accordance with the topic and replacing them with synonymic rows.

Sustainable Development Goals:

4) High-quality knowledge of the first works of Kazakh Musical Art
 5) Gender equality. Maira Mukhametkyzy is an internationally recognized singer, Shara Zhienkulova is the first internationally recognized dancer from among the Kazakh girls of the 19th century.
 8) Labor and Economic Growth. Dimash Kudaibergenov gained worldwide recognition with his work and introduced the Kazakh music abroad, growing both economically and spiritually.
 16) Peace, justice and effective institutions

Singing, as they say, “if there is bread, then there will be a song”, is the foundation of peace. Formation of Kazakh Education and the Kazakh Institute of Customs and Traditions

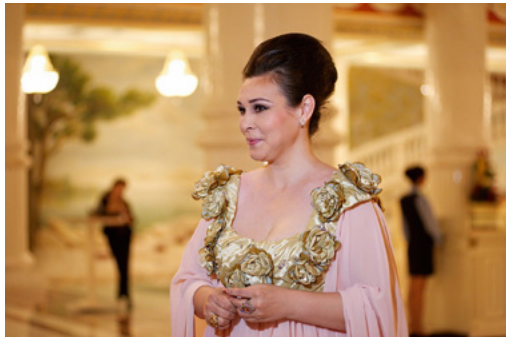
Instilling values:

Value: justice and responsibility
 - persevere in completing training tasks;

Value: hard work and professional qualifications
 - the ability to plan your time effectively and make efforts to achieve the results of any activity;

LESSON PROGRESS

LESSON STAGE/TIME	TEACHER'S ACTIONS	STUDENT'S ACTIONS	EVALUATION	RESOURCES
The beginning of the lesson 5 min.	<p>Greeting students, taking checking their presence.</p> <p>The topic of the lesson, the purpose, and the evaluation criteria will be announced.</p> <p>The teacher divides students into groups</p> <p>Homework Request</p>	<p>Students are divided into groups as “Dombra” and “Kobyz”</p>	<p><i>Verbal praise:</i></p> <ul style="list-style-type: none"> Well done! Excellent solution! A thoughtful decision! I have never heard such thoughtful comments! 	<p>Textbook 7th grade Altamura Publishing House, 2017 From the Briefcase of New Teaching Methods Nagisha Kozak Kyzy Yesbossyn</p>
The middle of the lesson 15 min.	<p>A new lesson Thinking</p> <p>Solve crosswords, connect words in the grid of squares, and compose sentences. When solving the crossword puzzle correctly, the students will get the word “Dimash”.</p> <div data-bbox="432 812 920 1120"> </div> <ol style="list-style-type: none"> The famous Kazakh folk kuyi performer. The city where the XXIV International Pop Song Contest “Slavyansky Bazar-2015” was held. The American singer who performed Dimash’s song. Dimash’s teacher. The legend of the Kazakh Dance Art. 	<p>Solve a crossword puzzle, and compose a sentence, including a word from the grid of squares. When solving the crossword puzzle correctly, the students will get the word “Dimash”</p> <p><i>Answer:</i> 1) Dina 2) Vitebsk 3) Michael 4) Aitimov 5) Shara</p>	<div data-bbox="1585 622 1765 762"> <p>Well done!</p> </div> <div data-bbox="1599 774 1756 909"> <p>Great!</p> </div>	<p>SDG 8) Labor and Economic Growth. Dimash Kudaibergenov gained worldwide recognition with his work and introduced the Kazakh music abroad, growing both economically and spiritually.</p> <p>SDG 4) High-quality knowledge of the first works of Kazakh Musical Art</p> <div data-bbox="1823 1220 1980 1404"> </div>

LESSON STAGE/TIME	TEACHER'S ACTIONS	STUDENT'S ACTIONS	EVALUATION	RESOURCES								
20 min.	<p>Task 4</p> <p>Task 5 Music therapy training</p> <p>Task 7 Basket of questions</p> <p>Memory of Maira Mukhametkyzy</p> 	<p>Students read the text and make a plan, offer an algorithm for use of the music therapy training through it Balgyn and Aisel perform the kuyi “Korugly”.</p> <p>Students read the memoirs of Maira Mukhametkyzy Two groups work out questions for each other, and put them in the basket.</p> <p>Writing words from the I-side in black, using the mood suffixes with the replacement of words from the II, III- sides.</p> <p>Fills in: Group will be evaluated by Asyk.</p> <p>In the group assessment, through the exit page, they convey what impression they received from the lesson, what they learned or did not understand, and what obstacles they have encountered.</p> <p>Writing an essay on the topic: “The Greats’ thoughts on music”.</p>	<p>General assessment</p> <p>Work assessment with Asyk Alshi – (9-10 points) Taike (taua) – (7-8 points) Buge (buk) – (4-6 points) Shige (shik) – (1-4 points)</p> <table><tr><td colspan="4">Custom</td></tr><tr><td>SH</td><td>T</td><td>C</td><td>Y</td></tr></table> <p>Shildehana Tusaukeser Sundet toi Wedding</p>	Custom				SH	T	C	Y	<p>SDG 5) Gender equality Maira Mukhametkyzy is an internationally recognized singer, the first and so far the only singer who sang at the GRAND Opera in Moscow, Paris</p> <p>The song “Kazaktyn dasturleri-ai!” will be played.</p> <p>SDG 16) Peace, justice and effective institutions As they say, “if there is bread, then there will be a song. Formation of Kazakh Education and the Kazakh Institute of Customs and Traditions</p>
Custom												
SH	T	C	Y									
<p>The end of the lesson 5 min.</p>	<p>Conclusion: “Exit page”</p> <p>Evaluation</p> <p>Homework: Task 9</p>											

