

Year 4 Animals Including Humans – Food and Digestion



Understand the intestines



Understand the food pyramid and why it is important



Know about vitamins and minerals



Understand salivary glands and taste buds

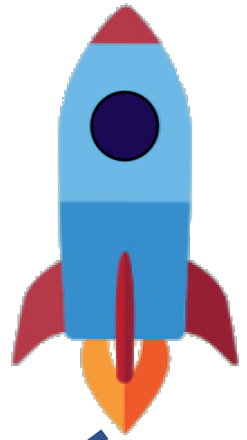


Know the different types of teeth



Understand the food chain, know how natural cycles work

Scientific Enquiry Covered	Rocket Words Covered	Name of Task / Tasks	Resources Needed	Summative Quiz Questions
Make a model of your intestines. Use simple scientific language, drawings, and labelled diagrams	small intestine, large intestine, stomach, appendix, nutrient	Use craft materials to make a model of the digestive system! Get creative!	Craft Materials Recycled Materials i.e. cardboard, balloons, pipe cleaners, toilet roll tubes, straws, rubber bands etc.	An intestines quiz: this might be longer than you think. True or false: You produce between one and three pints of saliva per day. The stomach is like a small cement mixer - as it stirs up the food, it adds (liquids and chemicals) to break your food down into digestible pieces. If you have eaten a hard chunk of an apple, your stomach breaks it down into a mushy substance. True or false: Your small intestine is eight meters long. If held up vertically then it would be taller than four fully grown men. Once your food leaves your stomach, it enters the small intestine. What happens here? Can you put all of these events in order to show the journey that food takes through the human body?
Use straightforward scientific evidence to answer questions or to support their findings	food pyramid, natural sugar, dairy product, meat, fruit and vegetables	Create your own food pyramid which shows your diet	<i>Food Audit - Draw Your Pyramid, Handout(s) - Food Pyramid, Pen, Paper / Mini Whiteboard, Make a Healthy Pizza, Recipe makes one pizza, 375g (13 oz) plain flour, 1 teaspoon of salt, 1 tablespoon caster sugar, 7g (1/4oz) dried active, baking yeast, 2 tablespoons olive oil, 225ml (8oz) warm water, Pizza toppings of your choice, Baking tray, Rolling pin, Handout - for recipe</i>	In the food pyramid for humans, which is the biggest section - the section you should take most of your diet from? True or false: Eating too many foods that contain a lot of fat could damage your heart. These pictures show foods that are in two different food groups: carbohydrates and dairy. But can you tell which of these foods goes into each group? Can you put these food groups in the correct order for the food pyramid? Which one goes at the top? Work your way down from there. Which of these foods are a source of protein?
Make decisions about what observations to make	vitamin A, vitamin B, vitamin C, vitamin D, mineral	Help people's health and wellbeing by giving them advice about the vitamins and minerals in food.	<i>Analysing Food Packaging</i> Food packets brought from home. Either complete, or just the cut-out ingredients lists (don't forget to label these lists so you know what food they are from). <i>Mission to Write - Ask Your Pharmacist Handout</i>	True or false: Vitamin A helps keep skin, tissue and eyes healthy. What does vitamin C do? There are two correct answers. Which of these things are a good source of vitamin D? Meat, green leafy vegetables, whole grain cereals, raisins, and dried beans are all good sources of what? Have you ever heard people say that eating carrots will help you see in the dark? Why do you think that people say this?
