Science MTP: Sequence of lessons	Everyday Materials (Spring)	Year 2	Focus Scientist: Charles Macintosh

Reference to the Programme of Study 2014	Key vocabulary
Pupils should be taught to: 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.	**Types of materials**: wood, plastic, glass, metal, water, rock, brick, fabric, sand, paper, flour, butter, milk, soil **Properties of materials**: hard/soft, stretchy/not stretchy, shiny/dull, rough/smooth, bendy/not bendy, transparent/not transparent, sticky/not sticky **Verbs associated with materials**: crumble, squash, bend, stretch, twist

Lesson 1	Lesson 2	Lesson 3	Lesson 4	Lesson 5
To be able to identify and compare the suitability of a variety of everyday materials. To be able to ask simple questions and recognise they can be answered in different ways. To ask questions about the suitability of materials.	To identify and compare the uses of everyday properties materials. To carry out simple tests and observe what happens.	To be able to find out how the shapes of solid objects made form some materials can be changed by squashing, bending, twisting and stretching. To be able to gather and record data to help in answering questions. To be able to perform simple tests.	To identify and compare the uses of different types of paper. To compare materials and identify which works best.	To identify and compare the uses of different materials. To present results using a block graph.
Starting Point – Recap Everyday Materials from Year 1.	**Properties of materials.** Which material is best for different jobs?	**Shaping Materials** How well can we change the shapes of some solid objects?	**Testing Paper** What are the properties of different types of paper?	**Blocking Holes** Which material is best for blocking a hole in a bucket?

Science MTP: Sequence of lessons	Plant Survival (Spring – Summer)	Year 2	Focus Scientist: Joseph Banks

Reference to the Programme of Study 2014

Pupils should be taught to:

Observe and describe how seeds and bulbs grow into mature plants
Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.

Key vocabulary

Trees - deciduous, evergreen, ash, birch, beech, rowan, common lime, oak, sweet chestnut, horse chestnut, apple, willow, sycamore, fir, pine , holly, etc

Wild flowering plants - cleavers, coltsfoot, daisy, dandelion, garlic mustard, mallow, mugwort, plantain, red clover, self heal, shepherd's purse, sorrel, spear thistle, white campion, white deadnettle and yarrow.

Garden plants – crocus, daffodil, bluebells, etc

Parts of plants – roots, branch, trunk, stalk, leaf, flower, petal, seeds, bulbs and twigs

Need of plants – water, light, heat, temperature

Lesson 1	Lesson 2	Lesson 3 (Plant bulbs in NOVEMBER!)	Lesson 4	Lesson 5	Lesson 6
To understand the difference between a seed and a bulb. To be able to sort and classify. To observe plants closely and describe what they see.	To be able to observe closely using simple equipment. To be able to sort objects using observable features (non-statutory).	To be able to observe how bulbs grow into mature plants. To record observations using drawings and labels.	To be able to find out and describe how plants need water, light and a suitable temperature to grow and stay healthy. To collect data in a simple table	To be able to observe and describe how seeds grow into mature plants. To be able to gather and record data to help in answering a question. To use their observations and ideas to suggest answers to questions. To compare results and identify patterns.	To be able to find out and describe how plants need water, light and a suitable temperature to grow and stay healthy. To use their observations and ideas to suggest answers to questions. To explain what plants, need to survive using evidence.

Science MTP: Sequence of lessons	Living things and Habitats (Autumn)	Year 2	Focus Scientist: Kate Humble

Reference to the Programme of Study 2014	**Key vocabulary**
Pupils should be taught to: Explore and compare the differences between things that are living, dead, and things that have never been alive 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 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.	Habitat, micro habitat Pond, meadow, log pile, woodland, river, lake, beach, cliff Organism – plant, animal **Trees** - deciduous, evergreen, ash, birch, beech, rowan, common lime, oak, sweet chestnut, horse chestnut, apple, willow, sycamore, fir, pine , holly, etc **Wild flowering plants** - cleavers, coltsfoot, daisy, dandelion, garlic mustard, mallow, mugwort, plantain, red clover, self heal, shepherd's purse, sorrel, spear thistle, white campion, white deadnettle and yarrow. **Garden plants** – crocus, daffodil, bluebells, etc **Parts of plants** – roots, branch, trunk, stalk, leaf, flower, petal, seeds, bulbs and twigs **Invertebrates** – snail, slug, woodlouse, spider, beetle, fly, etc **Pond animals** – pond skater, water slater, ramshorn snail, pond snail, leech, common frog, smooth newt, etc **Classification** - Carnivores, herbivores, omnivores

Lesson 1	**Lesson 2**	**Lesson 3**	**Lesson 4**	**Lesson 5**	**Lesson 6**	**Lesson 7**
To be able to identify and name a variety of plants and animals in their habitats, including micro-habitats. To be able to ask simple questions and recognise that they can be answered in different ways.	To be able to explore and compare the differences between things that are living, dead, and things that have never been alive. To be able to identify and name a variety of plants and animals in their habitats, including microhabitats. To observe and group living things based on what they notice	To be able to 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. To collect data using tallies to answer a question.	To be able to 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. To present results using a block graph.	To be able to 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. To be able to observe using a hand lens. To use results to answer questions about habitats.	To be able to 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. To understand how humans impact habitats. To explain what they found out using simple scientific language.	To be able to 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. To be able to record data in a tally chart.

