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FUTURE CLASSROOMS' LEADERSHIP SCENARIO

The layers of the Earth

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TOPIC: Geography

GRADE: 5

APPROACH:

DURATION: 50 min

Summary: In this lesson plan, students will learn about the layers of the Earth through a variety of activities. They will brainstorm their prior knowledge, work collaboratively to research the topic, investigate hardboiled eggs and peaches to observe the different layers, create a model of the Earth using play dough, and present their work to the class. The lesson aims to help students identify the layers of the Earth, describe the properties of each layer, and explain how the layers interact with each other. In addition, the lesson plan aims to develop research, observation, comparison and contrast, creativity and problem-solving, presentation, and collaboration skills, as well as competencies such as scientific literacy, critical thinking, communication and presentation skills, and self direction and initiative.





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Learning Objectives, Skills and Competencies:

What are the main objectives? What skills will the learner develop and demonstrate within the scenario? (e.g. 21st Century Skills).

Learning Objectives:

- recognize and identify the different components of Earth,
- describe the different internal layers of Earth
- differentiate between the asthenosphere and lithosphere
- explain some of the characteristics of the various layers of the Earth
- explain how the layers interact with each other

Skills:

- Research skills
- Observation skills
- Comparison and contrast skills
- Creativity and problem-solving skills
- Presentation skills

Competencies:

- Scientific literacy
- Critical thinking
- Collaboration and teamwork
- Communication and presentation skills
- Self-direction and initiative.





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Learners' role:

What sort of activities will the learner be involved in?

In this activity, students use models to help them visualize the layers inside the Earth. The activity uses materials familiar to the students and provides simple explanations about some of the physical aspects of the ground under their feet. It is important to discuss how the models represent the Earth – that they are analogies only – and that the real Earth is made up of very different materials! Use as many or as few of the models as time and interest allow.

Tools and Resources

What resources, particularly technologies, will be required?

- Internet access;
- World globe;
- Peaches;
- Hardboiled eggs; plastic knives; paper plates or similar;
- Play dough – one for each student;
- Paper towels
- Copies of the student handout.





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Learning space

Where will the learning take place e.g. school classroom, local library, museum, outdoors, in an online space?

School classroom

Future Classroom Scenario Narrative

Describe in max 10 sentences the main ideas of the scenario

The main ideas of the scenario include identifying and describing the properties of the different layers of the Earth, and explaining how they interact with each other. The lesson plan involves a variety of activities, including a warm-up activity, collaborative work, investigation work using hardboiled eggs and peaches, practice work using play dough, discussion, presentations, and assessment and feedback. The activities aim to develop students' research, observation, comparison and contrast, creativity and problem-solving, presentation, and collaboration skills, as well as scientific literacy, critical thinking, communication and presentation skills, and self-direction and initiative. Overall, the lesson aims to help students understand the layers of the Earth through hands-on activities and collaboration with peers.

Learning Activities

Warm-up activity

Ask students to brainstorm everything they know about the Earth. Write their ideas on chart paper.
Facilitate a short discussion on what they think the Earth is made of and if they have any idea about the layers. Show a globe to the class.
Ask students "What shape is the Earth?" Emphasize that we live on a sphere.
Tell students "What do you know about the Earth's layers? We live *on* the Earth, but I wonder what's *inside* the Earth?" Record students' ideas about what is inside the Earth.





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Collaborative work	Divide students into small groups of 3-4 and ask them to research the layers of the Earth using textbooks or the internet. Provide each group with a set of post-its to jot down key facts about each layer.
Investigation work	<p>Hand out the hardboiled eggs to groups of students. Instruct them to cut the eggs in half with the plastic knives and then examine each half of the egg.</p> <p>Ask students how the egg could represent the Earth: The yolk represents the core – if it is overcooked, there will be a grey coating on the yolk that can represent the outer core, the yellow yolk the inner core.</p> <p>The white represents the mantle. It is 'squishy' – the mantle behaves a bit like a liquid and a solid.</p> <p>The shell represents the Earth's crust. It is thin, and when cracked, the cracks represent the edges of tectonic plates.</p> <p>https://manuale.edu.ro/manuale/Clasa%20a%20V/a/Geografie/QVJUIEtMRVRU/#book/u03-44-45</p>
Practice work:	Bring out a peach. Hold it in front of the class and tell them that the peach is more than a fruit – it is a model of the Earth! Cut into half and discuss what's inside the peach, what's on the outside. Ask students to compare and contrast the layers of the peach with the layers of the egg.
Producing work	Provide each group with different colored play dough. Ask them to create a model of the Earth using the play dough, ensuring that it includes all the layers. Once they have created their model, have them present it to the class.





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Discussion	<p>Pass out copies of the student handout: Looking at models of the Earth. Ask students to label the models and add similarities and differences between the models and the actual Earth.</p> <p>Facilitate a class discussion on the layers of the Earth. Ask students to share any observations they made during the investigation and producing work.</p>
Presentations	<p>Ask each group to present their model to the class and explain their reasoning behind the colors used for each layer.</p>
Assessment and feedback	<p>https://create.kahoot.it/share/structura-interna-a-pamantului/0679d3a8-da2e-4e78-afa7-18fd40af56c2</p> <p>Provide feedback to students on their work and what they can improve for next time.</p>





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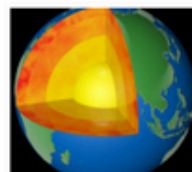
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Student handout: Looking at models of the Earth

The Structure of the Earth

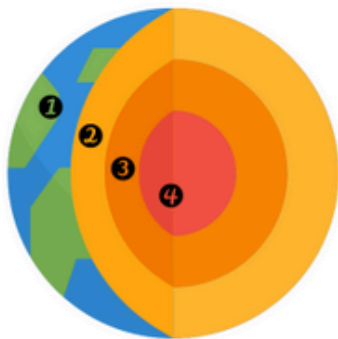
Models comparison with the Earth

Write a sentence about how each model is the same or different to the real Earth.



Layers of the Earth

Match the layers of the Earth to their names

☐ Mantle☐ Crust☐ Outer Core☐ Inner Core

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