

Nova's Material Investigation

Learning objective: To compare and group together everyday materials on the basis of their properties, including hardness, solubility, transparency, conductivity, and response to magnets.

Read each question carefully and use your knowledge of materials to answer. Think about how Nova the owl might test these materials in her science lab!

Nova the owl is preparing for a stargazing night. She is checking the properties of different items to see if they are suitable for her equipment and shelter.

Word bank: Transparent · Opaque · Conductive · Insulator · Soluble · Magnetic · Hard · Flexible

1. Nova needs to choose a material for her telescope lens. Should she choose a material that is transparent or opaque? Explain why. (2 marks)

2. Max the monkey wants to build a bridge. He has a piece of rubber and a piece of wood. Which material would be better for a bridge that needs to be hard and strong? Why? (2 marks)

3. List two materials that are magnetic and one material that is non-magnetic. (3 marks)

4. If Pip the caterpillar drops a sugar cube into a cup of water, what will happen to the sugar? Use the word 'soluble' in your answer. (2 marks)

5. Why is it important that the electrical wires in our homes are covered with an insulator like plastic, rather than a conductive metal? (2 marks)

Draw: Draw three objects that you would find in your classroom and label them with their properties (for example: 'Hard', 'Flexible', or 'Transparent').



Extension challenge: Nova wants to test if salt is soluble in water. Write a short plan explaining how she could test this safely in the classroom.