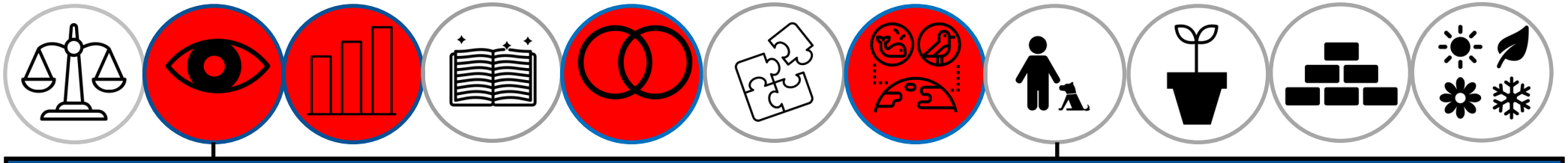
Year 2: Living Things and Their Habitats

SCIENCE CONTEXT: Biology



KEY VOCABULARY:

Life processes	These are things all living things do. They move, breathe, sense, grow, make babies, get rid of waste, and get their energy from food.
Living	Things that are living have all the life processes.
Dead	Things that are dead were once living.
Never living	Things made out of metal, plastic or rock were never living. They never had the life processes.
Food chain	A food chain shows how each animal gets its food.
Food sources	This is the place a living thing's food comes from.
Habitat	A habitat is the natural place where something lives. A habitat provides living things with everything they need to survive.
Micro-habitat	A very small habitat in places like under a rock, or on a branch.
Survive	This means to stay alive.

As Scientists we will...

Pupils should be taught to explore and compare the differences between things that are living, dead, and things that have never been alive. Pupils should be taught to identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other. Pupils should be taught to identify and name a variety of plants and animals in their habitats, including micro-habitats. Pupils should be taught to describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different sources of food.

Notable Scientist: David Attenborough

Working Scientifically

Pupils should be taught how to Identify and classify some living things.

Pupils should be taught how to observe closely.

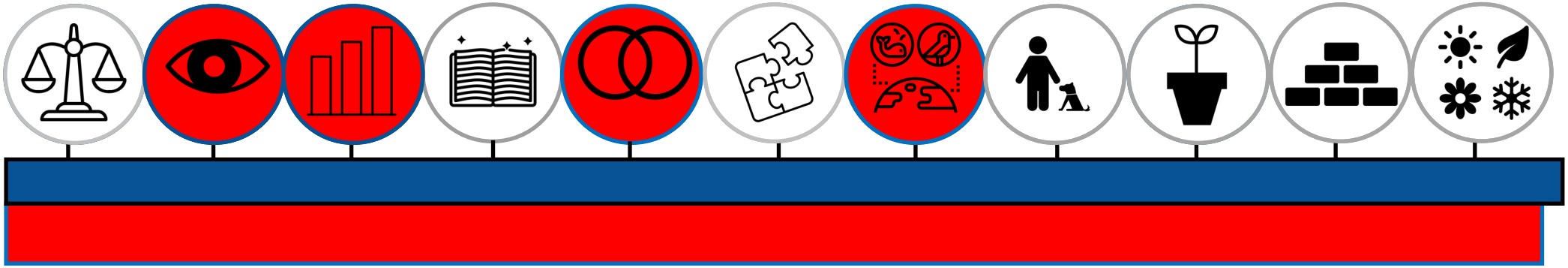
Pupils should be taught how to gather and record data to help in answering questions.

Key Questions:

1) **Can you name some different things that are dead, alive, or never alive?**
2) **What is a habitat? How do they provide for living things?**
3) **What is a micro-habitat? Can you give examples of a micro-habitat?**
4) **How do animals get their food?**

Year 2: Living Things and Their Habitats

SCIENCE CONTEXT: Biology



What I need to know:

All objects are either living, dead or have never been alive. Living things are plants (including seeds) and animals. Dead things include dead animals and plants and parts of plants and animals that are no longer attached e.g. leaves and twigs, shells, fur, hair and feathers (This is a simplification, but appropriate for Year 2 children.) An object made of wood is classed as dead. Objects made of rock, metal and plastic have never been alive (again ignoring that plastics are made of fossil fuels). Animals and plants live in a habitat to which they are suited, which means that animals have suitable features that help them move and find food and plants have suitable features that help them to grow well. The habitat provides the basic needs of the animals and plants – shelter, food and water. Within a habitat there are different micro-habitats e.g. in a woodland – in the leaf litter, on the bark of trees, on the leaves. These micro-habitats have different conditions e.g. light or dark, damp or dry. These conditions affect which plants and animals live there. The plants and animals in a habitat depend on each other for food and shelter etc. The way that animals obtain their food from plants and other animals can be shown in a food chain.

