

YEAR 3 SCIENCE
TEETH AND EATING AND DIGESTION CYCLE B
STEPHANIE HEAD

Plants – Functions of Parts of a Plant)	Health - Health/Nutrition)	Animals - Skeletons and Movement)
<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> ▪ Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers. ▪ 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. ▪ Investigate the way in which water is transported within plants. ▪ Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal. ▪ Roots grow downwards and anchor the plant. ▪ Water, taken in by the roots, goes up the stem to the leaves, flowers and fruit. ▪ Nutrients (not food) are taken in through the roots. ▪ Stems provide support and enable the plant to grow towards the light. ▪ Plants make their own food in the leaves using energy from the sun. ▪ Flowers attract insects to aid pollination. ▪ Pollination is when pollen is transferred between plants by insects, birds, other animals and the wind. ▪ Fertilisation occurs in the ovary of the flower. ▪ Seeds are formed as a result of fertilisation. ▪ Many flowers produce fruits which protect the seed and/or aid seed dispersal. ▪ Seed dispersal, by a variety of methods, helps ensure that new plants survive. ▪ Plants need nutrients to grow healthily (either naturally from the soil or from fertiliser added to soil). <p>Notes and Guidance (non-statutory): Pupils should be introduced to the relationship between structure and function: the idea that every part has a job to do. They should explore questions that focus on the role of the roots and stem in nutrition and support, leaves for nutrition and flowers for reproduction. Note: Pupils can be introduced to the idea that plants can make their own food, but at this stage they do not need to understand how this happens.</p> <p>Pupils might work scientifically by:</p> <ul style="list-style-type: none"> ▪ Comparing the effect of different factors on plant growth, for example the amount of light, the amount of fertiliser; ▪ Discovering how seeds are formed by ▪ Observing the different stages of plant cycles over a period of time; ▪ Looking for patterns in the structure of fruits that relate to how the seeds are dispersed. ▪ Observing how water is transported in plants, for example, by putting cut, white carnations into coloured water. ▪ Observing how water travels up the stem to the flowers. 	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> ▪ 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. ▪ An adequate and varied diet is beneficial to health (along with a good supply of air and clean water). ▪ Regular and varied exercise <i>from a variety of different activities</i> is beneficial to health (focus on <i>energy in versus energy out</i>. Include information on making informed choices). <p>Notes and Guidance (non-statutory): Pupils should continue to learn about the importance of nutrition</p> <p>Pupils might work scientifically by:</p> <ul style="list-style-type: none"> ▪ Comparing and contrasting the diets of different animals (including their pets). ▪ Decide ways of grouping them according to what they eat. ▪ Researching different food groups and how they keep us healthy. ▪ Designing meals based on what they find out. 	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> ▪ Identify that humans and some other animals have skeletons and muscles for support, protection and movement. ▪ Identify animals (vertebrates) which have a skeleton which supports their body, aids movement & protects vital organs (be able to name some of the vital organs). ▪ Identify animals without internal skeletons/backbones (invertebrates) and describe how they have adapted other ways to support themselves, move & protect their vital organs. ▪ Know how the skeletons of birds, mammals, fish, amphibians or reptiles are similar (backbone, ribs, skull, bones used for movement) and the differences in their skeletons. ▪ Know that muscles, which are attached to the skeleton, help animals move parts of their body. ▪ Explore how humans grow bigger as they reach maturity by making comparisons linked to body proportions and skeleton growth – e.g. do people with longer legs have longer arm spans? ▪ Recognise that animals are alive; they move, feed, grow, use their senses and reproduce. <p>Notes and Guidance (non-statutory): Pupils should be introduced to the main body parts associated with the skeleton and muscles, finding out how different parts of the body have special functions.</p> <p>Pupils might work scientifically by:</p> <ul style="list-style-type: none"> ▪ Identifying and grouping animals with and without skeletons. ▪ Observing and comparing their movement. ▪ Exploring ideas about what would happen if humans did not have skeletons.

