

enrich
Education
**ACTIVE SCIENCE &
FIELDWORK**

Resource Pack



The **enrich Education** 'Active Science & Fieldwork Resource Pack' offers a unique way to support the delivery of the Science curriculum in KS1 and KS2 by engaging children in fun, physical games and investigations that can be carried out both inside the school and in the outdoor environment. All the activities involve children developing and practising skills that are a key part of the National Curriculum's definition of 'Working Scientifically'. These include: asking questions; identifying and classifying; noticing patterns and relationships; comparing, sorting and grouping; observing, including observing changes over time; gathering and recording data; exploring the local environment. Whilst each activity can be directly linked to specific statements from National Curriculum programmes of study, they can also be used to introduce a topic which will then be explored at a higher level, or to revise content that has been covered in a previous year.

The activities within the pack also support other areas of the National Curriculum. In Physical Education, they involve children in 'co-operative physical activities', 'team games' and 'outdoor and adventurous activity'. For Geography, the activities include 'identifying seasonal weather patterns', 'using simple fieldwork and observational skills' and following directions and locating objects, using a map.

Outdoor activities can be carried out in the school grounds, but can also be easily transferred to other local environments, such as a local park or green space. In addition, they provide excellent opportunities to include science activities within class trips.



Everyday materials



Plants



Seasonal changes



Earth and space



Living things and
their habitats



Animals, including
humans

Overview of Activities, Linked to National Curriculum Programmes of Study

Activity	National Curriculum	What specific knowledge will children learn / revise?
Material Scavenger Hunt	<p>Year 1 - Everyday materials</p> <ul style="list-style-type: none"> Distinguish between an object and the material from which it is made Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock Describe the simple physical properties of a variety of everyday materials Compare and group together a variety of everyday materials on the basis of their simple physical properties. <p>Year 2 - Everyday materials</p> <ul style="list-style-type: none"> Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching. <p>Year 5 - Everyday materials</p> <ul style="list-style-type: none"> Compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets 	<ul style="list-style-type: none"> Types of everyday materials (e.g. wood, stone, glass, metal, plastic). What are the properties of these materials? (e.g. Do they stretch, bend? Are they rough/smooth, dull/shiny, waterproof/not waterproof, opaque/transparent, absorbent/not absorbent?)
Journey Sticks	<p>Year 1 - Plants</p> <ul style="list-style-type: none"> Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees <p>Year 2 - Living Things and Their Habitats</p> <ul style="list-style-type: none"> Identify and name a variety of plants and animals in their habitats, including micro-habitats 	<ul style="list-style-type: none"> Characteristics of the leaves of common trees (e.g. size, shape, colour, rough/smooth edge, spiky?) Names of trees found in the children's local environment. Identifying species of trees in the local environment by their leaves.
Tree Treasure Hunt	<p>Year 1 - Plants</p> <ul style="list-style-type: none"> Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees <p>Year 2 - Living Things and Their Habitats</p> <ul style="list-style-type: none"> Identify and name a variety of plants and animals in their habitats, including micro-habitats 	<ul style="list-style-type: none"> Characteristics of the leaves of common trees (e.g. size, shape, colour, rough/smooth edge, spiky?) Names of trees found in the children's local environment. Identifying species of trees in the local environment by their leaves.
Leaf Bingo	<p>Year 1 - Plants</p> <ul style="list-style-type: none"> Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees <p>Year 2 - Living Things and Their Habitats</p> <ul style="list-style-type: none"> Identify and name a variety of plants and animals in their habitats, including micro-habitats 	<ul style="list-style-type: none"> What are the characteristics of the leaves of common trees (e.g. size, shape, colour, rough/smooth edge, spiky?)
Tree and Plant Structure	<p>Year 1 - Plants</p> <ul style="list-style-type: none"> Identify and describe the basic structure of a variety of common flowering plants, including trees. <p>Year 3 - Plants</p> <ul style="list-style-type: none"> Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers 	<ul style="list-style-type: none"> Identify the component parts of the basic structure of plants/trees (roots, trunk/stem, branches, flowers, fruit, leaves) What is the function of each part?

