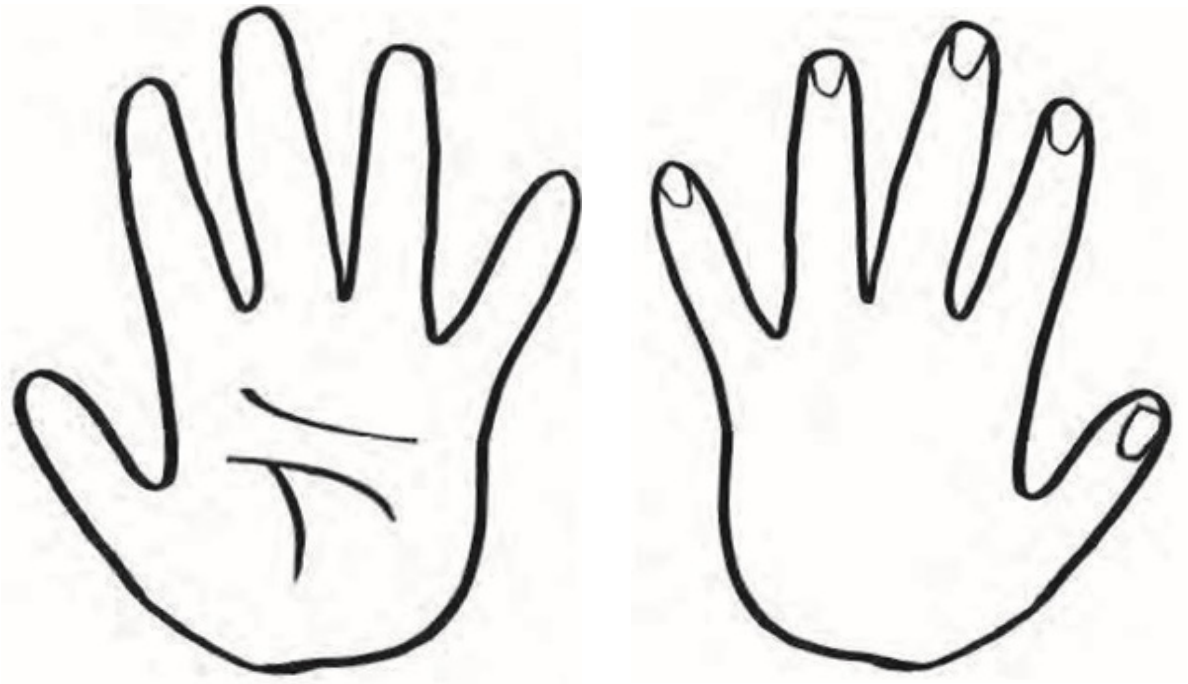
Engineering Adventure 6: Put It Together: Creating a Space Glove

How can we create a space glove that protects against cold, impact, and dust?

Plan



Which materials will you use to engineer your model space glove? Draw your ideas and label the features of your design.

Where will you place the materials?

- on the palm side of the glove
- on the back side of the glove
- inside the glove
- outside the glove

How will you use the materials?

- layering
- combining materials

NASA Career Spotlight

Phyllis Friello

My job at NASA is to work with my space medicine team to develop and provide what we need to keep our astronaut crews on moon and Mars missions healthy and safe.

Test Results

Location

Circle your mission location.

Mars Asteroids Moon

Dust (Mars and Moon)

Circle the number of areas on your glove with dust.

Dust on 4 areas (not good) 2–3 areas (good) 0–1 area (great)

Impact (Mars and Asteroids)

Record number of pieces for each test. Circle the highest number.

Test 1: _____ Test 2: _____ Test 3: _____

11+ pieces (not good) 8–10 pieces (good) 5–7 pieces (great)

Cold (Asteroids and Moon)

Record temperatures. Circle the difference in temperatures.

Starting Temp: ____°C Temp after 30 Seconds: ____°C

Difference of 7°C+ (not good) 3–6°C (good) 0–2°C (great)

Final Test

Were you able to complete the test? ☐ Yes ☐ No

Did your glove stay together after testing? ☐ Yes ☐ No

Remember that design failure is natural in engineering! Engineers gain information from failed designs and use it to make future designs better.

Humans have never been to a planetary body beyond the Moon, so it's important to make sure astronauts have good equipment before they travel to Mars, asteroids, and beyond.