The many phases of water

Background knowledge
When ice is warmed, it melts to form water. When water is heated further, it boils to form water vapor, a colorless, odorless gas. These changes from solid to liquid to gas can be reversed by cooling water vapor. The water vapor will condense to form liquid water, and if cooling continues the water will eventually freeze.

Ice \(\xrightarrow{melts}\) Water \(\xleftarrow{freezes}\) Water vapor
\(\xrightarrow{boils}\) \(\xleftarrow{condenses}\)

Science activity
Explain what is happening to the water in each picture.

Science investigation
Use a newspaper to look at weather maps in different parts of the country. Find some cities in which it is snowing. What is the temperature in these cities? Find some cities in which it is raining. What is the temperature in these cities? Create a data table to summarize the data you collected. What is the relationship between temperature and weather?
The many phases of water

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![Diagram of ice melting and water boiling](image)

**Science activity**
Explain what is happening to the water in each picture.

The water vapor is condensing to form water on the cold window pane.

The water in the wet washing is evaporating to form water vapor.

The water vapor in the air is changing to water, then quickly to ice on a very cold day.

**Science investigation**
Point out the different symbols on maps that represent each type of precipitation. Some examples of precipitation symbols are the raindrop, representing rain, and the snowflake, representing snow.