Y1 Science Planning

A note about the planning

Please read.

This planning has been created and adapted by the science leaders at Sacred Heart RC Primary School. It is primarily based on the ASE planning matrices and the exemplification materials. It includes other high quality resources to support the lessons and assessment, such as Explorify, STEM, BP, YouTube, and TAPs. The planning is set out to provide teachers with a series of approximately 6 lessons (a half term's worth) which include the opportunities for working scientifically, incorporating the 5 enquiry types (a table at the end of the planning shows where these enquiry types have been met).

Each set of plans begins with , key learning, possible evidence , vocabulary to be used within the topic (created by the ASE), the statutory national curriculum aims and a suggested LO for that lesson. Where possible, we have included the opportunities to incorporate SMSC into the lessons, the opportunity to develop the children's science capital by providing them with potential job opportunities that this area of science offers and the chance to learn briefly about a scientist who was well-known within that area of study. Teachers may wish to expand on this further in reading/writing lessons. As this planning has been created for teachers at Sacred Heart, this document can be edited by class teachers if they have alternative ideas but they must inform the science lead before hand and the editing must be done in a different colour and not replace the original.

A set of exemplification materials with the activities supplements this planning and is where teachers can see how the activities were delivered and the work produced by children. The exemplification materials also include the national curriculum statements for the previous year group and the later year groups. Teachers should look at this before making any changes to the planning.

Where appropriate, there are teacher notes that provide extra information about what teachers may need to be aware of before the topic begins, such as resources that may need to be purchased before the topic or the way that the topic has been split.

Please note that it is down to the teacher's discretion as to how they adapt the activities for SEND /more able pupils although some suggestions have been made. It is important to remember that currently there is no criteria for GD in science.

The start of each topic should begin with the children completing a concept map with the key vocabulary on to show their understanding prior to the topic. When necessary children should revisit this using a different colour when new learning has taken place and children are secure with their understanding of the vocabulary.

Y1 Plants

Y1 Plants

1. identify and name a variety of common wild and garden plants, including deciduous and evergreen trees
2. identify and describe the basic structure of a variety of common flowering plants, including trees

	Assessment guidance	**Key learning**
SECURE	Shows understanding of a concept using scientific vocabulary correctly	Growing locally there will be a vast array of plants which all have specific names. These can be identified by looking at the key characteristics of the plant. Plants have common parts but they vary between the different types of plants. Some trees keep their leaves all year whilst other trees drop their leaves during autumn and grow them again during spring. **Key vocabulary** Leaf, flower, blossom, petal, fruit, berry, root, seed, trunk, branch, stem, bark, stalk, bud Names of trees in the local area Names of garden and wild flowering plants in the local area

	Applying knowledge in familiar related contexts, including a range of enquiries	Make close observations of leaves, seeds, flowers etc. Compare two leaves, seeds, flowers etc. Classify leaves, seeds, flowers etc. using a range of characteristics Identify plants by matching them to named images Make observations of how plants change over a period of time When further afield, spot plants that are the same as those in the local area studied regularly, describing the key features that helped them

	LOs	Activities
Planning	Lesson 1 LO: to make careful observations Observation over time	Introduce children to new topic by showing them one of the the zoom and zoom out activities from Explorify https://explorify.wellcome.ac.uk/en/activities/zoom-in-zoom-out/super-succulent - read through the 'run the activity' section and ask children the questions (picture could b printed for science working wall and children could answer questions on post-it-notes. Complete concept map, which can be done with pictures if children are struggling to use words, for use as initial assessment. Explain to the children that a scientist who studies plants is called a botanist. See if the children can come up with any jobs where people may work with flowers. E.g gardeners, florists, farmers. Ask the children if the can name any plants. Do children recognise that a tree is a type of plant? Take children outside and choose a tree within the school grounds (if organised in enough time, the children could walk to the local park and choose a tree from there) – Explain to the children that you will be visiting this tree throughout the year (making links to seasonal changes) to see if it changes throughout the year. Take a picture of the children under the tree and on post it notes/recorded make some notes on children's observations encourage the children to think about the leaves and their colour/if the leaves are still on the trees etc– these can be typed up onto the picture to be stuck into their books. Pleanary Show children images of the two trees and explain that you are going to introduce them to two new words – deciduous and evergreen. These could be put on your working wall to help the children remember them. Show the children the youtube clip….. https://www.youtube.com/watch?v=RJx2xQKIgXU or https://www.youtube.com/watch?v=hwfQEK29Wrg

