# Nova’s Light and Shadow Experiment Record

*Learning objective: To observe and record how shadows are formed and how the size of a shadow changes when an object moves closer to or further from a light source.*

Follow Nova the owl’s scientific method to investigate light. Use a flashlight and an object to create shadows. Record your findings clearly, ensuring you use scientific vocabulary to explain your observations.

*Word bank: light source · opaque · transparent · translucent · shadow · blocked · distance · predict*

**1. Prediction: What do you think will happen to the size of the shadow if you move the object closer to the flashlight? Explain your reasoning. (2 marks)**

**2. Method: Describe the steps you took to set up your experiment. Remember to mention your light source and the object you chose. (2 marks)**

**3. Observations: Describe how the shadow changed as you moved the object at different distances from the flashlight. (3 marks)**

**4. Scientific Explanation: Why is a shadow formed? Use the word 'opaque' in your answer. (2 marks)**

**5. Conclusion: Based on your results, what is the relationship between the distance from the light source and the size of the shadow? (2 marks)**

*Extension challenge: Nova wants to know: If you used a piece of thin plastic instead of an opaque toy, would you still see a dark shadow? Why or why not?*