All about Butterflies and their Life cycle

A fifth grade unit on butterflies
Subject

Rationale
This is a unit on the lifecycle of a butterfly. In this unit students will analyze the stages of the butterfly starting from the egg and ending in adulthood. The unit begins by presenting basic knowledge and vocabulary pertaining to butterflies. Using this knowledge students will be learning concepts in Mathematics, English Language Arts, Social Studies, along with the main focus in Science. During the unit students will learn that all living things have a life span. They will also learn many of the parts of a butterfly. This will help them understand not only the life cycle of a butterfly but also show them that all living things both big and small have complex systems within their bodies. Along with learning about the lifecycle of a butterfly students will also learn about their living habits such as their migration patterns.

This unit covers many of the New York State Learning Standards for each subject addressed. Standards covered in this unit starting with science, address the living environment in various ways. Through use of the scientific method, content taught in class, and various activities the science standards will be met. The science standard states: Students will: understand and apply scientific concepts, principles, and theories pertaining to the physical setting and living environment and recognize the historical development of ideas in science under key idea 4 of the living environment: the continuity of life is sustained through reproduction and development. The performance
indicator for this idea is that students will learn to describe the stages of life cycles of various animals. Students will also be growing butterflies and observing changes in their development.

The ELA standards are met through the students’ work when we address sentence structures and parts such as nouns and adjectives. Haiku poetry will be used to allow for students to express their thoughts of butterflies through writing. They will read aloud their haikus along with stories about butterflies to fulfill the reading component. Through social interaction students will be working on the unit project, which involves growing the butterfly garden.

Math standards are met through the use of problem solving and communication of how they solved the problems. Graphing and probability will be used to keep track of the colors of butterflies from the garden as well as butterflies discussed in class. Measurement of wingspan and computations involving butterfly parts are also covered. The geography standard for butterflies is met when students learn about their migration patterns and where they are found in the world. Technology and art are also addressed in this unit. Students will use web quests and will be asked to create 3-dimensional pictures of butterflies during the unit.

Although students may feel that the study of the butterfly life cycle is not important they will see that it can be identified with the world around them everyday in that every organism has a lifespan. By learning the life cycle of a butterfly the students learn that life takes place in stages. We start out as infants, develop into children, mature into adolescents, and then adults, similar to that of the butterfly’s life cycle. Learning
about the life cycles of animals helps students to better understand that living things develop and change from birth until death.

Learning about the lifecycle of a butterfly also teaches students the theory of evolution. In the case of butterflies the caterpillar evolves into a butterfly after going into its chrysalis. In this aspect the evolution of a butterfly from a caterpillar is similar to that of infants developing into adults after undergoing other stages. In the study of human evolution it is said that we evolved from apes which would show that butterflies evolving connected to our meaningful learning rather than just being another science topic. The significance is being able to see the progression from caterpillars to butterflies whereas we will not see the progression from apes to humans.

Studying the life cycles of butterflies also shows children that all living things big and small are important to the world we live in. Children today deal with many things in the world so the importance of nature and how things live are not always taught in a way to make them see that even studying butterflies can be connected with their daily routines. Butterflies must learn to feed themselves and protect themselves from predators just as children learn from their parents about becoming independent and running from danger.

Studying small animals such as insects like butterflies also shows students to appreciate the small things in life. Too often today students are rushed to learn content for a test and they do not have a chance to learn about the beauty in the world. This is perhaps why as a world we are becoming less and less appreciative of what we have and more in a rush to just do what must be done.
Subject

Matter

Outline
Subject Matter Outline

I. Statement of topic: The Lifecycle of a Butterfly Unit for fifth grade class

II. Definition of important terms
   A. Metamorphosis-
      1. a change of form
      2. a typically marked and more or less abrupt developmental change in the form or structure of an animal (as a butterfly or a frog) occurring subsequent to birth or hatching
      3. a striking alteration in appearance, character, or circumstances
   B. Butterflies
      1. characterized by clubbed antennae, a slender body, and large, broad, often conspicuously marked wings.
      2. Most have four wings that are brightly colored or have “scary” spots they use to camouflage themselves when an enemy is present
      3. Butterflies stop and rest on trees with their wings closed to help camouflage while resting
      4. Butterflies belong to the order Lepidoptera
   C. Lifespan
      - the length of time from an animal’s birth to its death
   D. Life cycle
      - the series of stages in form and functional activity through which an organism passes between successive recurrences of a specified primary stage

III. Classification of Butterflies
   1. There are 28,000 species of butterflies worldwide
   2. They are most closely related to the moth.
   3. Some butterflies are monarchs, sulphurs, or swallowtails

IV. Stages of the butterfly
   A. Egg
      1. The first stage of the butterfly’s life cycle
      2. The eggs are laid on a leaf by the female
      3. A tiny wormlike creature will hatch in about five days
   B. Larva
      1. The larva or caterpillar hatches from the egg.
      2. The caterpillar begins to eat leaves and flowers immediately
      3. The caterpillar or larva will molt or lose its skin as it grows
      4. The caterpillar molts four or five times as the exoskeleton becomes tight.
      5. This stage lasts from two weeks to a month
6. When the larval stage is ending the caterpillar will empty its digestive system and look for a resting place

