

ПЛАН УРОКА




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Предмет	Информатика
Учитель	Сулейменова А.А.
Школа, класс	г. Уральск, НИШ, 11 класс
Тема урока	Branching algorithm structure

Learning objectives:	Write a program code using a basic algorithmic «branching» structure when developing a project		
Lesson objectives:	Write code to solve tasks with decision		
Success criteria:	<p>Knowledge:</p> <ol style="list-style-type: none"> 1. name structure of branch algorithm <p>Understanding:</p> <ol style="list-style-type: none"> 2. describe how implement branch algorithm <p>Applying:</p> <ol style="list-style-type: none"> 3. write program code to implement branch structure <p>Analysis:</p> <ol style="list-style-type: none"> 4. analyze scenario from different subjects <p>Synthesis:</p> <ol style="list-style-type: none"> 5. create application to realize branch algorithm <p>Evaluation:</p> <ol style="list-style-type: none"> 6. evaluate the work of a classmate 		
Guiding questions:	<p>What is a branch algorithm?</p> <p>How to implement branch algorithm?</p> <p>Why does address important for our life branching algorithms?</p>		
Mission, vision, values:	<p><u>MISSION</u></p> <p>-Enhancing intellectual capacity</p> <p>-Enhancing creative capacity</p> <p>-Realizing a global education</p> <p>-Practicing innovation</p> <p>-Practicing polylingualism</p> <p>-Practicing mathematics</p> <p>-Practicing science</p>	<p><u>VISION</u></p> <p>-Providing the finest education in morality</p> <p>-Providing the finest education in leadership</p> <p>-Providing the finest education in patriotism</p> <p>-Developing social responsibility</p> <p>-Developing critical thinking</p> <p>-Developing active citizens of Kazakhstan</p> <p>-Contributing to a better world</p>	<p><u>VALUES</u></p> <p>-Wellness</p> <p>-Respect</p> <p>-Transparency</p> <p>-Collaboration</p> <p>-Perseverance</p> <p>-Responsibility</p> <p>-Lifelong Learning</p>

Language objectives:	Learners can: •Discuss branch algorithms Subject-specific vocabulary & terminology: Algorithmic structure, Software code, Following, Branching, Cycle, Component, Development environment, Debugging, Property, Library, Compilation, Method, Decision Useful set(s) of phrases for dialogue/writing: The branching algorithm ... The main property of branch algorithms is ... Decision is...
Cross-curricular links:	Physics, Math, Biology, Kazakh language
Previous learning:	This unit requires general knowledge about algorithmization and programming. Knowledge of one of the programming languages, understanding of branched and cyclic structures algorithms. Learners need experience working with the development environment.

