Charnock Hall Primary Academy
A L.E.A.D. Academy

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

Reference to the Programme of Study 2014

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.

Key vocabulary

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	Lesson 6
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 identify and compare the uses of everyday properties materials. To be able to perform simple tests. To use their observations and ideas to suggest answers to questions.	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 be able to perform simple tests. To use their observations and ideas to suggest answers to questions.	To identify and compare the uses of different materials. To be able to use simple measurements to gather data. To be able to perform simple tests.	To learn about a significant scientist. To be able to perform simple tests.
Starting Point – Recap Everyday Materials from Year 1.	**Properties of materials.** What are the uses of wood?	**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?	**Assessment Point –** Which material is best at keeping you dry? Investigation linking to famous scientist – **Charles Macintosh**

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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 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 be able to recognise that questions can be answered in a range of ways. To be able to perform a simple test.	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 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 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.
Starting Point – Recap parts of a plant from Year 1. **Seeds and Bulbs** What is the difference between a seed and a bulb?	**Seeds** Observing - What are different seeds like?	**Bulbs** Investigation over time – What do bulbs need so that they can grow healthily?	**Seeds (Water & Light)** Comparative test - Do seeds need water, light and a suitable temperature to grow?	**Germination** Investigation over time – Do all seeds germinate in the same way?	**Seeds (Temperature)** Investigation over time – What type of temperature do plants need so that they can grow?

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

Reference to the Programme of Study 2014

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.

Key vocabulary

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 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 gather and record data to help 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 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 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 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 sort and classify.	To be able to record data in a bar chart.	To be able to record data in a tally chart. To be able to record data in a bar chart.		To understand how humans impact habitats.	To be able to record data in a tally chart.

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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.	**Lesson 2** To know that human offspring grow into adults. To be able to record data (scatter graph).	**Lesson 3** To know the importance of eating different types of food. To sort and classify.	**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.	**Lesson 5** To know the importance of hygiene to humans To be able to record data (tally chart).	**Lesson 6** To know the importance of hygiene to humans To be able to observe how germs spread. To complete a fair test.	**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?

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

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)

Key vocabulary

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 be able to find out about and describe the basic needs of animals, for survival (water, food and air).	To know that animals have offspring that grow into adults. To sort and classify.	To know that animals have offspring that grow into adults.	To know that animals have offspring that grow into adults. To observe and describe the lifecycle of an animal over time.	To learn about a significant person.	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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