C. Pupa
1. This is the complete metamorphosis of the larva into the butterfly
2. The caterpillar finds a safe resting place and forms its chrysalis
3. Chrysalis is larva encasement usually made from a silk pad and abdominal hooks
4. Some pupa stages last a few days others last for months through the winter
5. A day before some butterflies such as the monarch emerges the chrysalis becomes transparent or see through

D. Adult
1. When the butterfly emerges its wings are usually wrinkled
2. The butterfly comes out of the chrysalis at full size
3. The butterfly can only eat liquids such as nectar through a straw like proboscis
4. The adult butterfly’s task is to mate and reproduce
5. They find a mate by visual cues such as wing color
6. The female butterfly lays eggs and the cycle begins again

V. Parts of a butterfly
A. Antennae- used for the sense of smell and balance, there are usually two attached to the head of a butterfly, the sensitive feeler
B. Abdomen- stomach
C. Thorax- the part of the body that houses the lungs and a number of structures passing between the neck and the abdomen
D. Proboscis- tube-like flexible tongue butterflies use to sip liquid
E. Palps- scaly mouth parts on the side of the proboscis, they test whether things are food or not
F. Legs and feet- they have six segmented legs, two in the front are short and used for cleaning antennae, each leg has a claw attached to it which also has sensors on it

V. English Language Arts Component
G. Nouns- In a sentence the person, place, thing, or idea is the noun, a butterfly would be the noun in a sentence
H. Adjectives-describing words, what describing words can be used for butterflies?
   1. Creating sentences with adjectives
   2. Creating poems to be read aloud such as the Haiku- a three lined poem, in which the first line contains 5 syllables the second 7 and the third 5,
   3. reading and summarizing stories related to butterflies

VI. Math Component
A. Problem solving involving word problems made by students and instructor
B. Communication of students involving explanation of problems and solutions
C. Graphing
D. Measurement of wing span
E. Probability of colors of butterflies from garden
F. Basic multiplication and division computation based on butterfly activities

VII. Geography Component
A. Migration-to change your habitat. Some butterflies migrate to warmer climates during winter months. Butterflies will fly to Mexico, South California, or Florida for winter months and migrate to the north in the spring
B. Butterflies are found in all parts of the world with the exception of the polar regions
C. The butterflies migrate to find a warmer climate however, not all butterflies migrate
D. In some cases butterflies take three generations to complete a migration
E. Some migrating butterflies are tagged so that scientists can later track where the butterflies have traveled, how fast they went etc
F. There are many butterflies that do not migrate

VIII. Journal/Scientific Method Component (Science, ELA, Art Component)
A. Observations of butterflies will be logged in journal
B. Pictures will be made of butterflies involving 3-dimensional concepts
C. Data in journals recorded as a scientist would when experimenting

IX. Webquest (Technology/Science component)
- butterfly webquest assigned to further research and technology skills
Goals, Objectives, & Standards
Goal #1:

The student will be able to identify the parts of a butterfly.

Objective:

Given a diagram of a butterfly the student will correctly identify the parts discussed in class with no more than one mistake.

New York State Standard (Math Science Technology 4):

Students will understand and apply scientific concepts, principles, and theories pertaining to the physical setting and living environment and recognize the historical development of ideas in science.

Key Idea:

The continuity of life is sustained through reproduction and development.
**Performance Indicator 4.3d:**

Patterns of development vary among animals. In some species the young resemble the adult, while in others they do not. Some insects and amphibians undergo metamorphosis as they mature.

**National Standard:**

The standards for physical science, life science, and earth and space science describe the subject matter of science using three widely accepted divisions of the domain of science. Science subject matter focuses on the science facts, concepts, principles, theories, and models that are important for all students to know, understand, and use.

- Lifecycles of organisms
Goal #2:

The student will be able to describe and illustrate in detail the stages in a butterfly’s life cycle.

Objective:

Using their science journals, students will report and draw each stage of the butterfly life cycle with minor or no errors.

New York State Standard (Math Science Technology 4):

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Performance Indicator: 4.3d

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-Lifecycles of organisms
Goal #3:

The student will be able to use adjectives to describe a butterfly.

Objective:

After a walk outside to observe butterflies and being provided with many photographs of butterflies students will be able to write a story or poem to be read to the class using adjectives correctly to describe how the butterflies behaviors and physical characteristics with no errors in adjective usage.

New York State Standard (English Language Arts):

Students will read, write, listen, and speak for social interaction. Students will use oral and written language for effective social communication with a wide variety of people. As readers and listeners, they will use the social communications of others to enrich their understanding of people and their views.

Key Idea:

Students will write and speak for social communication.

Performance Indicators for Writing:

Use language and grammar appropriate to purpose for speaking. Use facial expressions and gestures that enhance communication.
**Performance for Speaking:**

Use correct grammatical construction in parts of speech such as nouns; adjectives and adverbs (comparative/superlative); pronouns (indefinite/nominative/objective); conjunctions (coordinating/subordinating); prepositions and prepositional phrases; and interjections.

**National Standard 12:**

Students use spoken, written, and visual language to accomplish their own purposes (e.g., for learning, enjoyment, persuasion, and the exchange of information).
Goal #4:

Students will be able to identify patterns in butterfly migration.