Opportunities for science capital:

Invite someone in whose job relies on knowledge of living things and their habitats– such as a zoologist– to talk to the class about how they rely on their scientific knowledge to help them with their job.

Alternatively, a trip to a local nature reserve, such as Avalon Marshes, could be booked to explore different animals in their habitats.

Science media consumption: watch clips from David Attenbourough documentaries specifically focused on habitats.

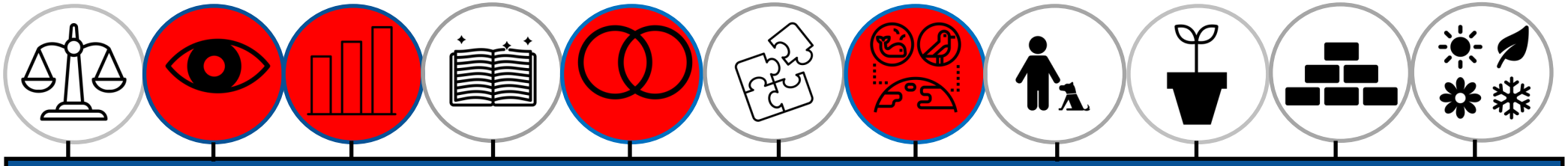
Assessment:

By the end of this unit of study, children should be able to discuss the differences between things that are living, dead, and things that have never been alive. They should be able to name different habitats and describe how/why animals are suited to them and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other. Children should be able to name a variety of plants and animals in their habitats, including micro-habitats. Finally, they should be able to describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different sources of food.

By the end of this unit of study, pupils should have knowledge of grouping and classifying as well as pattern seeking. They should be able to: identify and classify some living things, observe closely and gather and record data to help in answering questions.

Year 2: Living Things and Their Habitats

SCIENCE CONTEXT: Biology



Theme 1: Dead or alive?

Starter

KWL grid– complete prior knowledge, what we know looking at key questions and what we want to know.

Main

Substantive knowledge:

Input knowledge on how we know something is alive, dead or never alive using the idea of life processes: movement, reproduction, sense, growth, respiration, excretion and nutrition.

Disciplinary knowledge:

Grouping and classifying

Working scientifically objective: identifying and classifying

Sort and classify things according to whether they are living, dead or were never alive and record their findings using a sorting chart. They should describe how they knew where to place things.

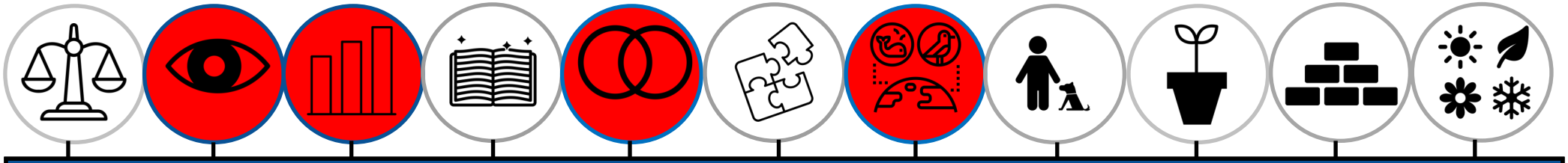
Plenary / assessment

Odd One Out recap

https://explorify.uk/en/activities/odd-one-out/living-moving

Year 2: Living Things and Their Habitats

SCIENCE CONTEXT: Biology



Theme 2: Habitats

Starter

Recap

Main

Substantive knowledge:

Work through videos, activities and questions using the link:

https://www.tigtagworld.co.uk/mindmap/#/lessons/CLASS00345/activities/main

Disciplinary knowledge:

Working scientifically objective: observing closely

Take a walk in the school grounds or the local area and ask the children to identify possible habitats. These do not necessarily have to include obvious habitats like fields, flowerbeds or hedges; for example, organisms may live in a drainpipe or under an upturned flowerpot.

