



# *Coverage of Science Subject Knowledge*

# Chadsmead Coverage of Science Subject Knowledge

## Key Stage 1

	CYCLE 1	CYCLE 2
<b>PLANTS</b>		
<b>NC Y1</b>		
<ul style="list-style-type: none"> <li>identify and name a variety of common wild and garden plants, including deciduous and evergreen trees</li> </ul>	<i>Enchanted Woodland – Cycle 1 – Summer 1 – Lesson 2, Lesson 7</i>	<i>Scented Garden – Cycle 1 – Summer 1 – Lesson 1</i>
<ul style="list-style-type: none"> <li>identify and describe the basic structure of a variety of common flowering plants, including trees</li> </ul>	<i>Enchanted Woodland – Cycle 1 – Summer 1 – Lesson 3, Lesson 8, Lesson 9, Lesson 17</i>	<i>Scented Garden – Cycle 1 – Summer 1 – Lesson 7</i>
<b>NC Y2</b>		
<ul style="list-style-type: none"> <li>observe and describe how seeds and bulbs grow into mature plants</li> </ul>	<i>Enchanted Woodland – Cycle 1 – Summer 1 – Lesson 1, Lesson 10, Lesson 17</i>	<i>Scented Garden – Cycle 1 – Summer 1 – Lesson 3</i>
<ul style="list-style-type: none"> <li>find out and describe how plants need water, light and a suitable temperature to grow and stay healthy</li> </ul>	<i>Enchanted Woodland – Cycle 1 – Summer 1 – Lesson 18</i>	<i>Scented Garden – Cycle 1 – Summer 1 – Lesson 2, Lesson 4</i>
<b>ANIMALS, INCLUDING HUMANS</b>		
<b>NC Y1</b>		
<ul style="list-style-type: none"> <li>identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals</li> </ul>	<i>Paws, Claws and Whiskers – Cycle 1 - Spring 2 – Lesson 1, Lesson 4 Enchanted Woodland – Cycle 1 – Summer 1 – Lesson 14</i>	<i>Towers, Tunnels and Turrets – Cycle 2 – Summer 2 – Lesson 8</i>
<ul style="list-style-type: none"> <li>identify and name a variety of common animals that are carnivores, herbivores and omnivores</li> </ul>	<i>Paws, Claws and Whiskers – Cycle 1 - Spring 2 – Lesson 5 Dinosaur Planet – Cycle 1 – Summer 2 – Lesson 11</i>	
<ul style="list-style-type: none"> <li>describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals including pets)</li> </ul>	<i>Paws, Claws and Whiskers – Cycle 1 - Spring 2 – Lesson 6 Dinosaur Planet – Cycle 1 – Summer 2 – Lesson 8</i>	<i>Wriggle and Crawl – Cycle 2 – Spring 2 – WOW Start</i>
<ul style="list-style-type: none"> <li>identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense</li> </ul>	<i>Superheroes – Cycle 1 – Autumn 2 – Lesson 4, Lesson 5 Dinosaur Planet – Cycle 1 – Summer 2 – Lesson 10</i>	
<b>NC Y2</b>		
<ul style="list-style-type: none"> <li>notice that animals, including humans, have offspring which grow into adults</li> </ul>	<i>Enchanted Woodland – Cycle 1 – Summer 1 – Lesson 15</i>	<i>Wriggle and Crawl – Cycle 2 – Spring 2 – Lesson 2, Lesson 7, Lesson 13</i>
<ul style="list-style-type: none"> <li>find out about and describe the basic needs of animals, including humans, for survival (water, food and air)</li> </ul>	<i>Enchanted Woodland – Cycle 1 – Summer 1 – Lesson 4</i>	<i>Wriggle and Crawl – Cycle 2 – Spring 2 – Lesson 11, Lesson 17</i>
<ul style="list-style-type: none"> <li>describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene</li> </ul>	<i>Superheroes – Cycle 1 – Autumn 2 – Lesson 7, Lesson 8</i>	