Appendix 8

Sustainable Development Case Studies

Case studies are real-life examples and scenarios illustrating successful sustainable development strategies. Their purpose is to demonstrate practical solutions and challenges related to sustainability.

Case Study: Transition to Renewable Energy

Description:

City A adopted a strategy to transition to renewable energy sources to meet its energy needs. As part of this strategy, solar panels were installed on the roofs of government buildings, wind farms were constructed, and incentives were introduced for private homeowners to switch to solar energy.

Results:

Within five years, the city reduced carbon emissions by 20%, decreased its reliance on fossil fuels, and created new jobs in the green energy sector. Additionally, savings on electricity bills allowed for the reallocation of funds to other social programs.

Case Study: Water Resource Conservation

Description:

Region C faced a freshwater shortage due to drought and population growth. Local authorities implemented a system of drip irrigation in agriculture, installed rainwater harvesting systems, and modernized water supply networks to reduce leaks.

Results:

Thanks to these new technologies, the region reduced water consumption by 30% without compromising agricultural production. Improvements in water infrastructure provided more residents with access to clean water and reduced the risk of waterborne diseases.

Case Study: Supporting the Local Economy

Description:

A small town, X, focused on supporting local producers and entrepreneurs. Farmers' markets were organized, allowing farmers to sell their products directly to consumers. A grant program for small businesses was introduced to help entrepreneurs develop their enterprises.

Results:

The local economy received significant support, leading to job creation and increased income. Consumers benefited from fair prices, and residents actively supported local production. This, in turn, reduced the carbon footprint by minimizing transportation costs.

Case Study: Education and Awareness

Description:

School A implemented a sustainable development education program that included courses on ecology, economics, and social sciences. Students participated in projects such as greening school grounds, developing eco-friendly products, volunteering, and running awareness campaigns within their community.

Results:

Students gained in-depth knowledge of sustainability principles and became active participants in community initiatives. Many graduates pursued careers in energy efficiency, health and safety, environmental protection, and sustainable development. The school became a model for other educational institutions in the region.

SECTION 4.

RECOMMENDATIONS FOR TEACHERS ON INTEGRATING SUSTAINABLE DEVELOPMENT COMPONENTS INTO THE EDUCATIONAL PROCESS

An important stage in integrating ESD component into the content of secondary education and school practice is the assessment of learning outcomes of ESD integration, the level of global competencies development, and effective feedback in the educational process.

Evaluation of the effectiveness of integrated approaches and development of the author's lessons by teachers based on the use of ESD in the process of implementation of subject curricula can become the basis for systematic integration of the concept of sustainable development into the content of Kazakhstani education.

The presented practices and lessons of Kazakhstani teachers on ESD demonstrate an integrated approach to global problems of civilization, ESD achievement, and students' understanding of the importance of achieving sustainable development goals both nationally and personally.

The training of teachers on the integration of the sustainable development component into short-term lesson plans across various school subjects, as well as Global Competencies courses, resulted in **a collection of teacher-authored materials within secondary education institutions across the country.**

The introduction of the sustainable development component into the content of lessons has given several significant advantages in the learning process, touching upon the issues of personal development and responsibility for the fate of their native land, town, village, country and the whole world, health and general well-being of both the students themselves and other people. Students had the opportunity to study new topics in different subjects at school, directly linking them to real life, the existing reality, taking into account their own views and individual trajectories, which increases their involvement in learning and understanding of the importance of sustainable development for every citizen.

The interactive and unconventional learning formats (such as visits to museums, production facilities, exhibitions, etc.), discussions on important and global issues affecting human life, risks, and threats in the modern world, the free expression of viewpoints, and conducting research were accessible, effective, and led to an increase in student interest in studying these issues. These approaches also contributed to the students' self-learning and self-development.

The positive outcomes of integrating the sustainable development component into the learning process also include:

1. Learners' adaptation and readiness for real-life situations.
2. Formation of civic responsibility and increase of students' self-esteem.
3. Reduction of stress and anxiety levels, understanding of the possibility and effective problem solving.
4. Formation of health-saving culture and care about physical and mental health.
5. Development of a sense of community and cooperation between students, formation of social skills.

