

Student Investigation Procedure and Guide Questions

Purpose: The beads you are given have a special reaction to light. Determine the special reaction of the beads to light. Determine what region(s) of the light spectrum causes the reaction.

Materials:

- 10-15 special beads
- Other materials that you will determine

Procedure:

1. Read the **Purpose** carefully. What are you asked to discover? Think carefully about what you need to find out and how you are going to achieve your goals. Design an experiment that will achieve your purpose. Your experimental design should be clearly written with detailed procedures. The following questions are offered as guide questions to help you in your design.
 - What is the special reaction of the beads?
 - What kinds of light (for example; fluorescent, incandescent, direct sunlight, indirect sunlight, weak light, strong light...) caused the reaction?
 - What do you know about the light spectrum emitted by the light sources you have studied? How do you know?
 - Are there any experimental procedures from previous investigations that might be modified for this investigation?
 - What part or parts of the spectrum cause the reaction of the beads? What is your evidence for this conclusion?
2. Present your design for Peer Review.
3. Revise your design based upon questions raised during review.
4. Conduct your investigation.
5. Present your findings.

LESSON 5-MYSTERY LIGHT

Student Assignment

The table below provides tasks and deadlines for these tasks. During this investigation use what you have learned about light, and what you have learned about conducting and constructing experiments.

Date Due	Complete	Task	Notes
		Preliminary experimental design procedure completed	
		Peer Review - design procedure must be complete, written and copied for review team	
		Revised procedure completed	
		Materials list completed and presented to teacher	
		Data collection completed	
		Rough draft of presentation	
		Presentation of results	