Set up simple practical enquiries, comparative and fair tests	saliva, salivary glands, taste buds, digest, bitter	Juicy Jelly's! Using the blindfold can you identify the various flavours of sweets?	Blindfold Taste Test Sweets in variety of flavours (jelly beans are good) Blindfold	True or false: Digestion begins before you even put the food in your mouth. Can you sort these things into the order that they happen when you eat an apple? Complete the statement: When you take a bite of the apple, your {{tongue}} tastes the sweetness and tells your brain, "Mmm, here's something good and sweet". Then your {{brain}} sends an order to the parts of the mouth called the {{salivary glands}}, "Get to work!" Which of these parts of the body are involved in digestion and which aren't? Which of these statements about a human's sense of taste are true?
Set up simple practical enquiries, comparative and fair tests	incisors, canines, chew, molars, dentist	Design an experiment that explores how different substances stain the surface of our teeth.	Egg Staining Experiment 4 beakers or cups, 4 different substances such as: Cola, coffee, blackcurrant juice, water, 4 eggs with shells, Toothbrushes / scrubbing brush, Toothpaste (optional), Cups of water for rinsing, Spoons to remove egg from cups, Kitchen towels	Your front {{eight}} teeth cut, munch and crunch the food into smaller pieces. Your front eight teeth, four on the top and four on the bottom, are called your {{incisors}}. To incise means to {{cut}}. True or false: You only ever bite off pieces of food that are small enough to swallow whole. Why are your four pointy teeth at the front of your mouth called canines? Which of these are real names for human teeth? Which of these foods would do the most damage to your teeth? Which would do the least amount of damage?
Identify differences, similarities or changes related to simple scientific ideas and processes	producer, consumer, decomposer, wheat, soda bread	Investigate three different habitats, and make a food chain pyramid to show the producers, herbivores and carnivores.	<i>Food Chain Pyramid</i> Handout Pens/pencils Scissors Glue	The bright colours on a ladybird's back are to advertise it to predators and let them know that it is safe to eat. Which of these groups of living things does a pond's cycle of nature depend on? Select three. Which of these are the producers in a pond environment and which are the consumers? Can you put these creatures in the right order for a food chain? The energy will travel from the bottom to the top. Complete the statement: Plants use {{nutrients}} to produce their own {{food}}. This is why they are called {{producers}}. So, like a circle, this cycle of nature goes on and on.



