



HAMILTON
SECONDARY COLLEGE

Space
SCHOOL

MISSION TO MARS

A memorable, hands-on, minds-on, science experience for students

Mission to Mars is a full-day, scenario-based program for Years 6 to 9. Students work in teams and use problem-solving skills to successfully complete a geological survey of a Martian crater.

Dressed in specially-designed spacesuits, students depressurise in a simulated airlock before stepping out onto the Mars surface. They collect real soil and rock samples, drill an ice core, conduct a thermal survey and take seismic measurements.

Mission Control officers play an important role in the mission: they are responsible for the safety of the astronauts and the success of the scientific program. From Mission Control, students communicate with the astronauts via radio and direct their scientific investigations. Mission Control officers also monitor the environmental conditions on Mars and the systems of the space station, working together to solve problems as they arise.

After returning to Earth, students analyse their samples and undertake further scientific investigations in the research laboratory. All students act as astronauts, mission

controllers and research scientists during the full-day program. The program is aligned with the requirements of the Australian Curriculum and is supported by a pre-mission training package.



815 Marion Road
Mitchell Park
SA 5043

T: (08) 8275 8300
F: (08) 8277 9380
W: hamcoll.sa.edu.au

Year levels: Suitable for Years 6 to 12
Primary schools: \$100 per class
Secondary schools: \$150 per class
Maximum group size: 26 students
Minimum group size: 10 students



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MARS ROCKS!

An engaging and practical geology investigation

Mars Rocks! enables students to investigate the rock cycle and understand the differences between the known geology of Mars and Earth. Students investigate rock and mineral types, material stresses and weathering, geologic time and fossil formation, the Earth's crust, tectonic plates, and soil formation and composition.

Mars Rocks! is situated within the context of colonising Mars, and students consider environmental site assessment. Rocks, soils, fossils and the Earth's crust make up the foundation of the world we currently depend on. We must understand the characteristics of these rocks and materials so that we can design large infrastructure projects such as bridges, foundations, roads and tunnels. The same will be true on Mars.

Acting as space scientists, engineers and astronauts, students collaborate to investigate the differences between igneous, sedimentary and metamorphic rocks, as well as the differences between rocks, minerals and crystals.

Hands-on activities include soil analysis, obtaining core samples, carrying out scratch tests, acid tests and visual tests, and analysing findings to identify rocks, minerals and crystals, and make engineering predictions.

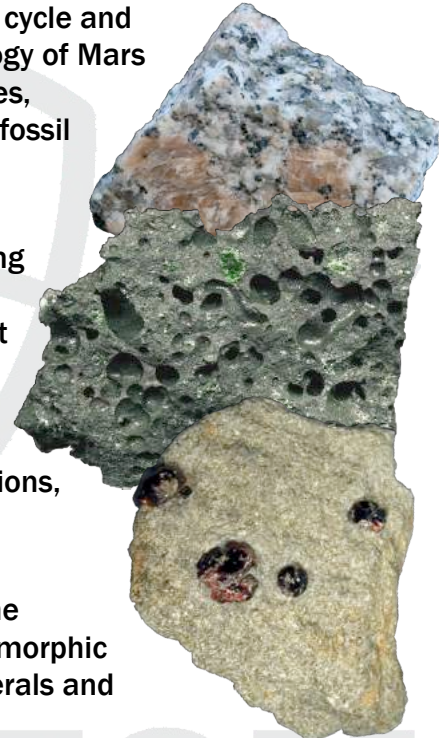
Mars Rocks! is part of the *Mission to Mars* program.

ROCK AND MINERAL I.D. PARADE

The rock and mineral I.D. parade is a standalone program designed to demonstrate the differences between igneous, sedimentary and metamorphic rocks, and the differences between rocks, minerals and crystals.

Students will break rocks to help them identify the different types. They will use mind maps to identify their samples of rocks and use scratch tests, acid tests and visual tests to identify their minerals and crystals.

This program is delivered at the Space School or our educators can come out to your school with all the equipment for this activity.



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