

National Geographic Kids Reader: Mars

Notes for teachers: using this book in the classroom

Reading objectives: read most words quickly and accurately, without overt sounding and blending, when they have been frequently encountered; read aloud books closely matched to their improving phonic knowledge, sounding out unfamiliar words accurately, automatically and without undue hesitation; retrieve and record information from non-fiction; identify main ideas drawn from more than 1 paragraph and summarising these

Spoken language objectives: participate in discussions, presentations, performances, role play/improvisations and debates; use relevant strategies to build their vocabulary; give well-structured descriptions, explanations and narratives for different purposes, including for expressing feelings; use spoken language to develop understanding through speculating, hypothesising, imagining and exploring ideas

Curriculum links: Science: Earth and space; Mathematics – Measurements; Art and Design; Writing – composition

Interest words: solar system, axis, atmosphere, gravity, probe, rover, orbit, habitat, weightlessness, astronomers, microbe, Gusev Crater, Olympus Mons, Sojourner, Phoenix Mars Lander, Mariner 4, Cape Canaveral, Hawaiian, Curiosity, neighbour, fascinated, nitrogen, Mercury, orbiter, tornadoes, indefinitely, technicians, nutritious, headaches, stomach aches, terraforming

Pronunciation guide: Gusev (*goo-sev*)

Resources: paper; pencils; crayons

Children who are reading at White and Lime book bands will be able to read this book in a group, pair or independently over several sessions. They will have good reading stamina and will be able to tackle more challenging vocabulary and a range of varied sentence structures. Guided group work and independent challenges can be used to develop retrieval, interpretation and meaning making, as well as children's ability to express and explain ideas and concepts.

Language

- Most of the language in the book will be decoded by children using the full range of cues available to them and extensive word knowledge. Some discussion in guided groups and after independent reading can be used to develop children's abilities to understand and interpret more complex information. Children may need help with the following:
 - decoding and understanding some of the words contained in the *Mars Meaning* boxes: *Solar System, axis, atmosphere, gravity, probe, rover, orbit, habitat, weightlessness, astronomers, microbe*. Children may need to look at the glossary and use the visual support provided.
 - reading new names, e.g. *Gusev Crater, Olympus Mons, Sojourner, Phoenix Mars Lander, Mariner 4, Cape Canaveral, Hawaiian, Curiosity*.

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- reading and understanding some longer and less familiar vocabulary, e.g. *neighbour, fascinated, nitrogen, Mercury, orbiter, tornadoes, indefinitely, technicians, nutritious, headaches, stomach aches, terraforming*.
- Children may need to look closely at the pictures and diagrams and talk about some of the labels and less familiar scientific vocabulary to develop their understanding of new ideas.
- Children may need help to understand some of the more complex ideas that are presented in extended paragraphs and sections, e.g. the differences in the length of a day and year between Earth and Mars; the differences in the temperature on Mars and earth.

Images

- Look closely at the photographs and drawings together. Ask children to describe what they can see in each picture and draw their attention to fine details, e.g. in the pictures of Curiosity, what parts of the space rover can they identify? Why are the tyres chunky and textured?
- Discuss the surface of Mars. Help children to find adjectives to describe its appearance and discuss what it would be like to land there.

Activities

- In pairs ask children to complete the quiz on pages 44–45, using the index and table of contents to locate the answers to the questions.
- Provide children with pencils, crayons and paper. Help them to design a new space rover or probe and give it labels, or sketch Curiosity on a mission.
- Walk through the book to find and tell the jokes to each other.

Questions

- What is Mars' nickname and why is it called this?
- Why would breathing on Mars be deadly for a human?
- What was the name of the first probe on Mars?
- What are Rovers designed to do?
- Would you like to visit Mars?