		Do they think the tree you have chosen as a class is deciduous or evergreen – why? Some comments could be written down to be added to work.
	Lesson 2 Exploring plants in the outdoors LO: identify and name common, wild and garden plants Child friendly: LO: to name plants	Remind children of the plants they named last week. Have they come across any plants at home? Are their parents/relatives /anyone they know growing any plants at home? Can they remember the two words for trees that you introduced them to last week? Explain to the children that they are going to be going on a plant hunt around school to see which flowers and plants grow locally. Provide the children with a British plant photo identifying sheet so that the children can tick it off once they find the plant. While outside, ask children to describe the plants to a partner by making carful observations. Encourage children to also think about any animals/mini-beasts they see around the flower e.g bees etc. If weather permits (or back inside the classroom) ask the children to carefully draw some of the plants that they found outside (please see exemp. 16 in booklet), name them, describe them and compare them. For SEND/LA children supported by an adult they could match up statements to images instead of writing these out.
	Lesson 3: identify and describe the basic structure of a variety of common flowering plants, including trees LO: to name parts of a plant	Recap your learning from the last two lessons. Explain that the children have learned lots of names of plants and tress. In this lesson they are going to be identifying the basic structure of a plant. Give each child (can be done as a whole class on a big sheet) a flower to stick into their books – try and choose a flower with all the parts roots, stem, leaves etc. Ask the chn to name the parts of the plant – picture to be taken for working wall/floorbook/individual books. If preferred, an image of a real flower with all of its parts can be given to the children to label, however please ensure children have had the opportunity to look at real flowers prior to this. This could be a good opportunity to allow children to use the magnifying glasses. Children do not need to know the functions of the parts however you may have some children who want to share this

		information. Ask the children how they think this plant was created. Do they recognise that plants and trees grow from seeds? Where have they seen seeds before? Please note: this activity is also a TAPs assessment activity to help you assess the children's learning https://pstt.org.uk/resources/curriculum-materials/assessment
	Lesson 4 identify and describe the basic structure of a variety of common flowering plants, including trees LO: Observe over time the change of a seed to a plant Observation over time	Planting lesson https://www.youtube.com/watch?v=w77zPAtVTuI Explain to the children that they are going to get the opportunity to plant their own seeds. This can be done earlier in the topic if the teacher feels it would be beneficial. Children can plant in groups/individually a seed (preferably one that will grow quickly eg beans) Although children do not need to know this to meet the standard, the teacher may wish to discuss what the pant will need to help it to grow as the children will be responsible for their plants. Over the next few weeks, children should draw/write what is happening to their bean seed using key vocabulary.

	Lesson 5: identify and describe the basic structure of a variety of common flowering plants, including trees LO: Observe over time the change of a seed to a plant Observation over time	Children should draw/write what is happening to their bean seed using key vocabulary. Teacher may wish to video children's discussions about their progress made about their plants. Children should be looking to see if their plant has the basic structure that they have learned about in previous lessons. Over the next few lessons, teachers may wish to encourage children to measure their plants e.g 'my plant is now 3 cubes tall' and add this to their drawings/descriptions. End of unit sticky knowledge quiz to be completed in this lesson.
	Lesson 6: identify and describe the basic structure of a variety of common flowering plants, including trees LO: to make careful observations	Engage the children with the video clip and ask them the questions from the 'run activity' section. https://explorify.wellcome.ac.uk/en/activities/whats-going-on/falling-in-to-place Visit the tree that you chose at the start of the topic. Tell the children that they are going to be making careful observations of the tree to see if there are any changes. If so, children should draw a picture of what they can now see and compare this to the original drawing. Encourage children to write a short comparative description e.g *When we first visited the tree there were lots of brown leaves all over the floor and not many leaves on the branches but now….'* If there are no changes to the tree, children could predict what they think will happen the next time they visit the tree (note that this may be a new season depending on when this topic is delivered) Can they use their knowledge from the video clip to compare their tree to the one in the clip?

