# Module 1: Introduction

# Typical Key Stage 3 practical activities

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| 1. Explore how skeletal systems of a pigeon or chicken are adapted for flight. |
| 1. Observe and draw the principal features of a cheek cell and explain their functions. |
| 1. Investigate the correlation between height and lung volume in humans. |
| 1. Evaluate a model of the digestive system. |
| 1. Explore how changing the population size of one organism might impact on others in the ecosystem. |
| 1. Use models to evaluate different mechanisms for seed dispersal. |
| 1. Compare anaerobic and aerobic respiration in yeast from the data provided. |
| 1. Test a variegated leaf for starch to show that chlorophyll is needed for photosynthesis. |
| 1. Display data relating to variation of various characteristics within a group of people. |
| 1. Research how different substances are exchanged in the placenta and use this information to suggest advice for pregnant women. |
| 1. Evaluate the evidence that global warming is responsible for coral bleaching. |
| 1. Use a model to predict the expected offspring for a particular genetic trait in a crop. |
| 1. Use a model to explain the relationship between the properties of a material and the arrangement of its particles. |
| 1. Devise a way to separate a given mixture. |
| 1. Group elements according to their properties and compare the grouping with their position in the periodic table. |
| 1. Compare the properties of a compound with its component elements. |
| 1. Create a reactivity series for different metals from experimental results. |
| 1. Compare the effectiveness of different indigestion remedies. |
| 1. Devise a method for comparing two endothermic reactions. |
| 1. Investigate whether change in mass could be used to classify reactions as either chemical or physical. |
| 1. Explore through the use of models how the features of a rock type can be explained by the way the rock was formed. |
| 1. Make observations of changing day length and relate these to a model of the solar system. |
| 1. Compare carbon dioxide emission from natural sources with that from anthropogenic sources. |
| 1. Use the position of a metal in the reactivity series to suggest how it could be extracted. |
| 1. Investigate the effect of different factors on the motion of a toy car rolling down a slope. |
| 1. Predict how the weight of an astronaut would change throughout a journey from the Earth to the surface of the Moon. |
| 1. Explore the effect of different variables on the magnitude of frictional or drag forces. |
| 1. Compare the pressure exerted on the floor by different shoes. |
| 1. Measure the potential difference across resistors connected in series. |
| 1. Compare the current flow in different parts of a parallel circuit and use a model to explain findings. |
| 1. Explore the factors that affect the strength of an electromagnet. |
| 1. Compare the magnetic fields of different types and combinations of magnets. |
| 1. Calculate the running costs of different types of light bulb. |
| 1. Use the stores and transfers model to describe the operation of a hand-crank torch. |
| 1. Explain how an electric motor lifting a weight is doing work. |
| 1. Investigate different ways of preventing heat loss from an object. |
| 1. Use an oscilloscope to demonstrate the effect of changing the pitch and volume of sound. |
| 1. Construct a ray diagram to model how light passes through lenses and other transparent objects. |
| 1. Evaluate the risks to human health by different types of wave in the electromagnetic spectrum. |
| 1. Explain observations of the reflection, absorption and transmission of waves by the use of a wave model. |
| 1. Observe the distribution of starch granules in stained potato and apple cells, using a microscope. |
| 1. Compare the effect of changing disinfectant concentration on the growth of microorganisms. |
| 1. Find the critical temperature for the optimum action of a digestive enzyme. |
| 1. Measure recovery rates after exercise using the pulse rate in a radial artery. |
| 1. Measure mass changes in a plant over several days to investigate patterns in stomatal opening. |
| 1. Measure the effects of distraction on reaction speed to a stimulus. |
| 1. Use a tally chart to record woodlice behaviour in a choice chamber. |
| 1. Test hypotheses to explain the distribution of algae on tree trunks. |
| 1. Estimate the population of an invertebrate species within a habitat. |
| 1. Compare pollution levels in different locations. |