

Changes in Matter

Peter and Kiara are in their school science lab learning about states of matter. They are doing experiments to find out more about how solids, liquids, and gases can change.

Let's see what Kiara and Peter are up to today.

They decide to explore water first because water can change to all three states of matter.

Solid ice,

Liquid water, and

Gas or steam.

Kiara puts solid ice on a plate, and Peter begins to heat liquid water in a kettle with Ms. Mariposa's help. What do you think will happen to the ice and the water?

That's right! As the solid ice warms, it begins to melt and become liquid water.

As the kettle heats the liquid water, it becomes steam which is a gas. When steam touches something cold, it changes back to liquid water.

When Kiara puts the water back in the freezer, it will become ice again.

Let's try another experiment. Peter and Kiara have vinegar, a liquid, and baking soda, a solid.

Peter adds some vinegar to the plastic bottle, and Kiara puts some baking soda inside the balloon. Then, they carefully stretch the balloon over the top of the plastic bottle.

Peter holds up the balloon so the baking soda can mix with the vinegar in the bottle. Can you guess what will happen?

If you said the balloon will get bigger, you're right! The liquid vinegar mixes with the solid baking soda and creates a gas called carbon dioxide. The gas needs more space, so it fills the balloon.

Finally, Ms. Mariposa helps Kiara use the stove to melt solid chocolate to make liquid hot chocolate.

Peter adds solid marshmallows on top of the liquid hot chocolate. Yum!

Solids, liquids, and gases can change in many ways. Today, Kiara and Peter helped us learn about heating, cooling, and combining matter to change it to different states.
