# Stage 5

## E Scientific enquiry

### Ep Ideas and evidence

- **5Ep1** Know that scientists have combined evidence with creative thinking to suggest new ideas and explanations for phenomena
- **5Ep2** Use observation and measurement to test predictions and make links

### Ep Plan investigative work

- **5Ep3** Make predictions of what will happen based on scientific knowledge and understanding, and suggest and communicate how to test these
- **5Ep4** Use knowledge and understanding to plan how to carry out a fair test
- **5Ep5** Collect sufficient evidence to test an idea
- **5Ep6** Identify factors that need to be taken into account in different contexts

### Eo Obtain and present evidence

- **5Eo1** Make relevant observations
- **5Eo2** Measure volume, temperature, time, length and force
- **5Eo3** Discuss the need for repeated observations and measurements
- **5Eo4** Present results in bar charts and line graphs

### Eo Consider evidence and approach

- **5Eo5** Decide whether results support predictions
- **5Eo6** Begin to evaluate repeated results
- **5Eo7** Recognise and make predictions from patterns in data and suggest explanations using scientific knowledge and understanding
- **5Eo8** Interpret data and think about whether it is sufficient to draw conclusions

## B Biology

### Bp Plants

- **5Bp1** Know that plants need energy from light for growth
- **5Bp2** Know that plants reproduce
- **5Bp3** Observe how seeds can be dispersed in a variety of ways
- **5Bp4** Investigate how seeds need water and warmth for germination, but not light
- **5Bp5** Know that insects pollinate some flowers
- **5Bp6** Observe that plants produce flowers which have male and female organs; seeds are formed when pollen from the male organ fertilises the ovum (female)
- **5Bp7** Recognise that flowering plants have a life cycle including pollination, fertilisation, seed production, seed dispersal and germination

# C Chemistry

## Cs States of matter

- **5Cs1** Know that evaporation occurs when a liquid turns into a gas
- **5Cs2** Know that condensation occurs when a gas turns into a liquid and that it is the reverse of evaporation
- **5Cs3** Know that air contains water vapour and when this meets a cold surface it may condense
- **5Cs4** Know that the boiling point of water is 100 °C and the melting point of ice is 0 °C
- **5Cs5** Know that when a liquid evaporates from a solution the solid is left behind

# P Physics

## Pl Light

- **5Pl1** Observe that shadows are formed when light travelling from a source is blocked
- **5Pl2** Investigate how the size of a shadow is affected by the position of the object
- **5Pl3** Observe that shadows change in length and position throughout the day
- **5Pl4** Know that light intensity can be measured
- **5Pl5** Explore how opaque materials do not let light through and transparent materials let a lot of light through
- **5Pl6** Know that we see light sources because light from the source enters our eyes
- **5Pl7** Know that beams/rays of light can be reflected by surfaces including mirrors, and when reflected light enters our eyes we see the object
- **5Pl8** Explore why a beam of light changes direction when it is reflected from a surface

## Pb The Earth and beyond

- **5Pb1** Explore, through modeling, that the sun does not move; its *apparent* movement is caused by the Earth spinning on its axis
- **5Pb2** Know that the Earth spins on its axis once in every 24 hours
- **5Pb3** Know that the Earth takes a year to orbit the sun, spinning as it goes
- **5Pb4** Research the lives and discoveries of scientists who explored the solar system and stars