

**PROJECT!****SUPPLIES**

- \* journal
- \* pen or pencil

**DESIGN A SPACE ROBOT**

Rovers are robotic vehicles that explore other planets, such as Mars. Here's a chance to design your own rover or space robot.

**1** Decide which planet your robot will explore. Mars has a solid surface, but other planets, such as Jupiter, are made of gas and do not have solid surfaces. How will your robot move around?

**2** Decide what task or tasks your robot will do. What kind of effectors will they need?

**3** Consider how to power your robot. *Sojourner*, a Mars rover, used solar panels. Other robots use batteries or fuel.

**4** Start an engineering design worksheet to design your space robot. Sketch it in your journal.

**TRY THIS!**

Use items you find around your house to create a prototype of your space robot.

**MEET A SPACE ROBOT**

Valkyrie is a 300-pound, 6-foot-tall humanoid built by NASA. Its official name is R5. Valkyrie runs on electricity or a battery and looks a little like the superhero Ironman! It has 44 degrees of freedom and can walk and step like a human. NASA hopes to use robots like Valkyrie to build shelters on Mars to prepare the way for astronauts.