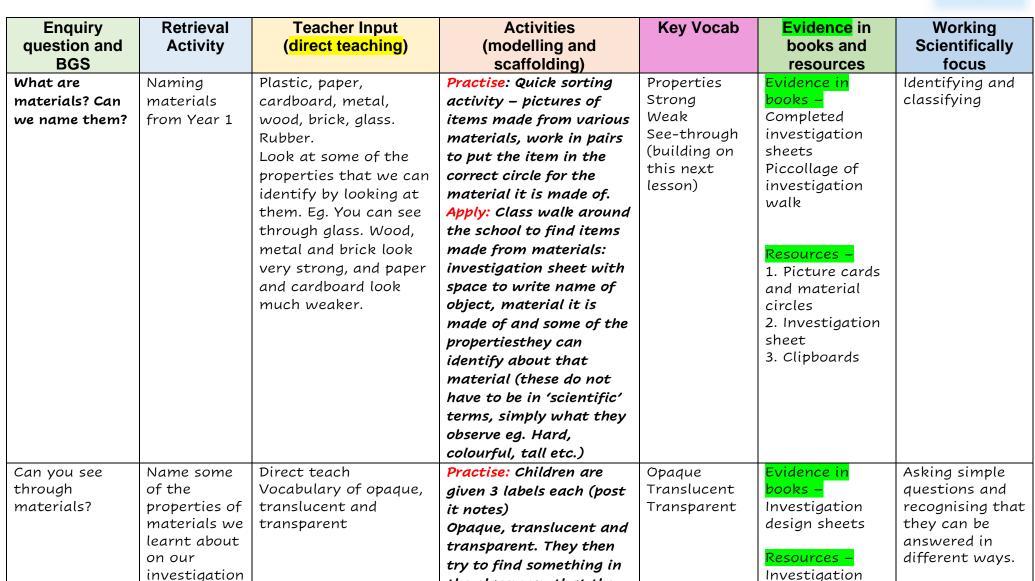
## **KPNS Science Unit Planning**

Year Group: 2 Term: Spring 1 Topic: Everyday Materials

**Big Idea: Which material and why?** 

lesson



the classroom that they

design sheets



	(discussion).		can label as such.			
Which materials are the most absorbent?	back to things which were 'see through'	Direct teaching of how some materials absorb water – tiny holes draw in the water and spread it across the material.  Discussion after experiment about why some materials need to be absorbent and why it might be bad for some other materials to be absorbent.	discussion about what they have labelled.  Apply: Working in pairs to design an experiment to test if a material is opaque, translucent or transparent. Encourage children to be creative (they won't be carrying out the experiment) Then as a class discuss some of the different ideas and highlight how there are many ways to find the answer to a scientific question.  Practise: Different materials laid out for experiment, children make their predictions about which will be the most absorbent and then order the materials from most to least on their desks (take picture for books)  Apply: Absorbent experiment – children work on their tables to test the materials by placing them into trays of water and seeing if they absorb or not.	Absorbent Prediction Experiment	Evidence in books –  Piccollage of experiment  Results table  Resources –  Results table  Various materials – brick, rock, paper, sponge, paper towel, cardboard  Trays for water	Performing simple tests Gathering and recording data to help answer questions Observing closely using simple equipment
Which materials are waterproof?	Absorbent materials	Direct teaching, why some materials are	Practise: suitable or not? Quick game on board –	Waterproof Liquid	Evidence in books –	Performing simple tests

	and how	waterproof – They do	children vote thumbs up	Suitability		
	Circy Work	tiny holes that absorbent materials have.	material would be suitable for the use suggested.  Apply: Waterproof experiment – range of materials, similar experiment to last week but looking to see which are not absorbent. Important: include a material which would be effective to be used to make an umbrella.		experiment  Results table  Resources -  Results table  A waterproof material eg. Plastic bag, pieces of plastic cut from an umbrella or rain mac.  Various other materials - brick, rock, paper, sponge, paper towel, cardboard  Trays for water	recording data to help answer questions  Observing closely using simple equipment
Which materials are flexible?	Waterproof materials and how they work	Misconception – does flexible mean that it is not strong? Teach which materials are flexible vs which are rigid.	Practise: suitable or not? Quick game on board – children vote thumbs up or down to show if the material would be suitable for the use suggested.  Apply: Which materials are flexible or rigid – worksheet.	Flexible Rigid Stretch Twist	Evidence in books –  Flexible materials worksheet  Resources –  Flexible materials worksheet	Using their observations and ideas to suggest answers to questions.  Identifying and classifying.
What materials would you make a castle out of?	Properties of materials so far: opaque,		Practise: Quick sorting activity in pairs with some pictures of items		Evidence in books –	Using their observations and ideas to

translucent,	and some names of	Castle	suggest
absorbent, waterproof, flexible, rigid	which have each property. Discussion: did some fit in more than one?  Apply: Design a castle – it must have a flag, walls, windows, turrets	Resources –  Castle worksheet Sorting activity sheet	questions.