План

Lesson stages	Planned activities at the lesson	Resources								
Lesson 1 Start 8 min	<p>Part I.</p> <p>1. Greetings</p> <p>2. Starter</p> <p>Action: Test Purpose: Check previous knowledge Description:</p> <table border="1"> <tr> <td>Teacher's activities:</td> <td>Student's activities:</td> </tr> <tr> <td>Share the link to test yourself. Asks student to do exercises on IWB</td> <td>(I) do test.</td> </tr> </table> <p>Evaluation: SC 1,2</p> <p>Action: Discussion Purpose: declare topic of the lesson Description: Define topic, LO and discuss SC</p> <table border="1"> <tr> <td>Teacher's activities:</td> <td>Student's activities:</td> </tr> <tr> <td>Announcement of the topic, LO and SC of the lesson. The teacher introduces students to the topic of the lesson, with the learning objectives. Asks students to create success criteria for the LO by themselves.</td> <td>(W) Writes down the theme of the lesson on their copybooks. Discuss success criteria themselves by Bloom Taxonomy.</td> </tr> </table>	Teacher's activities:	Student's activities:	Share the link to test yourself. Asks student to do exercises on IWB	(I) do test.	Teacher's activities:	Student's activities:	Announcement of the topic, LO and SC of the lesson. The teacher introduces students to the topic of the lesson, with the learning objectives. Asks students to create success criteria for the LO by themselves.	(W) Writes down the theme of the lesson on their copybooks. Discuss success criteria themselves by Bloom Taxonomy.	<p>https://bilimland.kz/en/courses/computer-science/6th-grade/lesson/types-of-algorithm (Exercise 1,2,3)</p> <p>https://bilimland.kz/en/courses/computer-science/6th-grade/lesson/writing-algorithm-with-the-flow-charts (Test)</p> 
Teacher's activities:	Student's activities:									
Share the link to test yourself. Asks student to do exercises on IWB	(I) do test.									
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Middle 7 min	<p>Action: Discussion Purpose: To define branch algorithm Description:</p> <table border="1"> <thead> <tr> <th data-bbox="341 151 738 184">Teacher's activities:</th> <th data-bbox="738 151 1128 184">Student's activities:</th> </tr> </thead> <tbody> <tr> <td data-bbox="341 184 738 478"> Display video about algorithm types. Share link to text about algorithm writing forms and asks to write in different form given scenario Organizes discussions </td> <td data-bbox="738 184 1128 478"> (W) watch video (P) read the text and discuss different ways of presenting given algorithm </td> </tr> </tbody> </table> <p>Evaluation: SC 1,2,4</p>	Teacher's activities:	Student's activities:	Display video about algorithm types. Share link to text about algorithm writing forms and asks to write in different form given scenario Organizes discussions	(W) watch video (P) read the text and discuss different ways of presenting given algorithm	<p>https://bilimland.kz/en/courses/computer-science/6th-grade/lesson/types-of-algorithm (Explanation video) https://bilimland.kz/en/courses/computer-science/6th-grade/lesson/algorithm-writing-forms (Text)</p>
Teacher's activities:	Student's activities:					
Display video about algorithm types. Share link to text about algorithm writing forms and asks to write in different form given scenario Organizes discussions	(W) watch video (P) read the text and discuss different ways of presenting given algorithm					
15 min	<p>Action: Project work Purpose: Practice Description:</p> <table border="1"> <thead> <tr> <th data-bbox="341 667 698 743">Teacher's activities:</th> <th data-bbox="698 667 1136 743">Student's activities:</th> </tr> </thead> <tbody> <tr> <td data-bbox="341 743 698 1470"> Divide student for 4 groups. Give instructions. Share resources. Support each group. Organizes group assessment </td> <td data-bbox="698 743 1136 1470"> (G) 1st group – watch recommended video with advanced test about DNS 2nd group – Pendulum Lab. Simulate math pendulum. Create app to calculate period for Earth and moon 3rd group – recap knowledge about verbs in Kazakh language grammar using animation and true-false game and create app to check student's knowledge 4th group – research worksheet and diagram about triangle, then create app to check triangle property. Share results/feedback </td> </tr> </tbody> </table> <p>Evaluation: SC 3,4,5</p>	Teacher's activities:	Student's activities:	Divide student for 4 groups. Give instructions. Share resources. Support each group. Organizes group assessment	(G) 1 st group – watch recommended video with advanced test about DNS 2 nd group – Pendulum Lab. Simulate math pendulum. Create app to calculate period for Earth and moon 3 rd group – recap knowledge about verbs in Kazakh language grammar using animation and true-false game and create app to check student's knowledge 4 th group – research worksheet and diagram about triangle, then create app to check triangle property. Share results/feedback	 <p>1st group: https://twig-bilim.kz/ru/film/what-is-dna (Video) 2nd group: https://bilimland.kz/en/courses/simulations/physics/lesson/pendulum-lab (Simulator) 3rd group: https://imektep.kz/kz/bolimdi-zhane-bolimsiz-etistikter (animation, true-false game) 4th group:</p> 
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5 min	<p>Action: Summary Purpose: To define student's understanding levels Description:</p> <table border="1"> <thead> <tr> <th data-bbox="341 1659 738 1692">Teacher's activities:</th> <th data-bbox="738 1659 1128 1692">Student's activities:</th> </tr> </thead> <tbody> <tr> <td data-bbox="341 1692 738 1768">Offers the link to check student's progress</td> <td data-bbox="738 1692 1128 1768">(I) Do test.</td> </tr> </tbody> </table> <p>Evaluation: 1, 2</p>	Teacher's activities:	Student's activities:	Offers the link to check student's progress	(I) Do test.	
Teacher's activities:	Student's activities:					
Offers the link to check student's progress	(I) Do test.					
End 5 min	<p>Action Reflection Purpose: Define level of students Description:</p> <table border="1"> <thead> <tr> <th data-bbox="341 1921 738 1955">Teacher's activities:</th> <th data-bbox="738 1921 1128 1955">Student's activities:</th> </tr> </thead> <tbody> <tr> <td data-bbox="341 1955 738 1988">Display BlobTree and ask</td> <td data-bbox="738 1955 1128 1988">(I) Choose one</td> </tr> </tbody> </table>	Teacher's activities:	Student's activities:	Display BlobTree and ask	(I) Choose one	Flipchart
Teacher's activities:	Student's activities:					
Display BlobTree and ask	(I) Choose one					

question about their own progress	character. Justify answer.	
Evaluation: SC 6		
Homework: Create app for own project		

Extra information

Differentiation – how do you plan to give more support? How do you plan to challenge the more able learners?	Assessment – how are you planning to check students’ learning?	Cross-curricular links
Differentiation by student’s abilities, interests	Feedback, self-assessment, pair assessment, group assessment, assessment by online education Platform Bilimland.kz	Physics, Math, Biology, Kazakh language

Summary evaluation

What two things went really well (consider both teaching and learning)?

1:

2:

What two things would have improved the lesson (consider both teaching and learning)?

1:

2:

What have I learned from this lesson about the class or achievements/difficulties of individuals that will inform my next lesson?