

Integrated lesson plan by sySTEAM

School	Teachers	Grade	Duration
Vilnius Zemynos gymnasium	Irma Krenciuvienė and Asta Navickaitė	11	45

Subjects

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|--------------------------------------|---|---|---------------------------------------|---|--------------------------------------|----------------------------------|
| <input type="checkbox"/> Lithuanian | <input checked="" type="checkbox"/> English | <input type="checkbox"/> Geography | <input type="checkbox"/> Physics | <input type="checkbox"/> Religion | <input type="checkbox"/> Arts | <input type="checkbox"/> Theatre |
| <input 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 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 type="checkbox"/> Autonomy | <input checked="" type="checkbox"/> Critical thinking | <input type="checkbox"/> Emotional intelligence | <input type="checkbox"/> Others |



Lesson/Project topic
Inheritance

Task/problem to solve
What physical and mental traits can be inherited if they can? What are the ways to talk about family similarities?

Assessment methods
Self-evaluation, reflection

Notes

	Activity description	Time	Teacher	Resources	Inclusive (self-)teaching	Teachers' notes
Lesson structure	<p>Introduction</p> <p>Announces the topic and the objectives of the class. (slide 1)</p> <p>A lead-in question is demonstrated on slide 2: What mental and physical traits can be inherited?</p>	3 minutes	Helps to remember if students struggle with the answer. What traits are likely to be innate and how it works.	The student's books of English (Solutions advanced 1B Inheritance ex. 2 and 4, class CD 1 Traks 2 and 3) and Biology for 11th form; video (7 minutes)		
	<p>Teaching/development</p> <p>A questionnaire (slide 3)</p> <p>Students are asked to work in pairs to answer 6 questions about human genome. They listen to the record and check their answers.</p> <p>Teacher asks what was the most unexpected fact that the students came across and whether there</p>	3 minutes 2 minutes	Monitors and after the listening and self-check points out the correct answers by demonstrating slide 4.	The presentation slide, notebooks and CD player.	Students discuss the questions/statements and consult each other as well as try to reach a joint decision by taking only one option, which is correct.	



	<p>was anything they are troubled about.</p> <p>Students are asked to remember the main characteristics of the DNA and chromosomes thus giving the definition of the genetic code and discussing it's meaning to the inheritance.</p> <p>Students are asked to solve the problem about the possibility of the inherited features. (slide 7)</p> <p>Students are asked to split in groups of four and watch the extract of the documentary. After watching they are given 2 min to discuss and summarise the video and decide why DNA tests are not always trusted. Students' feedback to the class. (slides 8 and 9)</p> <p>We can describe similiarity in different ways. There are 8 sentences for the students given. Taking turns they read the sentences and are asked to listen to a dialogue between three people talking about family similiarities. What exact words do the speakers use to express these ideas? Students are given the handouts with the sentences and while listening they have to find the exact words to talk about family resemblance.</p>	<p>2 minutes</p> <p>5 minutes</p> <p>10 minutes</p> <p>10 minutes</p> <p>3 minutes</p> <p>5 minutes</p>	<p>Teacher questions students as this is the information to be remembered</p>	<p>Problem (slide 5)</p>		<p>The solution of the biology problem must lead to a conclusion that a DNA test might be not reliable</p>
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	<p>Conclusions</p> <p>Self-evaluation and reflection of the class. (Slides 12 and 13)</p> <p>Homework English: Write 5 sentences comparing yourself to family members . Use the expressions from listening task 2 (slide 11) Biology: Answer the questions on the handout. (attached).</p>	2 minutes				

	How?	When?
Feedback	Reflection	<p>After each task and at the end of the class.</p> <p>At the beginning of the next class checking the homework.</p>

Self-evaluation	Table (slide 13)
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