Tennessee Tech University  
Formal Lesson Plan Template

(Complete each white section in the template.)

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| Name | Rachel Shanton | | Date | 11/20/12 | | | Grade Level | 3rd |
| Lesson Title | | Butterfly Lifecycles | | | | | | |
| Curriculum Standards *Cite from Tennessee standards and/or Common Core State Standards using the number and/or letter, as well as the description. Each lesson plan can easily teach several standards, but you should choose only ones you will truly emphasize and are aligned with your central focus and objectives.* | | | | | Focus Question/Big Idea/Goal: *What question(s), big idea(s), and/or goals drive your instruction?* | | | |
| Standard 4: Heredity   * **GLE 0307.4.1** Identify the different life stages through which plants and animals pass. * **0307.4.1** Sequence diagrams that illustrate various stages in the development of an organism. * **SPI 0307.4.1** Select an illustration that shows how an organism changes as it develops. | | | | | **Focus Question**: What is complete metamorphosis and what are the four stages?  **Big Idea**: The stages in complete metamorphosis include egg, larva, pupa, and adult.  **Goal**: The students will understand that complete metamorphosis includes the four stages of egg, larva, pupa, and adult. | | | |
| Rationale/Theoretical Reasoning *Cite the theory or theorist. Consider…why am I doing what I am doing? On what research are your chosen strategies based?* | | | | | | | | |
| Uncovering Student Ideas in Science Volume 3, Does it have a lifecycle? p. 111-116  The probe can be used to determine where students recognize that although life cycles vary in length and developmental stages, all multicellular organisms go through a life cycle. Elementary students often use representations of life cycles to compare and contrast different types of life cycles. Studying the life cycle of an organism helps children understand the continuity of life. When students make observations of particular plant or animal’s life cycle, be explicit in developing the generalization that all animals go through a life cycle, even though details of their cycles differ.  Howard Marzano’s Theory of Multiple Intelligences:  Naturalist: The students will learn about animals and be able to discriminate them from plants.  Bodily/Kinesthetic: The students will be using their hands and fingers to complete the butterfly life cycle plate activity. | | | | | | | | |
| Lesson Objective(s) *What do you want students to do as a result of this lesson?**An instructional objective describes exactly what you want the learners to learn and how you know that they have learned it. Objectives must be measurable and clearly aligned with every section of your lesson plan, your chosen standards, and your central focus.* | | | | | | | | |
| Students will be able to explain and identify the four stages of metamorphosis. | | | | | | | | |
| Materials/Resources *What do you need for this lesson?* | | | | | | | | |
| Science Book  Brainpopjr.com  Paper Plates (one per student)  Markers  Glue  Fuzzy Sticks (1 per student)  Construction Paper Leaves (4 per student)  Noodles (rice, small shell macaroni, rotini, bowtie) | | | | | | | | |
| Vocabulary/ Academic Language *What opportunities will you provide for students to practice academic language/vocabulary/discipline-specific terminology needed in demonstrating mastery of the lesson’s objectives*? | | | | | | | | |
| Language:  Models: a diagram to show the finished product.  Construct: to make something accurately using given measurements.  Label: to identify parts of a butterfly.  Elbow Buddy: a way for the students to talk to a partner without having to move around or without getting too loud.  Vocabulary:  Egg: A structure that protects and feeds young certain kinds of animals.  Larva: The stage in some insects’ life cycles, which comes after hatching.  Pupa: The stage of some insects’ life cycles before becoming an adult.  Adult: A fully mature animal, plant, or other form of life.  Hatches: To emerge from an egg.  Caterpillar: The larva of a butterfly or moth, with a long soft body, many short legs, and often brightly colored or spiny skin.  Chrysalis: An insect at the stage of changing from larva to adult, during which it is inactive and encased in a hard cocoon.  Butterfly: An insect with two pairs of often brightly colored wings and knobbed antennae. It develops from a caterpillar and lives for only a short time.  Life cycle: how a certain kind of organism grows, changes, and reproduces.  Metamorphosis: is a series of very different body forms.  Life stages: are the steps in an organism’s life cycle.  I will focus on these words as we work on our lifecycle of the butterfly activity. They will create the model and label the parts, which will help the students practice with the words. | | | | | | | | |
