Science Curriculum – Cycle A

Upper Key Stage 2 – Autumn 2 and Spring 1

Theme – Living things and their habitats (Biology)
Enquiry Question – How can living things be classified?

National Curriculum Coverage

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.
Describe the life process of reproduction in some plants

Key Scientists: Carl linnaeus/ Alexander Flemming	**Comparative Test** Which conditions does mould need to grow most in? **Fair Test** Does the temperature/amount of water/sugar affect how much gas is produced by the yeast?	**Observation over time** What happens to a piece of bread if you leave it on the windowsill for two weeks?	**Pattern Seeking** Do all flowers have the same number of petals?	**Research** What do different types of microorganisms do? Are they always harmful?

Objective	Challenge	Working Scientifically	Vocabulary
• To know that living things are classified into broad groups - To classify living things into plants, animals and microorganisms - To sub-divide broader groupings • To classify animals based on characteristics, similarities and differences - To sub-divide groups to include the following: vertebrates, invertebrates, and animal groups • To know the main parts and functions of a flowering plant - stigma, stamen, carpel, style, ovaries, filament and anther - To know the part they play in reproduction in the life	• To explain why classification is important • To explain their sub-divisions of broader groups • To find out about the significance of the work of such Scientists such as Carl Linnaeus (a pioneer of classification) **or own challenges*	See separate objectives sheet.	Classifying, classification keys, Carl Linnaeus, characteristics, vertebrates, invertebrates, mammals, birds, reptiles, amphibians, fish, insects, microorganisms, flowering, non-flowering, dicots, monocots (asexual/sexual) plants reproduction, functions, flowering plant, stigma, style, ovary, filament, stamen, anther, spores, ferns, conifers, mosses, childhood, old age

cycle of a plant • To know the life process of reproduction in some plants - To know that non flowering plants, such as ferns and mosses, use spores to reproduce - To know that flowering plants reproduce sexually through pollination (links with female/male parts) • To classify plants based on characteristics, similarities and differences - To sub-divide groups to include the following: flowering/non-flowering, reproduction (seeds/cones/spores), leaf structure (dicots/monocots) • To classify microorganisms based on characteristics, similarities and differences - To know the main five types of microorganisms (bacteria, fungi, virus, algae and protoza) - To know some observable characteristics of each - To identify similarities and differences between them • To give reasons for classifying plants and animals based on their specific characteristics			