

Science

SCI.III.2.3

Grade: 2

**Strand:** Using Scientific Knowledge in Life Science  
- Organization of Living Things

**Standard:** All students will use classification systems to describe groups of living things.

**Benchmark:** Describe life cycles of familiar organisms.

**Constructing and Reflecting:**

**SCI.I.1.1** - Generate reasonable questions about the world based on observation.

**SCI.I.1.3** - Manipulate simple devices that aid observation and data collection.

**SCI.I.1.4** - Use simple measurement devices to make measurements in scientific investigations.

**SCI.I.1.6** - Construct charts and graphs and prepare summaries of observations.

**SCI.II.1.1** - In the scientific world, decisions must be based on factual evidence that can be replicated.

**SCI.II.1.3** - Describe ways in which technology is used in everyday life.

**SCI.II.1.5** - Develop an awareness of contributions made to science by people of diverse backgrounds and cultures.

**Vocabulary / Key Concept**

Life cycle stages:

- egg
- young
- adult
- seed
- plant
- flower
- fruit
- larva
- pupa

**Context**

Common plants and animals:

- bean plants
- apple trees
- butterflies
- grasshoppers
- frogs
- birds

## Knowledge and Skills

### Benchmark Clarification:

A life cycle is a series of stages through which all living things (organisms) progress.

Students will:

- Sequence the life cycle stages of plants (seed, plant, flower, fruit)
- Sequence the life cycle stages of animals (egg, young, adult) (egg, larva, pupa, adult)

Resources (continued from column at right)

- Explore and enjoy photos, information, and even sounds of hundreds of animals in the fascinating Animal Bytes database from Sea World.  
<http://www.seaworld.org/animalbytes/animal%5Fbytes.html>
- Teachers' Domain – Multimedia Resources – video clips, narratives and photos of animals and their adaptations. Lots to choose from – AWESOME site!  
[http://www.teachersdomain.org/K-2/sci/life/colt/subtopic\\_plants.html](http://www.teachersdomain.org/K-2/sci/life/colt/subtopic_plants.html)
- *All About...Series*. Scholastic.
- *Backyard Series: Are You a...? Kingfisher*.
- *Know It All Series*. McClanahan.
- *Look Once, Look Again Series*. CTP.
- National Audubon Society. *First Field Guide Series*. Scholastic.
- Pictures of animals at the Oregon Metro Zoo-  
<http://www.zooregon.org/>

*Science of Living Things Series*. Crabtree.

## Resources

### Coloma Resources:

- Life cycle posters on seed, plant, flower & fruit.
- Big Books on sunflower & butterfly life cycle.
- Teaching posters on the ant, butterfly and frog.
- Small Book on the life cycle of a Maple tree.
- Lastly watching the frog & butterfly grow in the habitat in the classroom.
- Videos on seeds, plants and butterfly.

### Other Resources:

- Teacher's Domain – Plant Life Cycle – Lessons including multimedia resources – EXCELLENT – teacher resources, student materials, media and assessment. [http://www.teachersdomain.org/3-5/sci/life/cyc/lp\\_plantcycle/index.html](http://www.teachersdomain.org/3-5/sci/life/cyc/lp_plantcycle/index.html)
- Michigan Teacher Network Resources  
<http://mtn.merit.edu/mcf/SCI.III.2.E.1.html>
- SCoPE Unit – 2<sup>nd</sup> Grade - The Characteristics, Needs, and Development of Living Things  
[http://www.michigan.gov/scope/0,1607,7-155-10710\\_13476\\_13479-35611--,00.html](http://www.michigan.gov/scope/0,1607,7-155-10710_13476_13479-35611--,00.html)
- BCISD Classroom Resources – Life Science  
<http://www.remc11.k12.mi.us/bcisd/classres/lscience.htm>

## Instruction

**Benchmark Question:** What are the life cycle stages of living things (organisms)?

**Focus Question:** Show students a flowering potted plant, and ask them to name the parts of the plant: roots, stems, leaves, and flowers.

Ask:

- Which part of the plant develops into the fruit?

Teacher's Domain – Plant Life Cycle – Lessons including multimedia resources – EXCELLENT – teacher resources, student materials, media and assessment. [http://www.teachersdomain.org/3-5/sci/life/cyc/lp\\_plantcycle/index.html](http://www.teachersdomain.org/3-5/sci/life/cyc/lp_plantcycle/index.html)

In this lesson, students learn about the life cycle of plants by watching a time-lapse video. This activity provides students with further evidence that all living things grow and change as they progress through their life cycle. Two optional video segments show students how to set up a germination experiment and how to grow seeds they collect on their socks.

Discuss how the life cycle of plants is similar to and different from the life cycle of animals.

Remind students of the stages of human development: newborn, toddler, child, teenager, young adult, middle-aged adult, elderly adult. Ask students if there are comparable stages in the life cycle of plants.

Give each student a piece of paper and have them draw and color pictures of plants that they think correspond to each of the stages of human development. (For example, a seed with newly sprouted roots would represent a newborn plant. A tall tree, with many branches, would illustrate a middle-aged tree.) They may want to watch the video again to help them with this project.

## Assessment

Have students label a plant life cycle diagram and an animal life cycle diagram using terms from the key concepts. Students may work in groups to insure understanding among group members.

**Teacher Notes:**

<http://www.misd.net/mibig/>

**Use classification systems to describe groups of living things.**

With the help of the big yellow bird or the purple dinosaur, children at an early age sort "which one doesn't belong." There is a tremendous diversity of life forms. With over 1,500,000 identified organisms, biologists need some way of organizing these life forms so they can be studied.

Students informally observe a wide variety of living things in and out of school. Just like scientists, they note similarities and differences in their observations. At the elementary level, students focus on observable characteristics. These informal categories will be challenged with the acquisition of additional knowledge of anatomical differences, in particular those characteristics that are not observable.

