

STEM CAREER Architect: Building a House on Mars

Adventure Description:

In this adventure, you will think like an architect and design the first house on Mars!

Activity

Step 1: Background on Architects (5 minutes)

- Ask students if they know who designs houses. Explain that there are many people who help design houses. One person is called an architect.
- As a class, discuss what architects do.
- Explain to students that before designing a house, architects have to understand what the weather is like in the place the house will be.
- Ask students why it is important for architects to learn about the weather before they build a house.
- Show Handout: Weather and Houses. Discuss why architects must know about weather.

Step 2: Designing a Home on Mars (15 minutes)

- Explain to students that some architects are designing houses in space! Architects want to figure out the best way to design houses on Mars, a planet that is far away. No one has built a house on Mars before. Show Handout: Mars.
- To build a house on Mars, architects need to know about the weather there. Show Handout: Weather on Mars. As a class, read through what the weather is like on Mars.
- Discuss how it is windy and dusty on Mars! The temperature also changes a lot. It can be hot in the morning and cold at night.

Please contact Allison Bischoff, Director of Teacher Support, at allison@rozzylearningcompany.com or 314-272-2560 with questions.



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- Next, explain to students that architects have come up with an idea for a house on Mars.
- Explain to students that they will need to come up with their own design for a house on Mars.
- Provide students with Handout: Designing a House on Mars.
- As a class, read through the steps. Have students circle the shape that their house will be. As a class, brainstorm ways that a house can be built in a place that is windy, dusty, and has temperature changes.

Step 3: Building a House on Mars (10–15 minutes)

- Explain to students that they will now build a prototype of their house. A prototype is a small example of what the house will look like.
- Provide students with art supplies and building materials to build their house for Mars.
- Students can work in pairs or individually to build their house.
- When students are finished building, have them present their houses to the class. Have students explain how they designed their house for people who will live on Mars.

Materials List

Provided online:

- Handout: Weather and Houses
- Handout: Mars
- Handout: Weather on Mars
- Handout: Designing a House on Mars

Not provided:

• Art supplies and building materials

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