



AMAZING MOONS

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Students are fascinated with the Universe. From a really young age they can easily observe with their bare eyes the Moon and the stars. This is a great way to start observing the skies and how wonderful it looks through the lenses of a telescope.

EDUCATIONAL CONTEXT

AGE

This activity is designed for 8-10 year olds.

DURATION

3 x 45 min

PREREQUISITES

What do your students have to know to implement this activity?
None

EDUCATIONAL OBJECTIVES

WHAT DO YOU AIM FOR YOUR STUDENTS TO LEARN THROUGH THIS ACTIVITY

COGNITIVE OBJECTIVES

Learn about the properties of the Moon
Visualise how the Moon shifts phases in the Earth-Moon-Sun system

AFFECTIVE OBJECTIVES

Learners' manifest interest and are engaged in the learning process throughout the entire activity

PSYCHOMOTOR OBJECTIVES

Learners' create a model to explain how the Moon shifts phases in the Earth-Moon-Sun system

CONNECTION TO THE CURRICULA

- - natural sciences
- - literature



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EDUCATIONAL APPROACH

Inquiry based learning

In the following pages there is a template based on the inquiry learning method. It is not necessary to follow this method. You can choose any approach you like.

ORIENTING & ASKING QUESTIONS

Orienting: Provide Contact with the content and/or provoke curiosity

Reading a story "Papa, please get the Moon for me" by Eric Carle or "Let's travel together to the Moon" by Florin Bican

Define Goals and/or questions from current knowledge

Does the Moon look the same at all times?

HYPOTHESIS GENERATION AND DESIGN

Generation of Hypotheses or Preliminary Explanations

The Moon doesn't always look the same because of its position to the Earth

Design/Model

PLANNING AND INVESTIGATION

Plan Investigation

1. Observe the Moon
2. Create a moon diary
3. Discovering new worlds

Perform Investigation

1.
 - Discussion about why the Moon changes the way it's appearance
 - Game: Which object has light of its own? (introducing planets, moons, stars)
 - Studying pictures of the moon's different phases
2.
 - Use Stellarium to observe the Moon's phases
 - Keep a moon diary: student's will color the luminated side of the Moon each day for a full month



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- Use models/toys to explain why the Moon changes its phases and recreate a model of the Earth, Moon orbiting around themselves and the Sun
- 3.
- introduce fun facts about other moons of other planets in our Solar System
 - imagine more distant worlds and how they would look like
 - start from different pictures/art works
 - explain how these pictures are created
 - create an online session using Faulkes Telescopes. Even though younger students will not be able to do this task on their own they will be amazed to find out how it's made.

ANALYSIS & INTERPRETATION

Analysis and interpretation : Gather result from data

After analyzing the data we can clearly see how the Moon changes its phases throughout a month and we can understand more about why it does so

CONCLUSION & EVALUATION

Conclude and communicate result/explanation

Students can now explain why and how does the Moon change its phases

Evaluation/Reflection

Students can reflect on whether or not moons of other planets look the same as Earth's Moon And how pictures of far away worlds are being processed

Consider other explanations