

# Nova's Material Investigation Log

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

Help Nova the owl test different objects from around your classroom or home. Choose three different objects, observe their physical properties carefully, and record your findings below. Make sure to use scientific vocabulary to describe why each material is suitable for its purpose.

*Word bank: transparent · opaque · translucent · flexible · rigid · conductor · insulator · soluble · insoluble · magnetic · permeable · durable*

**1. Object Name and Purpose: Identify the object you are testing and explain what it is used for in everyday life. (2 marks)**

---

---

**2. Material Properties: Describe the material the object is made from. Is it hard, soft, transparent, or magnetic? List at least three properties. (3 marks)**

---

---

---

**3. Suitability Test: Why is this specific material the best choice for this object? What would happen if it were made of a different material (e.g., a glass hammer)? (3 marks)**

---

---

---

---

**4. Solubility Check: Predict what would happen if you placed this material in a beaker of water. Is it soluble or insoluble? Why? (2 marks)**

---

---

---

**5. Thermal Conductivity: Does this material feel warm or cold to the touch? Is it likely to be a thermal conductor or a thermal insulator? (2 marks)**

---

---

*Extension challenge: Choose one object from your investigation and write a short paragraph explaining how you could test if the material is a conductor of electricity. Remember to mention safety precautions!*