

Task

Use the table below to work out the state of each substance at the given temperature.

Substance	Melting point (°C)	Boiling point (°C)
Water	0	100
Oxygen	-218	-182
Mercury	-39	357
Nitrogen	-210	-196
Iron	1 535	2 750

What is the state of:

1. Mercury at 25° C.....
2. Iron at 3 000° C.....
3. Water at -1° C.....
4. Oxygen at 0° C.....
5. Water at 110° C.....
6. Nitrogen at -211° C.....
7. Oxygen at -200° C.....
8. Iron at 32° C.....
9. Nitrogen at -10° C.....
10. Mercury at -50° C.....

Teaching notes and answers

KS3 activity to develop an understanding of changes of state at different temperatures.

Some students who struggle with negative numbers may require a number line as scaffolding.

1. Liquid
2. Gas
3. Solid
4. Gas
5. Gas
6. Solid
7. Liquid
8. Solid
9. Gas
10. Solid