MISSION: Heat and Temperature Mission code: 01

Date: Name:

Record the temperature measured by the senior astronaut here:

Temperature of aluminum	
Temperature of plastic	
Temperature of your hand	

Touch the aluminum plate			
Is the plate warm or cool? Circle what you observe.	Warm	In between	Cool
Is your hand warmer or cooler afterwards? Circle what you observe.	Warmer	The same	Cooler

Touche la plaque de plastique			
Is the plate warm or cool? Circle what you observe.	Warm	In between	Cool
Is your hand warmer or cooler afterwards? Circle what you observe.	Warmer	The same	Cooler

Draw what happens when you touch the pate:

Conclusion:

Fill in the text with the words "warmer" and "cooler", and complete the model with an arrow to show how heat moves:

Heat moves from an object that is _____
to an object that is _____.

Model:

Heat

warm Cool

Ice Melting Experiment

The senior astronaut will give you ice cubes to put on your plates.

Temperature of the ice	

Aluminum plate		
which is warmer?	Ice	Aluminum plate
Draw an **arrow** to show the **direction that heat moves**	Ice	Aluminum
what is the speed of the heat transfer?	Faster	Slower

Plastic plate		
which is warmer?	Ice	Plastic plate
Draw an **arrow** to show the **direction that heat moves**	Ice	Plastic
what is the speed of the heat transfer?	Faster	Slower

After completing the ice experiment:

Compare the plates	
Temperature of the aluminum plate	
Temperature of the plastic plate	
which plate melted the ice faster?	Aluminum Plastic

Fill in the test using the words: ice cubes, good, aluminum, bad, plates, fast, plastic, slowly, quickly

Today I learned that different materials allow heat to flow differently. I did an experiment that showed that heat flows better in _____ than in _____.

In my experiment, I put _____ onto _____ made of different materials.

The ice melted more _____ on plastic because plastic is a _____ heat conductor.

The ice melted more _____ on aluminum because aluminum is a _____ heat conductor.

The Unknown planet

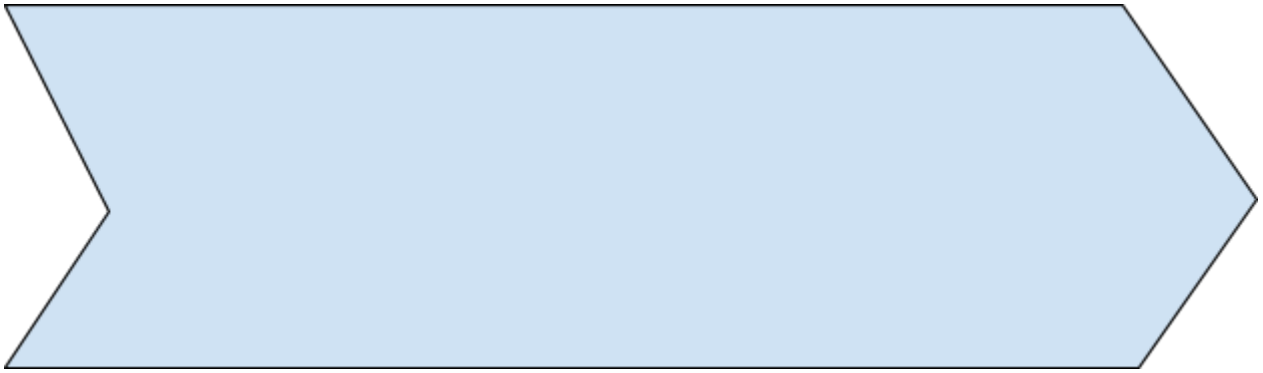
You have landed on an unknown planet. You explore the planet to search for new materials. You found a sample that you bring back to the space station to analyze with your team.

what is the number of the sample you found?	
what color is the material?	
Does it seem like other materials that you have tested? why or why not?	

what is its temperature?	

You want to know if the material is a good heat conductor. what experiment will you do to find out?

order the material you found with aluminum and plastic using the arrow to show how well they conduct heat.



Conducts heat poorly Conducts heat well

Fill in the text using the words: *ice, heat conductivity, better, worse, the same,*

I compared the _____ of the new material to the materials I studied before. The new material conducts heat _____ than aluminum. The new material conducts heat _____ than plastic.

Mission complete stamp

Signature of senior astronaut: