Lesson Plan Template

Grade: 3rd

Subject: Science – Life Cycle Intro

Materials: Paper plates, markers/colored pencils

Technology Needed: powerpoint?

Instructional Strategies:

- ☐ Direct instruction
- ☐ Guided practice
- ☐ Socratic Seminar
- ☐ Learning Centers
- ☐ Lecture
- ☐ Technology integration
- ☐ Other (list)
- ☐ Peer teaching/collaboration/ cooperative learning
- ☐ Visuals/Graphic organizers
- ☐ PBL
- ☐ Discussion/Debate
- ☐ Modeling

Guided Practices and Concrete Application:

- ☐ Large group activity
- ☐ Independent activity
- ☐ Pairing/collaboration
- ☐ Simulations/Scenarios
- ☐ Other (list)
- ☐ Hands-on
- ☐ Technology integration
- ☐ Imitation/Repeat/Mimic

Explain:

Standard(s)

3.LS1.1 Develop models to describe that organisms have unique and diverse life cycles but all experience birth, growth, reproduction, and death.

Objective(s)

Students will be able to explain the stages of life for one animal or plant.
Student will be able to compare their animal or plant with the life cycle chosen by a classmate.

Bloom's Taxonomy Cognitive Level:
Understand, Analyze

Differentiation

Below Proficiency:
Students who are struggling may pick one of the animals that we covered as a group. This can serve as reinforcement of those stages instead of introducing a new animal.

Above Proficiency:
Students who understand the life stages that we discussed can use their ipad to select an animal and look up their life cycle. They will then represent this life cycle on their paper plate. They must check the animal with the teacher or I before starting.

Approaching/Emerging Proficiency:
These students will select an animal that is similar to those that we cover as a group. They may choose to do their own research but should choose from a set list to ensure that it is not overly complicated.

Modalities/Learning Preferences:
Visual: students will be making a diagram to help visualize their life cycle.
Tactile: Students will be working with and manipulating materials to represent the concept that we are learning
Auditory: Students will be discussing the similarities and differences of their life cycle and their classmates to hear the steps several times and verbalize it
Kinesthetic: Students will be able to move around and look at each others life cycles, giving the movement students a chance to move.

Classroom Management- (grouping(s), movement/transitions, etc.)

Students will be at their desks for the group instruction and will begin work on their own at their desks.
Students will be able to move around and show their classmates their life cycles in the time remaining and discuss their life cycles at a level 2 volume once they have finished creating.

Behavior Expectations- (systems, strategies, procedures specific to the lesson, rules and expectations, etc.)

Students will respect their art materials
Students will work independently until they are ready to start comparing their life cycles.

Minutes	Procedures
	Set-up/Prep: **Have paper plates and art materials for creating** **Pull up examples of life cycles that they can choose to show and explain – Each animal will have an explanation of their life cycle at a station around the room (broken up steps 1-4 and CLEARLY labeled) Students will create their paper plate cycle by moving around the room to find their animals stages.** **Each stage should have the animal and the number with the image and explanation underneath. Students will draw their image in the right corner.**
	Engage: (opening activity/ anticipatory Set – access prior learning / stimulate interest /generate questions, etc.) **3rd graders, how do we know how old something is? Do we look the same as when we were babies? As we grow up and get older, we go through different stages in our lives. Adults and kids and babies all look different and are at a different stage in their life.** **This is something that we can see in animals and plants too. Everything that is alive has a life cycle that it goes through. This life cycle is the steps of growth that the plant or animal goes through.**

	Do any of you have pets? *raise hands!* Do any of you have gardens in your backyard or plants in your house? Have you ever noticed the way that these plants and animals grow and change? **Does a dog go through the same stages as a tomato plant? (Use their examples for this comparison) Both grow and change, but they don't do it in exactly the same way do they? Today we are going to talk a little bit about life cycles and then you are each going to make a little diagram of the life cycle of one animal.**
	Explain: (concepts, procedures, vocabulary, etc.) **I already told you a little bit about life cycles, but we are going to talk a little more about them before we start our activity, okay? Does anyone think they can tell me what a life cycle is?** ***take a couple answers if necessary, just to have an idea of their understanding*** **Yeah, so a life cycle is just the stages of life that a plant or animal goes through as they grow and develop. Most animals start off either as an egg or as a baby. They then grow up into a young animal, and then an adolescent, which is like a young adult, and then they become adult. *write the cycle on the board, in a circle*** **Each animal is a little different in how they look and act at each stage. An example is that baby horses are actually able to stand and walk around on their own after just a few hours, while baby puppies can't even see anything for a couple weeks after they are born. Isn't that pretty cool?** **Animals sometimes look exactly like their parents when they are born, like a horse or a cow. Some animals are born looking pretty different from their parents like a frog who is born as a tadpole and doesn't have any legs! As they grow they will change to look more and more like the full grown adult that most of us think of.** **Some animals like a butterfly or a moth are born very different from their adult form. These animals go through something called metamorphosis. Can you all say that with me? It is a pretty big word: Metamorphosis. *Write it on the board by the stage adolescent* Metamorphosis is the process that changes a caterpillar into a butterfly or a tadpole into a frog. Not all animals go through metamorphosis, it is just the animals that experience really big changes in form.** **Plants all follow a pretty similar life cycle. What do you think might be the first step in the life cycle of a plant? Yep! They start off as seeds, then what might we see happen? Next is a seedling. This is when you have just a little bit of the plant growing from the seed. The seedling will grow into a mature plant which starts growing fruit and flowers, depending on what plant it is.** **All stages of life, whether it is a plant or an animal will start with birth and end with death and involves growth and reproduction. After each cycle is finished, it starts right back up with another baby or seedling that comes from the one before it. That is why each life cycle includes reproducing.**
	Explore: (independent, concreate practice/application with relevant learning task -connections from content to real-life experiences, reflective questions- probing or clarifying questions) **Now to help you see different life cycles, we are going make a model by moving around the classroom. Each one of you will have a paper plate and the first step *write on board* is to draw one line up and down and one side to side to split the plate into four sections *show model* *give each of them a paper plate to divide into four*** **You may each pick one animal to represent on your paper plate. The choices are a dog, chicken, butterfly, and a frog. *write on board* all of these animals have four distinct stages that they go through and some are similar but some are very different.** **Once you have drawn your lines and picked an animal you get to move around the classroom and put each step of their life cycle in its place on your plate. *write 1-4 on plate and on the steps written on the board* Where do we put the first one? And the second? Third? Fourth? *Draw arrows to show direction*** **Good deal. So you will take your plate through the room to find your steps and then you can draw the steps that you find or write a description of it. If I pick a chicken, I can draw the full adult here in the adult spot on my plate. If you would rather write out what happens in that stage, you would write what the adult looks like and what it does. You have a choice of which one you prefer, but either way it should have lots of details based on the picture and the descriptions.** **Once you have all of your steps, you can come back to your desks and compare with someone who had a different animal. Does that all sound okay? What questions do you have?** **As we move through the room we need to be respectful of your classmates and the work that they are doing or we won't be able to all participate okay? There are a lot of bodies in this room so we need to walk to each station.**

Lesson Plan Template

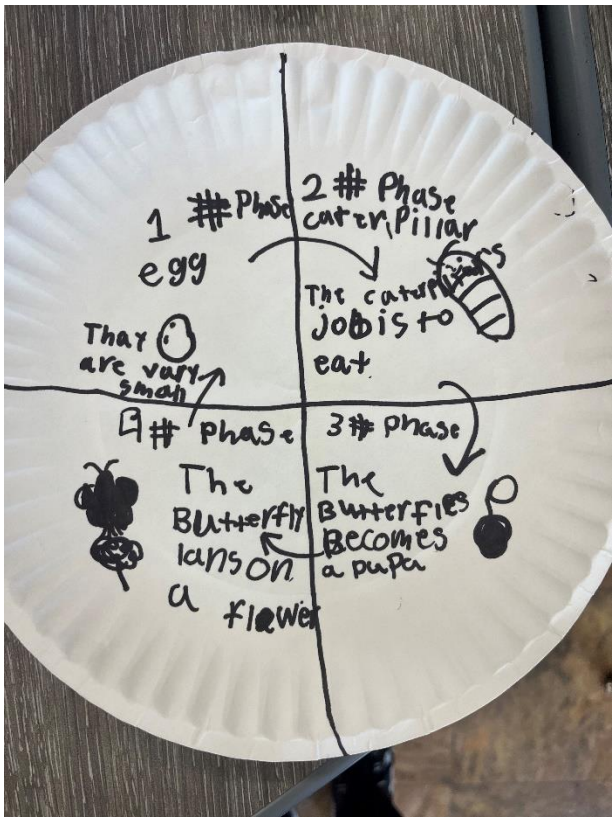
	Review (wrap up and transition to next activity): **What did you learn about your animal? Were there differences between your animal and the others that your classmates had?**

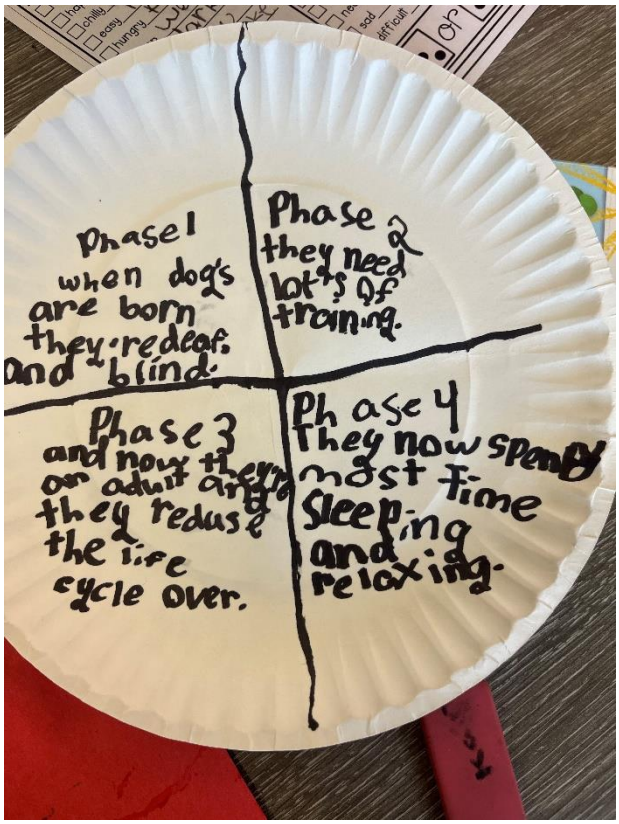
Formative Assessment: (linked to objectives) **Progress monitoring throughout lesson- clarifying questions, check-in strategies, etc.** **Students will be writing the stages of the life cycles in the right areas and engaging in discussion with classmates about their animals.** **Consideration for Back-up Plan:**	**Summative Assessment (linked back to objectives)** **End of lesson:** **Students will be able to explain the life cycle of an animal to their classmate. Students can show what is different between their animal and their classmate's animal, based on their paper plate organizers.** **If applicable- overall unit, chapter, concept, etc.:**

Reflection (What went well? What did the students learn? How do you know? What changes would you make?):

This lesson was the final thing that the students worked on this day. As we were moving through it, I could tell that they were more energetic and fidgety so having them up and moving while they learned was definitely a good move. We did end up being very low on time and it meant that I was unable to do a review of what they read and what differences there were between the life cycles. It was still a good refresher on life cycles, but it didn't get fully to the end which it what tied in the most closely with the standard. If it was my own classroom, I would have gone into their work time at the end of the day and pulled them back onto the rug. This would allow me to talk with them about what differences they found and get that final step done. I felt like the lesson was unfinished and some students even had their organizers unfinished, which was a big drawback on the lesson for me. It felt like the students engaged in it well though and like they were reading and taking their time with the content. I know that time management it something that all teachers struggle with, and it is something that I will continue to encounter, but this lesson was the first to really feel like the time was an issue. The last few lessons I have also been trying to find better ways to assess. This lesson felt as though there was no real assessment portion. If I was able to do this in my classroom, I would have a more strict set of requirements for the project and give it a bit more time. With clarity on what they are required to have on their organizers, I could grade what they included and assess their understanding of what they read. I would also want to add a portion that directly assess their ability to compare the life cycles. This could be something that asks them to discuss with a partner and write down the differences that they found for each phase or a short paragraph explaining their life cycle. I just wanted a slightly better form of assessment because I wasn't totally confident with what the students walked away with. I enjoyed teaching this lesson because it did engage the kids well. Spreading the information throughout the room and making them find it kept them engaged better than texts would normally. Overall it was a successful lesson, even though I was frustrated that I ran out of time and only had a vague assessment.