<b>MATERIALS</b>		
<b>NC Y1</b>		
<ul style="list-style-type: none"> <li>distinguish between an object and the material from which it is made</li> </ul>	<i>Moon Zoom – Cycle 1 – Autumn 1 – Lesson 6</i>	<i>Land Ahoy – Cycle 2 – Autumn 2 – Lesson 6</i> <i>Street Detectives – Cycle 2 – Spring 1 – Lesson 7</i>
<ul style="list-style-type: none"> <li>identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock</li> </ul>	<i>Moon Zoom – Cycle 1 – Autumn 1 – Lesson 6</i>	<i>Street Detectives – Cycle 2 – Spring 1 – Lesson 7</i>
<ul style="list-style-type: none"> <li>describe the simple physical properties of a variety of everyday materials</li> </ul>	<i>Dinosaur Planet – Cycle 1 – Summer 2 – Lesson 9</i> <i>Moon Zoom – Cycle 1 – Autumn 1 – Lesson 5, Lesson 12</i>	<i>Land Ahoy – Cycle 2 – Autumn 2 – Lesson 6</i> <i>Street Detectives – Cycle 2 – Spring 1 – Lesson 7</i> <i>Towers, Tunnels and Turrets – Cycle 2 – Summer 2 – Lesson 5, Lesson 6</i>
<ul style="list-style-type: none"> <li>compare and group together a variety of everyday materials on the basis of their simple physical properties</li> </ul>	<i>Moon Zoom – Cycle 1 – Autumn 1 – Lesson 10</i>	
<ul style="list-style-type: none"> <li>identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses</li> </ul>		<i>Muck, Mess and Mixtures – Cycle 2 – Autumn 1 – Lesson 6, Lesson 8</i> <i>Land Ahoy – Cycle 2 – Autumn 2 – Lesson 4</i> <i>Street Detectives – Cycle 2 – Spring 1 – Lesson 8</i>
<ul style="list-style-type: none"> <li>find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching</li> </ul>		<i>Towers, Tunnels and Turrets – Cycle 2 – Summer 2 – Lesson 5</i>
<b>SEASONAL CHANGES</b>		
<b>NC Y1</b>		
<ul style="list-style-type: none"> <li>observe changes across the 4 seasons</li> </ul>	<i>Enchanted Woodland – Cycle 1 – Summer 1 – Lesson 5</i>	
<ul style="list-style-type: none"> <li>observe and describe weather associated with the seasons and how day length varies</li> </ul>	<i>Enchanted Woodland – Cycle 1 – Summer 1 – Lesson 6</i>	
<b>LIVING THINGS AND THEIR HABITAT</b>		
<b>NC Y2</b>		
<ul style="list-style-type: none"> <li>explore and compare the differences between things that are living, dead, and things that have never been alive</li> </ul>		<i>Wriggle and Crawl – Cycle 2 – Spring 2 – Lesson 4</i> <i>Street Detectives – Cycle 2 – Spring 1 – Lesson 1, Lesson 2, Lesson 17</i>
<ul style="list-style-type: none"> <li>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</li> </ul>	<i>Paws, Claws and Whiskers – Cycle 1 - Spring 2 – Lesson 12, 13</i>	<i>Towers, Tunnels and Turrets – Cycle 2 – Summer 2 – Lesson 7</i>
<ul style="list-style-type: none"> <li>identify and name a variety of plants and animals in their habitats, including microhabitats</li> </ul>	<i>Enchanted Woodland – Cycle 1 – Summer 1 – Lesson 16, Lesson 17</i>	<i>Wriggle and Crawl – Cycle 2 – Spring 2 – Lesson 5, Lesson 6</i> <i>Towers, Tunnels and Turrets – Cycle 2 – Summer 2 – Lesson 7, Lesson 8</i>
<ul style="list-style-type: none"> <li>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</li> </ul>	<i>Paws, Claws and Whiskers – Cycle 1 - Spring 2 – Lesson 14</i>	<i>Wriggle and Crawl – Cycle 2 – Spring 2 – Lesson 2, Lesson 16, Lesson 17</i>