| Assessment/Evaluation *What evidence will you have as a result of the lesson to show that your students have mastered the learning objectives? Describe formative (****during*** *the lesson) and/or summative (****after*** *the lesson) assessments. Attach copies of any documents that will be used as evidence.* | | | | | | | | |
| Fact #22 Give me five: Figure out what the children know about the butterfly life cycle or metamorphosis. (before the lesson)  Life Cycle Worksheet: read a passage about Life Cycle of the Butterfly and answer questions. (early finishers of the lifecycle of the butterfly activity)  A short multiple choice quiz at the end of the lesson to see what the children learned about the butterfly life cycle or metamorphosis. (after the lesson) | | | | | | | | |
| Instruction *Give* ***detailed, carefully-sequenced procedures*** *for teaching the lesson by explaining what the teacher and students will be doing during the beginning, middle, and end of lesson.* | | | | | | | | |
| **BEGINNING OF LESSON** *Be exceptionally specific! Explain what the teacher and students will do.*  **Set (Introduction)** *This section orients the student to the learning that will occur in the lesson. It should:*   * *involve all students and get their attention focused on the lesson about to occur* * *communicate the objectives of the lesson to the students* * *relate the learning to previous learning* * *relate the learning to the students’ lives* * *consider students’ academic, cultural, and social characteristics* | | | | | | *What specific higher-order questions will you ask in this part of your lesson?* | | |
| The teacher will have the students complete FACT:22 Give me five. The students will be given a minute to write down something that they learned previous about the butterfly life cycle or metamorphosis.  The teacher will review previous lesson of life cycles.  The teacher will show the life cycle of the butterfly on Brainpopjr.com.  The teacher will come up with 4 questions to ask the students after the video.  **10 minutes** | | | | | | What is one idea that you already know about the butterfly life cycle?  What is metamorphosis? | | |
| **MIDDLE OF LESSON***Be exceptionally specific! Explain what the teacher and students will do.*  *This should be the most extensive section of your instruction.* | | | | | | *What specific higher-order questions will you ask in this part of your lesson?* | | |
| The teacher and students will read metamorphosis on p.93 of the science book.  The students and teacher will discuss vocabulary and diagram.  The teacher will show the students a completed model of the butterfly life cycle plate activity on the Elmo.  The teacher will demonstrate and lead students through each step of the butterfly life cycle plate activity.  Students will complete the butterfly life cycle plate activity.  The students will the fold their plate into fourths.  Using a marker the students will go over the fold line.  The students will glue the middle stem down, which is the brown fuzzy stick.  The students will glue the 4 leaves down (one in each section).  The students will start by labeling the first section egg.  The students will glue the rice on the leaf in that section to represent the eggs.  The students will label the next section larva.  The students will glue the rotini shells on the leaf in that section to represent the larva.  The students will label the next section pupa.  The students will glue on the small macaroni shell to represent the pupa.  The students will label the last section adult.  The students will color their bowtie shell with their marker and then glue it on the last leaf to represent a butterfly.  The teacher will use a timer to keep the lesson on pace.  Make sure students do not work ahead try to get them to stay with the teacher.  \*If students finish earlier than others then they will have a self-explanatory worksheet on the life cycle of the butterfly to work on while the others finish.  25 Minutes | | | | | | What are the four stages of the butterfly life cycle?  What happens during the larva stage?  What does a caterpillar live in before it turns in a butterfly?  How does metamorphosis compare to a mammal’s life cycle? | | |
| **END OF LESSON** *Be exceptionally specific! Explain what the teacher and students will do.*  **Closure (Conclusion)** *This section ties together and concludes with an opportunity for the STUDENTS to demonstrate that they met the objectives of the lesson. It should provide an opportunity for students to verbalize the learning of the stated objectives.* | | | | | | *What specific higher-order questions will you ask in this part of your lesson?* | | |
| The students will turn to an elbow buddy and explain the different stages of the butterfly life cycle using their models. Then one student can volunteer to share with the class what they learned.  The students will take a quiz with questions based on the butterfly life cycle and metamorphosis.  This will help the teacher be able to assess what the students learned during the lesson and what might need to be retaught.  10 minutes | | | | | | What other organisms go through metamorphosis? | | |
