Plants and Animal habitats.		
KS 1	Lower KS2	Upper KS2
Need to risk assess any contact with animals, use the CLEAPs folder to check on the health and safety recommendations for the activities. <u>Exploring plants and animals in the environment/Habitats</u> • **identify that most living things live in habitats to which they are suited** Pupils should understand how and why we should take care of animals and their habitats taken from their local environment and the need to return them safely after study. Pupils explore animals around the school looking for different animals in their habitats (forest school environments, differences in the mini beasts found at different times of the year) • Interpret and construct simple pictograms and tally charts • Sequence events in chronological order • Recognise and use language to dates (day, weeks, months years) Pupils should be introduced to the terms 'habitat' (a natural environment or home of a variety of plants and animals) and 'micro-habitat' (a very small habitat, for example for woodlice under stones, logs or leaf litter). Pupils raise and answer questions about their local environment that help them to identify and study a variety of plants and animals within their habitat. *Which plants and animals are found in a particular habitat? Eg pond field, under tree.* • Ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity. Pupils describe the conditions in different habitats and micro-habitats (under log, on stony path, under bushes) Pupils find out how the conditions in a habitat affect the number and type(s) of plants and animals that live there. *How do the animals found in one habitat compare with those found in another? Eg pond compared to open field* Pupils compare/look at the groups of animals found in different habitats and why they are suited to that habitat- Polar/jungle/savannah habitats. • Ask and answer questions about totalling and comparing categorical data Inviting visiting speaker to bring in a range of different animals.(Exotic Zoo, Telford) <u>Observing, Identifying and comparing plants and animals</u> • **describe the structure of a variety of common invertebrates (minibeasts)** **identify and name a variety of common animals that are mini-beasts (invertebrates)**	*Need to risk assess any contact with animals, use the CLEAPs folder to check on the health and safety recommendations for the activities.* <u>Exploring plants and animals in the environment/Habitats</u> • **Recognise that environments can change and that this can sometimes pose dangers to specific habitats.** Pupils should understand how and why we should take care of animals and their habitats taken from their local environment and the need to return them safely after study. Pupils should use the local environment (throughout the year to identify) and study plants and animals in their habitat. • gathering, recording, classifying and presenting data in a variety of ways to help in answering questions recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables • reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions • using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions They should identify how the habitat changes throughout the year. <u>Grouping living things</u> • **Recognise that living things can be grouped in a variety of ways** Pupils should explore possible ways of grouping a wide selection of living things that include animals and flowering plants and non-flowering plants. • Sorting activities (Venn and carol diagrams with science statements) • Interpret and present data using bar charts pictograms, tables and other graphs. Pupils could begin to put invertebrates into snails and slugs, worms, spiders, and insects. Plants can be grouped into categories such as flowering plants (including grasses) and non-flowering plants such as ferns and mosses. • Sorting activities (Venn and carol diagrams with science statements) • Interpret and present data using bar charts pictograms, tables and other graphs. <u>Observing, Identifying and comparing plants and animals</u>	*Need to risk assess any contact with animals, use the CLEAPs folder to check on the health and safety recommendations for the activities.* <u>Exploring plants and animals in the environment/Habitats</u> • **Use fieldwork to observe, measure and record plants and animals in different habitats (explorer link to new topic). Explorers need to find particular types of plants and animals and need to predict where they will be found and why.** Pupils should study and raise questions about their local environment throughout the year. • recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar, line graphs and pie charts • calculate and interpret the mean as an average (mean, median mode range of a set of data leaf size or plant height etc) Pupils create their own yes-no keys to classify plants found in the playground as part of a teaching guide for younger pupils. Pupils create their own yes-no keys to classify animals researched on the internet/books (UK based or international) as part of a teaching guide for younger pupils. Residential/field trip research. <u>Grouping living things</u> **Pupils should be taught to:** **describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including micro-organisms, plants and animals** ▪ **give reasons for classifying plants and animals based on specific characteristics.** **Literacy link biographies of Carl Linnaeus** **Identifying/Classifying Investigation into living things in the local environment** **Ch to write an explorer guide to living things in the local environment** **Ch to produce classification systems to group living things for an explorer visiting other parts of the world** Pupils should build on their learning about grouping living things in Year 4 by looking at the classification system in more detail. They should be introduced to the idea that broad groupings, such as micro-organisms, plants and animals can be subdivided. Through direct observations where possible, they should classify animals into commonly found invertebrates (such as insects, spiders, snails, worms) and vertebrates (fish, amphibians, reptiles, birds and mammals). Residential/field trip/internet/book research. Justify why animals have been grouped or reason why animals have

