Year 5 autumn 1

Processes and Change

RECAP: I know how materials change state

I know what reversible and irreversible change means.

I know how to demonstrate reversible changes of state. I know that some changes result in the formation of new materials and these changes are not usually reversible. **Processes and Change**

I know how to compare materials based on their properties. (Hardness, solubility, transparency, conductivity- electrical and thermal).

Topic: Properties of Materials and Changes of State

Composite
Question: What
different things are
materials used for
and why?

Good Health

I know how to explore the action of acids/ sugar on teeth – this is not a reversible change. **Processes and Change**

I know how to identify the use of materials based on their properties.

Pioneers/ Capital

Arthur Silver and Spencer Fry – Post It Notes.



Vocabulary

Thermal insulator/conductor, change of state, mixture, dissolve, solution, soluble, insoluble, filter, sieve, reversible/non-reversible change, burning, rusting, new material

Science Golden Threads covered in KS1 and KS2:

Climate Processes and change

Ecology Good Health

Year 5 autumn 2

Processes and Change

I know how to describe the Sun, Earth and Moon as approximately spherical bodies.

Processes and Change

I know how to describe the movement of the moon relative to the Earth. Processes and Change

I know how to explain the positions of the Sun and Earth to explain day and night.

Topic: Earth and Space

How does our solar system work?

Processes and Change

I know how to use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky.

Climate

I know how the movement of the planets influence the seasons.

Pioneers/Capital

Katherine Johnson

Mathematician, whose calculations of orbital mechanics helped the US land on the moon.



Vocabulary

Sun, Moon, Earth, planets (Mercury, Jupiter, Saturn, Venus, Mars, Uranus, Neptune), spherical, Solar System, rotate, star, orbit

Science Golden Threads covered in KS1 and KS2:

Climate Processes and change

Ecology Good Health

Year 5 spring 1

Ecology

I know some of the habitats and living things found in my local environment.

Climate

I know how climate change affects habitats.

Processes and Change

I know how to observe life cycle changes in a variety of living things.

I know how to describe the life processes of reproduction in some plants.

Topic: Living things and Their Habitats

Composite Question: What can we do to protect animals in their habitats?

Processes and Change

I know how to describe the life processes of reproduction in some animals.

Sustainability

I know how we make sure that we are looking after the environment where these animals live.

Pioneers

I know how to research the work of naturalists like Jane Goodall and David Attenborough.

Vocabulary

Life cycle, reproduce, sexual, sperm, fertilises, egg, live young, metamorphosis, asexual, plantlets, runners, cuttings

Science Golden Threads covered in KS1 and KS2:

Processes and change Climate

Ecology Good Health

Year 5 spring 2

Processes and Change

I know how to describe the changes as animals develop to old age.

Processes and Change

I know the gestation period of Human and can compare it with the gestation period of some animals. **Processes and Change**

I know how to draw a timeline of the development of a Human.

I know how to describe the changes as humans develop to old age.

Topic: Animals Including Humans

Composite Question: How do humans and animals develop?

Processes and Change

I know how to research baby Humans and compare this to some baby animals. **Good Health**

I know about the changes apparent during puberty.

Pioneers/ Cultural Capital

Look at the career of midwifery.

Vocabulary

Puberty, the vocabulary to describe sexual characteristics in line with the school's RSE policy.

Science Golden Threads covered in KS1 and KS2:

Climate Processes and change

Ecology Good Health

Year 5 summer 1

Processes and Change

I know how to explain the effects of water resistance.

Processes and Change

I know how to explain the effects of friction between two moving surfaces.

Processes and Change

I know that mechanisms like levers, pulleys and gears allow a smaller force to have a greater effect. Processes and Change

I know how to identify the effects of air resistance.

TOPIC: Forces

COMPOSITE QUESTION:

How do forces affect our everyday lives?

Processes and Change

I know how to make a mechanism using levers, pulleys and gears and/or springs and explore their effects.

Pioneers/ Capital

I know how to explain the effects of gravity on unsupported objects.

Reference to Aristotle and Galileo.





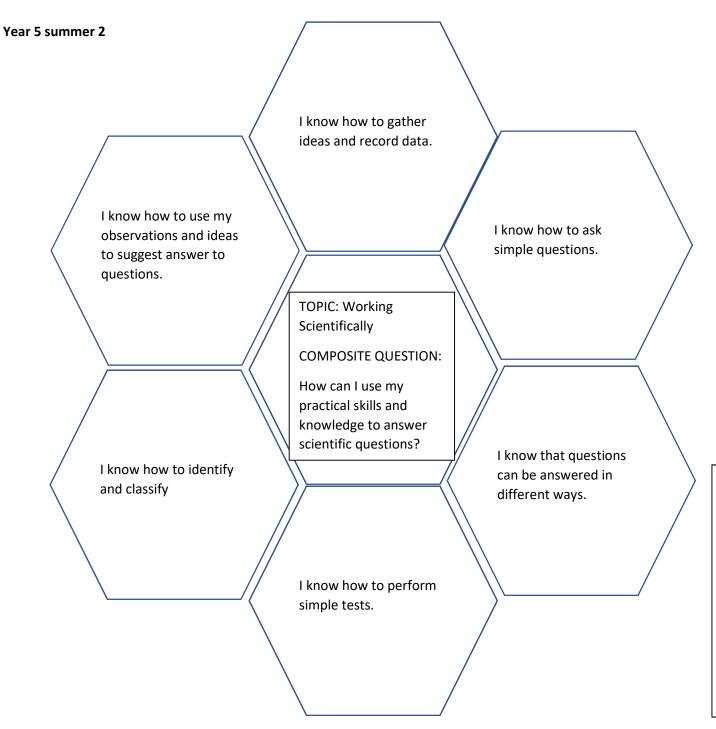
Vocabulary

Force, gravity, Earth, air resistance, water resistance, friction, mechanisms, simple machines, levers, pulleys, gears

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.