

Didactic Scenario Template

1. Title

Where is the Moon?

2. Keywords

Science, Solar system, Planets, gamification, game group

3. Basic Information

STEAM Subject: Science

Typical interaction time with the instructional scenario in teaching hours for in-school work:
Science 1 hour

General description of the scenario:

Phases	Stage	Time
1	Introduction to the solar system	5 minutes
2	Preparation	5 minutes
3	Game	20 minutes

Age group: 6 to 10 years old

Estimated difficulty level:

Very Easy	Easy	Moderate	Challenging	Very Challenging
	X			

Teaching resources

Material: A large game board depicting the solar system layout. Different colored pawns for each player (one pawn per player). A dice.

School infrastructure: Not required.

Additional material from external sources/online tools:

https://www.youtube.com/watch?v=libKVRa01L8&ab_channel=NationalGeographic

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4. Educational Problem

This scenario aims to enable students to acquire knowledge about space and the solar system, develop observation skills, and strategic thinking, thus fostering their interest in STEM subjects. The game provides an enjoyable learning experience and encourages students to engage in scientific discovery. To teach students about the distance relationships between celestial bodies within the solar system. To enhance students' observation skills. To help students grasp fundamental concepts related to space.

5. Learning Objective (-s)

1. Students will acquire a basic understanding of the distance relationships between the planets in the solar system.
2. Students will be able to relate this knowledge to real-life examples.

6. Phases of the Scenario

Phase 1

Title: Introduction to the solar system.

Indoor	Outdoor	Mixed
X		

Phase duration in minutes: 5 minutes

Detailed description of the scenario phase:

Introduce students to the solar system and its planets, including the Sun, Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, and Neptune

Activity sheets:

Phase 2

Title: Preparation

Indoor	Outdoor	Mixed
X		

Phase duration in minutes: 5 minutes

Detailed description of the scenario phase:

Prepare a large game board displaying the solar system layout.

Prepare different colored pawns for each student and distribute one to each player.

Game Rules:

Students will roll the dice to move between different planets on the game board.

When it's a player's turn, they will roll the dice and move the number of spaces indicated by the dice to reach a specific planet.

If the number on the dice doesn't correspond to a valid planet in terms of distance, for example, trying to go from Uranus to Earth, the player will have to wait for their next turn.

The objective of the players is to reach and stand on the Moon.

Activity sheets:

Phase 3

Title: Game

Indoor	Outdoor	Mixed
X		

Phase duration in minutes: 20 minutes or more.

Detailed description of the scenario phase:

At the start of the game, place each player's pawn on a starting planet, for example, Earth, on the solar system game board. Players take turns rolling the dice and advancing between

planets. Their ultimate goal is to reach and stand on the Moon. Players strategize and make decisions based on the number rolled on the dice, aiming to reach the Moon. Once a player reaches the Moon, the other players may need to revise their strategies to reach the same goal.

Activity sheets:

7. Evaluation Methodology

At the end of the game, the player who reaches and stands on the Moon will be declared the winner and the "Where is the Moon?" champion.

Conduct a post-game evaluation with the students, discussing the distance relationships between the planets within the solar system.