Year 6 autumn 1

Processes and Change

I know how to work systematically, noting what happens when we change one component at a time.

I know how to associate the brightness of a lamp or the volume of a buzzer with the number and VOLTAGE of the cells used in a circuit.

Processes and Change

I know how to compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of a buzzer and the on/off position of the switches.

Processes and Change

I know how to use recognised symbols when representing a simple circuit in a diagram

I know how to construct simple circuits and answer questions about what happens with different components.

Sustainability

I know how electricity and other energy can be provided in a sustainable manner.

Topic: Electricity

Composite Question: What are the uses of electricity?

Pioneers/Capital

Nikola Tesla

Father of Electricity.

Good Health

I know how to be safe when using electricity.



Vocabulary

Circuit diagram, circuit symbol, voltage

Science Golden Threads covered in KS1 and KS2:

Processes and change Climate

Ecology Good Health

Year 6 autumn 2

Good Health

I know how to identify and name the main parts of the human circulatory system, and describe the functions of the heart, vessels and blood.

Good Health

I know that the human body has 3 main systems – skeletal, muscular and digestive.

I know the function of the skeletal system.

I know the function of the muscular system.

Processes and Change

I know how to describe the ways in which nutrients and water are transported within animals including humans.

Topic: Animals Including Humans

Composite Question: What systems help our bodies to work?

Good Health

I know how to keep my body healthy and hygienic. **Processes and Change**

I know how to recognise the impact of diet, drugs and lifestyle on the way people's body's functions.

Pioneers

Dr Mary M Daly – first American black woman to receive a PHD – worked on the chemistry of the body – digestive system and circulatory system.



Vocabulary

heart, pulse, rate, pumps, blood, blood vessels, transported, lungs, oxygen, carbon dioxide, cycle, circulatory system, diet, drugs, lifestyle

Science Golden Threads covered in KS1 and KS2:

Climate Processes and change

Ecology Good Health

Year 6 spring 1

Life Processes and Change

I know that light travels in straight lines

I know how to use the idea that light travels in straight lines to explain that objects are seen because they give out or reflect light.

Life Processes and Change

I know how to explain that we see things because light travels from the light sources to our eyes or from light sources to objects and then to our eyes.

I know how to use the idea that light travels in straight lines to explain why the shadows have the same shape as the objects that cast them.

I know how to observe rainbows, colours on bubbles/oil, objects that look bent in water and colour filters.

Life Processes and Change

I know what a light source is (recap Yr3)

I know what a reflection is (recap Yr3)

I know how to explain what a shadow is (recap Yr3) Sustainability

I know how to make a periscope

Topic: Light

Composite Question: How does light help us to see?

Pioneers/ Capital:

CV Raman – Physicist

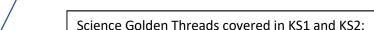
Ophthal mologist

Good Health

I know the structure of the human eye.

Vocabulary

Straight lines, light rays



Climate Processes and change

Ecology Good Health

Year 6 spring 2

Ecology

I know that broad groupings of groupings, such as microorganisms and plants can be subdivided.

I know how to give reasons for classifying plants and animals based on specific characteristics.

Ecology

I know how to give reasons for classifying plants and animals based on specific characteristics.

Ecology

I know how to how living things are classified into broad groups according to observable characteristics and based on similarities and differences, including microorganisms, plants and animals.

Topic: Living Things and Their Habitats

Composite Question: How can we group living things?

Ecology

I know how to classify animals into commonly found invertebrates (such as insects, spiders, snails, worms) and vertebrate (fish, amphibians, reptiles, birds and mammals)

Ecology

I know how to group living things by classifying in more detail.

I can use a classification key to identify animals/ plants in this environment.

Pioneers

I know who Carl Linnaeus was (pioneer of classification)



Vocabulary

vertebrates, fish, amphibians, reptiles, birds, mammals, warm-blooded, cold-blooded, invertebrates, insects, spiders, snails, worms, flowering, non-flowering, mosses, ferns, conifers

Science Golden Threads covered in KS1 and KS2:

Climate Processes and change

Ecology Good Health

Year 6 summer 1

Processes and Change

I know that animals' offspring inherit traits of their parents and the strongest traits prevail.

Ecology

I know that living things produce offspring that vary and are not identical to their parents.

Climate

I know that animals and plants are suited to their environment in different ways – this may lead to evolution.

TOPIC: Evolution and inheritance

COMPOSITE QUESTION:

How does the fossil record, inheritance, adaptation and evolution all work together?

Processes and Change

I know that organisms change over time – fossils are evidence of pre-historic life.

Good Health

I know how to identify evolutionary traits in early human beings and why we evolved the way we did.

Pioneers/Capital

I know how to research and discuss the work of Charles Darwin.



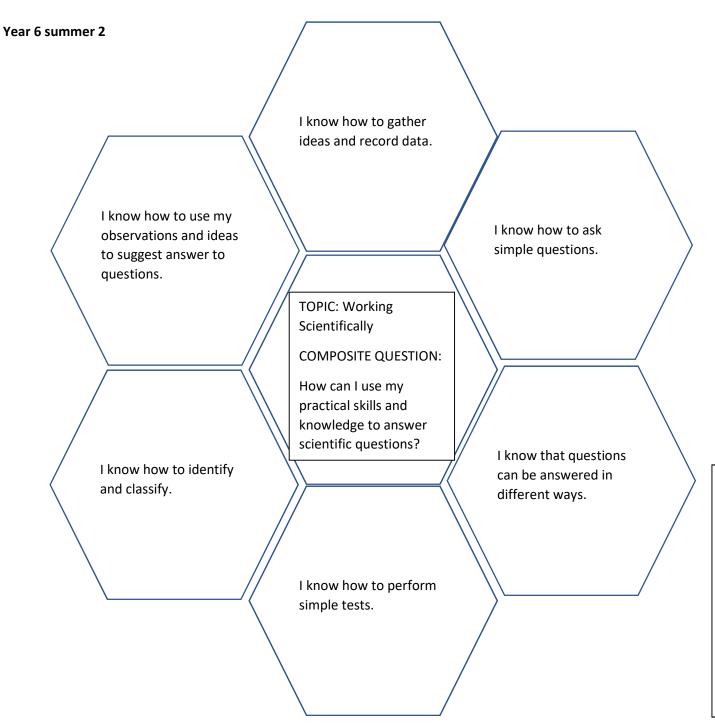
Vocabulary

Offspring, sexual reproduction, vary, characteristics, adapted, inherited, species, evolve, evolution

Science Golden Threads covered in KS1 and KS2:

Climate Processes and change

Ecology Good Health



Vocabulary

variables, independent variable, dependent variable, control variable, evidence, justify, argument (science), causal relationship, accuracy, precision, scatter graphs, bar graphs, line graphs, force meter

Science Golden Threads covered in KS1 and KS2:

Climate Processes and change

Ecology Good Health

Sustainability Pioneers/Capital

NB — Working scientifically runs throughout the entire year within each topic but extra time is awarded to disciplinary learning in the second summer half term — no golden thread given to allow for creativity when planning practical activities.