**Objective:**

Given access to the internet students will use websites approved by the instructor to find out supplemental information involving butterfly migration and create posters showing different butterflies, whether or not they migrate, and where they fly to if applicable.

New York State Social Studies Standard 3 (Geography):

Students will use a variety of intellectual skills to demonstrate their understanding of the geography of the interdependent world in which we live—local, national, and global—including the distribution of people, places, and environments over the Earth’s surface.

**Key Idea: 2.**

Geography requires the development and application of the skills of asking and answering geographic questions; analyzing theories of geography; and acquiring, organizing, and analyzing geographic information.
**Performance Indicator:**

Gather and organize geographic information from a variety of sources and display in a number of ways.

**National Standard:**

People, Places, and Environment: Social studies programs should include experiences that provide for the study of people, places, and environments.
Goal #5:

Students will understand how to organize butterflies into categories based on colors and kinds.

Objectives:

Given graphing paper students will create graphs showing the colors of butterflies in the garden and kinds studied in class.

New York State Standard (Math Science Technology 3):

Students will understand the concepts of and become proficient with the skills of mathematics; communicate and reason mathematically; become problem solvers by using appropriate tools and strategies; through the integrated study of number sense and operations, algebra, geometry, measurement, and statistics and probability

Key Idea:

Students will communicate their mathematical thinking coherently and clearly to peers, teachers, and others.
Performance Indicator 5.CM.4:

Share organized mathematical ideas through the manipulation of objects, numerical tables, drawings, pictures, charts, graphs, tables, diagrams, models, and symbols in written and verbal form

Key Idea:

Students will communicate their mathematical thinking coherently and clearly to peers, teachers, and others.

Performance Indicator 5.R.1

Use physical objects, drawings, charts, tables, graphs, symbols, equations, and technology as representations

Process Strand:

Communications/Representation

Content Strand:

Probability and Statistics

National Standard:  Representation

Instructional programs from pre-kindergarten through grade 12 should enable all students to create and use representations to organize, record, and communicate mathematical ideas
Starting Activities
**Starting Activity 1**

Imagine you are out in a big field full of colorful flowers. What other things might you see? Hopefully at least one student would say, “Butterflies!” However, students in the fifth grade do not always answer as anticipated. That is why as a teacher I must create activities that will get them interested and involved enough to go home and say to their parents I learned about butterflies today and it was pretty cool!

One activity I would use to introduce this unit and grab the attention of my students would be to have them come into the room and see large papier-mache set up of the butterfly lifecycle in stages on the ceiling. In one ceiling corner would be the egg. I would then set up various plants and trees for when the egg hatches into a caterpillar so the children can see what the caterpillar eats. In another corner of the room would be a large chrysalis, or cocoon hanging from the ceiling and as we go through the life cycle I would lower the papier-mache chrysalis from the ceiling and peel off the outer layer of covering to reveal a clear coating showing that the butterfly is almost ready to hatch when the chrysalis is transparent. In the final stage I would tell the students that out of the chrysalis comes the adult butterfly. I would then ask the children to help me complete our classroom project by creating many butterflies for the remaining corner of the room. They would use many different colors and materials to create butterflies of all colors and sizes. We would hang the butterflies from the ceiling in the last corner of the room. Students will also be able to create their own miniature papier-mache lifecycle for butterflies.
Starting Activity 2

When students walk into the room and see something “new” or “hidden” they are immediately curious. I would have a hidden object on my desk, bigger than any little surprise such as candy etc. During the morning I would allow my students to ask and even guess what is underneath the covered object on my desk, I would encourage their ideas whether they were close or not. In the afternoon I tell the children that we were going outside for a walk and that soon their questions about the “mysterious” item on my desk would be revealed. Students would also bring out notebooks, markers, and pencils for an assignment that would be worked on outside, away from the cocoon of their desks. As we walk around outside I would ask the students about nature. I would speak to them about my favorite things in nature and ask what they like. We would then pick a nice open spot in the school field. I would explain to them the “surprise” under the cover is something they can find in nature during the spring, fall, and summer months especially. I would allow them to guess one more time. Then I would remove the cover from my surprise to reveal butterflies that have hatched from their chrysalis. I would let the students feed the butterflies a little bit of milk weed and then ask what they think we should do now that we are outside with the butterflies. The children would be allowed to release the butterflies from the garden container I have and watch as the butterflies fly off into the freedom of the world. The students would then record what they saw and how it made them feel to watch the butterflies escape into their environment no longer caged in. They would also be allowed to draw pictures if they would like. I would conclude the
introduction by asking students if they would like to create their own butterfly garden while we learn about butterflies for the next few weeks.
Starting Activity 3

On one of my vacations I went to a butterfly conservatory in Niagara Falls, Canada. Students love to see pictures of teachers’ families and vacations. I would create a poster board of all the pictures from my trip to the butterfly conservatory and display it in the room. During science I would allow the children to take turns looking at the pictures from the trip and ask them what they saw. The children would respond that butterflies are in every picture. I would ask what some things are they notice about the butterflies such as color, size, and what the butterflies are doing in the picture. Students would be able to observe butterflies ranging in colors from blue, pink, purple, brown, yellow, orange, and black. They would see some butterfly wings spread out while flying. Other butterflies were captured on film with their wings pressed tightly together as though they were trying to hide from all of the people observing them. Children would see butterflies eating or flying through the air. After the children discussed in class all of what they say I would begin to ask them questions such as why they thought some butterflies were “hiding”. I would also ask them what food the butterflies in the pictures were eating. After getting many details from the entire class I would ask them to write a descriptive paragraph on what they have seen from the butterfly poster board. The students would then write a list of 3-5 questions they would like answered about butterflies. I would then explain to them that we would be able to answer those questions through either in class discussion or using the Internet to research because we are now going to start a butterfly unit. To finish the introduction I would allow the students to
create their own collage of butterflies using magazine pictures and captions to familiarize
the class with some of the most common butterflies today.
**Starting Activity 4**