<p>Tree Structure Team Build</p>	<p>Year 1 - Plants</p> <ul style="list-style-type: none"> Identify and describe the basic structure of a variety of common flowering plants, including trees. <p>Year 3 - Plants</p> <ul style="list-style-type: none"> Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers 	<ul style="list-style-type: none"> Identify the component parts of the basic structure of plants/trees (roots, trunk/stem, branches, flowers, fruit, leaves)
<p>Tree Water</p>	<p>Year 3 - Plants</p> <ul style="list-style-type: none"> Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers Investigate the way water is transported within plants 	<ul style="list-style-type: none"> Identify the component parts of the basic structure of plants/trees (roots, trunk/stem, branches, flowers, fruit, leaves) What is the function of each part? How do plants take in water, transport water internally
<p>Pollen Grab</p>	<p>Year 3 - Plants</p> <ul style="list-style-type: none"> Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal. 	<ul style="list-style-type: none"> The part that pollination plays in the life cycle of plants The part that flowers play in attracting bees The role of bees in the pollination process
<p>Planet Top Trumps</p>	<p>Year 5 - Earth and Space</p> <ul style="list-style-type: none"> Describe the movement of the Earth, and other planets, relative to the Sun in the solar system 	<ul style="list-style-type: none"> The names of the eight planets of the Solar System. Some of the characteristics of the planets (e.g. size, temperature, mass)
<p>Seasonal</p>	<p>Year 1 - Seasonal Changes</p> <ul style="list-style-type: none"> Observe changes across the four seasons Observe and describe weather associated with the seasons and how day length varies. 	<ul style="list-style-type: none"> What are the four seasons? How does the weather change with each season?
<p>Seasonal changes journey sticks</p>	<p>Year 1 - Seasonal Changes</p> <ul style="list-style-type: none"> observe changes across the four seasons 	<ul style="list-style-type: none"> What are the four seasons? How plants respond to seasonal changes
<p>Animal Grouping</p>	<p>Year 1 – Animals, including humans</p> <ul style="list-style-type: none"> Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals Identify and name a variety of common animals that are carnivores, herbivores and omnivores <p>Year 4 – Living Things and their Habitats</p> <ul style="list-style-type: none"> Recognise that living things can be grouped in a variety of ways 	<ul style="list-style-type: none"> Identify and name a variety of common animals Characteristics of categories of animals, including mammals, birds, reptiles, amphibians and fish What are carnivores, herbivores, omnivores?
<p>Animal Grouping Hunt</p>	<p>Year 1 – Animals, including humans</p> <ul style="list-style-type: none"> Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals Identify and name a variety of common animals that are carnivores, herbivores and omnivores <p>Year 4 – Living Things and their Habitats</p> <ul style="list-style-type: none"> Recognise that living things can be grouped in a variety of ways 	<ul style="list-style-type: none"> Identify and name a variety of common animals What are carnivores, herbivores, omnivores?
<p>Animal Key Class Dash</p>	<p>Year 1 – Animals, including humans</p> <ul style="list-style-type: none"> Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals Identify and name a variety of common animals that are carnivores, herbivores and omnivores <p>Year 4 – Living Things and their Habitats</p> <ul style="list-style-type: none"> Recognise that living things can be grouped in a variety of ways 	<ul style="list-style-type: none"> Identify and name a variety of common animals How can animals be classified according to their characteristics?