▪ **identify and name a variety of plants and animals in their habitats, including micro-habitats** Pupils should become familiar with the common names of mini-beasts (invertebrates), describing how they identify living things • Ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity. Pupils should become familiar with the simple sub-classes of invertebrates. Pupils use their observations to compare and contrast animals (mini-beasts) at first hand, supported by videos and photographs <u>Grouping living things</u> ○ **compare the structure of a variety of common invertebrates (minibeasts)** Pupils group animals (mini-beasts), focusing in on observable (use their senses to compare) similarities and differences, e.g. common body parts, how they move, including according to what they eat; *How could theses be sorted according to similarities* Pupils describe how they grouped living things ○ Order and arrange combinations of (mathematical) objects in patterns and sequences. 2 beetle 3 flowers (suggestion?) <u>Life Processes of living things (grow, feed, move, reproduce)</u> Pupils raise and answer questions that help them to become familiar with the life processes that are common to all living things. (caterpillar life cycle, Butterfly world) ○ Compare describe and solve practical problems for lengths, heights, mass and weight ○ Measure and begin to record length, height, mass and weight Pupils should be introduced to the idea that all living things have certain characteristics that are essential for keeping them alive and healthy (grow, feed, move, reproduce). <u>Interdependence of living things within a habitat</u> ▪ 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. ▪ 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 observe how living things depend on each other, for example, plants serving as a source of food and shelter for animals such as mini-beasts. *Do animals in a particular habitat affect/depend on each other if so how?* Pupils construct simple food chains (with 3 living things) *How does a particular animal obtain its food? Investigate what food snails like to*	• **Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment** Pupils should explore a large range of plants, using a range of keys to identify species names. Pupils to compare the types of plants that live in the habitat • Describe positions on a 2d grid as Coordinates in the first quadrant (simple map of grounds) • Plot specified points and join sides to complete a given polygon. Pupils should explore a large range of animals, using a range of keys to identify species names. Pupils to compare the types of animals that live in the habitat. (notice that animals from habitats such as under stones will have features such as antennae) <u>Life Processes of living things (grow, feed, move, reproduce)</u> REF Humans as animals unit <u>Interdependence of living things within a habitat</u> Pupils should explore examples of human impact (both positive and negative) on environments, for example, the positive effects of nature reserves, ecologically planned parks, or garden ponds, and the negative effects of population and development, litter or deforestation. <u>Life cycle</u> <u>REF Humans as animals unit</u>	been grouped accordingly. Pupils might find out about the work of scientists such as Carl Linnaeus, a pioneer of classification. Pupils might work scientifically by: using classification systems and keys to identify some animals and plants in the immediate environment. They could research unfamiliar animals and plants from a broad range of other habitats. They could research unfamiliar animals and plants from a broad range of other habitats and decide where they belong in the classification system. <u>Interdependence of living things within a habitat</u> **identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.** **Literacy link to biography of Charles Darwin (explorer)** **Exploring/observing enquiry observing how living things in local habitats suit their environment** **Matching living things to habitats** **http://www.wildlife-man.co.uk/** **bbc wildlife documentaries about plants and animals that have evolved to adapt to certain conditions** They should find out about the work of naturalists and animal behaviourists such as David Attenborough and Jane Goodall. Children should investigate with planting different parts of the plant (leaves, stem, root, cuttings, tubers and bulbs). Children should learn how fertilisers provide plants with the nutrients they need. Children should learn that animals and plants in a local habitat are interdependent. • Use of percentages for comparison (quadrants percentages of plants found in the square area.)Y6 • Ratio and proportion (relative sizes of two quantities of plants)Y6 bird watching and bug hunt to compare Children should learn how food chains represent feeding relationships in a habitat (link to theme – e.g. Rainforest, desert, UK, etc...) End of theme product: Create own habitat/alien world and produce own natural world documentary. <u>Life cycle</u> **Pupils should be taught to:** • **describe the differences in the life cycles of an insect, (a mammal, an amphibian, and a bird)** ▪ **describe the life process of reproduction in some plants and animals.** **Observing enquiry observing and recording and explaining the life cycles of frogs, plants**

eat <u>Observing, Identifying and comparing plants and animals</u> **□□compare the structure of a variety of common invertebrates (minibeasts)**		**Food chains and webs to animals in environment** They should observe life-cycle changes in a variety of living things, for example, plants in the vegetable garden or flower border, and animals in the local environment. Pupils should find out about different types of reproduction, including sexual and asexual reproduction in plants, and sexual reproduction in animals. Pupils might work scientifically by: observing and comparing the life cycles of plants and animals in their local environment with other plants and animals around the world (in the rainforest, in the oceans, in desert areas and in prehistoric times), asking pertinent questions and suggesting reasons for similarities and differences. • Ratio and proportion, how many infant tadpoles needed for every adult? Compare between aninals/ plants. Link in to PSHE sex/relationship education.