Sometimes on a Friday afternoon students are exhausted from the week’s work. What better way to finish off a week by starting a new unit in a relaxing way? In order to start a butterfly unit I would begin a simple discussion on butterflies. I would have the students compare and contrast moths and butterflies. I would also have the students complete a KWL chart. A KWL chart shows what the students know, what they want to learn and what they learned. We would then put the paper up on the board while we watch a film titled *Butterfly & Moth*, from Eyewitnesses. I would require the students to take notes in their science notebooks about butterflies and moths to see what we were right about and to see if we could learn everything we wanted to. Students would learn many trivia facts about butterflies such as when they evolved and about certain plants that produce false spots to discourage butterflies from laying eggs on their leaves. I would ask the students to write a paragraph about the video we watched in class. They would be required to use their notes from the KWL charts. The children would then later share their favorite “unique” fact about butterflies learned from the video. I chose this video because it serves as a starting activity using technology. It also provides an in depth view of many butterflies while still entertaining the students. The final part of this starting activity would be to provide each student with tissue paper and a template of a butterfly. They would mix water and glue and use paint brushes to “paint the tissue paper onto the template. We would let the glue mixture dry and then carefully peel away the template. They would then cut out black construction paper a little bigger than the templates to create a butterfly frame. Students would then put their “stained-glass” butterflies in the windows.
**Starting Activity 5**

Students love to go outside be it for play or lessons. Many times teachers bring their classes outside to collect leaves or rocks. In order to start a unit on butterflies I would bring my class out to collect caterpillars. The students would be in groups of 4. The goal would be for every group to find a caterpillar. When every group finds a caterpillar we would put them into shoeboxes with air holes cut out on the top. We would then begin walking through the trees among the school grounds. We would look for a “cocoon” like structure hanging from the trees. I would then ask the students if they were walking alone what they would do if they saw caterpillars on the ground. Some of course would pick the caterpillars up on let them crawl on their fingers. Unfortunately some may say that they like to squeeze the caterpillars or flip them upside down and watch them squirm. I would then ask the children to think about their favorite little cousin or friend. I would ask how it would make them feel to know that some older student in maybe 7th or 8th grade was doing things like teasing their little friends. This provides for the use of intrapersonal intelligence while evaluating behavior of others and themselves. The students would answer that they would not like it if someone teased their smaller friends. I would then explain that these caterpillars are just as important in our world as small animals or humans are. I would then ask the students if throwing rocks at the “cocoons” in the trees is a fun activity. Those who do not realize may say yes it’s just a bump on the tree. We would then sit down and I would show them pictures from New York State Conservationist. They would see the first couple pictures look like the “bumps” hanging on the trees or leaves. Then they would look at the other page and
see as the “cocoon” began to transform into a transparent structure. I would ask them to guess what they think is going to come out if anything. The last picture I would show them is the one of a Monarch butterfly emerging from the cocoon. Students would then realize that things of nature must be treated with respect. Even if they see what they think looks like a bump on a log they soon will realize that not all things in nature are simply parts of a tree. This starting activity is appropriate because it allows the students to use several intelligences such as naturalistic and intrapersonal. Along with these intelligences students are prompted to use higher level thinking in evaluating the importance of a caterpillar or butterfly in comparison to a human.
Possible Activities
Possible Activities

Possible Activity 1

Materials: Wikipedia butterfly articles (copies) 1 for each student.  
(http://en.wikipedia.org/wiki/Butterflies)  
Books and magazines provided by the library  
Age-appropriate world maps showing continents, countries, states, provinces  
Etc. clearly.  
Blank world maps  
Colored pencils  
Graphing paper  
Pencils  
Playground map  
Sidewalk chalk  
Overhead projector  
Blank and world maps in large print

Mapping Butterfly Migration

In this lesson students will learn about the migration habits of many butterflies through cooperative work and the use of multiple intelligences. Students will be presented with a copy of Wikipedia’s butterfly information. Many pictures and species of butterflies are presented on this article. Students will be asked to break up into groups of three. These groups will then choose three butterflies to research. The instructor will be available to help students with this activity but the goal is for the students to work independently with in their groups. Students will be allowed to split up responsibilities so that either each one researches one butterfly. The class would be allowed time in the library which is equipped with several computers with Internet access, books, and magazines. Students would be allowed to spend 15 minutes each using the Internet to find information on the butterflies they are researching. While students were waiting for a computer, the teacher would help the students find various other resources with
information needed for the project. After spending 45 minutes researching students would return to the classroom with their instructor. Groups would begin working on how they want to present their information to the class.

