

Curriculum Links Reference Book - Key Stages 1 & 2

This booklet runs alongside the curriculum links guidance for all led activities. The information below provides more in depth information about more specific links. In the table you will find the key heading marked out, this booklet then provides the relevant bullet points covered from that section (these will be numbered in the table), this is given to aid pre-session planning and help link sessions to current learning outcomes. Some subjects such as Science have much more in depth subheadings and headings and these are reflected within the booklet, others may be simply referred to by their subject e.g. Art and Design.

Key words/links to Avon Tyrrell's activities are highlighted in bold. Information is taken directly from the National Curriculum for the full curriculum visit: <https://www.gov.uk/government/collections/national-curriculum>

Subjects covered: Art and Design, Design and Technology, Geography, Science and Physical Education.

English and Maths:

English and Maths are not directly referenced in the document, this is because although our sessions provide a wide range of benefits and curriculum links in these subjects they will vary greatly between groups and sessions will be adapted to meet the needs of the group. Sessions especially aid spoken and descriptive English with groups given the opportunity to discuss, debate and research tasks and many key skills develop such as coordination, negotiation and empathy. The sessions therefore provide multiple opportunities to expand on learning e.g. writing descriptive accounts, discussing outcomes, comparing and contrasting activities on site to those at school... Many sessions also aid mathematical skills with counting, adding, measuring, subtracting and working out averages key to most environmental sessions.

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Key Stage 1

Physical Education:

1. Master basic movements including **running**, jumping, throwing and catching, as well as **developing balance, agility and co-ordination**, and begin to apply these in a range of activities
2. Participate in **team** games, developing simple tactics for attacking and defending
3. Swim competently, confidently and proficiently over a distance of at least 25 metres
4. Use a range of strokes effectively [for example, front crawl, backstroke and breaststroke]
5. Perform safe self-rescue in **different water-based** situations.

Art and Design:

1. To use a range of **materials** creatively to design and make products
2. To use drawing, painting and sculpture to develop and **share their ideas**, experiences and imagination
3. To develop a wide range of art and design techniques in using **colour**, pattern, **texture**, line, **shape**, form and space
4. About the work of a range of artists, craft makers and designers, describing the differences and similarities between different practices and disciplines, and making links to their own work.

Design and Technology:

Design:

1. Design purposeful, **functional**, appealing products for themselves and other users based on design criteria
2. Generate, develop, model and **communicate their ideas** through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology

Make:

1. Select from and use a range of tools and equipment to perform practical tasks [for example, **cutting**, shaping, joining and finishing]
2. Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics

Evaluate:

1. Explore and evaluate a range of existing products
2. Evaluate their **ideas and products** against design criteria

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Technical knowledge

1. **Build structures**, exploring how they can be made stronger, stiffer and more stable
2. Explore and use mechanisms [for example, levers, sliders, wheels and axles] in their products

Cooking and Nutrition:

1. Use the basic principles of a healthy and varied diet to prepare dishes
2. Understand where food comes from

Geography:

Locational knowledge:

1. Name and locate the world's seven continents and five oceans

Place knowledge:

1. Understand geographical similarities and differences through studying the **human and physical** geography of a **small area of the United Kingdom**, and of a small area in a contrasting non-European country

Human and physical geography:

1. Identify seasonal and **daily weather patterns** in the United Kingdom and the location of hot and cold areas of the world in relation to the Equator and the North and South Poles
2. Use basic geographical vocabulary to refer to:
 - a. key physical features, including: beach, cliff, coast, **forest, hill**, mountain, sea, ocean, **river, soil**, valley, **vegetation**, season and **weather**
 - b. key human features, including: city, town, **village**, factory, **farm**, house, office, port, harbour and **shop**

Geographical skills and fieldwork:

1. Use world maps, **atlases** and globes to identify the United Kingdom and its countries, as well as the countries, **continents** and oceans studied at this key stage
2. Use simple compass directions (North, South, East and West) and **locational and directional language** [for example, near and far; left and right], to describe the location of features and routes on a map
3. Use aerial photographs and plan perspectives to recognise landmarks and basic **human and physical features**; devise a simple map; and use and construct basic symbols in a key
4. Use simple **fieldwork** and **observational skills** to study the geography of their school and its grounds and the key human and physical features of its surrounding environment.

Science:

Working Scientifically:

1. Asking simple questions and recognising that they can be answered in different ways
2. **Observing** closely, using simple equipment
3. **Performing** simple tests
4. **Identifying** and **classifying**
5. Using their observations and ideas to suggest answers to questions
6. **Gathering** and **recording** data to help in answering questions.

Plants:

1. Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees
2. Identify and describe the basic structure of a variety of common flowering plants, including trees.
3. Observe and **describe** how seeds and bulbs **grow** into mature plants
4. Find out and describe how plants need **water**, **light** and a suitable **temperature** to grow and stay healthy.

Animals, including humans:

1. Identify and name a variety of common animals including fish, **amphibians**, **reptiles**, **birds** and **mammals**
2. Identify and name a variety of common animals that are **carnivores**, **herbivores** and **omnivores**
3. Describe and compare the structure of a variety of common animals (fish, amphibians, **reptiles**, **birds** and **mammals**, including pets)
4. Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each **sense**.
5. Notice that animals, including humans, have **offspring** which grow into adults
6. Find out about and describe the **basic needs** of animals, including humans, for survival (water, food and air)

Everyday materials:

1. Distinguish between an object and the **material** from which it is made
2. Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock
3. Describe the simple **physical properties** of a variety of everyday materials
4. Compare and group together a variety of everyday materials on the basis of their **simple physical properties**.

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Uses of everyday materials:

1. Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses
2. Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.

Seasonal Changes:

1. Observe changes across the four seasons
2. Observe and describe weather associated with the seasons and how day length varies

Living things and their habitats:

1. Explore and compare the differences between things that are **living, dead**, and things that have **never been alive**
2. 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
3. Identify and name a **variety** of plants and animals **in their habitats**, including microhabitats
4. 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 Stage Two

Physical Education:

1. Use **running, jumping**, throwing and catching in isolation and in combination
2. Develop flexibility, strength, **technique, control** and **balance** [for example, through athletics and gymnastics]
3. Take part in **outdoor** and **adventurous** activity challenges both individually and within a team
4. Compare their performances with previous ones and demonstrate improvement to achieve their personal best.
5. Swim competently, confidently and proficiently over a distance of at least 25 metres
6. Use a range of strokes effectively [for example, front crawl, backstroke and breaststroke]
7. Perform safe self-rescue in **different water-based** situations.

Art and Design:

1. To improve their mastery of art and design techniques, including drawing, painting and sculpture with a range of materials [for example, pencil, charcoal, paint, **clay**]
2. About great artists, architects and designers in history.

Design and Technology:

Make:

1. Select from and use a wider range of tools and equipment to perform **practical tasks** [for example, cutting, shaping, joining and finishing], accurately
2. Select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their **functional** properties and aesthetic qualities

Evaluate:

1. Investigate and analyse a range of existing products
2. **Evaluate their ideas** and products against their own design criteria and consider the **views of others** to improve their work

Technical knowledge:

1. Apply their understanding of how to strengthen, stiffen and reinforce more complex structures

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Cooking and Nutrition:

1. Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed
2. **Prepare** and **cook** a variety of predominantly savoury dishes using a range of cooking techniques

Geography:

Locational knowledge:

1. Locate the world's countries, using maps to focus on Europe (including the location of Russia) and North and South America, concentrating on their environmental regions, key physical and human characteristics, countries, and major cities
2. Name and locate **counties and cities** of the United Kingdom, geographical regions and their identifying **human and physical characteristics**, key topographical features (including hills, mountains, coasts and rivers), and land-use patterns; and understand how some of these **aspects have changed over time**
3. Identify the position and significance of latitude, longitude, Equator, Northern Hemisphere, Southern Hemisphere, the Tropics of Cancer and Capricorn, Arctic and Antarctic Circle, the Prime/Greenwich Meridian and time zones (including day and night)

Place knowledge:

1. Understand geographical similarities and differences through the **study** of human and physical geography of a region of the **United Kingdom**, a region in a European country, and a region within North or South America

Human and physical geography:

1. Describe and understand key aspects of:
 - a. physical geography, including: climate zones, biomes and vegetation belts, **rivers**, mountains, volcanoes and earthquakes, and the **water cycle**
 - b. human geography, including: **types of settlement and land use**, economic activity including trade links, and the distribution of natural resources including **energy**, food, minerals and water

Geographical skills and fieldwork:

1. Use maps, **atlases**, globes and digital/computer mapping to locate countries and describe features studied
2. Use the eight points of a compass, four and six-figure grid references, **symbols** and **key** (including the use of **Ordnance Survey maps**) to build their knowledge of the United Kingdom and the wider world
3. **Use fieldwork** to observe, measure, record and present the human and physical features in the **local area** using a range of methods, including **sketch maps**, **plans** and graphs, and digital technologies.

