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from: engineeringadventures@mos.org
to: You
subject: Mission Ready?



3:12 PM

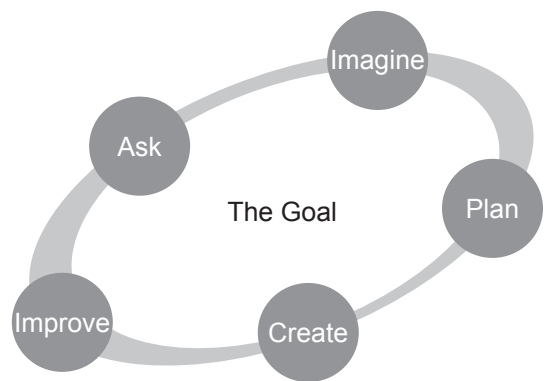
Hi engineers,

We can tell you've been working really hard on the model space gloves you've been designing for the different missions!

Your model space gloves should combine materials to help protect from different hazards and pass the final test to make sure your gloves are strong enough to last the entire mission and are easy for astronauts to use. Maru explained that engineers have to choose materials wisely to make sure they meet all of their goals as best as they can. That means engineers are always testing and *improving* their technologies. Share your ideas with each other and see if you can *improve* your model space gloves to make them even better!

Next time, you'll get to share your model space gloves with an audience in the Engineering Showcase. To help you prepare, you can work on any improvements you need to make and do a final Mission Simulation to make sure your designs are mission ready before you show them off. We can't wait to see your final designs!

India and Jacob





How can you improve your model space glove to make it even better? Draw your ideas and label the changes to your design.



PALM



BACK

Will you change where you place the materials?

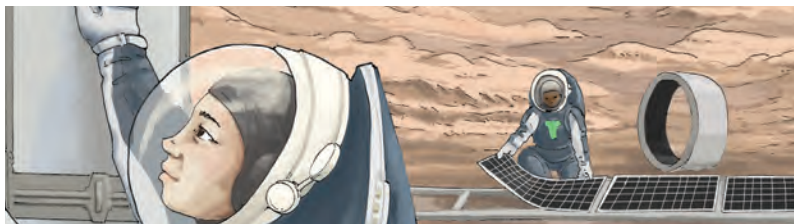
Will you change the materials?

Why will you make these changes?



Mars

How well did your glove perform in the tests below?



Dust: Circle how well your model space glove protects against dust.

Not Good 4+ areas	Good 2–3 areas	Great 0–1 area
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Impact: Record your results. Circle how well your model space glove protects against impact.

Test 1	Test 2	Test 3	Final

Not Good 11+ pieces	Good 8–10 pieces	Great 5–7 pieces
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Final Test:

Were you able to open the jar, remove the equation, and type it into the calculator?

Yes

No

Did your glove stay together after testing?

Yes

No



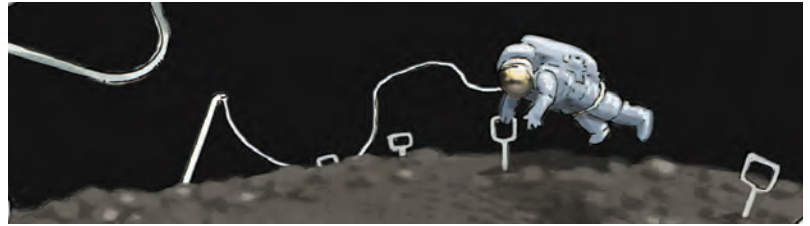
Did You Know?

Mars has four seasons, just like Earth.



Asteroids

How well did your glove perform in the tests below?



Impact: Record your results. Circle how well your model space glove protects against impact.

Test 1	Test 2	Test 3	Final

Not Good 11+ pieces	Good 8–10 pieces	Great 5–7 pieces
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Cold: Record your results. Circle how well your model space glove protects against the cold.

Starting Temperature	Temperature after 30 Seconds	Difference in Temperature

Not Good 7 °C or more	Good 3–6 °C	Great 0–2 °C
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Final Test:

Were you able to open the jar, remove the equation, and type it into the calculator?

Yes

No

Did your glove stay together after testing?

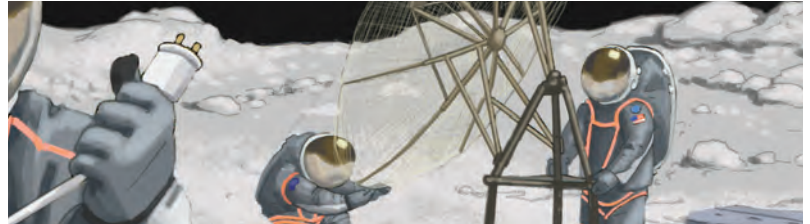
Yes

No



Moon

How well did your glove perform in the tests below?



Cold: Record your results. Circle how well your model space glove protects against the cold.

Starting Temperature	Temperature after 30 Seconds	Difference in Temperature

Not Good	Good	Great
7 °C or more	3–6 °C	0–2 °C

Dust: Circle how well your model space glove protects against dust.

Not Good	Good	Great
4+ areas	2–3 areas	0–1 area



Final Test:

Were you able to open the jar, remove the equation, and type it into the calculator?

Yes

No

Did your glove stay together after testing?

Yes

No



Did You Know?

Other than Earth, the Moon is the only place in the solar system where humans have set foot.