## Lower Key Stage 2

	CYCLE 1	CYCLE 2
<b>PLANTS</b>		
<b>NC Y3</b>		
<ul style="list-style-type: none"> <li>identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers</li> </ul>		Tribal Tales Aut 1 L3
<ul style="list-style-type: none"> <li>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</li> </ul>		Tribal Tales Aut 1 L3
<ul style="list-style-type: none"> <li>investigate the way in which water is transported within plants</li> </ul>		Tribal Tales Aut 1 L3
<ul style="list-style-type: none"> <li>explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal</li> </ul>		Tribal Tales Aut 1 L4
<b>ANIMALS, INCLUDING HUMANS</b>		
<b>NC Y3</b>		
<ul style="list-style-type: none"> <li>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</li> </ul>	Predator Spr 2 L 1/2	Bottoms, Burps & Bile – Aut 2 - L4
<ul style="list-style-type: none"> <li>identify that humans and some other animals have skeletons and muscles for support, protection and movement</li> </ul>	Predator Spr 2 L 7/8/9/10	
<b>NC Y4</b>		
<ul style="list-style-type: none"> <li>describe the simple functions of the basic parts of the digestive system in humans</li> </ul>		Bottoms, Burps & Bile – Aut 2 - L1
<ul style="list-style-type: none"> <li>identify the different types of teeth in humans and their simple functions</li> </ul>		Bottoms, Burps & Bile – Aut 2 – L5 L6 L7 L8 L11
<ul style="list-style-type: none"> <li>construct and interpret a variety of food chains, identifying producers, predators and prey</li> </ul>	Predator Spr 2 L 2	Blue Abyss Sum 1 L10
<b>LIGHT</b>		
<b>NC Y3</b>		
<ul style="list-style-type: none"> <li>recognise that they need light in order to see things and that dark is the absence of light</li> </ul>	Gods & Mortals – Sum 2 - L4	
<ul style="list-style-type: none"> <li>notice that light is reflected from surfaces</li> </ul>	Gods & Mortals – Sum 2 - L5	
<ul style="list-style-type: none"> <li>recognise that light from the sun can be dangerous and that there are ways to protect their eyes</li> </ul>	Gods & Mortals – Sum 2 - L5	
<ul style="list-style-type: none"> <li>recognise that shadows are formed when the light from a light source is blocked by an opaque object</li> </ul>	Gods & Mortals – Sum 2 - L4	
<ul style="list-style-type: none"> <li>find patterns in the way that the size of shadows change</li> </ul>	Gods & Mortals – Sum 2 - L4	

LIVING THINGS AND THEIR HABITAT		
NC Y4		
<ul style="list-style-type: none"> <li>recognise that living things can be grouped in a variety of ways</li> </ul>		Blue Abyss Sum 1 L6, 7, 8, 9
<ul style="list-style-type: none"> <li>explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment</li> </ul>		Blue Abyss Sum 1 L8
<ul style="list-style-type: none"> <li>recognise that environments can change and that this can sometimes pose dangers to living things</li> </ul>		Blue Abyss Sum 1 L11, 12, 19
SOUND		
NC Y4		
<ul style="list-style-type: none"> <li>identify how sounds are made, associating some of them with something vibrating</li> </ul>	Playlists Spr1 L1, 2	
<ul style="list-style-type: none"> <li>recognise that vibrations from sounds travel through a medium to the ear</li> </ul>	Playlists L6	
<ul style="list-style-type: none"> <li>find patterns between the pitch of a sound and features of the object that produced it</li> </ul>	Playlists Spr1 L3, L4	
<ul style="list-style-type: none"> <li>find patterns between the volume of a sound and the strength of the vibrations that produced it</li> </ul>	Playlists L3, L4	
<ul style="list-style-type: none"> <li>recognise that sounds get fainter as the distance from the sound source increases</li> </ul>	Playlists L5	
ROCKS		
NC Y3		
<ul style="list-style-type: none"> <li>compare and group together different kinds of rocks on the basis of their appearance and simple physical properties</li> </ul>	Tremors – Aut 2 – L10 L11	
<ul style="list-style-type: none"> <li>describe in simple terms how fossils are formed when things that have lived are trapped within rock</li> </ul>	Predator Spr 2 L 3/4	
<ul style="list-style-type: none"> <li>recognise that soils are made from rocks and organic matter</li> </ul>	Tremors – Aut 2 – L12	
FORCES AND MAGNETS		
NC Y3		
<ul style="list-style-type: none"> <li>compare how things move on different surfaces</li> </ul>	Mighty metals Aut 1 L1	
<ul style="list-style-type: none"> <li>notice that some forces need contact between 2 objects, but magnetic forces can act at a distance</li> </ul>	Mighty metals Aut 1 L1/3	
<ul style="list-style-type: none"> <li>observe how magnets attract or repel each other and attract some materials and not others</li> </ul>	Mighty metals Aut 1 L1	
<ul style="list-style-type: none"> <li>compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet, and identify some magnetic materials</li> </ul>	Mighty metals Aut 1 L1	
<ul style="list-style-type: none"> <li>describe magnets as having 2 poles</li> </ul>	Mighty metals Aut 1 L1	
<ul style="list-style-type: none"> <li>predict whether 2 magnets will attract or repel each other, depending on which poles are facing</li> </ul>	Mighty metals Aut 1 L1	