YEAR 3 SCIENCE
TEETH AND EATING AND DIGESTION CYCLE B
STEPHANIE HEAD

Material Properties - Rocks)	Light and Astronomy - Light, reflections and shadows)	Forces – Non contact forces)
<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> ▪ Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties. ▪ Describe in simple terms how fossils are formed when things that have lived are trapped within rock. ▪ Recognise that soils are made from rocks and organic matter. ▪ Rocks and soils can feel and look different. ▪ Rocks and soils can be different in different places/environments. <p>Notes and Guidance (non-statutory): Linked with work in geography, pupils should explore different kinds of rocks and soils, including those in the local environment.</p> <p>Pupils might work scientifically by:</p> <ul style="list-style-type: none"> ▪ Observing rocks, including those used in buildings and gravestones. ▪ Exploring how and why they might have changed over time. ▪ Using a hand lens or microscope to help them. ▪ Identify and classify rocks according to whether they have grains or crystals, and whether they have fossils in them. ▪ Research and discuss the different kinds of living things whose fossils are found in sedimentary rock. ▪ Explore how fossils are formed. ▪ Explore different soils. ▪ Identify similarities and differences between them. ▪ Investigate what happens when rocks are rubbed together or what changes occur when they are in water. ▪ Raise and answer questions about the way soils are formed. 	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> ▪ Recognise that they need light in order to see things and that dark is the absence of light. ▪ Notice that light is reflected from surfaces. ▪ Recognise that light from the sun can be dangerous and that there are ways to protect their eyes. ▪ Recognise that shadows are formed when the light from a light source is blocked by a solid object. ▪ Find patterns in the way that the size of shadows change. <p>Notes and Guidance (non-statutory): Pupils should explore what happens when light reflects off a mirror or other reflective surfaces, including playing mirror games to help them answer questions about how light behaves. They should think about why it is important to protect their eyes from bright lights. They should look for, and measure shadows and find out how they are formed and what might cause shadows to change.</p> <p>Note: Pupils should be warned that it is not safe to look directly at the Sun, even when wearing dark glasses.</p> <p>Pupils might work scientifically by:</p> <ul style="list-style-type: none"> ▪ Looking for patterns in what happens to shadows when the light source moves or the distance between the light source and the object changes. 	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> ▪ Compare how some things move on different surfaces. ▪ Notice that some forces need contact between two objects but magnetic forces can act at a distance. ▪ Observe how magnets attract or repel each other and attract some materials and not others. ▪ 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. ▪ Describe magnets as having two poles. ▪ Predict whether two magnets will attract or repel each other, depending on which poles are facing. <p>Notes and Guidance (non-statutory): Pupils should observe that magnetic forces can act without direct contact, unlike most forces, where direct contact is necessary (for example, opening a door, pushing a swing). They should explore the behaviour and everyday uses of different magnets (for example, bar, ring, button, horseshoe).</p> <p>Pupils might work scientifically by:</p> <ul style="list-style-type: none"> ▪ Comparing how different things move and grouping them. ▪ Raising questions and carrying out tests to find out how far things move on different surfaces. ▪ Gathering and recording data to find answers to their questions. ▪ Exploring the strengths of different magnets and finding a fair way to compare them. ▪ Sorting materials into those that are magnetic and those that are not. ▪ Looking for patterns in the way that magnets behave in relation to each other and what might affect this, for example, the strength of the magnet or which pole faces another. ▪ Identifying how these properties make magnets useful in everyday items and suggesting creative uses for different magnets.

Year 34 B1B Science - Teeth Eating and Digestion 2018 Template

Sort / group / compare / classify / identify	Research <i>finding things out using a wide range of secondary sources of information and recognising that scientific ideas change and develop over time</i>	Modelling	Recording of 'Explore / Observe' <i>developing a deeper understanding of a wide range of scientific ideas encountering more abstract ideas</i>	Questioning <i>asking their own questions about scientific phenomena</i>	Planning <i>using different types of scientific enquiry making decisions about and explaining choices for testing</i>
<p>Compare and contrast functions, diets, teeth, changes over time.</p> <ul style="list-style-type: none"> Record similarities and differences. Decide ways and give reasons for sorting, grouping, classifying, identifying things/objects, living things, processes or events based on specific characteristics. 	<ul style="list-style-type: none"> Create/invent design something based on what they have found out applying both research and/or practical experiences (Y3/4). Find out about the work of famous scientists historical and modern day (Y3/4). Finding things out using secondary sources of information (Y3/4). 	<ul style="list-style-type: none"> Act out something to represent something else about the world around us. 	<ul style="list-style-type: none"> Observe and record relationships between structure and function (Y3/4). Observe and record changes /stages over time (Y3/4). Explore / observe things in the local environment / real contexts and record observations (Y3/4). Record observations/explorations/ processes using simple scientific language. 	<ul style="list-style-type: none"> Explore their own ideas about 'what if....?' scenarios e.g. humans did not have skeletons. Begin to understand that some questions are testable/ can be tested in the classroom and some cannot. Within a group suggest relevant questions about what they observe and about the world around them. 	<ul style="list-style-type: none"> Help to decide about how to set up a simple fair test and begin to recognise when a test is not fair. As a group, begin to make some decisions about the best way of answering their questions. With support/as a group, set up simple practical enquiries incl. comparative and fair tests e.g. make a choice from a list of at least one variable that needs to be kept the same when conducting a fair test. Find/suggest a way to compare things e.g. materials, magnets.
Equipment and measurement <i>increasing complexity with increasing accuracy and precision make their own decisions about the data to collect</i>	Communicating Recording <i>recording data, reporting findings, presenting findings</i>	Considering the results of an investigation / writing a conclusion			Collaborating
		Describe results <i>Looking for patterns analysing functions, relationships and interactions more systematically</i>	Explain results <i>Draw conclusions based on evidence</i>	Trusting my results	
<ul style="list-style-type: none"> Collect data from their own observations and measurements, using notes/ simple tables/standard units. Help to make some decisions about what observations to make, how long to make them for and the type of simple equipment that might be used. Make simple accurate measurements using whole number standard units, using a range of equipment. Gathering data in a variety of ways to help in answering questions. Learn how to use new equipment, e.g. data loggers. Explore observe with increased accuracy using a hand lens or microscope. 	<ul style="list-style-type: none"> Record and present findings using simple scientific language and vocabulary, including discussions, oral and written explanations, notes, drawings annotated, pictorial representations, labelled diagrams, simple tables, bar charts [using ranges and intervals (scales) chosen for them] displays or presentations. Record, classify and present data in a variety of ways to help in answering questions. Communicate their findings in ways that are appropriate for different audiences. (Y3/4). 	<ul style="list-style-type: none"> Describe and compare the effect of different factors on something. With help, look for changes and patterns in their observations and data. Use their results to consider whether they meet predictions. 	<ul style="list-style-type: none"> Read and spell scientific vocabulary correctly and with confidence (Y3/4). Use their own experience and some evidence or results to draw simple conclusions and answer questions. Talk about and record their findings using simple scientific language. Explain why things have happened. 	<ul style="list-style-type: none"> Say whether what happened was what they expected and notice any odd results that seem odd. Begin to recognise when a test is not fair and suggest improvements. 	<ul style="list-style-type: none"> Act out something to represent something else about the world around us.

Year 34 B1B Science - Teeth Eating and Digestion 2018 Template

Please Note: There should be plenty of opportunities throughout the year for children to use the school/local environment to observe and identify how a habitat changes. This could include a focus on the relationships between the plants and animals within a habitat. This could be done through an ongoing/monthly nature journal to observe, record and review over a period of time.

Environment – Living things and their habitats)	Animals – Teeth, Eating and Digestion)
<p>Pupils should be taught to:</p> <ul style="list-style-type: none">Recognise that living things can be grouped in a variety of ways.Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment.Recognise that environments can change and that this can sometimes pose dangers to living things.Use and make identification keys for plants and animals. <p>Notes and Guidance (non-statutory):</p> <p>Pupils should use the local environment throughout the year to raise and answer questions that help them to identify and study plants and animals in their habitat. They should identify how the habitat changes throughout the year. Pupils should explore possible ways of grouping a wide selection of living things that include animals and flowering plants and non-flowering plants, Pupils could begin to put vertebrate animals into groups such as fish, amphibians, reptiles, birds, and mammals; and invertebrates into snails and slugs, worms, spiders, and insects.</p> <p>Note: Plants can be grouped into categories such as flowering plants (including grasses) and non-flowering plants, such as ferns and mosses.</p> <p>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.</p> <p>Pupils might work scientifically by:</p> <ul style="list-style-type: none">Using and making simple guides or keys [sorting, grouping, comparing, classifying] to explore and identify local plants and animals.Making a guide [sorting, grouping, comparing, classifying] to local living things.Raising and answering questions based on their observations of animals.What they have found out about other animals that they have researched.	<p>Pupils should be taught to:</p> <ul style="list-style-type: none">Describe the simple functions of the basic parts of the digestive system in humans.Identify the different types of teeth in humans and their simple functions.Construct and interpret a variety of food chains, identifying producers, predators and prey.Describe how teeth and gums have to be cared for in order to keep them healthy. <p>Notes and Guidance (non-statutory):</p> <p>Pupils should be introduced to the main body parts associated with the digestive system, for example, mouth, tongue, teeth, oesophagus, stomach and small and large intestine and explore questions that help them understand their special functions.</p> <p>Pupils might work scientifically by:</p> <ul style="list-style-type: none">Comparing the teeth of carnivores and herbivores.Suggesting reasons for differences.Finding out what damages teeth and how to look after them.Drawing and discussing their ideas about the digestive system.Comparing them with models or images.

Year 34 B1B Science - Teeth Eating and Digestion 2018 Template

Material Properties and Changes – States of Matter)	Sound	Electricity
<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> ▪ Compare and group materials together, according to whether they are solids, liquids or gases. ▪ 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). ▪ Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature. ▪ Solids, liquids and gases can be identified by their observable properties. ▪ Solids have a fixed size and shape (the size and shape can be changed but it remains the same after the action). ▪ Liquids can pour and take the shape of the container in which they are put. ▪ Liquids form a pool not a pile. ▪ Solids in the form of powders can pour as if they were liquids but make a pile not a pool. ▪ Gases fill the container in which they are put. ▪ Gases escape from an unsealed container. ▪ Gases can be made smaller by squeezing/pressure. ▪ Liquids and gases can flow. <p>Notes and Guidance (non-statutory): Pupils should explore a variety of everyday materials and develop simple descriptions of the states of matter (solids hold their shape; liquids form a pool not a pile; gases escape from an unsealed container). Pupils should observe water as a solid, a liquid and a gas and should note the changes to water when it is heated or cooled.</p> <p>Note: Teachers should avoid using materials where heating is associated with chemical change, e.g. through baking or burning.</p> <p>Pupils might work scientifically by:</p> <ul style="list-style-type: none"> ▪ Grouping and classifying a variety of different materials. ▪ Exploring the effect of temperature on substances such as chocolate, butter, cream (for example, to make food such as chocolate crispy cakes and ice-cream for a party). ▪ Researching the temperature at which materials change state, for example, when iron melts or when oxygen condenses into a liquid. ▪ Observing and recording evaporation over a period of time, such as a puddle in the playground or washing on a line. ▪ Investigating the effect of temperature on washing drying or snowmen melting. ▪ Additional suggestion from Lancashire for working scientifically opportunities which enhance learning and support using ICT. ▪ This unit provides an ideal opportunity for using data logging equipment to detect/measure and compare temperatures. 	<p>Pupils should be taught to:</p> <p>Vibrations</p> <ul style="list-style-type: none"> ▪ Identify how sounds are made, associating some of them with something vibrating. ▪ Recognise that vibrations from sounds travel through a medium to the ear. ▪ Find patterns between the volume of a sound and the strength of the vibrations that produced it. ▪ Recognise that sounds get fainter as the distance from the sound source increases. ▪ Sounds can be made in a variety of ways (pluck, bang, shake, blow) using a variety of things (instruments, everyday materials, body). ▪ Sounds travel away from their source in all directions. ▪ Vibrations may not always be visible to the naked eye. <p>Pitch</p> <ul style="list-style-type: none"> ▪ Find patterns between the pitch of a sound and features of the object that produced it. ▪ Sounds can be high or low pitched. ▪ The pitch of a sound can be altered. ▪ Pitch can be altered either by changing the material, tension, thickness or length of vibrating objects or changing the length of a vibrating air column. <p>Muffling/blocking sounds</p> <ul style="list-style-type: none"> ▪ Recognise that vibrations from sounds travel through a medium to the ear. ▪ Sounds are heard when they enter our ears (although the structure of the ear is not important key learning at this age phase). ▪ Sounds can travel through solids, liquids and air/gas by making the materials vibrate. ▪ Sound travel can be reduced by changing the material that the vibrations travel through. ▪ Sound travel can be blocked. <p>Notes and Guidance (non-statutory): Pupils should explore and identify the way sound is made through vibration in a range of different musical instruments from around the world; and find out how the pitch and volume of sounds can be changed in a variety of ways.</p> <p>Pupils might work scientifically by:</p> <ul style="list-style-type: none"> ▪ Finding patterns in the sounds that are made by different objects such as saucepan lids of different sizes or elastic bands of different thicknesses. ▪ They might make ear muffs from a variety of different materials to investigate which provides the best insulation against sound. ▪ They could make and play their own instruments by using what they have found out about pitch and volume. <p>Additional suggestion from Lancashire for working scientifically opportunities which enhance learning and support using ICT across the curriculum</p> <ul style="list-style-type: none"> ▪ This unit provides an ideal opportunity for using data logging equipment to detect/measure and compare sounds. 	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> ▪ Identify common appliances that run on electricity. ▪ Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers. ▪ 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. ▪ Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit. ▪ Recognise some common conductors and insulators, and associate metals with being good conductors. ▪ Electricity can be dangerous. ▪ Electricity sources can be mains or battery. ▪ Batteries ‘push’ electricity round a circuit and can make bulbs, buzzers and motors work. ▪ Faults in circuits can be found by methodically testing connections. ▪ Drawings, photographs and diagrams can be used to represent circuits (although standard symbols need not be introduced until UKS2). <p>Notes and Guidance (non-statutory): Pupils should construct simple series circuits, trying different components, for example, bulbs, buzzers and motors, and including switches, and use their circuits to create simple devices. Pupils should draw the circuit as a pictorial representation, not necessarily using conventional circuit symbols at this stage; these will be introduced in Year 6.</p> <p>Note: Pupils might use the terms current and voltage, but these should not be introduced or defined formally at this stage. Pupils should be taught about precautions for working safely with electricity.</p> <p>Pupils might work scientifically by:</p> <ul style="list-style-type: none"> ▪ Observing patterns, for example, that bulbs get brighter if more cells are added, that metals tend to be conductors of electricity, and that some materials can and some cannot be used to connect across a gap in a circuit.

