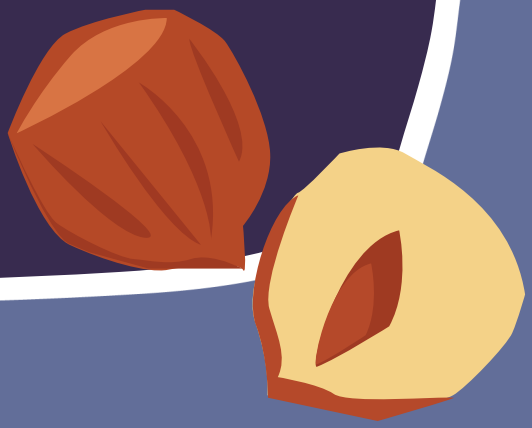
Winchester Science Centre
By Wonderseekers

Habitat Heroes

Pre-visit resources for KS1



Habitat Heroes KS1 Pre-visit Activities

These activities are designed to be completed before you visit for your workshop. We recommend working through the activities from 1 to 4 but you are welcome to pick and choose depending on your group's prior knowledge.

Through these activities we will be exploring the importance of habitats to animal species and the relationship between them. We will be encouraging the exploration of your school grounds to look for signs of habitats and using games to learn about herbivores and carnivores.

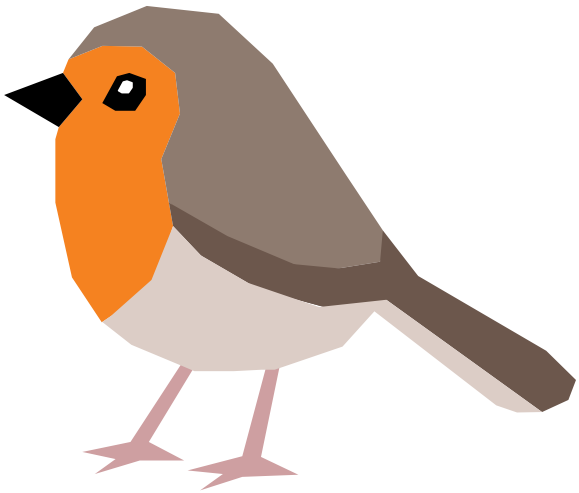
Teacher Guide:

Learning Objectives:

- To understand why habitats are important to different species.
- To explore the relationship between producers and consumers in food chains.

Key Science:

Through these activities we will be exploring the importance of habitats to animal species and the relationship between them. Habitats provide the shelter, food, water and space for different creatures providing all the different needs a species will have. Animal species will have similar needs, but often use different resources to meet these needs. This leads to predator and prey relations between species, which we can organise into food chains. Food chains help us identify the movement of energy in a habitat from the sun, to plants (which are producers) and then onto animal species (the consumers).



Curriculum links:

Animals including humans:

- Identify and name a variety of common animals that are carnivores, herbivores and omnivores.

Living things and their habitats:

- 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.
- Identify and name a variety of plants and animals in their habitats, including micro-habitats.
- 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.

Key Definitions:

Habitat – The place where something lives. Its natural home which gives it everything it needs. For a plant, that's light, air, water, soil. For an animal its shelter, water, food, space.
Biodiversity – The mix of living things in an area. High biodiversity means there are lots of different kinds of living things.
Ecosystem – Living things and the environment where they live.
Human spaces – Areas made by humans for humans, often with little thought for wildlife
Season – there are four seasons which have different weather and light patterns: spring (warming up), summer (warm and dry, lighter), autumn (cooling down), winter (cold, darker).
Herbivore – An animal which eats only plants.
Carnivore – An animal which eats only other animals.
Omnivore – An animal which eats plants and animals.
Producer – Something which makes its own food from the sun's energy e.g. a plant.
Consumer – Something that eats something else to survive – these can be primary or
Predator – something which eats other animals.
Prey – Something eaten by animals.
Food chain – A series of living things, each depending on the next for food e.g. plant, caterpillar, bird.
Physical environment – The soil, rocks, water, weather, air, human structures, etc.

Activity 1: Human habitat

Overview

This activity introduces students to the concept of a habitat by exploring the things that humans need to be able to survive.