Year 4 Living Things and their Habitats – Nature and the Environment



Understand water pollution



Know about the balance of nature



Describe ecosystems and how they are affected by changes in the environment



Explore methods that can be used to conserve water

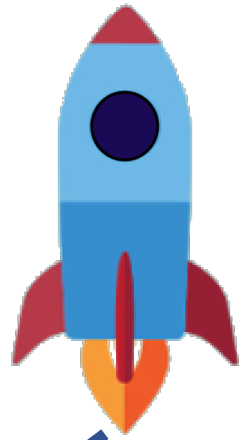


Understand human impact on the environment



Explore air pollution

Scientific Enquiry Covered	Rocket Words Covered	Name of Task / Tasks	Resources Needed	Summative Quiz Questions
Extract and condense scientific information	chemical, contaminate, conserve, water treatment plant, sewage	Research and create a report on disasters, such as oil spills, and how they can affect the environment.	<i>Handout</i> Research Material	True or false: Some of your drinking water is taken from lakes and rivers. How is water filtered in cities before it is pumped through to houses for drinking water? Which of these images show water being polluted and which don't? Complete the statement: If water {{evaporates}} into polluted air, the water that comes down as rain, and flows into rivers and lakes, can also become {{polluted}} by the air. That's another reason why it's not safe to drink water straight from {{rivers and lakes}}. Which of these statements are true?
Record findings using simple scientific language, bar charts, and tables	habitat, ecology, heron, bacteria, interdependent	Analysing data. Use your handout to plot the data onto your graph.	<i>Interdependence Study</i> Handout, Pen / pencil / colouring pencils, <i>Build a Bug Habitat</i> , Crisp tubes Masking tape, Paint, Ribbon, Scissors, Paintbrush Bark, leaves, sticks, straw, hay, cardboard, etc.	What is the study of how things interact and survive together in environments called? Complete the statement: Remember, when a fish dies and sinks to the bottom of the pond, it creates {{nutrients}} for the plants and bushes at the water's edge to grow again. How? When living things rely on one another for {{survival}} is we say they are {{interdependent}}. What might happen if, as a result of good weather, there is a very good year for the growth of seeds and other crops? Which of these creatures would you expect to predators and which ones do you think are most likely to be prey? True or false: Scientists sometimes call environments where creatures rely on each other for survival 'the circle of life.'
Use your knowledge and understanding to suggest the effects of interdependence	wetland, ecology, interdependent, ecosystem, environment	Explore how ecosystems are interdependent.	Handout	Which of these definitions describe an ecosystem? Complete the statement: A wetland area is an example of an {{ecosystem}} - the river and pond, the stream flowing into it and the woodland nearby. All the creatures are {{interdependent}}. Not all of the creatures survive - but their {{species}} will. Which of these images show a diverse ecosystem and which images show an ecosystem which is not very diverse? Which of these things might suggest that an ecosystem is healthy? Select three. If you took one species out of an ecosystem, it would have no impact on the other creatures in the same ecosystem.
Gather and record information to suggest improvements	water butt, drought, freshwater, pure, conserve	Complete a water audit exercise then work out how you can save water	Paper Pencils Pens Handout	True or false: Even if you use less water in your house, you and/or your parents won't save any extra money. Complete the statement: It is unbelievable that {{oceans and lakes and streams}} that contain beautiful {{wildlife}} and are home to so many species, are being used as dumping grounds for our {{waste}}. An example of this is the Great Pacific Garbage Patch. Which of these methods could be used to conserve water? Which of these images show people conserving water and which show people wasting water?
Research and present your findings in a creative way	air pollution, climate change, water pollution, single use plastic, deforestation	Using secondary sources of information research a man-made disaster that seriously impacted the environment	Library books / the internet <i>Handout</i>	What impact did reintroducing wolves to the Yellowstone National Park have? Which of these statements is true? Choose five. True or false: Humans never damage the environment or have a negative effect on wildlife. Have another look at the expert film on slide 15. What steps can humans take to try to have a positive impact on the environment? Choose three. Why had wolves disappeared from Yellowstone National Park 70 years before they were reintroduced in 1995? Complete the statement: The {{ecosystem}} of the Yellowstone National Park had been severely changed by the {{elk}} who had greatly increased in number because there were no {{wolves}} or predators to kill them.
Conduct a fair test and compare the results	climate change, pollute, greenhouse gases, emission, smog	Investigating air pollution levels.	Index cards Petroleum jelly Sticky and masking tape Cotton wool Scissors Hole punch <i>Handout</i>	Which of these is the correct definition for the word 'pollute'? Which of these images show air pollution happening and which don't? True or false: The word 'smog' is a mix of the words 'smell' and 'dog'. During the 1950s, how many people died in London as result of smog? Complete the statement: Factories can also {{pollute}} the air with their {{smoke and emissions}}. There are {{no laws}} to regulate pollution from factories in some parts of the world.