	<ul style="list-style-type: none"> Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment 	
Animal Guess Who	<p>Year 4 - Living Things and their Habitats</p> <ul style="list-style-type: none"> Recognise that living things can be grouped in a variety of ways Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment 	<ul style="list-style-type: none"> How can animals be classified according to their characteristics
Food Chain Chase	<p>Year 2 - Living Things and their Habitats</p> <ul style="list-style-type: none"> 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. <p>Year 3 - Animals, including humans</p> <ul style="list-style-type: none"> Identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat. 	<ul style="list-style-type: none"> How plants and animals obtain their food What is a food chain? What is meant by 'predator', 'prey'
Food Chain Dash	<p>Year 2 - Living Things and their Habitats</p> <ul style="list-style-type: none"> 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. <p>Year 3 - Animals, including humans</p> <ul style="list-style-type: none"> Identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat. 	<ul style="list-style-type: none"> How plants and animals obtain their food What is a food chain?
Habitat Build	<p>Year 2 - Living Things and their Habitats</p> <ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> What is a habitat? What do habitats provide for animals? (food, shelter, protection etc) What is a micro-habitat?
Mini-beast and Habitat Hunt	<p>Year 2 - Living Things and their Habitats</p> <ul style="list-style-type: none"> 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 <p>Year 4 - Living Things and their Habitats</p> <ul style="list-style-type: none"> Recognise that living things can be grouped in a variety of ways 	<ul style="list-style-type: none"> What is a habitat? What do habitats provide for animals? (food, shelter, protection etc) What is a micro-habitat? The names and classifications of common mini-beasts
Mini-beast Top Trumps	<p>Year 2 - Living Things and their Habitats</p> <ul style="list-style-type: none"> Identify and name a variety of plants and animals in their habitats, including micro-habitats <p>Year 4 - Living Things and their Habitats</p> <ul style="list-style-type: none"> Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment 	<ul style="list-style-type: none"> Characteristics of common mini-beasts

<p>Living and Non-Living</p>	<p>Year 1 - Everyday Materials</p> <ul style="list-style-type: none"> Describe the simple physical properties of a variety of everyday materials Compare and group together a variety of everyday materials on the basis of their simple physical properties. <p>Year 2 - Living Things and Their Habitats</p> <ul style="list-style-type: none"> Explore and compare the differences between things that are living, dead, and things that have never been alive 	<ul style="list-style-type: none"> Categories of materials: <ul style="list-style-type: none"> Things that are alive Things that are dead, but were once alive Things that were never alive What are the 'seven life processes'? (movement, respiration, reproduction, sensitivity to the environment, nutrition, growth and excretion)
<p>Face Stations</p>	<p>Year 1 - Animals, including humans</p> <ul style="list-style-type: none"> Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense. 	<ul style="list-style-type: none"> What are the names of the parts of a human face? What are the five senses? Which part of the human face is associated with each sense?
<p>Face Team Build</p>	<p>Year 1 - Animals, including humans</p> <ul style="list-style-type: none"> Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense. 	<ul style="list-style-type: none"> Names of the main body parts (including head, arms, face, ears, eyes, hair, mouth, teeth) What are the five senses? Which part of the body is associated with each sense?
<p>Skeleton Relay</p>	<p>Year 1 - Animals, including humans</p> <ul style="list-style-type: none"> Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense. <p>Year 3 - Animals, including humans</p> <ul style="list-style-type: none"> Identify that humans and some other animals have skeletons and muscles for support, protection and movement. 	<ul style="list-style-type: none"> Names of the main body parts (including head, neck, arms, body, elbows, hands, legs, knees and feet)
<p>Skeleton Treasure Hunt</p>	<p>Year 1 - Animals, including humans</p> <ul style="list-style-type: none"> Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense. <p>Year 3 - Animals, including humans</p> <ul style="list-style-type: none"> Identify that humans and some other animals have skeletons and muscles for support, protection and movement. 	<ul style="list-style-type: none"> Names of the main body parts (including head, neck, arms, body, elbows, hands, legs, knees and feet)
<p>Body Build Scavenge</p>	<p>Year 1 - Animals, including humans</p> <ul style="list-style-type: none"> Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense. <p>Year 3 - Animals, including humans</p> <ul style="list-style-type: none"> Identify that humans and some other animals have skeletons and muscles for support, protection and movement. 	<ul style="list-style-type: none"> Names of the main body parts (including head, neck, arms, body, elbows, hands, legs, knees and feet)