Education for Sustainable Development creates a school environment that not only provides knowledge but also helps students to develop harmoniously, to take care of themselves, their health, their family, society and to shape a successful future.

Several key points can be highlighted based on the results of analyzing the lessons and activities developed by teachers with the inclusion of the sustainable development component:

- The opportunity to use an individualized approach is the key to successful learning. Standardized teaching methods are not always effective for all learners. ESD teachers' lessons are related to concrete facts, processes, life situations and are creative and imaginative.
- The format of the lessons, the use of digital technologies and a variety of resources are aimed at unlocking the potential of each child.
- Increase students' interest and motivation in learning about sustainable development.

- Increasing the level of students' involvement in the events and changes taking place, the ability to predict and see the prospects for the development of civilization and society, as well as increasing social responsibility.
- Organization of creative space, reduction of excessive control and assessment pressure allows for greater independence and involvement of students in learning and discussion of these problems.

Successful practices allow teachers not only to develop knowledge and skills, flexible competencies, critical and creative thinking of students necessary for sustainable development but also to educate and develop students' understanding of global processes, responsible attitude to nature, society and their future.

Recommendations for improving lessons and extracurricular activities with ESD component

- Include ESD materials into the learning process across all subjects and in character-building activities.
- Ensure mandatory feedback and reflection when discussing sustainable development issues to enhance student engagement.
- Regularly discuss successes and challenges encountered during sustainable development lessons and projects.
- Encourage practical work on sustainable development based on students' own recommendations and solutions.
- Integrate interdisciplinary activities, such as using mathematical calculations to assess urban development prospects, energy savings, inequality reduction, and environmental impact.
- Conduct regular research and implement projects that apply sustainable development knowledge in real-world contexts.
- Engage parents and the local community in Education for Sustainable Development through joint initiatives, workshops, and knowledge-sharing events.
- Monitor and assess student achievements in sustainability integration within the educational process.
- Ensure flexibility and adaptability in sustainability-related teaching approaches and methodologies.

The integration of the sustainable development component into the learning and upbringing process requires a comprehensive approach and the involvement of all participants in the educational process. To build a sustainable future, it is essential to use the Education for Sustainable Development (ESD) concept and integrate its core principles, which involve a harmonious combination of political stability, economic growth, social well-being, environmental protection, enhancement of legal institutions, ensuring security.

The development of global competencies and life skills in students, which are necessary to solve contemporary issues and ensure a sustainable future, is both important and in high demand within the context of education.

CONCLUSION

The educational environment plays a crucial role in students' personal development, health, and well-being, creating conditions for their harmonious growth and self-actualization.

In this regard, engaging students in learning through the Sustainable Development Goals (SDGs) is particularly relevant. This approach fosters critical and creative thinking, civic engagement, and discussions on key global economic, political, social, and environmental challenges.

Modern teaching methodologies – such as analyzing international and national sources, reviewing current events, planning and forecasting, conducting research, and implementing projects – help students analyze information, make informed decisions, develop social skills, collaborate effectively, debate constructively, and implement innovative projects. These strategies enhance motivation and a sense of responsibility for addressing local, national, and global issues.

A positive learning atmosphere that integrates sustainability principles helps students unleash their potential, boost their self-esteem, and build confidence in their ability to influence real-world events.

A modern educational environment should be more than just a source of knowledge – it should be a space where students feel comfortable, confident, and happy. It should prepare them for life in society by encouraging active participation in discussions on global challenges and solutions; critical evaluation of the strengths and weaknesses of various phenomena and processes; and expression of personal viewpoints supported by reasoned analysis and evidence.

Additionally, students must respect diverse worldviews and perspectives, appreciate cultural diversity, and understand the importance of collaboration in ensuring collective well-being and sustainable development.

The authors' development of teachers with the integration of the ESD component showed that within the framework of the lesson it is possible to rely on research, analysis, and assessment that contribute to:

- development of students' critical, problem-oriented, systemic thinking;
- understanding of problems of regional and global importance;
- search for evidence and arguments used to support different points of view;
- establishing positive interaction in different life situations;
- development of initiatives and concrete actions in the interests of the well-being of the family, school, society and the state;
- systematic and structured selection and presentation of relevant arguments, evidence, and points of view;
- contributing to the achievement of the common goal and the result of teamwork.

When planning the learning process using the ESD component, the teacher has the opportunity to independently determine which of the Sustainable Development Goals can be integrated within the framework of a specific lesson, choose the most effective teaching methods and technologies, engage students in an interested and useful dialogue on current problems of life and development of society.

The created bank of best practices and developments of teachers in ESD will allow for the exchange of experience and the mutual exchange of effective methods and technologies of education, and it will allow for the demonstration of the possibilities of integrating the component of sustainable development into school education.