Y1 Seasonal Change

To be revisited during each season throughout the year

Please note: activities should be repeated during the different seasons so that children can compare the changes during each season. They are not in consecutive order as some require daily observation/measuring.
During Spring there will be an opportunity to FaceTime a farmer so that children can ask the farmer questions about life on a farm during spring.

Please watch

1. observe changes across the four seasons
2. observe and describe weather associated with the seasons and how day length varies

	Assessment guidance	Key learning	Possible Evidence
SECURE		In the UK, the day length is longest at mid-summer (about 16 hours) and gets shorter each day until mid-winter (about 8 hours) before getting longer again. The weather also changes with the seasons. In the UK, it is usually colder and rainier in Winter and hotter and dryer in the Summer. The change in weather causes many other changes; some examples are numbers of minibeasts found outside, seed and plant growth, leaves on trees and type of clothes worn by people. **Key vocabulary** Weather (sunny, rainy, windy, snowy etc.), seasons (Winter, Summer, Spring, Autumn), sun, sunrise, sunset, day length	Can name the four seasons and identify when in the year they occur. Can describe weather in different seasons over a year. Can describe days as being longer (in time) in the summer and shorter in the winter. Can describe other features that change through the year
		Collect information about the weather regularly throughout the year Present this information in table and charts to compare the weather across the seasons Collect information, regularly throughout the year, of features that change with the seasons e.g. plants, animals, humans Present this information in different ways to compare the seasons Gather data about day length regularly throughout the year and present this to compare the seasons	Use their evidence gathered to describe the general types of weather and changes in day length over the seasons. Use their evidence to describe some other features of their surroundings, themselves, animals, plants that change over the seasons Demonstrate their knowledge in different ways e.g. making a weather forecast video, writing seasonal poetry, creating seasonal artwork

	LO	Activities
Planning	Lesson 1 LO: to observe changes across the seasons Observation over time	Tell the children that they are going to choose a tree which they are going to visit every so often throughout the year to help us to see what happens throughout the year. Explain that during the year there are 4 different seasons. Show the children the video clip of the seasons song https://www.youtube.com/watch?v=8ZjpI6fgYSY Can the children tell you what season they think we are in now? Explain that even though we live in England and it can often be very cloudy and rainy throughout the year, the outdoors an give us clues to the season we are in, especially the trees. Head outside to visit your tree and look at the branches. Are their leaves on the trees? Are they on the ground? Are there many creatures/animals/birds around? Write down children's responses for floorbook. Ask the children to collect a leaf to bring back into the classroom. They're going to look closely at it. These can be stuck into floorbooks with the children's observational comments written around (See ASE exemps)
	Lesson 2 LO: to make a rain catcher and o measure how much rain falls over a week Pattern seeking	Teacher to create a bar chart for 1 week. Each day the children will measure how much rain has fallen. The children can record this on a class chart daily. Children's comments about the rain can be added to floorbook at a later stage after observing the weather over 3 weeks.

	Lesson 3 Recording the weather over a three week period LO: Record daily weather Observation over time	Teacher to create a weekly weather chart. Each day the teacher will choose a child to complete the weather chart by attaching the correct weather picture to the day. Teacher to write down comments made from children to put into the floor book. Teachers can show children the weather forecast to see if the predictions of the forecast are correct. During the three weeks, encourage the class to look for patterns. E.g when there are lots of grey clouds it usually rains. Teachers should ask the children to make predictions about the weather e.g there are lots of grey clouds today so it might rain.
	Lesson 4 LO: To create a bar chart about the weather Observation over time	Please see ASE exemp Children will see how many times it rained, was sunny, cloudy etc and create bar chart. Children could then make a simple analysis e.g in November it was mostly rainy and cloudy.

