ADVENT TERM – CYCLE A SCIENCE – Year 2 and Year 1 - Medium Term Planning – BIOLOGY: LIVING THINGS AND THEIR HABITATS		
LESSON 1	**LESSON 2**	**LESSON 3**
Recap & retrieval:	**Recall & retrieval:** • Living things carry out the seven life processes.	**Recall & retrieval:** • Living things carry out the seven life processes. Habitats provide everything living things need to survive, including food, water, shelter and space.
LEARNING INTENTION: **Year 1** To know that things are living, dead or never been alive with support. **Year 2** To know that things are living, dead or never been alive. **Skills: Disciplinary Knowledge** **Year 1** Identify and group things that are living, dead or never been alive with support. **Year 2** Compare and group things that are living, dead or have never been alive. **Aim:** Develop scientific knowledge and conceptual understanding through the specific discipline of biology.	**LEARNING INTENTION:** **Year 1** To know that most living things live in a habitat to which they are suited with support. **Year 2** To know that most living things live in a habitat to which they are suited. **Skills: Disciplinary Knowledge** **Year 1** Identify a range of local habitats and name what the habitats provide for the things that live there. **Year 2** Describe a range of local habitats and what all habitats provide for the things that live there. **Aim:** Develop understanding of the nature, processes and methods of science through different types of science enquiries that help them to answer scientific questions about the world around them.	**LEARNING INTENTION:** **Year 1** To know that plants and animals in a habitat can be identified with support. **Year 2** To know that plants and animals in a habitat can be identified. **Skills: Disciplinary Knowledge** **Year 1** Label and name a variety of plants and animals in a range of habitats. **Year 2** Identify and name a variety of plants and animals in a range of habitats. **Aim:** Develop understanding of the nature, processes and methods of science through different types of science enquiries that help them to answer scientific questions about the world around them.
Key Vocabulary: living, non-living, dead, movement, respiration, sensitivity, nutrition, excretion, reproduction, growth	**Key Vocabulary:** habitat, air, oxygen, water, soil, temperature, plants, animals, living, non-living, interdependent	**Key Vocabulary:** habitat, invertebrates, backbone, worms, molluscs, crustacean, insect, arachnid, myriapod.

Key Knowledge: **Child:** • Living things carry out the seven life processes. • Non-living things include things that have lived and are now dead, such as dead plants and animals. • Things that have never lived, such as rocks and water, do not carry out any life processes. **Teacher:** • The seven life processes are moving, breathing, using their senses, feeding, getting rid of waste, having offspring and growing.	**Key Knowledge:** **Child:** • A habitat is a place where plants and animals live. • Habitats contain both living and non-living things. • Habitats provide everything living things need to survive, including food, water, shelter and space. **Teacher:** • Habitats have non-living parts, such as air, water, soil and temperature, and living parts, including plants and animals • Each habitat varies in its living and non-living parts, and they are interdependent. • Local habitats include parks, woodland and gardens. • Habitats beyond the locality include beaches, rainforests, deserts, oceans and mountains.	**Key Knowledge:** **Child:** • Unknown plants and animals in a habitat can be identified by observing their physical features. • Invertebrates are animals without a backbone. **Teacher:** • Objects, materials and living things can be looked at, compared and grouped according to their features. • Invertebrates include worms, molluscs, crustaceans, insects, arachnids and myriapods.

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LESSON 4	**LESSON 5**	**LESSON 6**
Recall & retrieval: • Living things carry out the seven life processes. • Habitats provide everything living things need to survive, including food, water, shelter and space. • Unknown plants and animals in a habitat can be identified by observing their physical features.	**Recall & retrieval:** • Living things carry out the seven life processes. • Habitats provide everything living things need to survive, including food, water, shelter and space. • Unknown plants and animals in a habitat can be identified by observing their physical features. • Microhabitats are small habitats within a larger habitat.	**Recall & retrieval:** • Living things carry out the seven life processes. • Habitats provide everything living things need to survive, including food, water, shelter and space. • Unknown plants and animals in a habitat can be identified by observing their physical features. • Microhabitats are small habitats within a larger habitat. • Animals need water, food, air and shelter to survive.
LEARNING INTENTION: **Year 1** To know that a microhabitat is a small area which differs from the surrounding habitat with support. **Year 2** To know that a microhabitat is a small area which differs from the surrounding habitat **Skills: Disciplinary Knowledge** **Year 1** Identify and group a variety of plants and animals in a range of habitats with support **Year 2** Identify and name a variety of plants and animals in a range of habitats. **Aim:** Develop scientific knowledge and conceptual understanding through the specific discipline of biology.	**LEARNING INTENTION:** **Year 1** To know that animals need food, water, air and shelter. **Year 2** To know that animals need food, water, air and shelter to survive. **Skills: Disciplinary Knowledge** **Year 1** Use a range of methods (tables, charts and/or diagrams) to gather and record simple data with some accuracy and support. **Year 2** Use a range of methods (tables, charts, diagrams and Venn diagrams) to gather and record simple data with some accuracy. **Aim:** Develop understanding of the nature, processes and methods of science through different types of	**LEARNING INTENTION:** **Year 1** To know that Richard Sidney Richmond Fitter was a naturist and conservationist. **Year 2** To know that Richard Sidney Richmond Fitter was a naturalist and conservationist. **Skills: Disciplinary Knowledge** **Year 1** To recognise the work of Richmond as he made plans for nature reserves, as damaged areas were rebuilt with support. **Year 2** To recognise the work of Richmond as he made plans for nature reserves, as damaged areas were rebuilt. **Aim:** Be equipped with the scientific knowledge required to understand the uses and implications of science, today and for the future.

	science enquiries that help them to answer scientific questions about the world around them.	
Key Vocabulary: Microhabitat, small, larger, habitat, rock pool, pond, hedgerow, logs, stones, variety, light, dark, damp, wet, dry, features	**Key Vocabulary:** Food, water, air, oxygen, shelter, protection, survive, habitat, microhabitat, carnivore, herbivore, omnivore, plants, animals	**Key Vocabulary:** nature reserves, naturalist, environment. conservation, identification, diversity
Key Knowledge: **Child:** • Microhabitats are small habitats within a larger habitat. • A microhabitat is a habitat for very small creatures. • Examples of microhabitats are rock pools, ponds, hedgerows and under logs and stones. **Teacher:** • Microhabitats have different living and non-living parts compared with the larger habitat. • A microhabitat has its own conditions of temperature and light. • It has its own characteristic species.	**Key Knowledge:** **Child:** • Animals need water, food, air and shelter to survive. • Their habitat must provide all these things. • Animals eat food that is found in their habitat. **Teacher:** • They need food and water for energy and growth. • They need air to breathe. • Animals need shelter for protection from weather or dangers. • They need space to grow and reproduce. • Herbivores eat plants. • Carnivores eat animals. • Omnivores eat plants and animals.	**Key Knowledge:** **Child:** • Richard Sidney Richmond Fitter was a naturalist. • Fitter wrote books that were easy for a reader to use to identify birds and wild plants. • Fitter noted how wildlife and plant diversity were being destroyed by human activities. **Teacher:** • He was born on March 1st 1913 in London and died on September 3rd 2005 in Cambridge aged 92. • He was a pioneer in nature conservation in England and around the world. • The reason for this success was his unique way of organising birds: instead of using scientific classifications, he organised them by habitat and size, which was much easier for readers to understand. • When Fitter moved on to write guides to wild plants, he took a similar user-friendly approach, arranging flowers by colour instead of species.

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LESSON 7	**LESSON 8**	**LESSON 9**
Recall & retrieval: • Living things carry out the seven life processes. • Habitats provide everything living things need to survive, including food, water, shelter and space. • Unknown plants and animals in a habitat can be identified by observing their physical features. • Microhabitats are small habitats within a larger habitat. • Animals need water, food, air and shelter to survive. • Fitter wrote books that were easy for a reader to use to identify birds and wild plants.	**Recall & retrieval:** • Living things carry out the seven life processes. • Habitats provide everything living things need to survive, including food, water, shelter and space. • Unknown plants and animals in a habitat can be identified by observing their physical features. • Microhabitats are small habitats within a larger habitat. • Animals need water, food, air and shelter to survive. • Fitter wrote books that were easy for a reader to use to identify birds and wild plants. • Worms convert organic material such as fruit and vegetable scraps, garden greens, or animal manure into valuable compost.	**Recall & retrieval:** • Living things carry out the seven life processes. • Habitats provide everything living things need to survive, including food, water, shelter and space. • Unknown plants and animals in a habitat can be identified by observing their physical features. • Microhabitats are small habitats within a larger habitat. • Animals need water, food, air and shelter to survive. • Fitter wrote books that were easy for a reader to use to identify birds and wild plants. • Worms convert organic material such as fruit and vegetable scraps, garden greens, or animal manure into valuable compost. • Food chains show how living things depend on one another for food.
LEARNING INTENTION: **Year 1** To know what a wormery is. **Year 2** To know that a wormery is a way of recycling kitchen waste to make compost. **Skills: Disciplinary Knowledge** **Year 1** Describe how animals, including humans need water, food, air and shelter to survive. **Year 2** Explain how animals, including humans, need water, food, air and shelter to survive. **Aim:**	**LEARNING INTENTION:** **Year 1** To know that living things depend on one another for food with support **Year 2** To know that living things depend on one another for food **Skills: Disciplinary Knowledge** **Year 1** Record simple food chains to describe how living things depend on each other as a source of food. **Year 2** Interpret and construct simple food chains to describe how living things depend on each other as a source of food.	**LEARNING INTENTION:** **Year 1** To know that prey animals can avoid capture by predators. **Year 2** To know that prey animals have different ways to avoid capture by predators. **Skills: Disciplinary Knowledge** **Year 1** Observe living things, sorting and grouping them based on their features. **Year 2** Observe living things, sorting and grouping them based on their features and explaining their reasoning.

Be equipped with the scientific knowledge required to understand the uses and implications of science, today and for the future.	**Aim:** Develop scientific knowledge and conceptual understanding through the specific discipline of biology.	**Aim:** Develop scientific knowledge and conceptual understanding through the specific discipline of biology.
Key Vocabulary: microhabitat, food, water, worms, wormery, organic, waste, convert, compost	**Key Vocabulary:** Food chain, producer, consumer, predator**,** prey, plant, animal, depend, food.	**Key Vocabulary:** Predator, prey, camouflage, adaptation, attack, protection,
Key Knowledge: **Child:** • A wormery is a container in which composting worms live. • Worms convert organic material such as fruit and vegetable scraps, garden greens, or animal manure into valuable compost. **Teacher:** • The main considerations are that a wormery should have a lid that protects it from the elements and from pests, there should be good drainage, and if possible a good degree of ventilation. • A wormery can be kept indoors or outdoors, but ideally in a shady spot as the heat and drying effect of the sun can be very injurious to the worms.	**Key Knowledge:** **Child:** • Food chains show how living things depend on one another for food. • A food chain always starts with a producer, followed by consumer(s) and ends with a predator. • Arrows in a food chain mean 'is eaten by.' • Plants are eaten by animals, some of which are eaten by other animals. • Predators are animals that eat other animals. • Prey are animals that are eaten. **Teacher:** • A food chain shows how energy from food is transferred from plants to animals in a habitat. • Plants always start a food chain because they are producers that make their own food using sunlight. • Energy from food is transferred from plants to animals, and between animals, within a habitat.	**Key Knowledge:** **Child:** • Animals use different methods to avoid capture. • Some animals use speed to outrun predators. • Some animals have body parts that can be used as weapons. • Some animals use camouflage to blend into their surroundings and hide from predators. **Teacher:** • Some prey animals use mimicry to look like other, more dangerous animals. • Some animals use bright colours to warn predators that they are poisonous. • Some animals use body parts to shield themselves from attack.

ADVENT TERM – CYCLE A
SCIENCE – Year 2 and Year1 - Medium Term Planning – BIOLOGY: ANIMALS, INCLUDING HUMANS