ELECTRICITY		
NC Y4		
<ul style="list-style-type: none"> <li>Identify common appliances that run on electricity</li> </ul>	Road Trip USA – Sum 1 - L10	
<ul style="list-style-type: none"> <li>Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers.</li> </ul>	Road Trip USA – Sum 1 – L11, 12, 14	
<ul style="list-style-type: none"> <li>Identify whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery.</li> </ul>	Road Trip USA – Sum 1 – L11, 14	
<ul style="list-style-type: none"> <li>Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit.</li> </ul>	Road Trip USA – Sum 1 – L13, 14	
<ul style="list-style-type: none"> <li>Recognise some common conductors and insulators, and associate metals with being good conductors.</li> </ul>	Road Trip USA – Sum 1 - L12	
STATES OF MATTER		
NC Y3		
<ul style="list-style-type: none"> <li>compare and group materials together, according to whether they are solids, liquids or gases</li> </ul>		Potions – Spr 2 – L1 L3
<ul style="list-style-type: none"> <li>observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius (°C)</li> </ul>	Gods & Mortals – Sum 2 - L3	Potions – Spr 2 - L2
<ul style="list-style-type: none"> <li>identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.</li> </ul>		Potions – Spr 2 - L4

## Upper Key Stage 2

	CYCLE 1	CYCLE 2
<b>ANIMALS, INCLUDING HUMANS</b>		
<b>NC Y5</b>		
<ul style="list-style-type: none"> <li>describe the changes as humans develop to old age</li> </ul>	ID: Aut 1 - Lesson/s 2	
<b>NC Y6</b>		
<ul style="list-style-type: none"> <li>identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood</li> </ul>	Blood Heart: Aut 2 – Lesson/s 5, 6, 7,	
<ul style="list-style-type: none"> <li>recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function</li> </ul>	Blood Heart: Aut 2 - Lesson/s 9	
<ul style="list-style-type: none"> <li>describe the ways in which nutrients and water are transported within animals, including humans</li> </ul>	Blood Heart: Aut 2 - Lesson/s 2, 3, 4,	
<b>MATERIALS</b>		
<b>NC Y5</b>		
<ul style="list-style-type: none"> <li>compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets</li> </ul>		Alchemy Island: Aut 2 – Lesson/s 13, 17
<ul style="list-style-type: none"> <li>know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution</li> </ul>		Alchemy Island: Aut 2 – Lesson/s 13, 14
<ul style="list-style-type: none"> <li>use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating</li> </ul>		Alchemy Island: Aut 2 – Lesson/s 15
<ul style="list-style-type: none"> <li>give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic</li> </ul>	Ancient Civilisations: Aut 2 – Lesson/s 10	
<ul style="list-style-type: none"> <li>demonstrate that dissolving, mixing and changes of state are reversible changes</li> </ul>		Alchemy Island: Aut 2 – Lesson/s 12, 15
<ul style="list-style-type: none"> <li>explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda</li> </ul>	Ancient Civilisations: Aut 2 – Lesson/s 17	Alchemy Island: Aut 2 – Lesson/s 16 Stargazers: Spr 2 - Lesson 16
<b>LIGHT</b>		
<b>NC Y6</b>		
<ul style="list-style-type: none"> <li>recognise that light appears to travel in straight lines</li> </ul>	Hola Mexico: Spr 2 - Lesson 17  Tomorrow's World: Sum 2 - Lesson 20	
<ul style="list-style-type: none"> <li>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</li> </ul>	Hola Mexico: Spr 2 - Lesson 17	
<ul style="list-style-type: none"> <li>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</li> </ul>	Tomorrow's World: Sum 2 - Lesson 19	