Year 4 Classifying Living Things and their Habitats



Understand habitats



Know how scientists classify animals



Understand the difference between vertebrate and invertebrate



Know about cold-blooded amphibians and reptiles

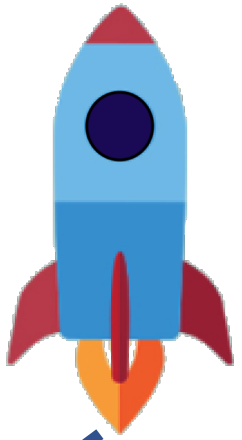


Know about warm-blooded birds and mammals



Understand how fish are different from amphibians and reptiles

Scientific Enquiry Covered	Rocket Words Covered	Name of Task / Tasks	Resources Needed	Summative Quiz Questions
Ash relevant questions and use different types of scientific enquiries to answer them	pond dipping, sample, sediment, water lily, newt	Asking relevant questions and using different types of scientific enquiries to answer them. Create your own imaginary creature.	Create a Creature Factsheet Research tools (books, internet) , Paper, Pencils Colouring pens, Handout Pond Dipping, Collecting pots, Pond dipping nets, Beakers Plastic spoons, Plastic trays Gloves, Waterproof boots	Which of these creatures live in or around a pond? This will be their natural habitat. Which of these plants would you expect to find growing near, in or around a pond? Creatures that live near each other and share a habitat often depend on each other for their own survival. Complete the statement: Have you ever walked along a pondside or lake? If the water is clear you may see {{fish}} swimming but you may also see many {{insects}} laying or hovering on the {{water surface}}. Water is a fascinating habitat to many different creatures. True or false: At night time, the creatures you see in a particular habitat could change because some creatures have adapted to live in their habitat at certain times of day.
Make careful observations to classify animals	classify, vertebrate, invertebrate, species, characteristics	Classifying into groups. Look at varied animals and decide which groups you can classify them into.	Grouping and Classifying Venn Diagram Hula Hoops (optional) Images of / model or toy animals Handout	True or false: All insects have six legs. Which of these characteristics are possessed by ALL birds? Complete the statement: The commonality of all mammals is that they have {{hair}}, secrete {{milk}} to feed their babies and are vertebrates. They are also {{warm blooded}}. In warm-blooded animals, blood warms up or cools down depending on the time of day (being linked with the Sun's movement). Which of these creatures are mammals and which of them are birds?
Finding different ways to answer questions	vertebrate, invertebrate, amphibian, exoskeleton, skeleton	Go on an animal-finding expedition outside or cut out pictures of different animals to sort and classify them.	Classifying Animals Camera (optional) magazines / newspapers scissors glue large sheets of paper	Which of these animals are vertebrates and which are invertebrates? True or false: Being a vertebrate means having a backbone. Can you put these vertebrates in size order, with the largest at the top and the smallest at the bottom. Some animals don't have a {{spine}}, or even a skeleton, but they have an {{exoskeleton}} which protects their bodies. All amphibians are {{vertebrates}}. What is the largest land snail (which is an invertebrate) in the world?
Present information and take accurate measurements	cold-blooded, gills, oxygen, scales, reptile	Model your own cold-blooded reptile using modelling clay, then investigate how long it takes for your clay model to change its body temperature based on its surrounding.	Clay Reptiles, Modelling clay (not the self-hardening type) Building a Habitat for Amphibian Shoebox or something similar, Card Straws, Pebbles, Paint Fact Sheet, Reference books and the internet, Handout	Which of these creatures are cold-blooded and which are not? True or false: There are under 600 species of reptiles on the planet. Where do amphibians live? Complete the mission: The word {{amphibian}} means 'living in two places'. When they are young, amphibians have {{gills}} to take {{oxygen}} from the water. Then they grow up and most develop {{lungs}} that allow them to take oxygen from the air. Which of these characteristics do ALL reptiles have?
Use relevant scientific language and illustrations	bird, mammal, warm-blooded, migration, hibernation	Create a wildlife spotting guide for your local area.	Wildlife Spotter Handout - Wildlife Spotter Pen Research - books / internet outside space to explore	Which of these characteristics do ALL mammals have? Which of these creatures are mammals and which aren't? True or false: There are two species of squirrel. The red one and the grey one. Complete the statement: Whales and dolphins breathe air using {{lungs}}, not gills. They need to come to the surface to breathe air. Whales and dolphins communicate using {{high pitched sounds}} and are very {{intelligent}} creatures. Which of these creatures are rodents?
Identify differences, similarities or changes related to simple scientific ideas and processes	fish, amphibian, reptile, cold-blooded, shark	Create your own magnetic fish game to help you learn about different types of fish.	Magnetic Fish Game Library books, internet Handout Coloured Pens/pencils Paperclips Magnets	True or false: A cold-blooded creature's body temperature goes up and down depending on whether it is hot or cold around them. Which of these classes have the largest number of species in their class? Which of these are amphibians and which are fish? As a warm blooded creature, your body temperature stays almost exactly the same almost all of the time. Do you know what temperature that is? Complete the statement: Fish are {{cold blooded}}, live in water, use gills and not lungs to breathe, and take {{oxygen}} from the water. Most fish are covered in {{scales}} and hatch from {{eggs}} which are laid by the female outside of her body.