<p>Sort / group / compare / classify / identify</p>	<p>Research <i>finding things out using a wide range of secondary sources of information and recognising that scientific ideas change and develop over time</i></p>	<p>Modelling</p>	<p>Recording of 'Explore / Observe' <i>developing a deeper understanding of a wide range of scientific ideas encountering more abstract ideas</i></p>	<p>Questioning <i>asking their own questions about scientific phenomena</i></p>	<p>Planning <i>using different types of scientific enquiry making decisions about and explaining choices for testing</i></p>
<ul style="list-style-type: none"> Make a simple guide to local living things. Use guides or simple keys to classify / identify [local small invertebrates]. Use their observations] to identify and classify. Record similarities, differences or changes related to simple scientific ideas or processes or more complex groups of objects/living things/events and begin to give reasons for these. 	<ul style="list-style-type: none"> Recognise when and how secondary sources might help them to answer questions that cannot be answered through practical investigations. Create/invent/ design something based on what they have found out applying both research and/or practical experiences. (Y3/4). Find out about the work of famous scientists (historical & modern day) (Y3/4). 	<ul style="list-style-type: none"> Make a visual representation or a model of something to represent something they have seen or a process that is difficult to see. Suggest their own ideas on a concept and compare these with models or images. 	<ul style="list-style-type: none"> Suggest their own ideas on a concept and compare these with what they observe / find out. Develop simple descriptions from their observations use relevant scientific language to discuss their ideas. Observe and record relationships between structure and function (Y3/4). Observe and record changes /stages over time (Y3/4). Explore / observe things in the local environment / real contexts and record observations (Y3/4). 	<ul style="list-style-type: none"> Choose/select a relevant question that can be answered [by research or experiment/test]. Ask/raise their own relevant questions with increasing confidence and independence about what they observe and about the world around them. 	<ul style="list-style-type: none"> Investigate the effect of something on something else. Start to make their own decisions about the most appropriate type of science enquiry they might use to answer scientific questions [is a fair test the best way to investigate their question]. Recognise when a test is necessary. Carry out simple fair tests [with increasing confidence and make some of the planning decisions about what to change and measure/observe].
<p>Equipment and measurement <i>increasing complexity with increasing accuracy and precision make their own decisions about the data to collect</i></p>	<p>Communicating Recording <i>recording data, reporting findings, presenting findings</i></p>	<p>Considering the results of an investigation / writing a conclusion</p>			<p>Collaborating</p>
<ul style="list-style-type: none"> Begin to identify where patterns might be found and use this to begin to identify what data to collect. Make more of the decisions about what observations to make, how long to make them for and the type of equipment that might be used. Learn how to use new equipment, such as data loggers & measure temperature in degrees Celsius (°C) using a thermometer. Understand precautions for working safely. Collect and record data from their own observations and measurements, using notes/simple tables/standard units, to help to make decisions. Make accurate measurements using standard units [and more complex units and parts of units] using a range of equipment. 	<ul style="list-style-type: none"> Record findings using simple scientific language and vocabulary, including discussions, oral and written explanations, notes, drawings (annotated), pictorial representations, labelled diagrams, tables and bar charts [where intervals and ranges agreed through discussion], displays or presentations. Begin to select the most useful ways to record, classify and present data from a range of choices. Make decisions on how best to communicate their findings in ways that are appropriate for different audiences. (Y3/4) 	<p>Describe results <i>Looking for patterns analysing functions, relationships and interactions more systematically</i></p> <ul style="list-style-type: none"> Notice/find patterns in their observations and data. Describe the effect of something/different factors on something else. Help to make decisions about how to analyse their data. 	<p>Explain results <i>Draw conclusions based on evidence</i></p> <ul style="list-style-type: none"> Begin to develop their ideas about relationships and interactions. Reporting on findings from enquiries [beginning to identify the scientific facts in their data]. Use relevant scientific language to discuss, communicate, report their findings. Read and spell scientific vocabulary correctly and with confidence (Y3/4). 	<p>Trusting my results</p> <ul style="list-style-type: none"> Use results to suggest improvements, new questions and predictions for setting up further tests. With help, pupils should look for similarities and differences in their data [between different groups of results]. 	<ul style="list-style-type: none"> Make a visual representation or a model of something to represent something they have seen or a process that is difficult to see. Suggest their own ideas on a concept and compare these with models or images.

