

# **Grade 4 Science - Living Systems**

## **Activity #7**

### **Response to Stimuli**

## Grade 4 Science - Living Systems

### Activity #7

#### Response to Stimuli

Duration: 60 minutes

Lesson Objective	Overview:
<p>By the end of the lesson, students should be able to:</p> <ul style="list-style-type: none"><li>- Understand how living organisms respond to stimuli.</li><li>- Understand that plants can modify themselves in response to changing stimuli.</li><li>- Estimate measurements of height.</li></ul>	<ul style="list-style-type: none"><li>- This lesson introduces students to the concept of the response of living organisms to stimuli. Students will explore what stimuli are and how they affect living organisms. Through experimentation, reflections and conversations students will gain a deeper understanding of the impact stimuli plays on living organisms.</li></ul>

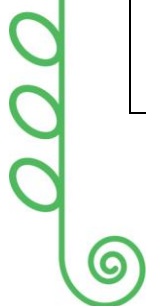
Science Guiding Question	Learning Outcome
In what ways do the structures of organisms support survival?	Students analyze organisms and relate external structures to functions.
<b>Knowledge</b>	<ul style="list-style-type: none"><li>- Organisms are living things that respond to stimuli and include plants, humans, and other animals.</li><li>- Plants can detect sensory stimuli, such as light, gravity, temperature, and touch, which help them grow and survive.</li></ul>
<b>Understanding</b>	<ul style="list-style-type: none"><li>- Organisms sense and respond to their environments to support growth and survival.</li></ul>
<b>Skills and Procedures</b>	<ul style="list-style-type: none"><li>- Discuss how plants respond to sensory stimuli.</li></ul>

ELA Guiding Question	Learning Outcome
How can text organization influence communication?	Students examine how the form and structure of texts can support the communication of ideas and information.
<b>Knowledge</b>	<ul style="list-style-type: none"><li>- Literary forms of fiction and non-fiction texts include<ul style="list-style-type: none"><li>-novels</li><li>-journal entries</li></ul></li></ul>

	-media
<b>Understanding</b>	- Text form or structure can support the enjoyment and communication of ideas and information for a variety of purposes.
<b>Skills and Procedures</b>	- Explain how personal preferences for texts inspire, fascinate, or expand understandings.

Teacher Materials	Student Materials	Safety Concerns
Smartboard, Lab document and lab materials	Pencil, journal, exit slip	Lab safety

Timing	Instructional Element	Student Tasks
<b>Introduction</b> (10 minutes)	<ul style="list-style-type: none"> <li>- Teacher talks to students about their relationships with the natural environment. (water, sunlight, air, etc)</li> <li>- Teacher talks about how every living thing responds to stimuli.</li> <li>- Teacher presents video about how humans respond to stimuli: <a href="#">Introduction to Stimuli</a></li> </ul>	<ul style="list-style-type: none"> <li>- Students participate in classroom discussion.</li> <li>- Students watch the video.</li> </ul>
<b>Development</b> (10 minutes)	<ul style="list-style-type: none"> <li>- Teacher explains to students how they will be observing the effects of stimuli (water, light, gravity) on plants over the next few weeks and presents the activity: <b>Use: “Plant Detectives” and “Plant Detectives Observation Journal” files</b></li> <li>- Teacher demonstrates the different steps of the lab and shows where materials can be found.</li> </ul>	<ul style="list-style-type: none"> <li>- Students listen to the teacher and ask questions.</li> <li>- Students listen and watch the demonstrations to help them with their activity.</li> </ul>



<b>Independent Work</b>  (35 minutes)	<ul style="list-style-type: none"> <li>- Teacher allows students to follow the procedure of the activity.</li> <li>- The teacher circulates to help students.</li> <li>- <b>Students may need more time to complete procedures.</b></li> </ul>	<ul style="list-style-type: none"> <li>- Students follow procedures to complete the activity.</li> </ul>
<b>Conclusion</b>  (5 minutes)	<ul style="list-style-type: none"> <li>- Teacher shows video: <a href="#">Responses to Stimuli</a></li> <li>- Teacher asks students to write a short exit slip on how stimuli affects living organisms.</li> <li>- Teacher explains that they will be continuing the lab and making observations over the next few weeks.</li> </ul>	<ul style="list-style-type: none"> <li>- Students watch the video and answer the short exit slip question.</li> <li>- Students take care of plants and make observations over the next few weeks.</li> </ul>