Year 4 Sound



Explain what causes sound



Describe different sounds



Compare the speed of sound and the speed of light



Compare sounds in solids, liquids and gases

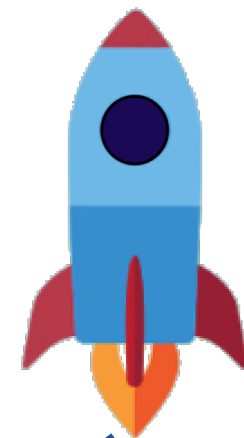


Describe how sound travels



Explain how to protect your ears

Scientific Enquiry Covered	Rocket Words Covered	Name of Task / Tasks	Resources Needed	Summative Quiz Questions
Use observations to answer questions	loudspeaker, voice box, sound, source, vibration	Exploring sound vibration!	Cup and String Telephone Plastic cups Cocktail stick String / wool ~ 4m <i>Handout</i>	Sound is created by waves moving backwards and forwards. Put these things in the order that they happen when you hear something make a sound. True or false: You cannot hum while holding your nose. Why might someone not be able to hear something when it makes a sound? Can you sort these images into things that block sound and things don't.
Describe pitch and volume	low-pitched, high-pitched, volume, loud, quiet	Create a sound museum	Sound Museum <i>Handout</i> objects from around the room	If you place and hold a ruler half-way on a table, pull it down and let it go, it will make a sound. If you move the ruler slightly further onto the table while it is still vibrating, what do you think will happen to the pitch of the sound? Which of these statements are true?
Use knowledge to explain phenomena	supersonic, Concorde, speed of sound, thunder, lightning	Explore light & sound phenomena	Light vs Sound <i>Handout</i>	Why could people see the curvature of the Earth when flying on Concorde? How fast does light travel?
Use knowledge and understanding to explain observations	medium, vacuum, transmit, clarity, particles	Observe sounds in solids, liquids and gases.	<i>Handout, The Sugar and the Speaker</i> , sugar grains, cling film, bowl, speaker, <i>Hanging From Your Ears</i> , String, wire coat hanger, <i>Tuning Fork in Water</i> , bowl of water, tuning fork, bung, <i>Rocks Underwater</i> , tank of water, two rocks 2l plastic bottle (bottom cut off), <i>Balloon Chatting</i> , inflated balloon, <i>Listening by the Fan</i> electric fan	True or false: Sound moves quicker through air than water. Can you sort these images into examples that prove that light waves move quicker than sound waves. Which of these places would you expect to hear echos? See if you can sort them into places that you would hear echos and places that you wouldn't. If you moved further away from a source that makes sound and light, what do you think would happen to the length of time between the moment that you saw the light and the moment that you heard the sound? Even though sound travels faster through liquids, why do you think that it is hard to hear clearly underwater?
Conduct a fair test	sound wave, echo, pinna, diffraction, fade	Setting up simple practical enquiries, comparative and fair tests. Sound muffler challenge!	Catching sound A2 paper (to make a large paper cone) tape <i>Handout</i>	Why would you choose to have carpet in a room instead of a hard floor?
Conduct a fair test	ear defence, baffling, absorb, muffled, sensitivity	Which materials are good at insulating sounds?	Handout, A simple circuit containing a battery, a buzzer & a switch. Samples of materials including; sponge, paper, corrugated card, cloth, foil etc. These should be cut to the same size and be able to cover the top and sides of the of the buzzer.	Which of these materials do you think would best insulate against sound? Pick three. True or false: Bones and muscles transmit sound. True or false: Different materials transmit sounds better than others. Complete the statement: Unless you wrap your {{whole body}} in many thicknesses of insulating material, some sound will always get through, as bones and muscles {{transmit sound}}. Different materials transmit {{frequencies}} better than others. Which of the places do you think that it would be a good idea to wear hearing protection?



Year 4 Electricity



Describe the basic parts of a circuit



Identify when a lamp will light in a simple series circuit



Understand the difference between a series and parallel circuit



Explain how to recognise electrical conductors and insulators

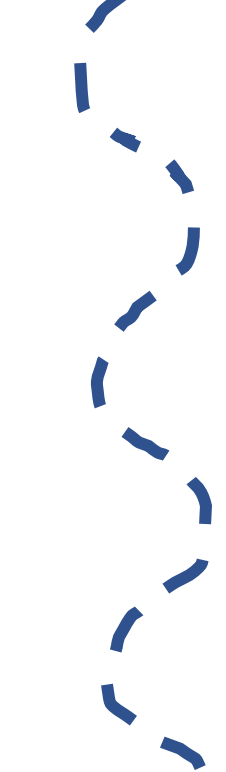
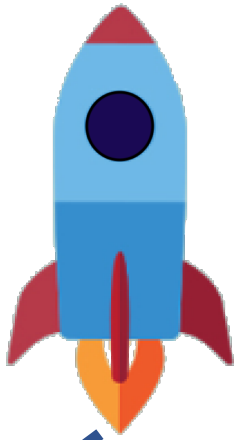