<ul style="list-style-type: none"> <li>use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them</li> </ul>	Tomorrow's World: Sum 2 - Lesson 19	Revolution: Spr 1 - Lesson 14
<b>LIVING THINGS AND THEIR HABITATS</b>		
<b>NC Y5</b>		
<ul style="list-style-type: none"> <li>describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird</li> </ul>		Allotment: Sum 2 - Lesson 4
<ul style="list-style-type: none"> <li>describe the life process of reproduction in some plants and animals</li> </ul>		Allotment: Sum 2 - Lesson 5, 6
<b>NC Y6</b>		
<ul style="list-style-type: none"> <li>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</li> </ul>	ID: Aut 1 - Lesson 7  Darwin's Delight: Sum 1 - Lessons 9, 12, 16	
<ul style="list-style-type: none"> <li>give reasons for classifying plants and animals based on specific characteristics</li> </ul>	ID: Aut 1 - Lesson 7	Allotment: Sum 2 - Lesson 7
<b>FORCES AND MAGNETS</b>		
<b>NC Y5</b>		
<ul style="list-style-type: none"> <li>explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object</li> </ul>		Stargazers: Spr 2 - Lesson 11
<ul style="list-style-type: none"> <li>identify the effects of air resistance, water resistance and friction, that act between moving surfaces</li> </ul>		Stargazers: Spr 2 - Lesson 12, 13, 14
<ul style="list-style-type: none"> <li>recognise that some mechanisms including levers, pulleys and gears allow a smaller force to have a greater effect</li> </ul>		Off With her Head: Aut 1 - Lesson 14, 15,
<b>ELECTRICITY</b>		
<b>NC Y6</b>		
<ul style="list-style-type: none"> <li>associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit</li> </ul>	Tomorrow's World: Sum 2 - Lesson 17	Revolution: Spr 1 - Lesson 15
<ul style="list-style-type: none"> <li>compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches</li> </ul>		Revolution: Spr 1 - Lesson 16  A Child's War: Sum 1 - Lesson 9
<ul style="list-style-type: none"> <li>use recognised symbols when representing a simple circuit in a diagram</li> </ul>	Tomorrow's World: Sum 2 - Lesson 16	
<b>EARTH AND SPACE</b>		
<b>NC Y5</b>		
<ul style="list-style-type: none"> <li>describe the movement of the Earth and other planets relative to the sun in the solar system</li> </ul>		Stargazers: Spr 2 - Lesson 5
<ul style="list-style-type: none"> <li>describe the movement of the moon relative to the Earth</li> </ul>		Stargazers: Spr 2 - Lesson 6

<ul style="list-style-type: none"> <li>describe the sun, Earth and moon as approximately spherical bodies</li> </ul>		Stargazers: Spr 2 - Lesson 4
<ul style="list-style-type: none"> <li>use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky</li> </ul>		Stargazers: Spr 2 - Lesson 7, 8
<b>EVOLUTION AND INHERITANCE</b>		
<b>NC Y6</b>		
<ul style="list-style-type: none"> <li>recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago</li> </ul>	ID: Aut 1 - Lesson 4 Darwin's Delight: Sum 1 - Lesson 14	
<ul style="list-style-type: none"> <li>recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents</li> </ul>	Darwin's Delight: Sum 1 - Lesson 15	
<ul style="list-style-type: none"> <li>identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution</li> </ul>	ID: Aut 1 - Lesson 4 Darwin's Delight: Sum 1 - Lesson 8, 10, 11, 16	