Starting Point – Recap Habitats & Introduce Kate Humble. **Deep thinking time –** Which habitats do you know of on our amazing planet Earth?	**Living, dead and never been alive.** How many different living things can we find?	**Survival** Pattern-seeking enquiry - Which caterpillar will survive?	**Microhabitats** Where is the most popular place for animals to live?	**Food Chains** What are animals eating?	**Helping Habitats** How can humans help protect habitats?	**Habitats throughout the year.** Investigation over time - Does the number of animals found in a habitat change?

Science MTP: Sequence of lessons		Humans (Autumn)		Year 2	Focus Scientist: Louis Pasteur	
Reference to the Programme of Study 2014 Pupils should be taught to: Notice that animals, including humans, have offspring which grow into adults Find out about and describe the basic needs of animals, including humans, for survival (water, food and air) Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.		**Key vocabulary** **Stages of growth** - adult **Stages of life** –baby, toddler, child, teenager, adult **Life processes** – growth, nutrition (feeding), respiration (breathing is part of this) **Hygiene** – clean, wash, germs **Foods** – healthy, grow, strong, energy				
Lesson 1 To know that human offspring grow into adults. To observe changes in the human body and record findings.	**Lesson 2** To know that human offspring grow into adults. To be able to record data (table).	**Lesson 3** To know the importance of eating different types of food. To sort and classify. To record results in a table with headings.	**Lesson 4** To know the importance of exercise for humans. To be able to record data (table). To be able to perform a simple test. To compare results and identify patterns.	**Lesson 5** To know the importance of hygiene to humans To use data to answer questions about hygiene and health.	**Lesson 6** To know the importance of hygiene to humans To be able to observe how germs spread. To communicate findings using simple explanations.	**Lesson 7** To learn about a significant scientist.
Starting Point – Parts of the body. **Stages of Human Development** What are the stages of human development?	**Measuring body parts.** Does every child in class have the same size feet?	**Nutrition** Which foods make a healthy diet?	**Exercise** Which exercise makes your heart rate go faster?	**Hygiene Routines** How often do we wash ourselves?	**Germs – hygiene** How do germs spread?	**Louis Pasteur – significant scientist** Who was Louis Pasteur and what did he discover?

Science MTP: Sequence of lessons	Animal Survival (Summer)	Year 2	Focus Scientist: David Attenborough

Reference to the Programme of Study 2014	Key vocabulary
Pupils should be taught to: Notice that animals, including humans, have offspring which grow into adults. Find out about and describe the basic needs of animals, including humans, for survival (water, food and air)	**Classification** - Birds, fish, amphibians, reptiles, mammals and invertebrates **Classification** - Carnivores, herbivores, omnivores **Stages of growth of many insects** – egg, larva, pupa, adult **Names of some invertebrates** – ladybirds, butterflies, dragonflies, etc **Invertebrate groups –** arachnids, crustaceans, insects, molluscs, myriads, worms **Names of some amphibians** – smooth newt, common frog, toad offspring, inherit

Lesson 1	Lesson 2	Lesson 3	Lesson 4	Lesson 5	Lesson 6	Lesson 7
To identify and classify the characteristics of different invertebrates. To sort and group animals based on observable features.	To be able to find out about and describe the basic needs of animals, for survival (water, food and air). To observe animals and record what they notice.	To know that animals have offspring that grow into adults. To sort and classify. To collect data using tallies.	To know that animals have offspring that grow into adults. To present data using a block graph.	To know that animals have offspring that grow into adults. To observe and describe the lifecycle of an animal over time. To compare results and answer questions.	To learn about a significant person. To explain findings using simple scientific language.	To record data. To be able to observe using a hand lens.
Invertebrates What do all invertebrates have in common?	**Survival: Basic Needs of Animals** What do all animals need to survive?	**Animal Offspring** Do all offspring look like their parents?	**Lifecycles of Animals** What is similar and different about different lifecycles?	**Butterflies/caterpillars** How long does the lifecycle of butterfly last?	**David Attenborough – significant biologist** Who is David Attenborough and why is he a significant biologist?	**Recording Live Data** What insects can be found at CHPA?

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