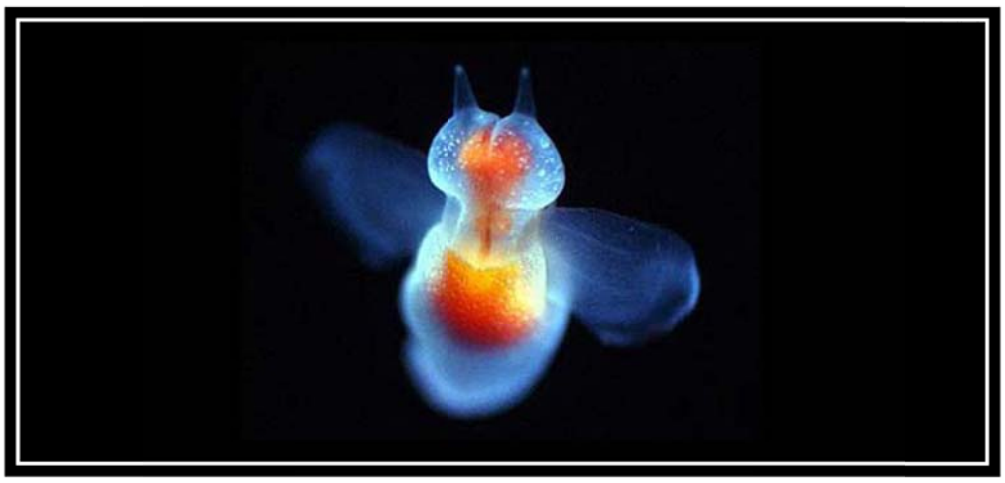
LIFE SCIENCE

GRADE 2

ASSESSMENT PACKET

Discover the science behind the barely visible parts of life and the environment, such as plant structure, plant processes, tiny insects, and genetics. You'll get to design and build several habitats to observe the germination, growth, and development of plants and experiment how they are affected by light, gravity, and touch.



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This curriculum is aligned with the National State Standards and STEM for Science.

Educational Goals

To the Parent/Teacher: Kids will demonstrate how well they understand important key concepts from this section. Some kids at this level are not reading quite yet, so you'll need to work together with them and observe them carefully as you go in order to understand what they know as they may not be able to tell you directly.

Overview: Why do families share similar features like eye and hair color? Why aren't they exact replicas of each other? And why do plants still reach for the sun, defying even gravity if they're planted on the side of a hill?

These questions and many more will be answered in this section as we look at the different areas of life science by studying life cycles for different animals and plants, genetic traits, environmental habitats, and much more.

Here are the scientific concepts:

- Many characteristics of an organism are inherited from the parents. Some characteristics are caused by, or influenced by, the environment.
- The germination, growth, and development of plants can be affected by light, gravity, touch, or environmental stress.
- Plants and animals have structures that serve different functions in growth, survival, and reproduction.
- Producers and consumers (herbivores, carnivores, omnivores, and decomposers) are related in food chains and food webs, and may compete with each other for resources in an ecosystem.
- Plants depend on water and light to grow.
- Plants depend on animals for pollination or to move their seeds around.
- There are many different kinds of living things in any area, and they exist in different places on land and in water.
- Designs can be conveyed through sketches, drawings, or physical models. These representations are useful in communicating ideas for a problem's solutions to other people

By the end of the labs in this unit, students will be able to:

- Design and build several observational experiments to study plants and animals in their natural habitat.
- Differentiate observation from inference (interpretation) and know scientists' explanations come partly from what they observe and partly from how they interpret their observations.
- Measure and estimate the weight, length and volume of objects.
- Follow a set of written instructions for a scientific investigation.

Life Science Grade 2 Explorations

Teacher's Outline with Answers

Teacher/Parent: This is not a quiz. This is a chance for you to explore the key concepts with your student to you can understand what they know and where they still need work. Read each question aloud and do the action and invite the students discuss their answers with you to help them answer the questions. Answers and/or experiment references given in parenthesis.

Questions to Explore Together:

1. How can you get a tree to grow lemons, limes, and oranges? (Refer to *Three Ways to Create a plant* experiment.)
2. What are the stages of life for butterflies? (Bonus question: How is this different for roaches, frogs or mice?)
3. How does water and what's in the water (like salt and/or minerals) affect land and animals? (Refer to *Terraqua Column* Experiment and discuss how things like salt and fertilizer affect plants and insects.)
4. What color light do plans like best? (Different colors of light have different energy levels. If you think of a rainbow, these are all the colors included in white light. The highest energy light is violet light, and red is the lowest energy. The light that gives plants the most energy are the ones at the violet end of the spectrum.)
5. Name two different insects and describe how each one builds their home, find food, and protect themselves. (Refer to *Predator Prey: Who Eats Whom?* Experiment or just your own observational experience.)
6. Families share similar features like eye and hair color. What features does your family share? (Refer to *Tracking Traits* Experiment.)

Life Science Grade 2 Evaluation

Student Worksheet

(Teacher: You'll need to go over the instructions with the kids and work with them on this part.)

Overview: You're going to show your teacher how much of this science stuff you already know. Choose one of the following activities:

a. Make up a short story about your favorite plant or animal, and include information about why and how it's your favorite. You can act it out if you want to with costumes and everything.
b. Design a garden and label its parts on a poster, including the various life stages of the insects, plants, and animals that you include. Your drawing must include: plants, insects, and animals as well as water, light and nutrients. When you're finished, you'll use it to teach your parent or teacher and demonstrate what you've learned.