Nova’s Material Mystery Lab

Learning objective: To identify, sort, and describe materials based on their properties such as transparency, flexibility, and strength.

Nova the barn owl is building a new stargazing nest! Look at the list of objects below. Sort them into the correct 'Material Category' table based on what they are made from. Then, answer the questions about why Nova chose those materials for her nest.

Word bank: metal · wood · plastic · fabric · glass · flexible · waterproof · transparent · rigid

1. Nova needs a window for her nest so she can see the stars. Why is glass a better choice than wood? Explain your answer using the word 'transparent'. (2 marks)

2. If Nova wants to keep her nest dry when it rains, should she choose a fabric roof or a plastic roof? Why? (2 marks)

3. Nova finds a metal spoon. Is metal a good material for building a nest? Give one reason why it might be too heavy or cold. (2 marks)

4. Sort these items into two groups: 'Flexible' (bends easily) and 'Rigid' (hard to bend). Items: A ruler, a sock, a rubber band, a wooden stick. (2 marks)

5. Nova decides to use twigs for her nest. What property makes wood a good choice for building? (Think about strength). (1 mark)

Draw: Draw Nova the owl inside her finished nest. Label three different materials you used to build it (e.g., 'wooden twigs', 'soft fabric blanket', 'glass window').

Extension challenge: Imagine Nova wants to build a nest that is magnetic! Research which materials are magnetic and write a list of three objects Nova could collect from around the forest that would stick to a magnet.