The next part of this activity involves students using a world map to fill in a blank world map based on their migration information. Each student would be required to complete his or her own map based on information gathered. Students will be able to make their own map key color-coding system. Allowing students to make some choices in their activities gives them a sense of control over what they learn, even though the teacher is guiding them along the way. When all maps are completed, the instructor would set up the overhead projector with an enlarged world map for the class to refer to as we discuss migration patterns. Each group of students will be called up to present their information. We would then record information on the “class map” using overhead markers. Colors and patterns would be used to represent each butterfly migration. When all information is presented, the teacher will provide students with graph paper. Each group will set up a bar graph showing what they have learned through studying map migration.

In order to involve some tactile learning and a little bit of the bodily kinesthetic intelligence the students will also plot the migration patterns in another way. I will give each group a corkboard with a world map glued to it. The students will be provided with tacks after being instructed that they are to only use the tacks on the corkboards. Children in the fifth grade are mature enough to understand the safety rules in a classroom when using sharp objects. Students will put the tacks in each place where their
butterflies migrated. Students will then use yarn to show migration paths. The yarn will be color coded so the class and instructor will easily detect each path.

The closing discussion of this activity would involve connecting the migration patterns of butterflies to the world and why migration is necessary. This discussion helps students see the big picture or expand their knowledge involving butterfly migration. We would begin by reviewing some of the most common butterflies and their migration patterns. We would look for similarities in where butterflies migrate to and what time of the year this takes place. The instructor (me or a substitute) will then ask the students why certain animals need to migrate such as birds. We would then discuss that birds fly south for the winter because of the cold temperatures and harsh weather. We would then discuss that even some people move to the south in order to avoid the winter. Taking the knowledge gained from this discussion I would ask students to apply the information to butterfly migration. They would then answer the question: why do butterflies need to migrate? Do all butterflies migrate? Students would see that most butterflies need an environment that allows for flowers to grow in order to feed. They will see that butterflies need to migrate in order to survive as people do. I would then ask the students what they thought about butterfly migration. Do they feel it is important if it means keeping butterflies alive?

After a morning of structured learning students need to be able to move around. Some students learn best through moving their whole body. This is known as a kinesthetic learning style. To further educate the class we would go out to the playground where the students could learn through play on the world map. Students will be able to run, skip, hop, and do other various large motor skills to practice butterfly
migration patterns. They would also be provided with chalk to try and fill in some of the 
migrating patterns as they worked their way around the world. The closure of this 
outdoor lesson would be to have the students attempt different ways of acting out 
butterfly migration. This allows for the use of bodily kinesthetic intelligence, which, is 
not always provided for, in daily lessons.

Explanation for Applicability For All Pupils

In this fifth grade class I have a child with a visual impairment. My student has 
problems with close vision. As a result I plan to use the overhead projector to allow the 
student to see the map enlarged on the board. The student will also sit close to the board 
in order to see as best as possible. During the researching part of the project the student 
will be able to use a magnifying device while researching on the Internet. One of the 
computers is set up to allow for enlarged images on the monitor. The student will also be 
provided with a large print copy of the world and blank maps. While reading the 
Wikipedia article the student will work in a group and be provided with a magnifying 
glass if he would like to use it.

Technology

In this activity I have used a variety of technological devices. The overhead 
projector allowed for a student with vision problems to see the map as we discussed 
migration in class. The students will be allowed to use computers, books, and magazines 
to find information needed to learn in detail about butterfly migration. Students were 
provided with maps and allowed to use these maps to create their own maps unique to 
them. Technology is provided in many ways throughout the lesson.
Possible Activity 2
Materials: Disney’s Peter and the Wolf VHS
VCR
Various instrumental CDs
CD player
Video clips of various animals such as butterflies in their natural habitat
Pencils
Notebooks
Chart Paper
Corkboard
Tacks (to be used with supervision)

The Sounds of Butterflies

Often times in teaching we focus on the verbal-linguistic intelligence. Class is usually a series of the teacher showing you information on the board or telling you information while you write it down. Students need to be presented with many ways of learning in order to reach their maximum potential. Through a lesson using music, teachers are able to reach the student who isn’t a great essayist but feels music and learns through its rhythm and sound. I would begin this lesson by discussing the classic story of Peter and the Wolf, with the students. We would talk about how the different instruments each represented an animal in the film. They learn that the flute represents the bird and the oboe represents the duck. A clarinet symbols the cat, a bassoon is the grandfather. The wolf is symbolized by three horns while a bass drum and timpani represent hunters. The string instruments represent Peter the young boy in the story. Peter learned that the wolf ate the duck. The sound of the horns is a shrill sound. We would discuss how each instrument represents its character. The students would be allowed to watch the film
before moving onto the next part of the activity. ELA is covered in this part of the activity because we discuss a fairy tale and learn about it in depth.

The lesson I have planned involving butterflies and music allows for students to use musical rhythmic intelligence while using other intelligences as well. After watching Peter and the Wolf, students would be asked to gather in the room near the CD player. They would then begin listening to different musical instrumental selections. Each piece would feature a different instrument so the children would get a variety of different sounds and moods of music. Students would sit quietly in a dimly lit corner or near the windowsill, depending on their preferred learning style while they listened to selections of violin, drum, saxophone, flute, piano, oboe, clarinet, trombone, trumpet, and other various instruments. If any students play musical instruments they will be invited to play for the class. Children would use their notebooks to decide whether or not the mood of the music was light and spirited or dark and eerie. We would then watch clips of animals in their natural habitats. We would begin with dolphins, bats, lions, rabbits, and other animals. The animal we would pay the most attention to is the butterfly. Students would be asked to write a paragraph about which instrument they feel best represents the butterfly and why. This provides for not only the use of intra-personal intelligence but also allows for higher-level thinking.

