

Science lesson Sapphire class 20th January 2021

Hello Sapphire Class,

I hope you enjoyed your second lesson on our new topic all about gases. Here is a quick test to check your understanding.

Test yourself here:

- | | |
|--|---------------|
| 1. Gases have a weight. | True or False |
| 2. We use natural gas for cooking. | True or False |
| 3. Gases cannot be compressed. | True or False |
| 4. Air is not a mixture of gases. | True or False |
| 5. A clergyman invented the first fizzy drink. | True or False |
| 6. The particles in a gas are very close together. | True or False |

How did you do? The answers are in the end of the document.

Today's question: What happens when you heat or cool a state of matter?

Please listen to the lesson of Miss Couves. You will learn what happens to the behaviour and arrangement of particles when they are heated or cooled. She will also investigate some uses of these properties such as cooling gases to store them.

[What happens when you heat or cool each state of matter? \(thenationalacademy\)](#)

In the lesson she asked the following questions. Can you remember the answers?

Solids:

- Cannot be c_____
- Do not f_____
- Have a f_____ s_____

Liquids:

- Cannot be c_____
- Can f_____
- Can take the shape of _____

Gases:

- Can be c_____
- Can f_____
- Can f_____ the shape of
their container.

Do you remember which state of matter goes with each description? (draw lines, two statements of each state)

Solid

Particles are touching and in ordered rows.

Particles are far apart from each other.

Liquid

Particles are touching in a random arrangement.

Particles can slide past each other.

Gases

Particles are moving constantly in all directions.

Particles cannot move but can vibrate.

Finally she discussed how heating and cooling can be useful.

Please complete the sentences below.

- Putting a jar under the hot tap to help get the lid off. Heating the lid could be helpful because...

- Using liquid in a thermometer to tell temperature. Heating the liquid in a thermometer when you place it in something hot is helpful because...

- Cooling oxygen and hydrogen to put them into tanks. When storing gases like oxygen and hydrogen, cooling them is helpful because...

- Why might it be dangerous to heat a gas when it is trapped in a metal can?

Test yourself: 1. true, 2. true, 3. false 4. false, 5. true 6. false