

Assignment #2: Learning Goals

Life Cycles

The Main Idea:

The main ideas of this unit are that living things have life cycles and stages within those cycles. In the main idea that living things have life cycles, every living organisms' life cycle may not be the same as others. The students will learn about the complete and incomplete life cycles and the stages within those cycles. Also, students will understand and be able to identify the sequence of stages of an organism's life cycle. It is important for students to understand these main ideas, because it is something that they will have to understand and will encounter in their daily lives. When they have pets, grow plants or flowers, or even see animals and living things in nature they will have an understanding of the cycle of that organism.

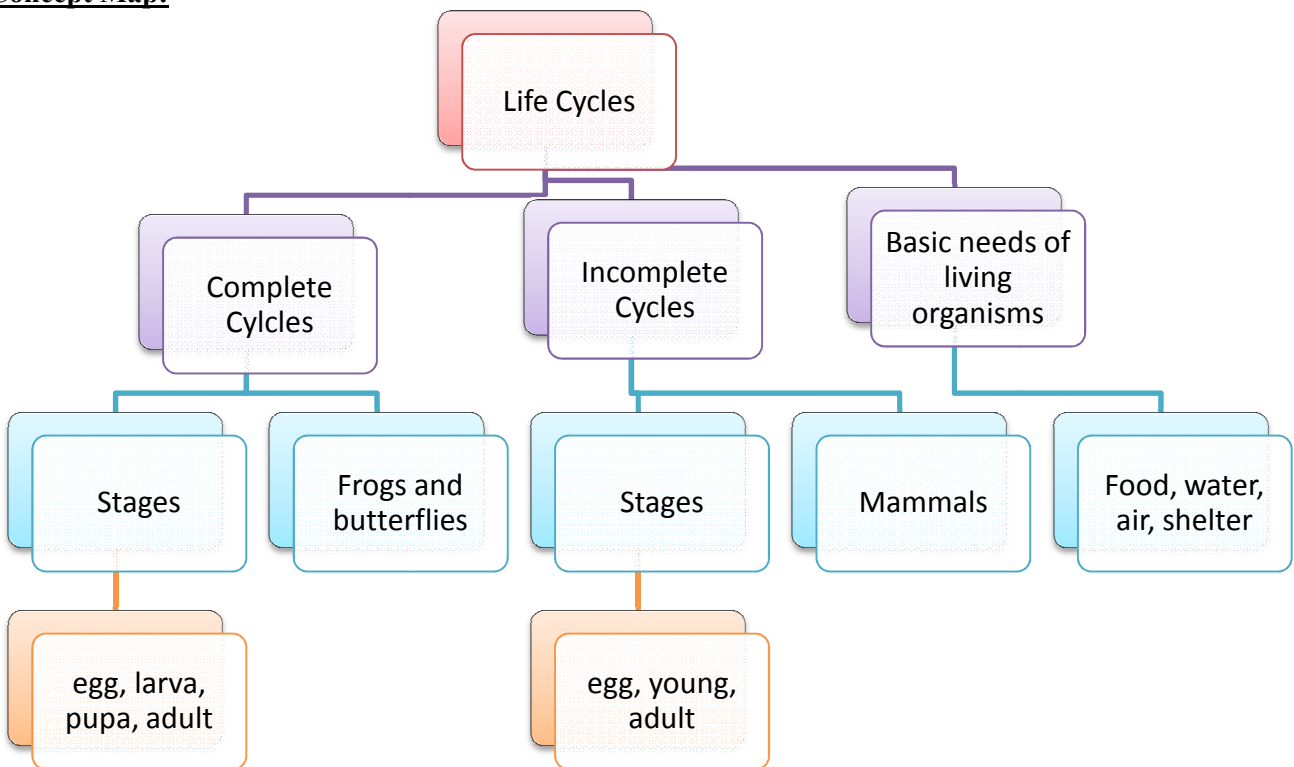
Central Problem/Question:

How does a caterpillar become a butterfly or a tadpole become a frog and why can't you?

Example responses:

A life cycle is the way an animal grows up or starts out as a baby and becomes an adult. There are two life cycles: complete and incomplete. In a complete life cycle there are four stages. The first stage is that it starts out as an egg, and then becomes a larva. When the larva gets bigger it goes through the pupa stage and metamorphosis happens. This is just a really big word for change. The animal changes and then changes into an adult. One example of a complete life cycle is a butterfly. It starts as an egg, becomes a caterpillar, turns into a chrysalis and metamorphosis happens, and it turns into a butterfly. An incomplete life cycle is when there are only three stages. The three stages are an egg, young, and then an adult. One example of an incomplete life cycle would be a brown bear.

Concept Map:



EPE Chart:

Experiences	Patterns	Explanations
<p>Observing and recording the stages that our caterpillars will go through throughout its life cycle.</p> <p>Weekly observations of how our caterpillar is changing.</p> <p>Weekly observations into the other first grade class to observe how their tadpoles are changing.</p>	<p>The pattern that the students notice between the life cycles of the tadpoles and the butterflies.</p> <p>Also, that all living organisms have a life cycle that can be complete or incomplete.</p>	<p>The life cycle of a butterfly lasts for several weeks. A butterfly lays 200-500 eggs on the leaves of a plant. Within five days caterpillars hatch out of the eggs. Caterpillars first eat their egg shell and then eat a lot of leaves. Each time the caterpillar grows it sheds its skin (molts.) It will shed its skin about five times. After a few weeks the caterpillar stops eating and begins to look for a place to change. It will shed its skin one last time and then become a pupa. During the pupa stage the caterpillar forms a hard shell (chrysalis) and stays inside of it to change to a butterfly body. After several weeks an adult butterfly emerges from the chrysalis and looks for a mate. After it mates it will lay its eggs and only live for about two weeks. (http://www.shrewsbury-ma.gov/schools/bea/curriculum)</p>

Scientific Practices:

The students should learn to draw and write their observations. They should learn that when they observe something or an object they are using all five of their senses and should be descriptive when explaining their observation. Also, the students will learn how to record their data from their observations. They can do this by writing or drawing. Another thing I would like my students to learn is to guess or hypothesize what they think might happen next. For example, when we watch the life cycle of the butterfly, I want them to guess what they think is going to happen to the caterpillar and chrysalis. I think it is important for them to analyze what they are observing. I want the students to know the two different life cycles and how they are different. By growing butterflies they will see three-quarters of the complete life cycle (except for the egg stage), which will help them better understand and see first-hand what happens. The students will also learn to compare and contrast the life cycle that they are watching in our room of the butterfly and that of the frogs in the first-grade class next door. This will help them better understand the complete life cycle, but to also see that things in science do have patterns. Even though they are different animals and they look very different, they are both going through a complete life cycle.

All of the scientific practices are related to the GLCE's that we are using in our unit. In regards to the science process GLCE's it will cover a few in which the students are to "make purposeful

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observation of the natural world using the appropriate senses,” “generate questions based on observations,” and that “inquiry involves generating questions, conducting investigations, and developing solutions to problems through reasoning and observations.” (Grade Level Content Expectations S.IP.E.1, S.IP.01.11, S.IP.01.12)