Possible Cross-curricular links, especially opportunities for English, Mathematics and Computing within teaching:	
English links	<ul style="list-style-type: none"> • Writing experiments/diary format of the journey of a mars bar
Mathematics links	<ul style="list-style-type: none"> • VENN/CARROLL DIAGRAMS FOR SORTING INFORMATION tables and charts to record results
Computing links	<ul style="list-style-type: none"> • Use ICT to support answering their own questions
Other links	<ul style="list-style-type: none"> • Community links with dentists
Possible Experiences including visits/visitors/other:	
Consider what could augment your planning to really enthuse the children in your class:	
<ul style="list-style-type: none"> • Teeth model • Skeleton model • Hands on digestive system squishy bags 	
Display/Resources:	
Consider what resources could be brought into the classroom and what display work could be completed either before/during or after topic is taught:	
TEETH MODEL OUT	
SKELETON MODEL OUT	
NEW MODELS FOR HANGING DISPLAYS ABOUT TEETH AND EATING	

Session	Key Objective from skills listed above (What is it that you want the children to learn?)	Possible Activities including use of Computing and other technologies, and showing at least 3 differentiations	Outcomes/Evidence of what they have learnt (Where will this be found? Will it be in a book? Topic book? Display? Photographic evidence?)	Possible extension into homework if appropriate to enhance and deepen learning
1 Slides Worksheet 1A/1B/1C Animal Cards A/B Books, access to internet, etc. Challenge Cards (FSD? activity only)	WIK WIWTK mind map or grid To be able to identify and classify carnivores, herbivores and omnivores.	Shared: <ul style="list-style-type: none"> • Why do we eat? Children to think, pair, share their ideas, then go through the information on the slides. • Explain that all animals, including humans, need to eat in order to survive. Animals all eat different things to get the right nutrients they need to be healthy. Show children the animals on the slides. What do you think might be different or similar about the diets of these two animals? Children to discuss ideas for each pair. • Show children the terms 'carnivore', 'herbivore' and 'omnivore' on the slides. Do you know what these terms mean? Children to discuss ideas. • Show children the definition for each of the terms on the slides. Can you think of any animals that are herbivores/carnivores/omnivores? How can we find out what an animal eats if we are not sure? Discuss ideas as a class. 	Information pages Photos to recognise working collaboratively ASSESSMENT QUESTIONS: <ul style="list-style-type: none"> • Can children explain why all animals, including humans, need to eat? • Can children identify animals that are carnivores, herbivores and omnivores? • Can children classify animals according to their diet? 	

		<p>Activity:</p> <ul style="list-style-type: none"> • Split the class into groups and provide each group with one of the Challenge Cards. Children to work together to identify a variety of carnivores, herbivores and omnivores in their given habitat. • Once children have identified a variety of herbivores, carnivores and omnivores, ask them to present the information as an information poster. They could include Venn diagrams, tables, charts, diagrams, written descriptions, etc. • When finished, each group could present what they have found out to the rest of the class. <p>Plenary:</p> <p>Are you a herbivore, a carnivore or an omnivore? Stick up the Label Cards in different points around the classroom and ask children to go and stand next to the one that describes what they are.</p> <p>What do you notice?</p> <p>What does this tell us about human diets?</p> <p>Discuss ideas as a class.</p>		
<p>2 Slides Worksheet 2A/2B/2C/2D/2E Organisms Sheet Name Tags (FSD?) activity only)</p>	<p>To be able to construct and interpret a variety of food chains.</p>	<p>Shared:</p> <ul style="list-style-type: none"> • Show children the terms 'carnivore', 'herbivore' and 'omnivore' on the slides. How would you describe what each of these terms means to someone who didn't know? Children to share their ideas. If necessary, read through the definitions and examples on the slides. • Show children the picture of a food chain on the slides. What do you think this diagram is showing? <p>Invite children to share their ideas, then go through the information about food chains on the slides and how they always start with a producer. Explain also that the arrows show the direction of energy in the food chain.</p> <ul style="list-style-type: none"> • Can you organise these animals into a food chain? Challenge children to do this with a partner and then check if they were right on the slides. Repeat with several other food chains. <p>Activity:</p> <p>Lower ability: Children to cut out each strip on worksheet 2A and then each animal from each strip. Children to arrange the organisms into a food chain on worksheet 2B.</p> <p>Middle ability: Children to cut out each strip on worksheet 2C and then each animal from each strip. Children to arrange the organisms into a food chain on worksheet 2D.</p> <p>Higher ability:</p>	<p>ASSESSMENT QUESTIONS:</p> <ul style="list-style-type: none"> • Do children know what the terms 'producer' and 'consumer' mean in relation to food chains? • Can children interpret food chains? • Can children construct food chains? 	