LESSON 10	LESSON 11	LESSON 12
Recall & retrieval: • Living things carry out the seven life processes. • Habitats provide everything living things need to survive, including food, water, shelter and space. • Unknown plants and animals in a habitat can be identified by observing their physical features. • Microhabitats are small habitats within a larger habitat. • Animals need water, food, air and shelter to survive. • Fitter wrote books that were easy for a reader to use to identify birds and wild plants. • Worms convert organic material such as fruit and vegetable scraps, garden greens, or animal manure into valuable compost. • Food chains show how living things depend on one another for food. Animals use different methods to avoid capture.	**Recall & retrieval:** • Living things carry out the seven life processes. • Habitats provide everything living things need to survive, including food, water, shelter and space. • Unknown plants and animals in a habitat can be identified by observing their physical features. • Microhabitats are small habitats within a larger habitat. • Animals need water, food, air and shelter to survive. • Fitter wrote books that were easy for a reader to use to identify birds and wild plants. • Worms convert organic material such as fruit and vegetable scraps, garden greens, or animal manure into valuable compost. • Food chains show how living things depend on one another for food. • Animals use different methods to avoid capture. • Plants have adaptations that protect them from being eaten by animals.	**Recall & retrieval:** • Living things carry out the seven life processes. • Habitats provide everything living things need to survive, including food, water, shelter and space. • Unknown plants and animals in a habitat can be identified by observing their physical features. • Microhabitats are small habitats within a larger habitat. • Animals need water, food, air and shelter to survive. • Fitter wrote books that were easy for a reader to use to identify birds and wild plants. • Worms convert organic material such as fruit and vegetable scraps, garden greens, or animal manure into valuable compost. • Food chains show how living things depend on one another for food. • Animals use different methods to avoid capture. • Plants have adaptations that protect them from being eaten by animals. • Habitats beyond the locality include beaches, rainforests, deserts, oceans and mountains.
LEARNING INTENTION: **Year 1** To know that plants have adaptations that protect them. **Year 2** To know that plants have adaptations that protect them from being eaten by animals. **Skills: Disciplinary Knowledge** **Year 1** Observe living things, sorting and grouping them based on their features.	**LEARNING INTENTION:** **Year 1** To know that all habitats provide support. **Year 2** To know that all habitats provide the support all things that live there to survive. **Skills: Disciplinary Knowledge** **Year 1** Identify a range of local habitats and habitats beyond their locality (beaches, rainforests, deserts,	**LEARNING INTENTION:** **Year 1** To know that a bug hotel can help wildlife. **Year 2** To know that a bug hotel can be made to provide shelter for wildlife. **Skills: Disciplinary Knowledge** **Year 1** Describe how animals, including humans, need water, food, air and shelter to survive. **Year 2**

Year 2 Observe living things, sorting and grouping them based on their features and explaining their reasoning. **Aim:** Develop scientific knowledge and conceptual understanding through the specific discipline of biology.	oceans and mountains) and list what all habitats provide for the things that live there. **Year 2** Describe a range of local habitats and habitats beyond their locality (beaches, rainforests, deserts, oceans and mountains) and what all habitats provide for the things that live there. **Aim:** Develop understanding of the nature, processes and methods of science through different types of science enquiries that help them to answer scientific questions about the world around them.	Explain how animals, including humans, need water, food, air and shelter to survive. **Aim:** Be equipped with the scientific knowledge required to understand the uses and implications of science, today and for the future.
Key Vocabulary: plant, adapt, adaptation, protect, protection, predator, spine, thorn, hair, sting, chemicals, camouflage	**Key Vocabulary:** habitat, food source, water source, adaptation, food chain, similarities, differences, prey, predator, plant, animal, shelter	**Key Vocabulary:** invertebrates, insects, microhabitat, habitat, shelter, natural, wildlife, biodiversity, damp, dry, spaces
Key Knowledge: **Child:** • Plants have adaptations that protect them from being eaten by animals. • Plants use spines, thorns, camouflage and stings to protect them from being eaten. • Some produce poisonous chemicals. **Teacher:** • Some plants grow sharp spines. • Some plants have thorns on their stems. • Some plants have hairs covering their stems and leaves to stop insects from eating them. • Some plants have prickly leaves. • Some have stings. • Other plants camouflage themselves so animals do not see them as food.	**Key Knowledge:** **Child:** • Local habitats include parks, woodland and gardens. • Habitats beyond the locality include beaches, rainforests, deserts, oceans and mountains. **Teacher:** • All living things live in a habitat to which they are suited and it must provide everything they need to survive.	**Key Knowledge:** **Child:** • The best bug hotels have lots of small spaces in different shapes and sizes. • They are made from different materials. • Some parts should be nice and dry inside, and other parts a bit damp. **Teacher:** • Bug hotels are generally made from reclaimed materials or natural objects.

• Other plants provide homes for other animals that provide protection from predators.		
Assessment Cumulative Quiz. Retrieval Practice.		