

# The 5 E's: A Model for Designing Lessons for Inquiry Planner<sup>1</sup>

## Logistics Information:

- a. Sense of Sight Education Learning Cycle Example
- b. Iowa Core Curriculum  
Science (Inquiry):
  - 1. Asks questions about objects, organisms, and events in the environment
  - 2. Uses tools to gather data and extend the senses
  - 3. Use data to construct reasonable explanations
  - 4. Communicate investigations and explanationsSocial Studies (Behavioral Sciences):
  - 1. Understanding all people have individual traits
- c. Characteristics of Effective Instruction are embedded within the Iowa Core Curriculum
- d. A synthesis of *Project Learning Tree*
- e. Developed April 16, 2010

**Background Information** (What do observers need to know about our learners, classroom and school?): Schools will vary

## Materials Required:

*The Shape of Things (Project Learning Tree, p. 17-19)*  
*Looking at Leaves (Project Learning Tree, p. 273-276)*

## Time Period:

2-3 45-minute class periods

## Name of the Unit: Sense of Sight

- I. Plan of the Unit

Goals of the unit:

- a. Students will recognize the common shapes appearing in natural environments.
- b. Students will understand how leaf shapes, sizes, and other characteristics vary from plant to plant.

How this unit related to the curriculum:

Previous Grade/Course	Current Grade/Course	Next Grade/Course
	K-2 (Life Science) – Students have been introduced to and explored the sense of sight.	3-5 (Life Science) – Students will continue to explore the sense of sight as it relates to the eye.

- c. Lesson Plan: Phases in a 5E Learning Cycle (in no particular order) are Engage, Explore, Explain, Elaborate, and Evaluate. There may be multiple experiences in each phase.

Phases of the lesson: learning activities and key questions (and time allocation)	Student activities/ anticipated student reactions or responses	Teacher’s response to student reactions/ Things to remember	Evidence of Student Understanding
<p><b>ENGAGE:</b> Students will make a shape necklace and take an outdoor walk connecting the concept of shape to objects in nature. (<i>Project Learning Tree</i>, p. 17)</p> <p><b>EXPLORE:</b> Students will collect leaves and sort them into groups with common features (color, shape, “teeth”, etc.).</p> <p><b>EXPLAIN:</b> Students will share their sorted leaves and participate in a partner activity.</p> <p><b>ELABORATE:</b> Students will complete a craft activity which focuses on the shape of natural materials.</p>	<p>Make shape necklace.</p> <p>Locate objects in the environment that have various shapes.</p> <p>Each student will collect 3-5 leaves.</p> <p>Students will form pairs or small groups to examine and sort them.</p> <p>Students will share how they sorted their leaves.</p> <p>Students will exchange leaves and then go back outside. They will then match the leaves to the trees from which they fell.</p> <p>Students will collect their materials and create a natural work of art.</p> <p>Some suggestions are provided in <i>Project Learning Tree</i>, p. 274. They can also decorate objects, make a collage, etc.</p>	<p>Teacher will lead the “I Spy” activity.</p> <p>Teacher will assist students with matching objects to shapes.</p> <p>Teacher asks a series of questions listed in <i>Project Learning Tree</i>, p. 273.</p> <p>Teacher should collect tree needles to show students (if not available in school yard).</p> <p>Teacher supervision of activity; ask questions and provide assistance as needed.</p> <p>Provides needed materials and supervise art activity.</p>	<p>Write and draw pictures of observations.</p> <p>Student responses to teacher guided questions.</p> <p>Student participation and discussion.</p> <p>Students can talk about what they made, including the various shapes of natural materials they used.</p>

Phases of the lesson: learning activities and key questions (and time allocation)	Student activities/ anticipated student reactions or responses	Teacher’s response to student reactions/ Things to remember	Evidence of Student Understanding
<p><b>EVALUATE:</b> Students will select two leaves and compare and contrast them using a Venn diagram.</p> <p><b>EXTENSION:</b> Students will participate in a Seeing Eye-Dog activity.</p>	<p>Students will discuss the ways the two leaves are alike and different. Their responses will be reflected on their Venn diagram.</p> <p>Students will be divided into the following groups:</p> <ul style="list-style-type: none"> <li>• People who are blind and have no assistance.</li> <li>• People who are blind and have seeing eye-dogs.</li> <li>• Students pretending to be seeing eye-dogs.</li> </ul> <p>Students begin at the classroom door and perform a task provided by the teacher. An unassisted student will engage in the activity, followed by a student who has the help of a seeing eye-dog.</p> <p>Discuss and compare what was easy and difficult, and reasons why.</p>	<p>Teachers will complete the Venn diagram, using student responses.</p> <p>Teacher question: “Are these leaves more alike or different?”</p> <p>Teacher will provide blindfolds and divide students into groups.</p> <p>Teacher will conduct obedience training for the “seeing eye-dogs” (dogs cannot go under a table, etc.)</p> <p>Teacher will provide tasks for students to complete.</p> <p>Teacher will supervise the activity to ensure safety.</p>	<p>Students will compare and contrast two different leaves using a Venn diagram. Details and grading rubric in <i>Project Learning Tree</i>, p. 275.</p> <p>Student participation.</p>