Title of Lesson: Caterpillar to Butterfly: The Life Cycle
Theme: Life Science
Unit Number: 6
Unit Name: Animal Planet

Performance Standard(s) Covered (enter code):
S1L1. Students will investigate the characteristics and basic needs of plants and animals.

Enduring Standards (objectives of activity):
- Habits of Mind
  - Asks questions
  - Uses numbers to quantify
  - Works in a group
- Uses tools to measure and view
- Looks at how parts of things are needed
- Describes and compares using physical attributes
- Observes using senses
- Draws and describes observations

Content (key terms and topics covered):
Insects, metamorphosis, life cycle of a butterfly, egg, caterpillar, cocoon, butterfly

Learning Activity (description in steps)
Abstract (limit 100 characters): Click here to enter text.
Details: Click here to enter text.

To begin, click through a previously created power-point that includes pictures of the butterfly life cycle and allow students to ask questions. To conclude, ask students to review the cycle verbally.

Ask the students to divide themselves into pairs. Designate one student to be the caterpillar and one student to be “cocoon creator”. Give each pair a roll of toilet paper and spread them within the classroom. Allow “cocoon creators” to generate cocoons by wrapping toilet paper around the “caterpillars”. Once completed, ask “caterpillars” to emerge from the “cocoons” as butterflies. In conclusion, ask students to draw/describe the day’s experiment.

Materials Needed (type and quantity): Click here to enter text.
1 roll of toilet paper for everyone two students, typically around 10 rolls for a 20 person classroom

Notes and Tips (general changes, alternative methods, cautions): Click here to enter text.
When the students emerge from the cocoons, a large amount of toilet paper is broken and falls onto the ground. One major way to improve the lesson is to complete the lesson in an area that is easy to clean up. We did this activity outside, which could potentially be the easiest place to clean up. However, it was an extremely windy day and pieces of toilet paper were flying everywhere. I recommend being aware of the mess you will make and choosing a location best suited for the weather and your class in general. Also, I would make the students aware that we will be making a mess before beginning the lesson and in order to participate they must commit to cleaning up this mess.

A second way to improve this lesson is to teach the students how to wrap the toilet paper around something without it breaking before beginning the cocoons. At first, the students would rip the toilet paper because they were pulling too hard and they were unable to make a cocoon. But once the students understood to leave slack on the toilet paper and wrap around gently, the cocoons formed very well.

This experiment is fairly safe and the students do not have to use any materials that potentially could be harmful. However, as the students are making the cocoon, they tend to get very excited and run around quickly. This potentially could cause a student to trip, fall and injure him or herself. I recommend warning the students before hand and instructing them not to run at all.

Sources/References: