Unit Lesson Plan – From Molecules to Organisms			
Teacher:		**Time Frame:**	15 days
Grade:	**4**	**School:**	
Subject:	**PSI Elementary School Science**		

NGS/**DCI**	LS1.A: Structure and Function Plants and animals have both internal and external structures that serve various functions in growth, survival, behavior, and reproduction. (4-LS1-1) LS1.D: Information Processing Different sense receptors are specialized for particular kinds of information, which may be then processed by the animal's brain. Animals are able to use their perceptions and memories to guide their actions. (4-LS1-2)
Instructional Objective: (condition, behavior, standard)	Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction.

Essential Questions

(What questions will the student be able to answer as a result of the instruction?)

1. How does organism's structure fit its function?
2. How do internal and external structures function to support the survival of plants and animals?
3. How are instincts and learned behaviors beneficial to organisms?
4. How do senses function to help an animal's survival?
5. How are signals sent from receptors to the brain?

Knowledge & Skills

(What skills are needed to achieve the desired results?)

By the end of this unit, students will know:	By the end of this unit, students will be able to:
• The core 4 function of organisms: growth, survival, behavior and reproduction. • Examples of how plant and animal structures, both internally and externally, function to fulfill life processes. • The difference between instincts and behavior with examples. • How senses benefit animals in respect to how they respond to their environment.	• Analyze a plant or animal and explain how the internal and external features support their survival. • Model how senses are used in respect to the brain in order to respond to their environment effectively. • Use a model to describe that animals receive different types of information through their senses, process the information in their brains, and respond to the information in different ways.

Assessment

(What is acceptable evidence to show desired results (rubrics, exam, etc.)? Attach Copy

During the Smart Notebook lesson designed to introduce concepts, students will be continually questioned on these concepts using a combination of class work/homework questions and the SMART Response system. Classwork and Homework questions will be discussed as a class and misconceptions will be addressed by the teacher prior to the formal evaluations listed below.

Lab: How do Plants Breathe?
Activity: Earthworms
Lab: African Violets

Activity: Internal Organ Systems
Quiz 1: Structure and Function
Quiz 2: Information Processing
Quiz 3: Receiving and Sending Signals

(What is the sequence of activities, learning experiences, etc, that will lead to desired results (the plan)?

Day	Topic	Classwork	Homework
1	Structure & Function	Slides 4-17; Classwork #1-3	Homework #4-7
2	Structure Fits Function	Slides 18-31 Classwork #8-13	Homework #14-18
3	Structure Fits Function	Lab: How do Plants Breathe?	N/A
4	Internal Structures	Slides 32-37 Set-up African Violets Lab	N/A
5	Internal Structures	Slides 38-41; Earthworm Activity	N/A
6	Internal Structures	Slides 42-48 Classwork #19-24	Homework #25-29
7	Internal Structures	Internal Organ System Activity	Study for quiz
8	Structure and Function	Quiz 1	N/A
9	Information Processing	Slides 49-56 Classwork #30-33	Homework #36-38
10	Information Processing	Slides 57-68 Classwork #34-35	Homework #39-40; Study for quiz
11	Information Processing	Quiz 2	N/A
12	Receiving and Sending Signals	Slides 69-83 Classwork #41-44	Homework #45-47; Study for quiz

13	Receiving and Sending Signals	Quiz 3	N/A
14	Unit Review	Review Game	Study Guide
15	Unit Test	Unit Test	N/A

*While there are many slides for each topic, several slides are interrelated and support each topic.
**HW Problems are currently not scaffolded from least to most difficult, but are instead listed in order of topic. Teacher should pay special attention at the end of each class period when assigning HW so that only problems related to the topic that was taught are being assigned.