Learning Flow

Term 1– Animals including humans

What do we already know?

Topic Referance Page - Prior knowledge Key Scientific vocabulary. Assessment opportunity.

What do animals need to survive?

- Identify the 4 things animals need to survive.
- scientific diagram and labels.
- Ask/ pose questions about animals and survival in different climates.

Life Cycles

- Explore the life cycles of a bird, insect and mammal.
- What is the same and what is different?
- How do the animals change throughout their life?

What do humans need to survive?

- Identify the 6 things humans need to survive.
- Needs vs wants.
- Compare them- What is the same? What is different? Why?

Human life cycle

- Explore the human life cycle.
- Discuss how mammals (humans) grow and reproduce (offspring).
- Observe how the cycle shows repetition. Starting again.

Humans and healthy lifestyles

- Describe why exercise, balanced diet and hygiene are important for humans.
- What can they do to keep themselves healthy?
- Research and record findings.

Significant Scientists

<u>Dr Ernest Madu</u>

- He is a cardiologist. His work focuses on providing affordable healthcare in low-resource nations.

Assessment focus

- How can we present what we know about animals including humans?

Learning Flow

Term 2– Living things and their habitats

What do we already know?

Flashback Friday – Prior knowledge
Key Scientific vocabulary.
Assessment opportunity.

What is a habitat?

- To know what a habitat is and to be able to name a
- variety of plants and animals in their habitats.
- What does the habitat provide for the animals and plants?

What habitats do we have in the UK?

- Native habitats
- To find out about some native animals and their habitats
- Understand that living things live in habitats to which they are suited.

What is a micro-habitat?

- Minibeast Explorer Challenge (EF)
- Woodlouse Habitat (TAPS)

What is a food chain?

- Food chains
- BBC Food chain challenges

What are microhabitats

To know how animals and plants can depend on each other
Why do we need trees?
How do animals depend on plants and other animals?

Significant Scientists

<u>Dr. Archie Fairly Carr</u>

- Dr. Archie Fairly Carr was a famous zoologist who was best known for his study of sea turtles.

What do we know now – how can we use it? The purpose

- Conclude Plant investigation. What do we notice?Draw it/ Explain it tasks.
- Quiz.
- Flashforward- Next term. What do we know?

Learning Flow

Term 3– Plants

What do we already know?

- Flashback Friday - Prior knowledge ,Parts of a plant & tree, key questions, Key Scientific vocabulary. Assessment opportunity.

Working Scientifically – Observing

- Identify and name a variety of plants
- Go outside and explore different plants.
- Do they know names/seasonal plants.

Working Scientifically – Observe

- What do seeds and bulbs look like?
- Why do they start to grow when you plant them?
- Cress seeds and bean seeds in hydroponic kit.
- Draw observations.

What do plants need to stay healthy?

- Investigate conditions in which seeds and bulbs germinate.
- Plant seeds in different conditions. Predict.
- Observe germination as well as leaf colour and height.

Communicating findings

- Describe how the seeds need water, light and a suitable temperature to grow and stay healthy
- Conclude.

Significant Scientists

<u>Marie Clark Taylor</u>

- Marie Clark Taylor studied the influence of light on plant growth.

What do we know now – how can we use it?

The purpose

- What is the same? different? How could they be sorted/ grouped?
- The explain it - Scientific diagrams and explanations. Explain it
- Quiz opportunities.

Learning Flow

Term 4 – Plants

What do we already know?

- Flashback Friday - Prior knowledge What do plants need to germinate? questions, Key Scientific vocabulary. Assessment opportunity.

Working Scientifically – Observing & Recording

- Explore the life cycle of common plants.
- Key parts- seeds, germination, stems and roots, leaves, flowers, pollination.

Working Scientifically – Observe

- Plants in different climates.
- How have they adapted?
- How do they survive?

Working Scientifically – Observing & Recording

- Pollinators.
- Why are they important?
- How do they help our world?
- What can we do to help/ protect them?
- Plant some seeds in the school environment to encourage pollinators.

Recording data & Communicating findings

- Focus on recording data and communicating findings (WS)
- Provided data around the growth of a plant.
- Create a graph to represent data.
- Look at the data, conclude results and communicate.

Significant Scientists

- David Douglas.
- Scottish Botanist.
- Douglas-Fir
- Explored many places.
- Worked as a gardener.

What do we know now – how can we use it?

The purpose

- What have they learnt?
- Make it, Draw it & Explain it.
- Quiz opportunities.
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Learning Flow

Term 5- Materials part 1

What do we already know?

Flashback Friday - Prior knowledge, Key Scientific vocabulary. Materials Properties, Sorting and grouping, Strength, Insulate Absorb, Reflect Assessment opportunity.

Scientific Enquiry

- Exploring different materials and describing them (shape, size, material, weight, texture).
- Grouping materials based on similar qualities and their everyday uses.

Natural vs man-made.

- What materials are natural? How do we know?
- What materials are man-made? How do we know?
- Go on a natural vs man-made hunt- observe, record and conclude.

Suitability of materials- Some investigations.

- What material makes a good insulator?
- What material makes a good reflector?
- What materials would take the weight of...?
- What materials would allow light to pass through?

Significant Scientists

<u>John Dunlop & John Loudon McAdam.</u>

- What did they invent? Why are their inventions important? How has it impacted our lives? Compare their impact on society.

What do we know now - how can we use it? The purpose

What is the same? different? How could they be sorted/ grouped? The explain it - Scientific diagrams and explanations. Explain the purpose of materials and why. Quiz opportunities.

Learning Flow

Term 6- Materials part 2

What do we already know?

- Flashback Friday - Prior knowledge, Key Scientific vocabulary. Materials Properties, Sorting and grouping, Strength, Insulate Absorb, Reflect
- Assessment opportunity.

Magnetic and non-magnetic materials.

- What do you notice about materials that are magnetic and not magnetic?
- What everyday objects are magnetic? What is their purpose?
- Magnet investigation.

Significant Scientists

Julie Brusaw.

- What did they invent? Why are their inventions important? How has it impacted our lives? Compare their impact on society.

Materials on Different surfaces

- Links to suitability of materials.
- Introduce the idea of friction.
- Investigation- How far does an object travel on different surfaces?
- Conclude using results- more or less friction.

How can solid shapes be changed?

- Introduce the idea of solids and liquids.
- Reflect on what the children know about solid materials.
- Investigation- Explore bending, twisting, squashing and stretching of solid materials.

What do we know now – how can we use it? The purpose

- What is the same? different? How could they be sorted/ grouped?
- The explain it - Scientific diagrams and explanations. Explain the purpose of materials and why. Quiz opportunities.