		<p>Provide children with the Organisms Sheet. Challenge children to create as many food chains as they can using the organisms on the sheet. Children to record the food chains on worksheet 2E</p> <p>FUN CHALLENGE-Cut out the names from the Name Tags sheet and give one to each child. If necessary, give children some time to research their plant/animal to find out what kinds of foods they eat.</p> <ul style="list-style-type: none"> • Ask children to stand in a circle holding their name tag in front of them. When you say 'Go!' challenge children to get themselves into food chains. Check as a class. Are all our food chains correct? Are there any organisms left over that we could include in an existing food chain? • Repeat several times to see how many different food chains you can create as a class. Alternatively, ask children to create their own name tags at random and see what funny food chains you can get! <p>Plenary: Show children the food chain on the slides. What would happen if one of these organisms was to be taken out of the food chain? What would the consumer eat instead? How might this affect the whole ecosystem? Discuss ideas as a class.</p>		
<p>3 2 sessions</p>	<p>To identify the different types of teeth in humans and identify their functions.</p>	<p>Have a dentist visit if possible</p> <p>Shared:</p> <ul style="list-style-type: none"> • Ask children to feel their teeth with their tongues. What do your teeth feel like? Do all your teeth feel the same? Children to share their ideas. • Why do we have teeth? Children to think, pair, share their ideas. • Explain that we have teeth to help us eat. Teeth help us cut and chew our food to break it down so we can swallow and start digesting it. Without teeth, all your food would have to be very mushy. • Show children the picture of the teeth on the slides. Do all these teeth look the same? What are the differences between the different types of teeth? • Go through the explanations of what incisors, molars and canines are for and where they are in the mouth. • Show the individual picture of incisors, canines and molars and ask children to identify what type of tooth each one is, what it is used for and why, then check if they were correct. <p>Activity: Match the diagram to the description (quick activity)</p> <ul style="list-style-type: none"> • Provide children each with a mirror and give them some time to look at their teeth and see if they can identify their incisors, canines and molars. 	<p>ASSESSMENT QUESTIONS:</p> <ul style="list-style-type: none"> • Can children identify the different types of human teeth? • Do children know that the shape of teeth make them useful for different purposes? • Can children suggest reasons why animals might have different types of teeth? 	<p>CHECK WITH GROWN UPS THAT YOU ARE PART OF A DENTIST AND THAT YOU GO REGULARLY</p>

		<ul style="list-style-type: none"> • Challenge children to draw a diagram of their own teeth, including any gaps they may have, on worksheet 3D. When they have finished their diagram, they should label it using the words in the word box and then answer the questions about how many of each different type of tooth they have. <p>Plenary: Show children the pictures of the animals on the slides. How do you think the teeth of these two animals might be different? Why do you think they would need to be different? Children to discuss ideas drawing on what they know about animal diets. Encourage children to use the specific vocabulary, e.g. incisors, molars, canines, etc.</p>		
<p>4 Slides Worksheet 4A Poster Template Information Sheet</p>	<p>To explore different ways of keeping teeth healthy.</p>	<p>SHARED:</p> <ul style="list-style-type: none"> • Ask children to count their teeth with their tongues. How many teeth do you have? Do you have any gaps? Do you know how many teeth you are supposed to have? Invite children to share ideas. • Explain that humans have two sets of teeth during their lifetime: milk teeth and adult teeth. Milk teeth fall out and are replaced by adult teeth that are permanent. Why do you think we don't just have one set of teeth during our lifetimes? Children to share ideas, then go through the information on the slides. • Show children the two people on the slides who have each lost a tooth. What impact will this have on each person and why? Invite children to share their ideas. • Explain that children are supposed to lose their milk teeth, that it is natural and that a new tooth will grow in its place. Adults are not supposed to lose their adult teeth because another one will not grow back. Show children the pictures of tooth decay on the slides and explain that tooth decay can lead to cavities and tooth loss. How do you think people can make sure that their teeth stay healthy? <p>Activity: Starter-- Split the class into small groups and challenge each group to produce two short role-plays - one showing a child losing a milk tooth and one showing an adult losing a permanent tooth. Children could include dentist, tooth fairy characters etc. in their role plays. Encourage children to use scientific language in their role-plays and to convey how and why the two situations are different.</p> <ul style="list-style-type: none"> • When children have had some time to rehearse and prepare their role-plays, invite them to share them with the rest of the class. <p>Lower ability:</p>	<p>Plenary: Tell children that in the past, not everyone had access to a dentist so people's teeth would often rot and fall out. Sometimes, people even took all their teeth out and put false teeth in so they wouldn't have to worry about them! Do you think you do enough to look after your teeth? What could you do to make sure that your adult teeth will not fall out?</p> <p>ASSESSMENT QUESTIONS:</p> <ul style="list-style-type: none"> • Do children know that humans have two sets of teeth during their lifetime? • Can children explain why it is important to look after teeth? • Can children describe ways in which people can make sure their teeth stay healthy? 	<p>TEETH CLEANING CHALLENGE</p> <p>Comic strip relating to the day in the life of a tooth.</p>

