

## Role-play

This is a super team-building exercise which helps pupils to understand and explain the structure of solids, liquids and gases.

To play the game

- Explain that each pupil is a molecule, and that they are going to represent the structure of a solid. They can decide which solid.
- The class comes together to make the structure of a solid.
- The pupils link arms and get as close to the rows in front and behind them as they can.

They then discuss what they will have to do to represent a liquid.

Each class may have different ideas. For example, they might stand up, tuck their elbows in and turn their hands so their palms face the person next to them. As the rigid lines of the solid structure become less uniform, they sway.

As a gas they might space themselves out much further and move much more – becoming ‘free spirits’.

Once the class has decided how they will represent each state the role-play is developed further. The teacher calls out the name of a solid, liquid or gas. On hearing the name, e.g. ‘wood’, the pupils organise themselves into the correct state of matter.

Following on from this, the teacher describes the properties of one of the states, e.g. it doesn’t take the shape of its container (solid), and the pupils work together to represent the state described.

### Development

- After discussing the different states of water, the pupils could make their own sequence of movements, to represent the changing states of water, i.e. ice, water and water vapour.
- The pupils make the appropriate movements when the teacher says ‘*evaporation*’ (liquid to gas), ‘*melt*’ (solid to liquid), ‘*condense*’ (gas to liquid), ‘*freeze*’ (liquid to solid).

