

Activity

Episode 24
26th August 2014

Moon Living

Key Learning

Students will investigate what it would be like to live on the moon and what would be needed to sustain human life.

The Australian Curriculum

Science/Science understanding/Earth and space sciences

The Earth is part of a system of planets orbiting around a star(the sun) ([ACSSU078](#)) Year 5



Predictable phenomena on Earth, including seasons and eclipses, are caused by the relative positions of the sun, Earth and the moon ([ACSSU115](#)) Year 7



Science / Science as a Human Endeavour / Use and influence of science

Scientific understandings, discoveries and inventions are used to solve problems that directly affect peoples' lives ([ACSHE083](#)) Year 5.



Science/Science as a Human Endeavour/ Nature and development of science

Important contributions to the advancement of science have been made by people from a range of cultures ([ACSHE082](#)) Year 5



Discussion Questions

1. In what year did humans land on the moon?
2. Why might humans want to live on the moon?
3. What valuable resources are on the moon?
4. What is the hardest part of getting into space?
5. Describe the conditions on the moon. Consider gravity and atmosphere.
6. Why is building a base on the moon difficult?
7. What solution have scientists come up with to build on the moon?
8. Which two materials are mixed together to make the bricks?
9. Draw a picture of the buildings that could be made from the bricks.
10. Do you think scientists should build a space colony on the moon? Give reasons for your answer.

Activities

Class Discussion

Hold a class discussion about the BtN *Moon Living* story and clarify questions students have about the story. Ask students what they already know about the moon. Students name three things they know and record responses on a mind map with 'The moon' at the centre. What words do they associate with the moon? The interactive moon mind map may help students develop a mind map <http://www.instagrok.com/>

Remember and Understand

Watch the BtN story *Moon Living* and summarise the story in your own words. Watch the story again and listen carefully. Circle each of the following words as you hear them. Record any unfamiliar words.

elements	atmosphere	Earth
gravity	Moon dust	sulphur

Ask students to write what they think is the meaning of each word (including unfamiliar words) in the context of the BtN story. Swap definitions with a partner and ask them to add to or change the definition.

Moon Research

Use the following questions to help guide students' research about the moon.

Moon Research

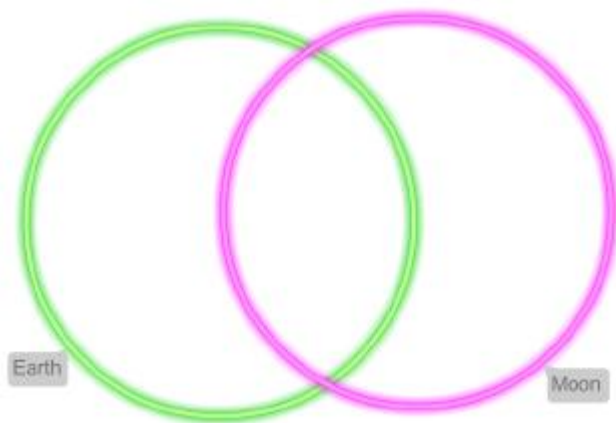
- What does the moon look like?
- What are the geographical features of the moon? Does it have an atmosphere? What are conditions on the surface like?
- Distances – how far is this moon from the Earth and sun?
- Movement – how long does it take for the moon to orbit the Earth? Compare this to the time it takes for the Earth to orbit the sun.
- What is a lunar eclipse?
- Find out some interesting facts about the moon.
- Present research using Prezi <http://prezi.com/> or other publishing software. Include images in the presentation.



Venn Diagram

Students will create a Venn diagram to compare the Earth and the moon. The *Read Write Think* website has an interactive Venn diagram students can create

http://www.readwritethink.org/files/resources/interactives/venn_diagrams/ Encourage students to share their information with the class.



Life on the moon

Students will investigate what it would be like to live on the moon and what would be needed to sustain human life.

Begin with a class brainstorm using the following questions to guide discussion:

What do you think it would be like to live on the moon?

What are the benefits of having a space settlement on the moon?

When planning for life on the moon what are some important things to think about?

Students will then need to research conditions on the moon so they can plan and design a settlement on the moon that will sustain human life.

Research questions

- What are the conditions like on the moon?
- What needs to be considered when planning a colony on the moon? For example:
 - Water supply
 - Atmosphere (air supply)
 - Temperature
 - Food Production
 - Waste Management
 - Gravity
- What materials could be used to build a space settlement?

Students can create either a model or a labelled diagram of their 'moon settlement'. Display students' work in a public space in the school.

Evaluate

Students will reflect on their learning about the moon

- I learned that...
- I enjoyed/did not enjoy...
- I want to know more about...
- I was surprised to discover that...

Related Research Links

ABC Catalyst – Moon Mining

<http://www.abc.net.au/catalyst/stories/4052664.htm>

Behind the News – Moon Landing

<http://www.abc.net.au/btn/story/s2627599.htm>

NASA – Exploring the Moon Educators Guide

<http://www.nasa.gov/audience/foreducators/topnav/materials/listbytype/Exploring.the.Moon.html>

NASA – Solar System Exploration – Earth's Moon

<http://solarsystem.nasa.gov/planets/profile.cfm?Object=Moon>

Science Kids – Moon Facts for Kids

<http://www.sciencekids.co.nz/sciencefacts/space/moon.html>