Students would then be grouped to practice math skills based on data they have gathered about butterflies and instruments. Students would first discuss which instrument they believed best represented the butterfly. Some may say the flute because of its high-pitched “happy” tone. Another student may answer that a tambourine would be an appropriate instrument because of the way butterflies are constantly in motion and are
very full of energy. This allows for the students to use inter-personal intelligence. Students would each receive a piece of chart paper. They would be required to compare how many in each group chose one instrument to represent butterflies using the concept of greater than, less than, or equal to. To further incorporate math children would be asked to create 2 word problems each being about butterflies. The students would have the option of using one or two operations per problem but may not use the same operation in both problems. An example problem a student may make would be: 23 types of butterflies migrate from the United States to Mexico for the winter months. 17 types stay in their homes. How many more butterflies migrate?

To close this activity each group would receive a piece of chart paper. The instructor will ask the students to create a poster showing butterflies and the instrument they believe best represents them. Students also have the option of writing a few words or sentences somewhere on the paper to explain their illustrations. This allows for the use of visual-spatial, inter-personal, and verbal-linguistic intelligences.

**Explanation for Applicability For All Pupils**

In this class I have a student who has poor attention. To help this student I will interact with her every 5 minutes. I will make sure directions are short and clear. When activities begin I will visit the student and review the main points of the lesson activities and limit distractions as much as possible.
Technology

In this activity the technology is simple but present. The students watch a video in the VCR. We also use a CD player for to hear musical instruments. Students would also be able to play their instruments if applicable. The use of these technological sources allows for the students to learn using various multiple intelligences while incorporating Science, ELA, and Math.
Possible Activity 3

Materials: Butterfly Garden

Butterflies in the Garden
Pop-up butterfly observation habitat
Dropper (for feeding)
Fresh carnations
Fresh mums
Sugar
Water
Freshly cut orange slices
Notebooks
Pencils
Overhead projector
Food Pyramid Poster

Raising and Caring Butterflies

A butterfly unit is only complete when children get hands-on experience raising butterflies themselves. This activity will be one that is completed during the beginning of the unit and then students will observe their caterpillars and tend to them as they go through metamorphosis and become butterflies. While completing this activity we will be comparing the nutritional needs of caterpillars, butterflies, and humans. We will also discuss and write about the care that all animals and humans need to survive.

To begin the activity the teacher has ordered a live butterfly garden. The class will be raising Painted Lady butterflies. I will first read the story Butterflies in the Garden, by Carol Lerner to the class. We then begin to set up the caterpillar container.
It must be positioned in the classroom so that it is upright and out of direct sunlight. Students will be allowed to help decide where the butterflies should be kept. They will need to discuss the location in a cooperative and respectful manner. The teacher will show the students three ideal locations. Students will also need to consider if there are any places in the room the butterflies may not be safe even if they are out of sunlight and upright. They need to consider that other classes or people may be in the classroom once the day is over. The safety of the caterpillars must be considered in order for them to survive and change. Once the location is chosen students will need to help the teacher observe the home. Any direct sunlight that does reach the caterpillar habitat can cause condensation in the container. The water can cause the caterpillars to become sick and even die. The teacher would leave the guide about the live butterfly garden for a substitute if for some reason she is out for the day. The caterpillars feed on a nutrient within the habitat. That is all they need to survive. Children will be asked to write in the science journals each time they work with the caterpillar/butterfly habitat. For their first entry they will each write about how they felt when the caterpillars arrived and what they saw in the home. Students may be concerned when they see no movement from the larvae caterpillars however, as long as there is a bit of silky webbing there is no concern. Students will observe the butterfly habitat for 15 minutes each day. They will record in their science journals any changes they see within the habitat and caterpillar size.

To continue the lesson students and the instructor will discuss the importance of proper nutrition. Many times when children get animals such as fish, they want to feed them many times throughout the day. With most fish such as beta fish, overfeeding can result in death of the fish. The caterpillars do not need to be fed. They have the nutrients
they need. Therefore if students were to decide to drop in leaves the caterpillars would be harmed. Students will understand that caterpillars in nature need to feed themselves leaves but because we have altered their environment by bringing them into the classroom to raise they have different needs. The students and teacher will then discuss the importance of nutrition within humans. We will look at a poster of the food pyramid. This poster shows that breads, cereals, and rice are among the most important foods to humans today. The other very important groups are fruits and vegetables. We will then discuss the ideas of certain foods containing different types of carbohydrates, fats, and proteins. Foods like bread or rice have complex carbohydrates whereas other foods such as candy have only simple sugars. The fats, oils, and sweets are the group we should have the least of. We would talk about dogs and cats to compare that while we like to eat chocolate, if dogs and cats accidentally eat chocolate they get worms and become ill. I will then prod the students to compare that although we only need a small amount of sugars, butterflies get all of their nutrition from sugar or pollen. Students will then begin to understand the idea that all living things need different types of food to survive. To complete this part of the lesson students will be asked to draw and label the food pyramid in their science journals. They will then write two-paragraph summary about the nutritional needs of various animals such as butterflies and compare them to human needs.

