



Introduction (10 minutes)

Read the introduction to the topic and answer the following questions:

1. What are the main challenges of space travel?

2. Why is teamwork important in overcoming these challenges?

Design a Space Mission (20 minutes)

Foundation:

Draw a picture of your spacecraft and label its different parts.

[Space for drawing]

Core:

Write a short report (150-200 words) on the challenges of space travel and how you would overcome them.

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Extension:

Create a detailed mission plan, including calculations for fuel, food, and water.



Creating a Colony on Mars (25 minutes)

Foundation:

Draw a picture of your colony and label its different parts.

[Space for drawing]

Core:

Write a short report (150-200 words) on the challenges of establishing a colony on Mars and how you would overcome them.

Extension:

Create a detailed colony plan, including calculations for resources, such as food, water, and shelter.

Maths Problems (15 minutes)

Solve the following maths problems to help you design your space mission and colony:

1. If a spacecraft travels at a speed of 25,000 miles per hour, how long will it take to reach Mars, which is 140 million miles away?

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2. If a colony on Mars needs 1000 kilograms of food per month, and each astronaut consumes 2 kilograms of food per day, how many astronauts can the colony support?



English Activities (20 minutes)

Foundation:

Write a diary entry from the perspective of an astronaut on a mission to Mars.

Core:

Create a presentation about your colony on Mars, including its layout, resources, and challenges.

Extension:

Write a report on the importance of teamwork and innovation in overcoming the challenges of space travel and colony establishment.

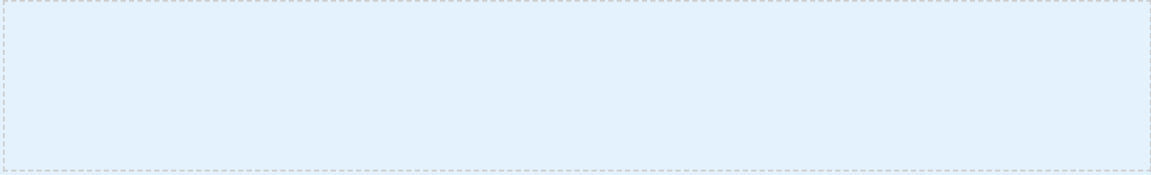
Conclusion (10 minutes)

Individual Reflection:

1. What was the most surprising thing you learned today?

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2. How will this learning change your actions in the future?



Assessment (15 minutes)

Complete the following tasks to demonstrate your understanding of the challenges of space travel and colony establishment:

1. Complete the maths problems and English activities.

2. Complete the space mission and colony designs, and write a short report on the challenges and solutions.

Extension Activities (20 minutes)

Research and Write a Report:

Research and write a report on the history of space travel and colony establishment.

Design and Create a Model:

Design and create a model of a spacecraft or colony.

[Space for model design]