		<p>Provide children with the Information Sheet and any other available sources. Challenge children to use the information to create a poster explaining what people should do to make sure that their teeth stay healthy, e.g. brushing, flossing, avoiding sugary foods, etc. Children could use the Poster Template or create their own on A4 paper.</p> <p>Middle ability: Provide children with the Information Sheet and any other available sources. Challenge children to create a flier explaining what people should do to make sure that their teeth stay healthy. Children could fold an A4 piece of paper into a booklet or concertina to create their flier.</p> <p>Higher ability: Provide children with the Information Sheet and any other available sources. On worksheet 4A, children to imagine they are a dentist and answer the interview questions about why it is important to look after our teeth and how to avoid tooth decay. When children have written their answers, they could act out their interviews with a friend.</p>		
5	To investigate how the digestive system works.	<p>Shared:</p> <ul style="list-style-type: none"> • We have already found out that our bodies need food to eat but have you ever wondered what happens to the food once you have swallowed it? On a mini-whiteboard or a piece of paper, ask children to sketch what they think the digestive system looks like inside their bodies. Encourage children to label any organs they know the names of. • Show children the diagram of the digestive system on the slides. How similar is your diagram to this diagram? Children to discuss the similarities and differences with a partner. • Have we found out how the digestive system works yet? What questions do we not know the answer to? Invite children to share their questions and list on the slides. Tell children that today they will be finding out the answers to some of these questions to help them work out what happens to their food once it is swallowed. <p>Critical Skills Activity: watch a short clip to support this and have ICT room available plus books from the library Assign roles to individuals. Children to create a mini presentation referring to how the digestive system works. Present to class.</p>	<p>Plenary: What have you found out this lesson about what happens to your food once it has been swallowed? Have we found all the answers to our questions? What haven't we found out yet? Discuss ideas as a class.</p> <p>ASSESSMENT QUESTIONS:</p> <ul style="list-style-type: none"> • Can children ask relevant questions? • Can children use different sources of information to find the answers to questions they have asked? • Can children name some of the organs associated with the digestive system? 	Display polished pieces

<p>6</p> <p>3 ADDITIONAL sessions use one session in English to produce the draft.</p>	<p>To be able to describe the functions of the basic parts of the digestive system.</p>	<p>Shared:</p> <ul style="list-style-type: none"> • What can you remember about how your digestive system works? Children to think, pair, share their ideas. • Show children the diagram of the digestive system on the slides. Can you remember what each of these different organs is called? Children to share ideas, then check on the slides. • Explain that today they will be exploring the journey food takes from the moment it enters the body to the moment it leaves the body. How long do you think it takes for food to pass through your system? Invite children to share their estimates, then explain that it can take between 24 hours and 72 hours for food to pass through your digestive system. • Go through the information on the slides about how the digestive system works. • If possible, refer back to the list of questions the class asked in lesson 5. Have we answered all these questions now? <p>Lower ability: Provide children with a set of the Label Cards and worksheet 6A. Children to cut out the labels and stick them on the correct part of the diagram on the worksheet to show the function of each of the organs shown.</p> <p>Middle ability: On worksheet 6B, children to use the words in the word box to label each of the parts of the digestive system, then match the organ to its function.</p> <p>Higher ability: On worksheet 6C, children to use the words in the word box to label each of the parts of the digestive system. When finished, challenge children to describe in their own words how the digestive system works and record on the flow diagram.</p>	<p>Plenary: End of Unit QUIZ!</p> <p>ASSESSMENT QUESTIONS:</p> <ul style="list-style-type: none"> • Can children name the organs associated with the digestive system? • Can children describe the basic functions of the organs associated with the digestive system? • Can children describe the process of digesting food? 	
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