

# States of matter

## What is a food scientist?

A food scientist designs and makes new food products. Food scientists change the state of foods, for example, when they melt, freeze or bake. They work in lots of different workplaces, including:

- ▶ restaurants or kitchens
- ▶ universities
- ▶ government organisations
- ▶ specialist research associations.

**Key Learning and Science Skills** needed:

- ▶ Be creative when designing, making and evaluating new foods.
- ▶ Set up practical enquiries when designing and making foods and communicate findings to customers.



*This is Heston Blumenthal. He is a food scientist who uses kitchen chemistry to create innovative foods. He is also a Fellow of the Royal Society of Chemistry.*

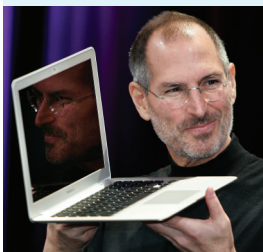
## What is a nanotechnologist?

A nanotechnologist finds ways to make materials nanoscale. Nanoscale is a very small scale. This is important for lots of jobs, such as:

- ▶ holography and optics technicians
- ▶ manufacturing engineers
- ▶ market development managers
- ▶ mechanical engineers
- ▶ optical engineers.

**Key Learning and Science Skills** needed:

- ▶ Curious about the world around them and find ways to make materials at nanoscale.
- ▶ Measure using a range of scientific equipment to investigate materials at nanoscale.



*This is Steve Jobs. He used nanotechnology when he worked on a small scale, developing computer graphics for Apple, Pixar.*

## What is a medicinal chemist?

Medicinal chemists mix chemicals in different states, such as gas, liquids and solids, to make medicines that treat illness and disease. They are interested in using science to help others. Medicinal chemists work in different places, including:

- ▶ laboratories
- ▶ pharmacies
- ▶ hospitals.

**Key Learning and Science Skills** needed:

- ▶ Resilient in setting up investigations to find medicines that will treat illness or disease.
- ▶ Observe carefully to investigate how the chemicals might treat illness or disease.



*This is Marcella Bassetto. She is a medicinal chemist at Swansea University in Wales.*

Would you like to use your learning about states of matter when you are older?