Explore how electricity is transported



To know how to work safely with electricity

Scientific Enquiry Covered	Rocket Words Covered	Name of Task / Tasks	Resources Needed	Summative Quiz Questions
Ask relevant questions and perform a simple test to answer them	electric circuit, wire, electrical appliance, bulb, battery	Create your own electrical circuit, powered by a lemon!	Fruit Power Battery Lemons, Pennies / Copper Coins, Zinc-galvanised nails, Sets of alligator clips. LED lights* Kitchen knife, <i>Handout, However for the best results use low voltage LEDs, anything between 1.5V to 2.25V should work.</i>	What is the name of the route that electricity flows through? Complete the statement: Electricity flows from the power source, through the {{switch}} when it is turned on, and through the wires, which {{conduct}} the electricity. Once the electricity reaches the bulb, it travels through the filament, which makes the bulb {{light}} up. True or false: Protons flow around an electrical circuit. When electrical energy reaches the filament in the bulb what is converted to? Which of these items use electricity and which don't?
Use scientific equipment safely and draw accurate, labelled diagrams	open circuit, closed circuit, switch, component, circuit diagram	Build a circuit and draw a diagram of it.	Build a Series Circuit with a Bulb, 6 volt batteries, Switch junctions, Bulb junctions Alligator clips, Buzzers, Torch Investigation, Torches, Pencils, Paper, <i>Handout</i>	If one light goes out in a series circuit then all of the lights in that circuit will go out. Complete the statement: A series circuit is one continuous {{loop}}. The electricity flows directly from the {{power source}} to the load. There may be a switch included in the circuit in order to {{stop}} the flow of electricity when it is flicked. What might be some of the reasons for loads (such as light bulbs) not working in a series circuit? Select three. Put all of these components in the correct order so that the circuit would work. What is the purpose of a resistor?
Making a light spinner card	parallel circuit, series circuit, current, continuous, represent	Design and make a light spinner card and test it out with series and parallel circuits.	Handout Pen Paper / Board to record on LED light / bulb batteries wires / clips motor	If one of the bulbs in a parallel circuit goes out then all of the bulbs will go out. Complete the statement: A parallel circuit has different {{components}} connected through different paths, or branches, before returning to a {{common path}} and, finally, back to the {{power source}} Can you sort these images depending on whether they run on a parallel circuit or a series circuit? True or false: Adding additional paths (branches) will make the lights already in the circuit dimmer. Select the statements that are true about the benefits of a parallel circuit over a series circuit. Two are correct, two are incorrect.
Setting up and performing a simple test	conductor, insulator, resistance, electrical shock, short circuit	Which materials are conductors and which ones are insulators. Predict and then test.	Insulators and Conductors Challenge, Four pieces of coated electrical wire, D battery, Small lightbulb, paperclips, toothpick, aluminium foil, drink can, copper coin, used match, rubber band, galvanised screws, eraser, etc. Bulb holder, D battery holder, Batteries, Card, Bulb, Clothes pegs	True or false: Most metals are good conductors. Complete the statement: Materials that do not let electricity pass through them are called {{insulators}}. Some examples of these are plastic, wood, glass and {{rubber}}. Materials that do conduct electricity are called {{conductors}}. Some examples of these are {{copper}}, silicon, zinc and sea water. Sort these items into ones that conduct electricity and ones that don't. In which of these scenarios is there a danger of electrocution? Which one of these statements is true?
Apply existing knowledge to design and make a doorbell circuit	national grid, switch, wind turbine, electrons, cable	Make your own doorbell.	Battery Electrical Wires / Crocodile clips Buzzer Paper Clips Paper	Which of these ways make electricity? Which of these appliances are powered by batteries and which are powered from the national power grid? Which type of particle is electricity made by? Which of these ways of generating electricity do you think are sustainable/renewable? True or false: electricity can be stored in batteries or cells.
Present information in written forms	electrician, electric shock, precaution, repair, electrical socket	Create your own health and safety booklet which explains how to use electrical appliances correctly.	Safety Poster Challenge Paper, Paints, Computers Printer, <i>Handout</i> Magazines, Health & Safety Booklet, Paper, Pens	Which of the things listed below would make working with electricity more dangerous? Which of the things listed below are safe ways to use electricity? Have a look at the expert video on slide 20. Why do you think that holding the grass against the electric fence does not give either of them a big electric shock? Why would it be dangerous to swim in the sea during a thunder storm? Which of these things would make working with electricity safer and which of them would not make it any safer?



