



EduTrend Contents

EDUTECH · STEM RESOURCES FOR STUDENTS · PRIMARY

Rocky or Gassy?

Start with a question, find the answer and explain it at dinner

Ages 7–10

Level: Foundation

45 minutes

Pairs · up to 30

Activity 01

Inside: activity at a glance · step-by-step session plan · facilitator notes · 3 pupil worksheets · assessment checklist

ACTIVITY 01 · AT A GLANCE

Rocky or Gassy?

Pupils sort planet cards into rocky and gas or ice giants and ask why they differ. Using a trusted children's space site such as NASA Space Place, or a library book, they find out, record key facts and make a simple poster. Each pupil practises explaining the answer, ready to tell their family at dinner.

Learning outcomes

By the end of the session pupils can:

- ask a research question;
- use a trusted source;
- record key facts;
- explain an answer to someone else.

KEY WORDS

planet · rocky · gas giant · ice giant · orbit · source

CURRICULUM LINKS

English: explaining. Geography: Earth in space. Art: planet posters.

1**GOAL**

Set a small goal

2**QUESTION**

What do I want to know?

3**EXPLORE**

Use a trusted resource

4**MAKE**

Build, solve or record

5**EXPLAIN**

Tell someone

6**REFLECT**

What next?

Materials (per pair)

- Planet picture cards
- Device with NASA Space Place or a space book
- Worksheets 1, 2 and 3

Before the session

- Print planet cards.
- Check the website on school devices.
- Gather library books.
- Print worksheets.

SAFETY

Use only the website the teacher opens. Never look at the Sun through anything.

ACTIVITY 01 · SESSION PLAN

Step by step

Resources work best when pupils come with a question; set it before opening anything.

Time	What happens	Say or ask
0–8 min Sort	Sort planet cards.	<i>"What do you notice?"</i>
8–12 min Question	Write a question.	<i>"Why are they different?"</i>
12–30 min Research	Use a trusted source.	<i>"What did you find?"</i>
30–40 min Poster	Make a fact poster.	<i>"What is the key idea?"</i>
40–45 min Rehearse	Explain to a partner.	<i>"Can you say it simply?"</i>

CHALLENGE CARD (print or copy onto the board)

Find out why the four inner planets are rocky and the four outer planets are giants, and explain it in your own words.

ACTIVITY 01 · FACILITATOR NOTES

The learning know-how in brief

The four planets closest to the Sun (Mercury, Venus, Earth and Mars) are small and rocky. The four outer planets (Jupiter, Saturn, Uranus and Neptune) are giants made mostly of gas and ice.

When the planets formed, it was hotter near the young Sun, so mainly rock and metal could form solid material there. Further out, it was cold enough for ices, and the growing giants pulled in lots of gas.

Common ideas to listen for

- “All planets are like Earth.” Most are very different.
- “Gas giants have a solid surface to stand on.” They do not.
- “Any website is fine.” Use trusted sources.

Adapting the activity

Support

Give a fact sheet with key words highlighted.

Stretch

Find out where Pluto fits and why.

WORKSHEET 1

Planet sort

Name: _____

Class: _____ Date: _____

Sort the planets.

Planet sort

Rocky planets	Giant planets
1	
2	
3	
4	

WORKSHEET 2

My research

Record what you found.

My research

Question	Answer	Source
1		
2		

WORKSHEET 3

Explain it

Write how you will explain it at dinner.

My explanation

FOR THE TEACHER

Assessment checklist

Use during the session. One sheet covers up to eight pupils; copy as needed.

Pupil	Asks a question	Uses a trusted source	Explains clearly

Suggested codes: W = working towards · E = expected · G = greater depth

ABOUT THIS ACTIVITY

Rocky or Gassy? is a sample activity from the EduTrend Contents Edutech STEM Resources for Students programme (primary, level: foundation). Every activity in the programme follows the same format: a practical challenge, a clear session plan, facilitator notes and ready-to-print worksheets, so that teachers, club leaders and parents can run it without extra preparation.

Full 15-, 20- and 32-week programmes are available from EduStore at edutrend.org.

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