# Using models

***Education in Chemistry***June 2019
[rsc.li/2KdgoNa](https://rsc.li/2KdgoNa)

Once you’ve introduced your students to the overarching concept of scientific models, you can use these worksheets to get them discussing models.

The first worksheet asks students to evaluate models, deciding whether they are scientific ideas or representations/illustrations of scientific ideas.

Based on [Ben Rogers’ similar/different resources](https://eic.rsc.org/feature/quick-wins-to-promote-comprehension/3010388.article), the second sheet asks students to explore the similarities and differences between the model and what it represents, for example the magnet model of forces between atoms.

**Physical models**

**Comparisons/**

**analogies**

**Equations/graphs**

**Computer models**

**Visual pictures**

**held in our minds**

Which scientific models are  **scientific ideas that attempt to describe/picture things in the world?**

**SCIENTIFIC MODELS**

Which scientific models are  **things used to *represent* or *illustrate* scientific ideas?**

The particle model of solids, liquids and gases.

The Dalton model of the atom.

The geocentric and heliocentric models of the universe.

The plum pudding model of the atom.

The nuclear
model of the atom.

Our model of the Earth’s structure (crust, mantle, outer core, inner core).

Molymods represent molecules.

An egg can illustrate the structure of the Earth.

A loop of rope can represent a circuit.

The bell-jar model of the lungs illustrates how lungs work.

You can build model atoms from plasticine.

The model shows how …

In reality,

**DIFFERENT**

In the model,

**Things that the model illustrates or represents well.**

**SIMILAR**

**MAGNETS**

**DIFFERENT**

**Evaluating THE MAGNET MODEL of FORCES BETWEEN ATOMS**

**FORCES BETWEEN ATOMS**

**Features of the model which are different to reality.**

**Features of reality which are not shown well by the model.**