You will need

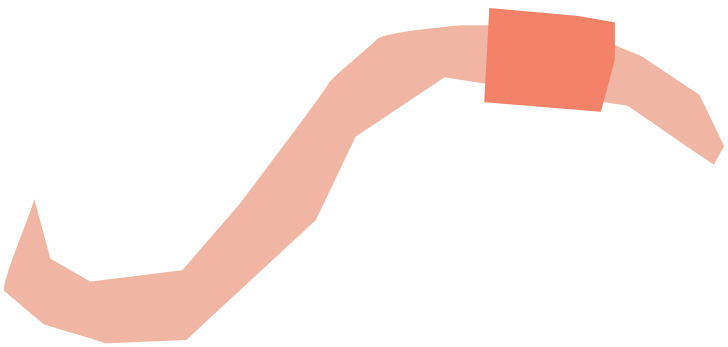
- Paper.
- Pencils.
- Colouring pens/ pencils.

Instructions

1. Think about what would make your ideal home. What things do you need to survive?
2. Make a list of all the things in your home that are important for you to be able to be comfortable and survive, e.g. you have water to drink coming out of your taps.
3. Is there anything you would add to your home to make it even more comfortable? Maybe you'd like a food machine that makes anything you like when you ask it or a fan to keep you cool in the summer.
4. Imagine you can only live in your home, you can't go outside and visit anywhere. Draw your ideal home and label all the features.
5. Has everyone drawn the same thing? Compare what is the same in your homes. These things are the essential things needed for a human to survive, things such as shelter, air, water, food, nutrients and companionship.
6. Plants and animals also need some key things to survive. All of these things are found in their habitats.

Take it further

Draw a habitat for a pet e.g. cat, dog, hamster. What are they going to need to survive?



Activity 2: Habitat evidence (10-15 minutes)

Overview

Explore the area around your school, to discover what might be living there and the key features of the different habitats you find.

You will need

Printed habitat evidence sheets (on page 8).

Instructions

1. Hand out the habitat evidence sheets to the students.
2. Explain the boundaries for the activity so the students know where they are allowed to go.
3. Have a look for the items on the list and share any interesting finds with the group as you explore.
4. Feedback with the group at the end to find out why they think each thing may be good for a habitat.
5. What benefits might a particular feature have to different users of the habitat?
6. What need do each of the things meet for different animals found in those habitats? e.g. grass could be food for a rabbit or a log could be shelter for a woodlouse.

Activity 3: Herbivore, Omnivore, Carnivore

Overview

Discover what herbivores, omnivores and carnivores eat, discuss the variety in their diets and consider what animals are unable to eat.

You will need

- Printed game cards (pages 9-14).

Instructions

1. Discuss with the class the definitions of herbivores, omnivores and carnivores and give some examples
2. Print out the activity cards below. Lay out a 6x6 grid with the cards face down.
3. Split the class into 3 groups: herbivores, omnivores and carnivores.
4. Each card has an image and details written on it. Some can be eaten by herbivores, carnivores or omnivores and some can't be eaten at all.
5. Each team takes it in turns to turn over a card. If there is something they would be able to eat on the card they can bring it back to the group. If they can't eat it, they have to turn it back over and leave it where it is.
6. This is repeated for 1 minute or until all of the cards that can be are taken.
7. Count up the cards for each group. Consider why some groups might have more than others. Are there any groups that have cards they wouldn't be able to eat?

Take it further

Switch round the groups, shuffle the cards and play the game again. Or spread the cards over a wide area and play the game as a relay race.

Activity 4: Food chain game

Overview

This game shows how energy is transferred across a food web and how species can be interdependent on each other.

You will need

- Printed food chain game cards (pages 15-18)

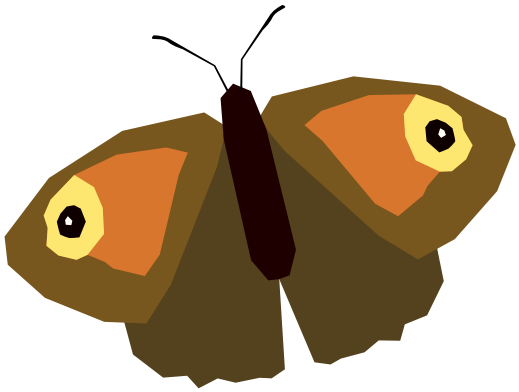
Instructions

There are 4 different food chain examples so the game can be played multiple times.

1. Select a set of food chain cards.
2. Randomly lay out the four cards on the floor face up.
3. Ask the students to come up with an action for each of the cards. For example, the sun could be stretching your arms out as though you are waking up. Or for a hedgehog you could use your fingers as the spines on your back.
4. Next discuss the order the cards should be in. Energy comes from the sun, so the sun must be first. The energy is used by plants to grow so a plant must be next. The plants are then eaten by an animal and the animal is eaten by another animal.
5. As a class do all the actions for the entire food chain.
6. Next spread one set of cards upside down on the floor making sure there are enough for everyone to have a card.
7. Each student picks up a card and acts out what is on it.
8. The students then have to order themselves into food chains without speaking. They can find the three other people they need by looking at everyone's actions.