	Lesson 5 LO: to observe how the length of daylight varies Observation over time	Teacher will choose a stuffed animal and create a bedtime diary for it. Each day a child will take the bear home. The bear/toy must go to bed as soon as it's dark and the children must record this in the diary. During summer, parents can record the time if children are in bed during daylight. This can be done over 2 weeks per season. Teacher and children can then use this data to see how long the length of daylight lasts for and compare this to other seasons throughout the year. Children should b encouraged to make comments such as 'in Autumn it went darker early but in summer it went darker later'
	Lesson 6 LO: To observe how animals adapt to the seasons Observation overtime	https://www.youtube.com/watch?v=VYpGBtR8Lbs Children could create tally charts to collect data of the amount of creatures and animals they see outside. This can be compared to other seasons and children can analyse the data and make comments such as "in Spring there were lots of creatures/birds and plants but in Winter there weren't any/ were very few.'

	LO: to ask questions that we can find the answer to	**SPRING** Prior to the session, children should write a list of questions that they would like to ask a farmer. FaceTime a farmer can be arranged by subject lead or class teacher. Children should think about their learning of the seasons so far. These questions could be linked to the animals that are being born, fruit, veg and other plants being harvested. https://leafuk.org/farmertime/home

Y1 Animals Including Humans (focussing on Animals) first half term

1. identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals
2. identify and name a variety of common animals that are carnivores, herbivores and omnivores
3. describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets)

Y1 Humans (second half term)

identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense

	Assessment guidance	Key learning	Possible Evidence
SECURE	Shows understanding of a concept using scientific vocabulary correctly	Animals vary in many ways having different structures e.g. wings, tails, ears etc. They also have different skin coverings e.g. scales, feathers, hair. These key features can be used to identify them. Animals eat certain things - some eat other animals, some eat plants, some eat both plants and animals. **Key vocabulary** Head, body, eyes, ears, mouth, teeth, leg, tail, wing, claw, fin, scales, feathers, fur, beak, paws, hooves Names of animals experienced first-hand from each vertebrate group N.B. The children need to be able to name and identify a range of animals in each group e.g. name specific birds and fish. They do not need to use the terms mammal, reptiles etc. or know the key characteristics of each, although they will probably be able to identify birds and fish, based on their characteristics. The children also do not need to use the words carnivore, herbivore and omnivore. If they do, ensure that they understand that carnivores eat other animals not just meat.	Can name a range of animals which includes animals from each of the vertebrate groups Can describe the key features of these named animals Can label key features on a picture/diagram Can write descriptively about an animal Can write a What am I? riddle about an animal Can describe what a range of animals eat
	Applying knowledge in familiar related contexts, including a range of enquiries	Make first hand close observations of animals from each of the groups Compare two animals from the same or different group Classify animals using a range of features Identify animals by matching them to named images Classify animals according to what they eat	Can sort and group animals using similarities and differences Can use simple charts etc. to identify unknown animals Can create a drawing of an imaginary animal labelling its key features Can use secondary resources to find out what animals eat, including talking to experts e.g. pet owners, zoo keepers etc.

