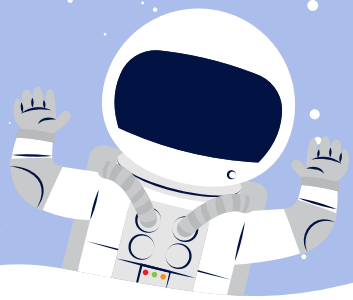
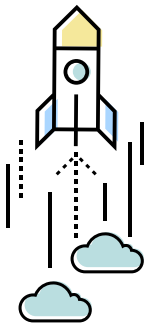


Activity sheet (Primary level)

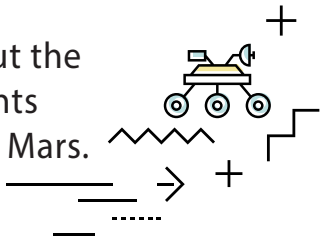
"China's Lunar and Mars Exploration" Special Exhibition

Rovers for Lunar and Mars Exploration



The rovers that have landed on Moon and Mars help scientists study these celestial bodies.

Through this project learning, we will get to know more about the Moon and Mars, and understand how the scientific instruments installed on the rovers help uncover the secrets of Moon and Mars.



Project Learning

Task 1: Get to know Moon and Mars

Choose either Moon or Mars for research and answer the following questions.

How is the atmosphere of Moon / Mars differ from Earth's atmosphere?

What natural resources can be found on Moon / Mars?

What are the average temperatures of Moon / Mars during the day and night?

How long is a day on Moon / Mars in terms of Earth hours?

Name some landscape features of Moon / Mars.

Activity sheet (Primary level)

"China's Lunar and Mars Exploration" Special Exhibition

Project Learning

Task 2: Study the rovers

Rovers can move on rough surfaces, withstand tough environmental conditions, and collect valuable scientific data for researchers.

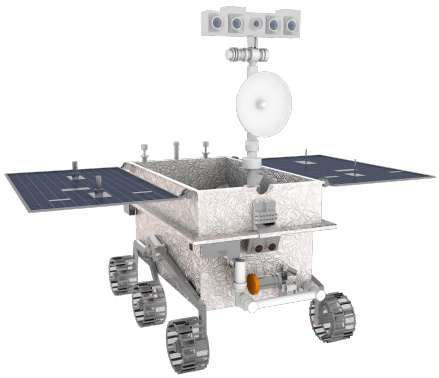
Based on your selection of the research subject in task 1, study the missions, functions and features of the lunar rover Yutu or the Mars rover Zhurong, and answer the following questions:

What scientific instruments are installed in the rover?

What special features of the rover allow it to move on rough surfaces?

How does the rover obtain energy? Why can it withstand extreme temperatures?

What achievements has the rover made?



Let's explore the achievements China made in its lunar and Mars exploration!

Activity sheet (Primary level)

"China's Lunar and Mars Exploration" Special Exhibition

Project Learning

Task 3: Become an adventurous friend

Let's design and make a rover.

1. Pick a challenge that the rover may face during Moon / Mars exploration.
2. Find out how scientists and engineers cope with this challenge by making corresponding design of the rover.
3. Design or modify the current rover so that it can cope with the challenge more effectively.
4. Make a prototype rover using materials like cardboard, wheels and solar panels. Alternatively, you can use design and engineering apps like Tinkercad to create a virtual prototype.
5. Show the class your design and explain the strategies used to cope with the challenge.

Draw the rover design in the space below.