



Whole School Overview for Science
Summer 2 2018/2019

Year 1

Science

Animals including humans

Knowledge base

- Animals, including humans
- Identify and name a variety of common animals including fish, amphibians, reptiles, bird and mammals
- Identify and name a variety of common animals that are carnivores, herbivores and omnivores
- Describe and compare the structure of a variety of common animals
- Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense

Work scientifically

- Ask simple questions and recognise that they can be answered in different ways
 - Identify and classify
 - Use his/her observations and ideas to suggest answers to questions
 - Gather and record data to help in answering questions

Design and Technology

Linking to Animals including humans

Design

- Design products that have a clear function and an intended user.

Making

- Select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]

Evaluating

- Explore and evaluate a range of existing products and evaluate their ideas and products against design criteria

Year 2

Science

Animals including humans

Knowledge base

- Notice that animals, including humans, have offspring which grow into adults
- Find out about and describe the basic needs of animals, including humans, for survival (water, food and air)
- Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene

Work scientifically

- Identify, group and classify
- Use his/her observations and ideas to suggest answers to questions noticing similarities, differences and patterns
- Gather and record data to help in answering questions including from secondary sources of information

Design and Technology

Linking to Animals including humans

Design

- Design products that have a clear function and an intended user.

Making

- Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics

Evaluating

- Explore and evaluate a range of existing products and evaluate their ideas and products against design criteria

Year 3

Science

Animals including humans

Knowledge base

- Identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat
- Identify that humans and some other animals have skeletons and muscles for support, protection and movement

Working Scientifically

- Make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers
- Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables
- Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions
- Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions

Design and technology

Linking to Animals including humans

Design

- Gather and review information and resources relating to ideas.

Making

- Develop practical skills by experimenting with, and testing the qualities of a range of different material and techniques.

Evaluating

- Reflect upon likes and dislikes of a piece of work, in order to improve it.

- Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions
- Identify differences, similarities or changes related to simple scientific ideas and processes
- Use straightforward scientific evidence to answer questions or to support his/her findings

Year 4

Science

Design and technology

Living things in their habitats

Linking to States of matter

Knowledge base

- Recognise that living things can be grouped in a variety of ways
- Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment
- Recognise that environments can change and that this can sometimes pose dangers to living things

Working Scientifically

- Use straightforward scientific evidence to answer questions or to support his/her findings
- Ask relevant questions and use different types of scientific enquiries to answer them
- Set up simple practical enquiries, comparative and fair tests

Design

- Use planning and research to improve understanding, inform ideas and plan for an outcome (e.g. sketchbooks will show several different versions of an idea and research has led to an improvement in outcome).

Making

- Investigate the qualities of different materials and processes systematically.

Evaluating

- Regularly reflect upon their own work, and use comparisons with the work of others to identify how to improve.

- Make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers
- Gather, record, classify and present data in a variety of ways to help in answering questions

Year 5

Science

Design and technology

Animals including humans

Linking to animals including humans

Knowledge base

- Describe the changes as humans develop to old age.

Working Scientifically

- planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary
- taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate
- recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs
- using test results to make predictions to set up further comparative and fair tests
- reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and a degree of trust in results, in

Design

- Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups

Making

- Select and use relevant resources and references to develop ideas.

Evaluating

- Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work

oral and written forms such as displays and other presentations

- identifying scientific evidence that has been used to support or refute ideas or arguments

Year 6

Science

Design and technology

Science Experiments

Knowledge base

- Describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including microorganisms, plants and animals
- Give reasons for classifying plants and animals based on specific characteristics.

Working Scientifically

- Plan different types of scientific enquiries to answer their own or others' questions, including recognising and controlling variables where necessary
- Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate
- Group and classify things and recognise patterns

Designing

- Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups

Making

- Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately

Evaluating

- Evaluate the design of products so as to suggest improvements to the user experience