The next part of this 2-day lesson would involve preparing the students for how to care for the butterflies when they have gone through metamorphosis. The first thing the instructor would provide each child with is a copy of the live butterfly garden instructions and use the overhead to show an enlarged copy while they discuss it. Students will take
turns reading aloud the different steps that will take place, as their caterpillars get ready for metamorphosis. The students will see that in the normal room temperature of 72° Fahrenheit, within 7-10 days the caterpillars will begin to change into their chrysalides. The caterpillars will climb to the top of the cup to hang down “head first”. Students will be allowed extra observation time in order to see and record the events as they happen. We will then discuss that as the caterpillars venture to the top they must not be disturbed, just as a baby cannot be disturbed when he or she is resting. This is the caterpillars’ rest period. Even though the caterpillars appear to be doing nothing they are going through metamorphosis. The body parts are transforming. The teacher will then explain to them how to transfer the chrysalides into the butterfly garden habitat.

In order to transfer the caterpillars from their habitat to the butterfly garden, they attach themselves to the paper disk in the container. We will attach the disk carefully to the habitat and then remove the paper. If any chrysalides were to become detached we would carefully put them on a napkin, they should still grow to be healthy butterflies. They chrysalides will be placed just a few inches above the floor of the garden. We will carefully put fresh carnations and mums at the bottom of the butterfly garden when they hatch from the chrysalis. In order to keep butterflies safe, students again should keep them away from direct sunlight. Students will be allowed to choose a spot to hang the butterfly garden so that it is not bumped into or disturbed.

To finish this lesson on nutrition and caring for animals and humans we will discuss the various steps we took to provide the butterflies with the best care possible. The instructor would then prompt the students to take out their ELA journals. They would write a short story about how their parents or guardians care for them. At the end
of 30 minutes students would be asked to read their story to the class. Being that this assignment involves ELA, students would then be asked to make revisions to their work and complete a final draft. The teacher would then ask students to discuss in depth the care they believe is involved with caring for a newborn baby. Students would be encouraged to think of the pleasant activities such as playing with the new baby or feeding him/her. Then students would be reminded of the not so pleasant activities such as picking up the vomit or changing the diapers. I would then ask the students what would be the consequence of not caring for the baby the proper way. We would talk about the butterflies and how accidental bumping motions cannot disturb them. The instructor will explain to the students that they also need to be careful when handling an infant. The infant’s head is extremely sensitive and therefore shaking the baby is not safe. The class then discusses how to care properly for animals such as dogs, cats and other household pets. To end the discussion we would review the main points of caring for the butterflies once they have hatched. We are only to feed them the sugar and water mixture by dropping it onto the fresh carnations and mums that will be dropped into the garden. The students will be able to track the butterfly progress throughout the duration of their development. Students will finish this part of the activity by writing a poem about butterflies and including how to care for them.

The end of the lesson takes place when the instructor reads the book *Becoming Butterflies*, by Anne Rockwell. The students will listen and then be asked to pick a quiet spot in the room and use their English journals to create a picture of what they did to begin the butterfly journal on one page. The end of this assignment would be for them to
create their own story of what will happen when the butterflies develop and where they think the butterflies will go when they are set free.

**Explanation for Applicability For All Pupils**

In my class I have a student with Attention Deficit Hyperactive Disorder (ADHD). In order to make sure the student is able to complete the assignments to the best of his ability I will provide the student with as much structure as he needs. If it is part of the activity that appears to be unstructured such as observation or setting up the habitat, I will give the student specific tasks to do to help me. The student will be provided with ample times to move around. I will interact with the student frequently and use his name during the lessons when appropriate.

**Technology**

The use of technology in this lesson is involved even if it does not include the basics such as computers. The students are using technology when setting up the butterfly and caterpillar homes. They are using droppers when they feed the butterflies once they have developed (after the basic activity is complete and the butterflies have developed). The students are also provided with technology when we use the overhead to provide an enlarged copy of butterfly garden instructions. Students also observe the poster of the food pyramid and are read to twice within the activity.
Possible Activity 4

Materials: Computers
Internet:
Notebooks
Hyperstudio Program
Cardboard
Rulers
Scissors
Glue
Construction paper
Butterflies

Fight or flight of the Butterfly

Caterpillars and butterflies, like all animals and humans sometimes need to defend themselves against predators. In this lesson students will discuss various ways a butterfly can protect itself from harm. We will also learn about different kinds of animals that defend themselves and how. We will also discuss the concept of “fight or flight” among humans and how our bodies chemically and physically react to an attacker of any sort. To compare different types of butterflies as to whether or not their wings are strong enough to carry them away quickly, we will use measurement in order to determine if we as a group think they should be able to escape in time. They will be asked to measure using both the metric and standard systems to compare the two and see which measurements are bigger. We will then research to discover which butterflies use what kind of defense mechanism and why. Students will begin by discussing what types of dangers they feel butterflies may come across. The teacher will remind them that other animals may try to eat them. Butterflies are also in danger when people try to touch their
wings or cause them harm. We will then talk about different things that put us into danger. I will put students into groups and ask each group to come up with 1-2 different situations where students need to either fight or run. Some suggestions I expect would be if a dog were to try and bite the student do they think they should run or try and fight off the dog. Another scenario may be if a person attempts to hit them should they fight or should they run. Every situation has its own necessary response. If the student is at school where other people are there that can help he or she should probably try to get away. However, if you are by yourself with no way to defend yourself other than to fight back you must do what is necessary. Students may also suggest what to do if there was a snake nearby them. They may need to simply hold still rather than attack the snake or go running.