	LO	Activities
Planning	Lesson 1 LO: to name some common animals Research	Launch your new topic in any creative way you like. Remember we are splitting animals and humans into two parts so we are just focussing on Animals to begin with. You could ask Miss Harrop or Mr Simpson to bring in some animals from the animal corridor or you could go on a walk around school/outdoors and have a look at all of the animals we are fortunate to have. You could even use this zoom in activity https://explorify.wellcome.ac.uk/en/activities/zoom-in-zoom-out/creature-comforts and ask your class to guess what this is and justify their reasons. Once the children are back from their walk/after the animal visit The children could draw the animals that they found (try and encourage a range of animals (fish, minibeasts etc) and independently label them. If you have class text linked to an animal, the children could draw this too. As a challenge, linked to their work on seasonal change, the children could classify their animals into Spring/Summer/Winter.
	Lesson 2 LO: to classify animals based on their appearance Grouping and classifying	Explain to the children what it means to classify something (we put things into groups based on characteristics) Explain that animals can be grouped in different ways depending on how they loo and behave. Give your table groups/children in pairs, pictures of different animals (already cut up) and give them a short time to classify them based on their own ideas. E.g some might pick small animals and big animals, some may do this by colour, some may even do this by habitat but it is important to allow them to pick their own criteria. While the children are doing this, walk around and discuss their choices with them. After 5-10 minutes, ask the children to explain to the rest of the class how they've sorted their animals. Show chn the video https://www.youtube.com/watch?v=PHYi4fqeEdw (**Please note that children do not need to know and memorise the groups amphibians, mammals, reptiles etc, they just need to identify animals that fall into these categories).** The video will help them to see that animals can be grouped in other ways too.

		Provide children with two circles to stick into their books (or two circles on one a4/3 sheet) and some animals for the children to cut out. Tell the children that they are going to classify the animals into two groups. Please see exemp. Most children should be able to choose their own groups, however for some children you may wish to give them the characteristics e.g small animals, big animals, tail, no tail, lives in the sea, lives on land. As a challenge, children could write a few sentences about their groups e.g 'the dolphin and the whale all live in water but the horses, pigs and chickens all live on land'.
	Lesson 3 LO: identify and name a variety of common animals that are carnivores, herbivores and omnivores Identifying, classifying and grouping	A hands on/practical activity could be done to engage children where the teacher makes fake poo (using oats, cocoa powder and milk) please check allergies. Children, using magnifying glasses and gloves, identify what animal this poo could belong to based on what they find in their poo. Put different foods in the pretend poo, lettuce leaves (herbivores), pretend bones (carnivores) herbs/lettuce leaves and bones (omnivores) Once the children have had fun investigating what is inside the poo, have posters around the room with different animals on and speech bubbles explaining what those animals like to eat. The children can then decide which animal's poo they were investigating. Take lots of pictures as the se can be used in the next lesson.
	Lesson 4 LO: To classify	Remind children of the exciting lesson they had last week investigating poo. Explain that their findings will help them to classify these animals today and remind them about what it means to classify. Provide children with the pictures taken of the poo and the animal speech bubbles (which should clearly show what was in it) and ask the children to write down the names of the animals for each of the pictures. E.g under the herbivore poo they could write rabbit, guinea pig etc under the herbivore poo, lion under the carnivore poo or for further challenge children could write sentences to explain their findings e.g In this poo, we found lettuce leaves and carrots so this must be a rabbit because

	animals based on what they eat Grouping and classifying	rabbits are herbivores.' Children could go and visit some of the other animals in the school grounds and have a look at what they eat (this could be arranged with Miss Harrop/Mr Simpson or you could Facetime/Skype your farmer again and find out what some of the animals on his/her farm eat. **Zoo trip to Chester zoo to celebrate learning about animals and to find out about animals that we haven't learned about in our science lessons.**
		Humans (second half term)
	Lesson 1 identify, name, draw and label the basic parts of the human body and say which part of the body is associated with	Play Simon says with your class based on body parts. Choose a child to draw around on a big piece of paper and ask the class to label parts of the body. This can go up on your display. Children can then be given an outline of a body to go into books which they can turn into themselves and label parts of the body. Ask the children to write a sentence about our senses and our body arts underneath the labeled picture. E.g Our eyes are there so we can see, we use our nose to smell etc. A senses walk could take place and a senses poem could be written during English. This would be a great opportunity to talk about how how our body parts help us. E.g we use our legs to walk/run, hands to hug and touch (talk about the senses) and how our bodies can help us to showcase the talents God has given to use. It would be a good opportunity to explain to the children that not all people are born with the ability to use

	each sense LO: name parts of the body	their body parts. Children could be shown this short video clip https://www.respectability.org/2018/12/short-film-about-playground-inclusion-wins-international-acclaim/ which shows the life of a school boy with disabilities. Discuss with your class about how we can support those who can't use the body parts like we can.
	Lesson 2 TAPs assessment LO: identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense	Download the TAPs assessment for body parts and follow the guidance https://pstt.org.uk/resources/curriculum-materials/assessment Children can create and label their human body model from playdough or plasticine. Pictures to be taken as evidence with TAPs assessment cover sheet stapled over the top and highlighted.