Student Examples





Butterflies: Phase 1

Butterflies begin their life cycle as an **egg**. This egg is laid on a plant by the adult female butterfly. These eggs can be very small and are laid in the spring, summer, or fall.

Butterflies lay many eggs so that it is more likely that several survive.

Butterflies: Phase 2

The second stage of a butterfly's life is as a **caterpillar** (also called the larva). The caterpillar's job is to EAT. It works to get all of the nutrients that it needs in order to become a full adult butterfly. This food is stored for the butterfly to use later.

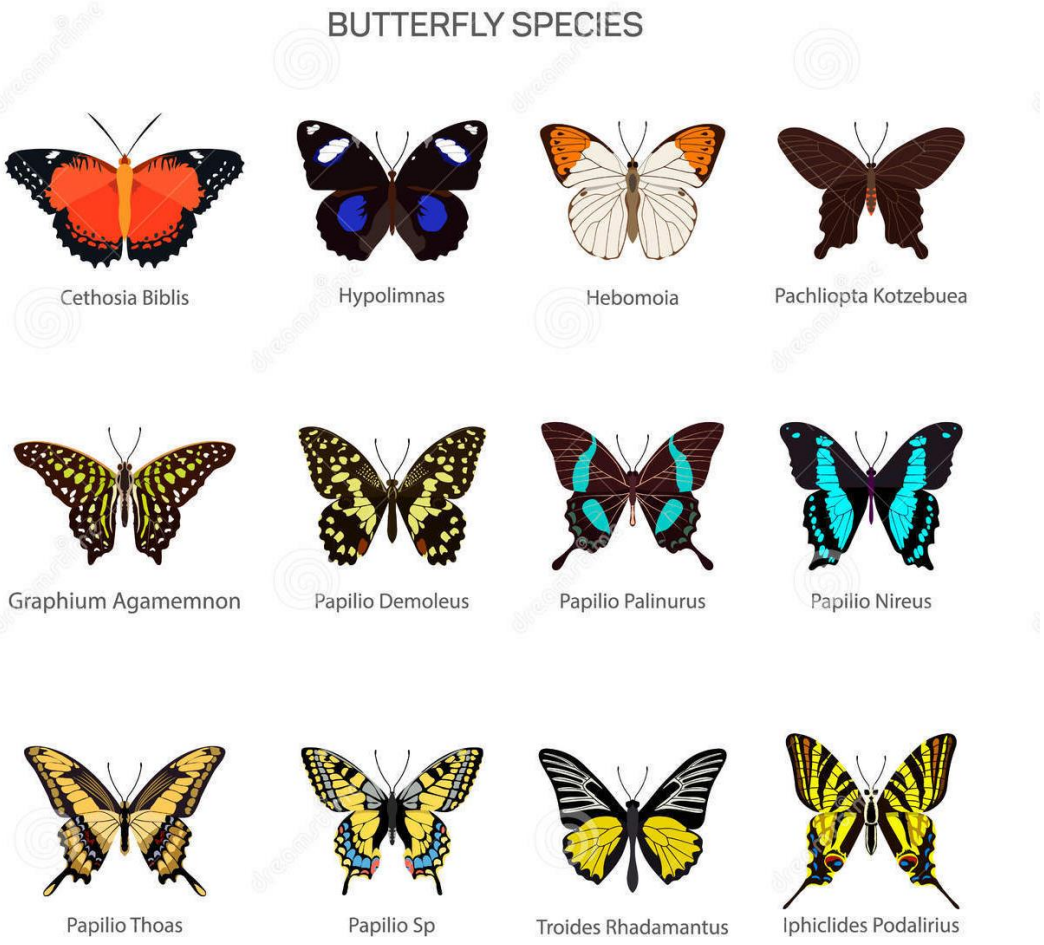
Caterpillars can grow to be 100 times their size during this phase!

