Classroom Teacher Preparation

Life Science 3: Exploring Life Cycles

Please use the following to prepare for the next SfS lesson.

Description:

Students will build models of life cycles using laminated illustrations. They will then use their models to identify and name the four generalized steps of every organism's life cycle: birth, growth, reproduction, and death.

Lesson Objectives – SWBAT ("Students Will Be Able To…"):

3rd-4th

- Identify the generalized steps that define a life cycle: birth, growth, reproduction, death
- Explain that all living things have life cycles

Disciplinary Core Idea (DCI)

LS1 From molecules to Organisms: Structures and Processes - LS1.B Growth and development of organisms

- (3rd-5th) Reproduction is essential to every kind of organism. Organisms have unique and diverse life cycles.

Science & Engineering Practice (SEP)

Developing and Using Models

- (3rd-5th) Develop and/or use models to describe and/or predict phenomena.

Crosscutting Concept (CCC)

Patterns

- (3rd-5th) Similarities and differences in patterns can be used to sort, classify, communicate and analyze simple rates of change for natural phenomena and designed products

Preparation:

This lesson is an introduction to the concept that life cycles have generalized features for all living things. It will be helpful if students are already familiar with the life cycle of at least one other organism, such as the butterfly, frog, or beetle. The lesson also includes organisms with familiar and unfamiliar life cycles including the butterfly, flowering plants, and mammals.

Room Set Up for Activities:

Students will work at their desks in groups of 2-4. They will need room to make stacks of laminated cards, and to lay out pictures in chronological order.

Safety:

There are no safety concerns for this lesson.

Related Modules:

This lesson may be taught as part of a sequence or group of related modules on life cycles, population, and heredity. Modules include:

Life Science 1: Inherited Traits – Students examine how traits are inherited from parents to offspring by using Cootie toys with interchangeable body parts; students choose Cootie parents to make an offspring from and play the inheritance game to determine what traits their Cootie will have.

Life Science 6: Population Changes – Students play the active 'Oh Deer!' game to learn about population dynamics. Students observe the natural fluctuation of a population, effect of limiting factors, & get to graph their data.

For other module sequences and groups, look here: www.sciencefromscientists.org/sequences

Standards Covered:

Please click the following link to our website to review the standards covered by this lesson, listed by state: www.sciencefromscientists.org/standards/

Lessons are matched to both national NGSS and local state standards.

After Our Visit:

Extend this lesson modeling the life cycle of a butterfly on a paper plate: https://buggyandbuddy.com/butterfly-life-cycle-craft/.

Access this Extension activity by visiting the Classroom Post found on our website at sciencefromscientists.org/cohorts. Use the name of your school/cohort and password to log in.

To help Evaluate, check out our Open Response questions online at sciencefromscientists.org/open-response-questions. They are freely available for all of our lessons for current teachers. Use the password supplied by your instructor to log in.

Additional Resources:

- *How to Live Forever? Be a Jellyfish*, Scishow (4:29): https://youtu.be/2kLSiE-eNjw
- *How a Caterpillar Becomes a Butterfly*, SchiShow Kids (3:57): https://youtu.be/V5RSpMQQOpw
- *How Does a Seed Become a Plant,* SciShow Kids (3:46): https://youtu.be/tkFPyue5X3Q