Science Learning Journey – Materials	Year 1 Autumn 2	

Theme Overview	Project Outcomes
The children will learn to identify and name materials and their properties. To investigate what materials are magnetic and which are waterproof. To use tally charts to record data and compare results.	Children will be able to identify and compare the properties between metal, plastic, fabric/cushioned chairs. They will be able to use key vocabulary brittle, bendy, stiff, durable, Glass – transparent, Wood – opaque, Metal – waterproof, plastic – bendy/ flexible and waterproof, Paper – absorbs water (absorbent), not waterproof and opaque, Fabric – soft, translucent, magnetic, attract, repel, They will be able to have a role in an investigation. They will be able to talk about their observations. They will be able to drew conclusions about their investigations.

Skills Focus	Sequence of Learning		
Main Skills Focus: **To ask simple questions** **To observe closely** **To perform simple tests** **Linked Skills Focus:** **Literacy – Goldilocks and the 3 bears.** **Learning about Scientists:** **Teaching science skills and techniques at Mrs Bland's Infant School.**	**Lesson 1** LI: To identify the material of some objects. to can find objects of a given material. to observe carefully and say how I know that an object is a given material. Brainstorm what the children know about materials – the names of the materials and any descriptions. Record these on a class spider diagram Have **word cards for plastic, metal, wood, glass, paper / card.** Ask children to find or point to examples of each of these materials in the classroom. **How do you know it is made of that material? Is that object**	Lesson 2 LI: To explore the different materials of chairs in school. Complete a tally chart to record the data collected. Understand the different properties of different materials. **What materials did we learn about in science last week?** **How can we tell if something is metal? What does metal look / feel like? Which do you think is stronger, wood or metal?** Explain that today we are going to explore the different types of chairs in school and record their materials. What did Goldilocks say about the chairs she tested in the story?...**She said one chair**	**Lesson 3** LI :To describe the properties of a selection of materials: wood, metal, glass, paper, fabric We are going to be scientists today. **What do scientists do?** Go and visit the class tree – **What changes have happened to the tree since last time we looked at it and why?** Record pupil voice and take photo of the tree for the class science PowerPoint. **Who can remember some names of materials?** Explain today we are going to extend our descriptions of materials with some new vocabulary. We will describe the

• we encourage the children to think that we can all be scientists. • We are curious, we share ideas, explore our environment and ask questions to find out the answers to things we don't not know yet.	**sometimes made of a different material?** (Use example of a child's water bottle – they can be plastic or metal). **Could you make a water bottle out of paper? Why / why not?** **Activity:** Split the children into 5 mixed-ability groups. Each group given a material: **plastic, metal, wood, glass, paper / card** to search for – inside and outside the classroom. **Each group to have an I-pad between them** to take photos of the objects they have found which they believe are made of their designated material. **Teacher and TA to move between groups – question and record pupil voice on stickers** with a **clipboard.**	**was too soft, so what material do you think was on this chair? She said another chair was too hard...what material might this have been made of? Why do you think the other chair was just right?** Walk around school and identify and record on a **'tally chart'** of how many chairs we find of each material **Activity:** In two or three groups (each group with a member of staff) - Children look for different types of chair in school and record its material Record on a tally chart. **Plenary: Which material were most of the chairs in school made of? Why do you think this is?**	**'properties'** of the materials – what the key features of the materials Watch the 'Oak Academy' video about materials: Glass – **transparent,** Wood – **opaque,** Metal – **waterproof,** plastic – **bendy/ flexible and waterproof**, Paper – **absorbs water (absorbent), not waterproof and opaque,** Fabric – **soft, translucent.** **Activity (can be done in outdoor learning):** In mixed ability groups – match labels to describe the properties of each material using the vocabulary cards.
	Lesson 4 LI: To begin to understand what magnetic means. Explore what happens when a magnet is passed close to a magnetic material. Identify objects / materials that are magnetic. Watch the video clip.(see teacher plan) Tell the children to try to remember as many materials as they can that are shown in the video and what they were used to make. **What materials did you see in the video? What did they make with the material?** Recap vocabulary from last week: **What does opaque**	Lesson 5 **LI: to investigate which materials are waterproof.** **Mental/Oral Starter:** Recap vocabulary – adjectives to describe materials from previous weeks: **Who can describe wood? (metal, glass)** Then describe a material for the children to guess what it is? **"This material can be hard but it can also be flexible, it can be opaque or transparent, it comes in lots of different colours, What is it?** **What did we learn when we did our magnet investigation?** Today we are going to investigate: "What keeps us dry?". **Who remembers**	

	mean? Who can tell me a material that is opaque? What is the opposite of opaque? (transparent). What materials are transparent? Can you remember the word for a material that lets some light through but isn't completely see-through? (translucent) Who can name something which is waterproof? Who can name something which 'absorbs' water? Today we are going to learn about materials which are 'magnetic'. **Can anybody tell me what they already know about magnets or magnetism?** (record pupil voice on stickers). Today we are going to explore what materials are magnetic in today's lesson. Explain what they need to do with the zip lock bags (keep the items inside!) and use the magnet to sweep over the items to see if they are made of a magnetic material or not – if they 'attract' the magnet or 'repel' it. **Activity:** Children in small groups to explore the items in the zip-lock bags with a magnet. Emphasise taking turns and using the scientific language to describe what is happening with the item and the magnet. **Plenary:** Children from each group to feedback to the class about what they found out. **Which items were magnetic? How could you tell? Why do you think they were magnetic? Which items were not magnetic / why not?**	**the word for when a material does not let any water through it?** Select some children to bring their coats into the classroom. Have a look at the material labels to see what they are made of and discuss. **Activity:** In mixed ability groups, at tables/ or outside (Take it in turns with the different roles). Put a cuddly toy in the sink (bowl/watertray) and another child hold one of the sheets of materials over the toy. *Then someone else pours the water from the watering can over the material (covering the toy). **How waterproof is the material? – what do they notice happens on the material when the water lands on it?** (Emphasise that they need to pay close attention, thoroughly observe the material for class discussion afterwards). ***Decide as a group – for how long they will pour water each time, before judging if the material is waterproof or not – explain that this will make it a 'fair test'.** (Use stopwatches / sand-timer to measure the time to pour). Could video some of the experiments and add this as evidence to science powerpoint. **Plenary:** Discuss the results of the investigation. **What did they observe happening to the materials? Were any materials water proof or water resistant? How could they tell? – what did they notice happened to the water droplets on these materials?** Create a table of results as a	

		class (print for their books). ***Record pupil comments on stickers for books too.**	