	Lesson 3 LO: to investigate our sense of smell Pattern seeking	Tell the children that today they are going to be doing some investigating about our sense of smell. Create sniffing pots from camera film cases (these can be found in resources cupboard) with smells that the children will be familiar with. The children will then complete a simple pattern seeking activity whereby they will see if there is a pattern between your age and your sense of smell. The pattern seeking investigation is: **Do you get better at smelling as you get older?** The children will need to ask different children in different year group to test the smell pots to see if older children can guess the smells quicker than younger children. You could even include adults in school in your test. Gather data by recording how long it takes each person in each year group to guess the smell and see if there's a pattern. This could be presented as a table e.g Children will then write a simple conclusion about whether or not there was a pattern.

Name	Age	How long in seconds it took to guess the smell
Amy	10	12 seconds

Children can use stopwatches or an online stopwatch to record the times.

Please note that there are only 3 lessons on humans as the last two weeks of this half term can be used to revisit your seasons topic and depending on when the trip takes place. When seasons is revisited, it will need to be put into seasons/plants floor books and gives the children the opportunity to compare findings from last season.

Y1 Everyday Materials

1. distinguish between an object and the material from which it is made
2. identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock
3. describe the simple physical properties of a variety of everyday materials
4. compare and group together a variety of everyday materials on the basis of their simple physical properties

	Assessment guidance	**Key learning**	**Possible Evidence**
SECURE	Shows understanding of a concept using scientific vocabulary correctly	All objects are made of one or more materials. Some objects can be made from different materials e.g. plastic, metal or wooden spoons. Materials can be described by their properties e.g. shiny, stretchy, rough etc. Some materials e.g. plastic can be in different forms with very different properties. **Key vocabulary** Object, material, wood, plastic, glass, metal, water, rock, brick, paper, fabric, elastic, foil, card/cardboard, rubber, wool, clay, hard, soft, stretchy, stiff, bendy, floppy, waterproof, absorbent, breaks/tears, rough, smooth, shiny, dull, see through, not see through	Can label a picture or diagram of an object made from different materials Can describe the properties of different materials
	Applying knowledge in familiar related contexts, including a range of enquiries	Classify objects made of one material in different ways e.g. a group of object made of metal Classify in different ways one type of object made from a range of materials e.g. a collection of spoons made of different materials Classify materials based on their properties Test the properties of objects e.g. absorbency of cloths, strength of party hats made of different papers, stiffness of paper plates, waterproofness of shelters	Can sort objects and materials using a range of properties Can choose an appropriate method for testing an object for a particular property Can use their test evidence to answer the questions about properties e.g. Which cloth is the most absorbent?

