

KS3 Baseline Science Core Scales Checklist

Strand: Biology

Sort and group animals based on their features, using examples as a guide.

Place animals into given groups based on certain characteristics.

Design a creature with a specific set of characteristics, using prompts and a word grid.

Name types of microorganism.

Set up an investigation into harmful microorganisms.

Give reasons for the classification of animals, using examples as a guide.

Match groups of animals to their characteristics.

Classify creatures based on their characteristics.

Design a creature that has a specific set of characteristics, using prompts.

Describe the useful and harmful effects of different microorganisms.

Identify the variables in an investigation into harmful microorganisms.

Draw conclusions based on their results.

Describe the characteristics of different microorganisms.

Describe the characteristics of groups or organisms, using images as prompts.

Explain how living things are classified at each level of the Linnaean system.

Design a creatures that has a specific set of characteristics.

Explain their predictions and conclusions in an investigation into harmful microorganisms.

Describe and compare the structure of the cells of different organisms.

Describe the characteristics of groups of organisms.

Identify the main parts of the circulatory system.

Explain the main functions of the heart, lungs and blood vessels in the circulatory system.

State how the digestive system breaks down nutrients.

Explain what constitutes a healthy lifestyle.

Describe how drugs and alcohol can impact negatively on the body.

Demonstrate prior knowledge of systems within the human body.

Explain the specific functions of the lungs in the circulatory system.

State the beneficial impact of a healthy diet and exercise on the human body.

Describe how smoking cigarettes impacts negatively on the body.

Name the organs, the main parts of those organs and the functions of each in the circulatory system.

Understand that adaptations are random mutations.

Examine fossil evidence supporting the idea of evolution.

Identify the difference between selective and cross-breeding.

Develop an understanding of the development of evolutionary ideas and theories over time.

Explain how human evolution has occurred and compare modern humans with those of the same genus and family.

Give examples of selective and crossbreeding.

Explain the terms adaptation, evolution and natural selection and use these in context.

Describe how living things evolve via the process of natural selection.

Explain in simple terms what genes and DNA are.

Investigate the ethical issues of human intervention in the process of evolution by natural selection.

Strand: Physics

Recognise that light travels in straight lines.

Describe how light enables us to see.

Understand reflection as light bouncing off a surface.

Identify the angles of incidence and reflection.

Understand refraction as light bending or changing direction.

Explain how a prism allows us to see the visible spectrum.

Explain how light enables us to see an object reflected in a mirror.

Recognise that the angles of incidence and reflection are equal.

Explain how light is refracted as it travels through glass or water.

Know the main circuit symbols and use these to draw circuit diagram.

Explain how our understanding of electricity has changed over time.

Draw circuit diagrams using the correct symbols and label the voltage correctly.

Explain the effect of increasing or decreasing the voltage on different parts of a circuit.

Understand forces: push and pull- interaction between 2 objects

Forces are needed to cause objects to stop and start

Strand: Chemistry

Predict what will happen in an investigation.

Be able to plan and conduct an investigation.

Plan an investigation based on the results of a previous investigation.

Decide how to record data.

Make observations.

Take accurate measurements.

Record results.

Make conclusions.

Be able to answer questions based on their learning.

Decide on the most appropriate type of investigation for their question.

Take repeat readings if necessary.

Report the degree of trust they have in their results.

Decide which variables to control while planning an investigation.

Make and explain predictions.

Identify and explain the variables they will control in an investigation.

Choose the most appropriate graph to present their data.

Make and record accurate observations.

Use scientific language to explain their findings.

Be able to ask and answer questions based on their learning using scientific language.

Understand different states of materials during investigations e.g. solid, liquid, gas

Understand concept of dissolving

Understand the change in state from freezing to melting to evaporation