Take it further

Introduce a new set of cards and decide on new actions. Turn the cards upside down on the floor and play the game without discussing the order of the food chain.

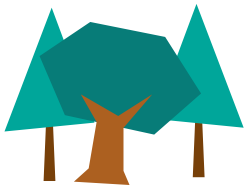


My habitat evidence checklist

Grass

Found ☐

Trees

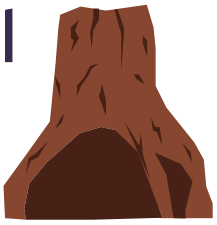


Found ☐

Rotten wood

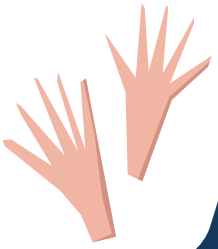
Found ☐

An animal home



Found ☐

Animal footprint



Found ☐

Minibeasts

Found ☐

A puddle

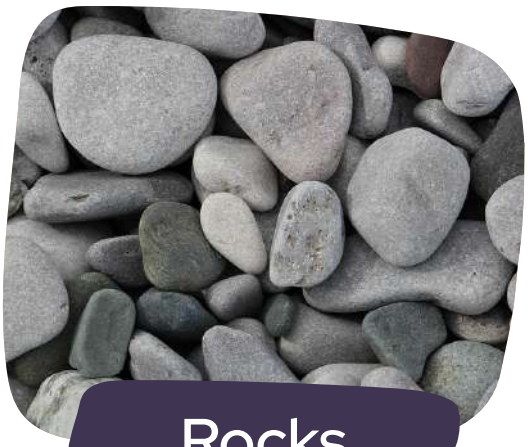
Found ☐

A feather

Found ☐

Cards for Activity 3: Herbivore, Omnivore, Carnivore

Pens



Rocks

Metal can

Chocolate

Plastic

T-shirt

Crab

Salmon

Snail

Ant

Badger

Mole

Fox

Caterpillar

Cow

Robin

Sea bass

Hedgehog

Gorse

Blackberries

Worms

Basil

Rabbit

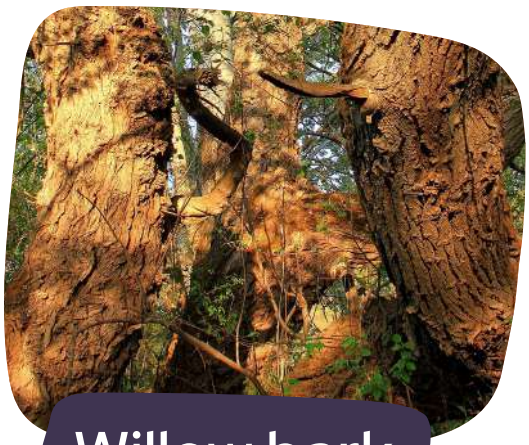
Slug

Daisies

Oak leaves

Seeds

Cabbages



Willow bark

Peas

Stinging Nettles

Algae

Hazelnuts

Grass

Seaweed

Dead Leaves

Cards for Activity 4: Food chain game

Set 1:

Sun

Stinging Nettles

Caterpillar

Robin

Cards for Activity 4: Food chain game

Set 2:

Cards for Activity 4: Food chain game

Set 3:

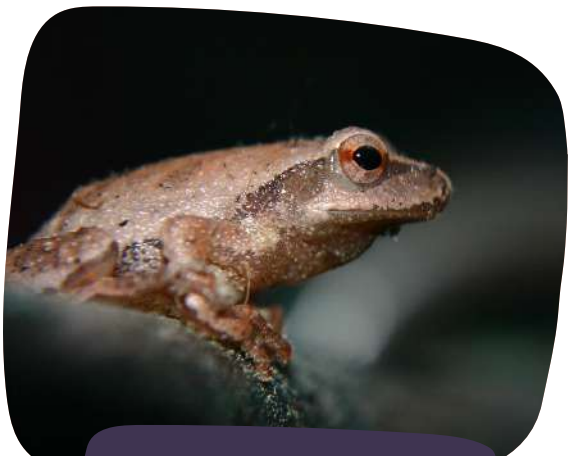
Cards for Activity 4: Food chain game

Set 4:

Sun

Pondweed

Pond Snail



Frog