	LO	Activities
Planning	Lesson 1 To distinguish between objects and the material they're made from LO: to name different materials and objects	Introduce topic with this zoom in/zoom out activity https://explorify.wellcome.ac.uk/en/activities/zoom-in-zoom-out/give-it-a-try and ask your class to guess what object it is. Encourage them to justify their answers. Provide children with some cups and some spoons made from different materials e.g metal, plastic, wood, paper, (you'll also need these printed out on paper for children to stick into books) Ask the children what the object is and what the material is to identify if they can distinguish between the object ad the material. Although children do not need to identify the suitability (that comes in y2), you may wish to pose the question to some of your higher attainers about why they think the same object is made from different materials. Children may link this to real life scenarios such as birthday parties so they can be thrown away. Once the children have discussed in pairs/groups the materials, the chn can stick the images into their books and write the object name and material and describe its properties e.g shiny, dull, etc. Ask children to go on a material hunt around the classroom. Tell the children that they can choose one object to bring to the carpet to discuss but the rules are that they must know the name of the object and they must be able to say which material it is made from. For evidence, teachers may wish to take a picture of the child with their object and write on a post-it-note what the child said about the object.
	Lesson 2 compare and group together a variety of everyday materials on the basis of their simple physical	Explain to the children that they will grouping and classifying today and remind them what that means. Give the children a range of different objects on their tables (and some other objects printed on paper) and ask them to sort the objects based on the materials. Teachers may choose to photograph this individually or ask the children to do this in books once done practically. If photographed, children could write a sentence underneath their picture the following week e.g I put the spoon and bowl in one group because they are both made from metal'

	properties LO: to group materials based on their properties Classifying and grouping	Children could go and choose an object from the classroom to add to their groups as an extra challenge. If this should prove tricky based on not having enough materials – it could be done as a carousel activity with just one table completing the activity at a time.
	Lesson 3 describe the simple physical properties of a variety of everyday materials LO: to describe materials	Play 'guess what?' with the children based on materials. Model how to play the game giving the chn clues to the material/object you are e.g You will find me all around school. Mr Johnson will get cross if you use too much of me. Sometimes teachers use me to mop up spills and sometimes I'm used to clean children up when they've fallen over. What am I? Ans – paper towel. Allow chn to have a go at giving the class clues to guess their object or material. Teacher will need to link this lesson to a current book/other topic. Ask the children to think of the best material to make……. For example if the class text had an animal as the main character, you may wish to pose the question: Which material would be best for me to make a dog bed from? At this stage, teachers should give the children a range of materials to choose from rather than hoping they will guess. You may want to give them cotton wool, wool, tin foil, cardboard etc. Again, although y1 children do not need to explain suitability, you should be encouraging them to think of the properties e.g I would pick the cotton wool because it is soft for the dog to lie down on. Children to be provided with an outline of a dog bed,for example, and should stick their chose material onto the dog bed.
	Lesson 4 LO: to compare materials Comparative testing	To engage the children at the start of the lesson, the teacher could accidentally spill some water/coffee/liquid on the table. Ask the children to get you a strange object or material to help you clean up the mess e.g someone's shoe, a peg, football. Hopefully the children will find this strange and maybe suggest the best materials you could use to clean up the spill instead. Introduce the children to the word 'absorbent' and ask them what they think it means. Once clarified, explain to the children that they will be testing different materials today to see which one is the best for mopping up spills. In books, you may wish to ask the children to write down some simple predictions e.g I think the newspaper will be the most absorbent' Children do not necessarily need to justify their predictions in writing but may wish to verbally, especially those who are higher attainers.

		Provide each table with a range of materials, a tray and a pipette. You may wish to give each child a job role. Explain that to make it a fair test, children can only use 6 drops of water each time, for example. Children should then begin their investigation by dropping water into a tray and placing the material over the top for the same amount of seconds each time. The children will not be expected to measure the absorbency but they may arrive at their conclusion by seeing how much water is left in the tray each time a different material is placed on top of it. Chn should be given a simple table with the name of the material and a x or ✓ for absorbent/not absorbent. Children may then want to use their investigation to find out which material from the ones that were absorbent was the most absorbent and write this is a simple sentence.
	Lesson 5 TAPs assessment	Download the floating and sinking materials assessment from the TAPs website https://pstt.org.uk/resources/curriculum-materials/assessment Please note that this is a practical activity. Pictures will need to be taken with the assessment cover sheet stapled over the top and highlighted for each child

Enquiry types checklist for planning

Topic	Observation over time	Pattern seeking	Identifying, classifying and grouping	Comparative and fair testing	research
Seasons	✓	✓			
Plants	✓		✓		
Animals incl. Humans		✓	✓		✓
Everyday materials			✓	✓	