Nova’s Material Investigation

Learning objective: To identify, describe, and compare the properties of everyday materials, including hardness, solubility, transparency, conductivity, and magnetism.

Follow the drawing prompts below to create your own scientific material experiment. Use the word bank to label your diagram accurately.

Draw: Draw a laboratory workbench scene. On the left, show a magnet hovering over a mix of metal and plastic items. In the centre, draw a glass of water with a metal spoon and some salt. On the right, include a window looking out at the night sky. Use clear lines and labels to show the physical properties of these items, as if you are preparing a report for Nova the owl.

Label words: Transparent · Opaque · Thermal conductor · Thermal insulator · Magnetic · Soluble · Insoluble · Hard · Flexible

Steps:

1. Step 1: Draw a metal spoon in a glass of water. Label the metal spoon and explain why it is a good thermal conductor.
2. Step 2: Draw a plastic bottle and a clear glass window. Label both as either transparent or opaque.
3. Step 3: Draw a magnet being held near a pile of iron nails and a pile of plastic buttons. Label which group

of materials will be attracted to the magnet.

4. Step 4: Imagine you are stirring salt into a beaker of water. Label the salt as 'soluble' or 'insoluble'.

5. Step 5: Write one sentence explaining why a frying pan handle is usually made of plastic or wood rather than metal.