| Adaptations to Meet Individual Needs: *How will you adapt the instruction to meet the needs of individual students throughout the lesson? Be specific for various parts of your lesson, as applicable.* | | | | | | | | |
| Science text from book will be read aloud and discussed as a class.  During the activity students can help their group if there are any questions or if a child gets behind. Teacher will lead direction and also circulate to help any student that needs help.  Teacher will pull struggling readers and read the quiz aloud to them. | | | | | | | | |
| Special Classroom Situations: *Are there any management and/or safety issues that need to be considered when teaching this lesson?* | | | | | | | | |
| One child has Asperger’s and at times can be very emotional. | | | | | | | | |
| Reflections/Future Modifications: *To what extent did the class learn what you intended them to learn? What will be your next steps instructionally? What did you learn about your students as learners? What have you learned about yourself as a teacher? What were your strengths during this lesson? In what areas do you think improvements are needed? This part should be completed within 24 hours of your formal observation. After adding this section to your formal lesson plan, email the entire lesson plan to Dr. Suters (*[*lsuters@tntech.edu*](mailto:lsuters@tntech.edu)*). Changes should not be made to your lesson plan from the way it was presented during your formal observation the previous day.* | | | | | | | | |
| Overall I think that the lesson went very well. The students were very engaged throughout the lesson. They really enjoyed making the life cycle butterfly plate activity. I would say that overall most of the students learned the objective of the lesson, which was to be able to identify the four stages of metamorphosis and a few students even exceeded expectations. They were able to use academic vocabulary when explaining about the stages of the life cycle. Most have the concept down and were able to answer the questions on the quiz that were about the four stages of metamorphosis. There were a few that are unable to answer the questions, but I think with time and more instruction they would be able to learn the four stages. The next steps instructionally would be to review the life cycle of the butterfly. Then move on to learn about the other types of life cycles so that students know that there is more than one type. I learned that my students are very intelligent, not that I had any doubt, they were just able to prove it to me. They were able to answer all of my questions. They were also able to follow directions correctly in order to complete their plate activity. I have learned that I am a stronger teacher than I think I am however, I still have areas that I need to work on. I was able to make it through my entire lesson and complete the lesson to the best of my ability. One of my strengths was staying positive throughout the lesson. Even though I was really nervous and stressed I was still able to stay on task with my lesson. Another strength would be giving positive feedback to the students. I always encourage them and I want them all to succeed to their fullest potential. I make sure to tell them that are doing a wonderful job, and if I see good behavior I make sure to point it out and acknowledge and give praise to the student. Patience is also a strong point for me. I believe that patience is a very important trait to have when working with children. Another strong point for me would be giving detailed instruction. I do my best to explain everything thoroughly so that way children have no way of getting lost or falling behind. This is another very important trait to have when working with children. The areas I need to improve on would be using my teacher voice and to make sure it is strong and stern so that the students know that I am in charge and so they will have respect for me. Another area that needs improvement is transitioning to different parts of the lesson. I need to make sure everything is filled and that there are no awkward transitions. I noticed a couple of times I had to refer back to my paper because I could not remember what was next. I need to work on this so I won’t have any awkward pauses in the future. I also need to improve on asking more high order thinking questions. I know this will come with time but it is something I really want to focus on and get better at. I really enjoyed doing this lesson with the children and overall I think it went very well and I would definitely do it again. | | | | | | | | |

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Student Teacher Signature/Date Supervisor/Date