Year 4 States of Matter



Compare and group solids, liquids and gases



Understand the water cycle



Investigate the effect temperature has on changing state



Understand diluting and dissolving



Understand evaporation and condensation



Describe freezing and melting

Scientific Enquiry Covered	Rocket Words Covered	Name of Task / Tasks	Resources Needed	Summative Quiz Questions
Ask relevant questions and present answers in the form of a model	state of matter, particle, volume, matter, bond	Create your own model which shows how water exists in three different states of matter.	Matter Models Marbles Plastic Container with lid	Which three states does water exist in? What happens when you boil water? Which of these pictures shows water in liquid form and which show it in a different form? At what temperature does water freeze and become ice? Sort these examples of water so that water at the highest temperature is at the top and water at the lowest temperature is at the bottom.
Report on findings from enquiries, including oral and written explanations, displays	water cycle, precipitation, transpiration, surface run off, groundwater	Water cycle collage.	Water Cycle Display Craft Materials	What is the journey called that a drop of water takes as it evaporates from the ocean, forms clouds, changes into rain, and then falls back to Earth? Which of these words describes water falling from clouds back to Earth? Complete the statement: Geographical water cycle facts show that Planet Earth is about 70% {{water}}, 97% of which is {{salt water}} and therefore not safe for humans to consume or use in farming to grow crops. Of the 3% that remains, 2% is actively stored in {{glaciers or ice caps}}. True or false: Water that falls back to Earth and infiltrates the ground is called dormant crystals. How much water on Earth takes each of these forms? Put the largest at the top and the smallest at the bottom.
Make systematic and careful observations. Take accurate measurements using standard units, using thermometers	temperature, degrees Celsius, melting point, boiling point, thermometer	Investigate how quickly a material dries at different temperatures.	Drying Investigation Fabric sample squares Water Different temperature rooms / spaces. <i>Handout</i>	Complete the statement: A washing machine is like a {{centrifuge}} and can wash away {{dirt}}, stains and sweat from our clothes. This takes less than an hour usually, but the downside is your clothes will be {{soaking wet}} once finished! Which of these things could you put wet clothes in/on in order to dry them more quickly? What is the scientific name for turning wet clothes into dry clothes? Can you put these events in order as your clothes go from wet to dry on a radiator. Which of these pictures show places where clothes would dry quickly and which pictures show places where clothes would not dry very quickly.
Set up simple practical enquiries, comparative and fair tests	dissolve, dilute, soluble, solvent, solute	Setting up simple practical enquiries, comparative and fair tests. Explore how to make the best bubble mixture by diluting substances.	Make a Bubble Wand Water Washing Up Liquid Measuring Cylinder Beaker Bubble Wand (we used the end of a bottle)	What happens when you put water and oil in a bottle and shake it? What happens when you put sugar and water into a bottle and shake it? True or false: We call things that dissolve in water solutes. Which of these things dissolve in water and which do not dissolve in water? Complete the statement: You cannot go on adding sugar to a water solution forever. A {{solvent}} (in this case water) can only dissolve a certain amount of {{solute}} (in this case sugar). When you cannot dissolve any more sugar in the water, we say that it has become a {{saturated solution}}.
Set up simple practical enquiries, comparative and fair tests	evaporation, condensation, absorb, heat, water vapour	Set up an experiment to see the rates of evaporation of different substances.	The Evaporation Challenge Jam jars / petri dishes Water, oil, vinegar washing up liquid Permanent Markers Paper Towels, Hot water Sealable plastic bags	True or false: Only one third of the surface of the Earth is covered in water. Complete the statement: The water in rivers, lakes and oceans is {{liquid}}. But every day, some of this liquid turns to {{gas}}. Every day, as the Sun shines down, some of the water {{evaporates}}. This means it turns into water vapour (gas) and mixes with the air. Where does most of the water in the air come from? Which of these places do you think have air with a high humidity and which of these places do you think have air with a low humidity. What happens to water that does not evaporate?
Working safely with scientific equipment to measure and record temperature	melting, freezing, sublimation, deposition, reversible	What temperature does wax freeze at?	Wax shavings (you could also use chocolate) Test tube 2 beakers Hot water Thermometer Stopwatch <i>Handout</i>	When a liquid changes to a solid, it is called freezing. Melting is the process of a solid changing to a Select... when Select... is applied. The opposite of this is Select... , when a liquid turns to a solid due to freezing temperatures. When water and other materials change state, they can often be Select... by applying or removing heat. Place these statements in order for when ice turns to steam and reverses again. Which of these describes the process of melting? Which of these would happen to an ice cream if you left it in the sun?