Butterflies: Phase 3

The third phase of a butterfly's life is a transition stage. In this stage, the butterfly becomes a **pupa** (also called a chrysalis). It may look like nothing is going on, but big changes are happening inside. Special cells that were present in the larva are now growing rapidly. They will become the legs, wings, eyes, and other parts of the adult butterfly.

Butterflies: Phase 4

The final stage of a butterfly's life is when it is an **adult**. This is where the butterfly will lay eggs and reproduce. It can fly and looks the way that many people expect a butterfly to look. The one thing that adult butterflies can't do is grow! They sometimes feed on nectar from flowers, but many species don't eat at all!



Dogs: Phase 1

The first phase of a dog's life is being a **puppy**. A female dog gives birth to a litter of puppies. Each litter can have from 2-12 puppies in it. Newborn puppies are blind and deaf for the first few weeks of its life. They depend on their mother for safety and food. After those first weeks, the puppy begins to see and hear, and this is when the puppy learns about the world, but it is still very dependent on its mother. Most breeds are a puppy for 6 to 18 months.

Dogs: Phase 2

The second phase of life for dogs is **adolescence**. This phase is where hormones begin to be released, which helps the dog grow and develop into a full-grown adult dog. It lasts from around one year old until around 3 or 4 years old. As the dog goes through this phase, it changes physically but it also learns how to behave socially. This is typically where an owner would do a lot of training for their dog and teach them how to behave and interact with humans.

Dogs: Phase 3

The third phase of a dog's life is as an **adult**. This is the phase that dogs spend the most time in! All breeds have different life spans, so the amount of time that they spend as an adult varies greatly. This phase involves the dogs reproducing and starting the life cycle over again with new puppies. Adult dogs still enjoy playing and going for walks but are more familiar with their surroundings and behave better than puppies.

Dogs: Phase 4

The final stage of a dog's life is as a **senior** dog. These dogs are older and typically stop reproducing at this point. Their muzzle will tend to become grey, and they will slow down, preferring a quiet stroll to an energetic run. More sleep is needed, and some dogs start to have dental or joint problems. Larger breeds of dog will typically age faster, with the average lifespan being 11-12 years but some dogs can even make it past 20! These dogs are snuggly and sleepy and love lazy days instead of crazy days.

Frogs: Phase 1

It all starts with adult frogs laying hundreds of tiny **eggs**, which clump together in groups known as frogspawn. This happens in early spring when the weather is just starting to get warmer. Spotting frogspawn is often thought of as being a key sign of spring! As the eggs are defenseless, they're usually laid among vegetation and just below the surface of the water, to give them some protection.

Frogs: Phase 2

After spending 1-3 weeks eating the yolk of their egg, the baby frog hatches into the big, wide world. Now, the baby frogs are known as **tadpoles**. They have gills, a mouth, and a long tail, which they need for swimming! Unlike adult frogs, tadpoles can't go on land – so they feed on plant material from the water and tear off tiny chunks of nearby vegetation.

Frogs: Phase 3

The third phase of the frog's life is a transition phase. It is sometimes called a **froglet**. The legless, water-bound tadpoles slowly metamorphose into frogs over 14 weeks. These 14 weeks are the froglet phase. First, they grow back legs, then front legs too! Soon after, their body starts to change shape, and they're able to start eating insects.

Next, the tadpoles' tails shrink away, and skin grows over their gills, as they develop lungs and eardrums! These are super important steps, as they prepare the tadpole for life on land. Once their gills and tails are gone forever, tadpoles undergo one last 24-hour push, where the metamorphosis completes. Once this stage is finished, the baby frogs emerge from the water as tiny adults!

Frogs: Phase 4

As **adults**, frogs and toads are much less reliant on water. So long as they stick to the shade and don't dry out, they can live on land – but they often return to ponds and lakes for a splash! Before too long, the females will look for water to lay her own eggs. Once that's happened, the life cycle is complete!