

Integrated lesson plan by sySTEAM

School
Vilniaus Zemynos gymnasium

Teachers
Asta Navickaite, biology senior teacher Vilma Aleščikaite ,maths senior teacher

Grade
2

Duration 45 min.

Subjects

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| <input type="checkbox"/> Lithuanian | <input type="checkbox"/> English | <input type="checkbox"/> Geography | <input type="checkbox"/> Physics | <input type="checkbox"/> Religion | <input type="checkbox"/> Arts | <input type="checkbox"/> Theatre |
| <input checked="" type="checkbox"/> Mathematics | <input type="checkbox"/> Russian | <input type="checkbox"/> Citizenship | <input type="checkbox"/> Chemistry | <input type="checkbox"/> Ethics | <input type="checkbox"/> Photography | <input type="checkbox"/> Others |
| <input type="checkbox"/> German | <input type="checkbox"/> History | <input checked="" type="checkbox"/> Biology | <input type="checkbox"/> Technologies | <input type="checkbox"/> Physical Education | <input type="checkbox"/> Dance | |

Skills and competencies

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|--|---|---|---|
| <input checked="" type="checkbox"/> Initiative | <input type="checkbox"/> Leadership | <input type="checkbox"/> Creativity | <input checked="" type="checkbox"/> Complex problem solving |
| <input type="checkbox"/> Responsibility | <input checked="" type="checkbox"/> Cooperation | <input type="checkbox"/> Communication | <input checked="" type="checkbox"/> Cognitive flexibility |
| <input checked="" type="checkbox"/> Autonomy | <input checked="" type="checkbox"/> Critical thinking | <input type="checkbox"/> Emotional intelligence | <input type="checkbox"/> Others |



Lesson/Project topic
The research based on the influence of environmental factors on the length of acorns.

Task/problem to solve
Working in pairs measure the length of acorns; write the data into a table and make a variation curve; correctly depict a graphical expression of sign changeability – variation curve.

Assessment methods
Active participation, capability to analyze and summarise the teaching material are taken into account.

Notes

	Activity description	Time	Teacher	Resources	Inclusive teaching	Teachers' notes
Lesson structure	Introduction. Greeting and revision.	6-7 min.	Reminds the previous topics, asks the questions about modificational changeability.	<ul style="list-style-type: none"> * a computer * a projector * prepared handouts * acorns 	Answering the questions the students revise the theory which will be helpful in the research.	
	Teaching/development. Research.	15 min.	Encourages the students to set the purpose of the research and form hypothesis.		The students write the purpose and hypothesis by themselves. The students are taught to do the research purposefully, keeping to methodology basics.	
		8 min.	The teacher explains how the research needs to be done, emphasises the order and advises to observe it and asks the students not to hurry.	The maths teacher explains		The students work in pairs, help each other, record the length of acorns, make a variation curve.
					The students listen to the	The maths teacher observes the



		2-3 min.	<p>how to draw a curve correctly in a given square; what data they need to put in X and Y axis to have a correct graphic.</p> <p>The teacher asks to make a conclusion: firstly, listens to some students' opinions.</p>	<p>teacher's explanation and draw a graph. They understand the point of integration of two subjects (Biology and Mathematics).</p> <p>The students write the conclusion. Properly approve the purpose and hypothesis of the research.</p>	students and assesses the curves.
Conclusions		3-4 min.	The teacher verbally evaluates the research done by the students, summarises their work, assigns homework.	The students critically assess themselves and the knowledge they needed for the research.	

	How?	When?
Feedback	Review the knowledge about modificational changeability; name the factors which influence the display of sign changeability, learn to depict it graphically according to stated results (measure the acorns).	In everyday life they will be able to perceive why fruit, vegetables, berries grown naturally differ in weight, length or shape.

Self-evaluation	The students will evaluate their own capability to analyze and summarise.
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