Before exploring these habitats, ask the children to discuss what type of environment each provides, thinking specifically about whether it is light or dark, wet or dry, if it contains many plants or few, and the condition of soil. Encourage them to think about what types of organisms they might expect to find there.

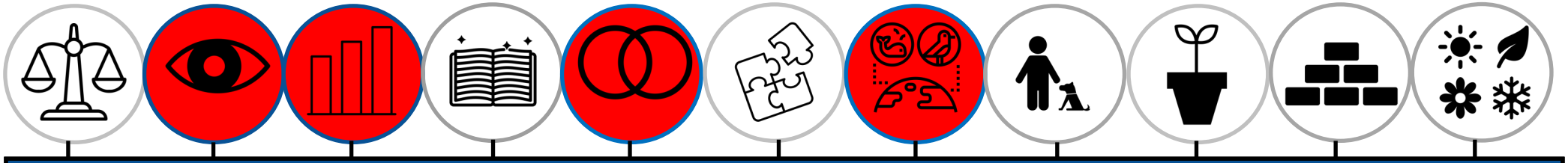
Ask the children to sketch the organisms they find in the different habitats they explore and label with key features e.g. dark. Ensure the children take care to replace things like rocks, pots or leaves in their original positions, so that animals' habitats are not disturbed unnecessarily.

Plenary / assessment.

Matching activity matching animal to its habitat making key notes about how that habitat provides for that animals needs.

Year 2: Living Things and Their Habitats

SCIENCE CONTEXT: Biology



Theme 2: Habitats

Starter

Recap:

Recap what a habitat is and different habitats.

Can you spot the habitats?

https://www.tigtagworld.co.uk/film/habitats-spot-the-PRM00447/

Main

Disciplinary knowledge

Pattern Seeking

Working scientifically objectives: Gather and record data to help in answering questions.

Today we are zoologists.

Show picture of a woodlouse.

What kinds of habitats do woodlice live in? Consider places in the locality where we could look for woodlice.

Decide whether to tally woodlice in different places or broaden to any invertebrates.

Support children to set up a tally chart or map ready to record their results.

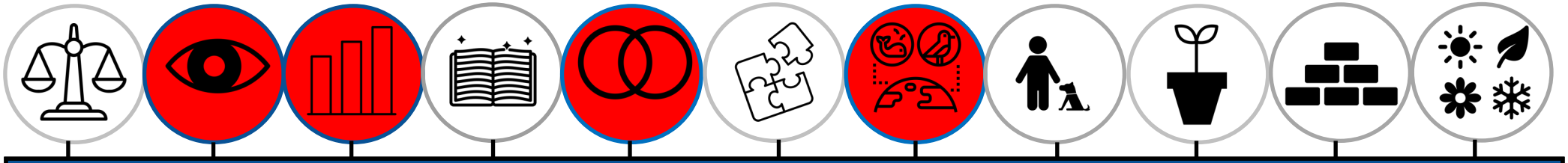
Full plan: Woodlice habitat

Plenary / assessment.

Present findings, what pattern was there in the data? Where do woodlice prefer to live? Why do they prefer living in these habitats?

Year 2: Living Things and Their Habitats

SCIENCE CONTEXT: Biology



Theme 3: Food, glorious food!

Starter

Recap

What's going on? https://explorify.uk/en/activities/whats-going-on/spf-natural

Main

Watch the Science Farm – Farm Food Chain Video: https://education.nfuonline.com/ScienceFarm

Recap the video: What were the animals that we saw? Did we learn any new words? Split the children into mixed ability groups of 3 and give each team a grass headband and a cow mask (the 3rd mask-less team member is the human!). Challenge each group to position themselves in the correct order.

Discuss the 4 words below: Producer – Most producers are plants they get their energy from the sun Herbivore – Herbivores are animals that only eat plants Omnivore – Omnivores eat plants and other animals Carnivore – Carnivores eat only other animals are their main diet. 1 minute energiser - Children still with masks have to stand up when the teacher calls their classification out .

Plenary / assessment.

Each child creates a paper food chain using resource sheet. Children independently decide which order the food chain should be linked and create their food chain. For those that would find the above activity difficult: Children identify and write the animals already mentioned in the introduction and pictured on the chain links with help from an adult. For those that would find the above activity too easy: As well as completing the new food chain children also add classifications to each link.

Planning + resources from: https://education.nfuonline.com/ScienceFarm

Follow the food chains tab.

Complete KWL grid.