Science:

Working Scientifically:

1. Asking relevant questions and using different types of **scientific enquiries** to answer them
2. Setting up **simple practical enquiries**, comparative and fair tests
3. Making **systematic** and careful observations and, where appropriate, taking accurate measurements using standard units, using a **range of equipment**, including thermometers and data loggers
4. **Gathering, recording**, classifying and presenting data in a variety of ways to help in answering questions
5. **Recording** findings using simple scientific language, **drawings**, labelled diagrams, **keys**, bar charts, and **tables**
6. Reporting on findings from enquiries, including **oral and written explanations**, displays or presentations of results and conclusions
7. Using results to draw **simple conclusions**, make predictions for new values, suggest improvements and raise further questions
8. Identifying **differences, similarities** or changes related to simple scientific ideas and processes
9. Using straightforward scientific evidence to **answer questions** or to support their findings.
10. Planning different types of **scientific enquiries** to answer questions, including recognising and **controlling** variables where necessary
11. Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking **repeat readings** when appropriate
12. **Recording data** and results of increasing complexity using scientific diagrams and labels, **classification keys, tables**, scatter graphs, bar and line graphs
13. Using test results to make **predictions** to set up further comparative and fair tests
14. **Reporting** and presenting findings from enquiries, including **conclusions**, causal relationships and **explanations** of and degree of trust in results, in **oral** and written forms such as displays and other presentations
15. Identifying scientific evidence that has been used to support or refute ideas or arguments.

Plants:

1. Identify and describe the **functions** of different parts of flowering plants: roots, stem/trunk, leaves and flowers
2. Explore the **requirements** of plants for life and growth (air, light, water, nutrients from soil, and room to grow) and how they vary from plant to plant
3. Explore the part that flowers play in the life cycle of flowering plants, including **pollination, seed formation and seed dispersal**.

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Animals, including humans:

1. 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
2. Identify that humans and some other animals have **skeletons** and muscles for **support**, protection and movement.
3. Construct and interpret a variety of food chains, identifying producers, predators and prey
4. Describe the ways in which nutrients and water are transported within animals, including humans.

Light:

1. Recognise that they need light in order to see things and that **dark** is the absence of light
2. Use the idea that light travels in straight lines to explain that objects are seen because they give out or reflect light into the eye
3. Explain that we see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes

Living things and their habitats:

1. Recognise that living things can be **grouped** in a variety of ways
2. Explore and use **classification keys** to help **group**, **identify** and name a variety of living things in their local and wider environment
3. Recognise that environments can **change** and that this can sometimes pose dangers to living things.
4. Describe the differences in the life cycles of a **mammal**, an amphibian, an **insect** and a bird
5. Describe the life process of **reproduction** in some plants and animals
6. Describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including microorganisms, plants and animals
7. Give reasons for classifying plants and animals based on specific characteristics

States of matter:

1. Identify the part played by evaporation and condensation in the **water cycle** and associate the rate of evaporation with temperature

Sound:

1. Identify how sounds are made, associating some of them with something **vibrating**
2. Recognise that vibrations from sounds travel through a medium to the ear

Electricity:

1. Identify common appliances that run on electricity

Earth and Space:

2. Describe the movement of the **Earth**, and other planets, relative to the Sun in the solar system
3. Describe the movement of the **Moon** relative to the Earth
4. Describe the Sun, Earth and Moon as approximately spherical bodies
5. Use the idea of the Earth's rotation to explain **day and night** and the apparent movement of the sun across the sky.

Forces:

1. Identify the effects of air resistance, water resistance and **friction**, that act between moving surfaces

Evolution and Inheritance:

1. Recognise that living things produce offspring of the same kind, but normally offspring vary and are **not identical** to their parents
2. Identify how animals and plants are **adapted** to suit their environment in different ways and that **adaptation** may lead to evolution.