We would then go on the Internet in the computer lab in pairs. Students would be provided with a website that discusses different ways that caterpillars and butterflies protect themselves from harm. I would give the students 30 minutes to research proper butterfly defense mechanisms. Each pair would then be assigned to research a Hyperstudio on caterpillar and butterfly defense mechanisms. I would allow the students to choose 2 butterflies to present in the Hyperstudio program. Hyperstudio is a program that is similar to Microsoft PowerPoint. Students would be given one training period on how to use Hyperstudio. They would be allowed to practice making a Hyperstudio before being expected to work with the program on their own. In the case of a substitute, I would leave a step-by-step guide of how to create a Hyperstudio: Students would need to open the program. They would have to use the Internet to research and find pictures. The students would then use copy and paste Hyperstudio to put in any pictures they
wanted. They would be expected to put the research into their own words. Students would be allowed two 45-minute periods to complete their HyperStudio projects after getting a tutorial from the instructor. The teacher will be available for assistance as needed.

After the students have completed their Hyperstudio projects, we will discuss the different ways caterpillars and butterflies can defend themselves. The ways that caterpillars can defend themselves are through spiky hairs on their outer skin. They may also have a poison in their bodies to stop predators from eating them. Caterpillars are also able to blend into their environment by camouflage. They appear to look like they are leaf they are laying on. Butterflies use many types of defense. The most obvious is that they are able to fly away quickly in a very frantic way so they are able to lose their predators. For others their coloring lets predators know that they are poisonous. The poisonous butterflies happen to fly slower than the nonpoisonous type. Some butterflies are able to fly faster because of their wingspan and how their wings flap. The fastest butterflies are the Skippers, which can fly 30 mph. Skippers are among the smallest butterfly group. Children will see through measurement that Skippers are among the smallest butterflies. This means their best defense is the poison within their system. Some butterflies such as the South American Owl butterfly have an eye-shape pattern on their wings. These eye-like markings startle some predators such as birds. The butterfly is able to use the disturbance long enough to escape. Other butterflies are able to camouflage themselves into an environment so as not to be found by predators when they are on leaves or butterflies. One more mechanism used by butterflies is mimicry. A butterfly may mimic another flying insect that is indeed poisonous. That butterfly is safe
because a predator does not want to eat poisonous food. Batesian mimicry is when a non-poisonous species looks similar to a poisonous species. The non-poisonous mimic is protected because it looks like the insect or animal that causes harm to the predator. The students would also learn that Müllerian mimicry is when there are two similar looking poisonous species. Through eating one or two predators soon learn these species and their mimics are not healthy foods. An example of a Müllerian mimicry is the Monarch butterfly. The Monarch butterfly’s mimic is the Viceroy.

To further the understanding of butterfly camouflaging I would allow the students to create a camouflage scene. The students would cut out a butterfly template from cardboard. He or she would color the butterfly with a bright pattern including spots. The students would then cut out oval shaped leaves and decorate the leaves in the same patterns they used for the butterfly. Students would then stick the colorful leaves on cardboard using glue. Students will see that the butterflies are harder to find once the leaves are glued down and the patterns all blend together. This provides tactual learning and visual spatial activities throughout the verbal-linguistic part of the discussion.

In order to integrate ELA into this science and mathematics lesson the teacher will read the book Butterflies, by Emily Neye to the fifth graders. Even though by this age students are able to read children love to be able to relax and listen as the teacher does the work. When the story is finished students will be asked to put the story in sequential order when parts are written out of order on the board. To close this activity students will then be asked to complete either a Haiku poem about butterflies in their natural environment or to write a silly story about butterflies defending themselves. By giving students choices they feel they have control over what they are learning.
**Explanation for Applicability For All Pupils**

In my class I have a student who is non-compliant. I will make sure to praise the student when I find her doing even the smallest part of the assignments without a problem. I will be aware of the materials I present and assist the student to make sure she is able to work to that level. The student will be directed in “do” form rather than do not.

**Technology**

This activity provides the student with technology in the form of using the computer in various ways. I allow the students to use the computers to find information on the Internet. They are also using technology when the create their HyperStudio butterfly projects. They are using technology when they measure the pictures of butterflies in actual size to get wingspan.
Possible Activity 5

Materials:  How Butterflies Got Their Colors  
Butterfly Poems and songs  
Notebooks  
Pencils  
Lemons  
Scented Soaps  
Flowers  
Various art materials

Literature and Butterflies  
This activity will integrate stories and poems about butterflies to allow children to see different ways butterflies are viewed in writing. This unit also touches upon Social Studies because one story is from the Papago Indians. Students will first be given some background information on the Papagos. These Indians lived in the desert regions of Arizona. They relied on farming but not irrigation. The Papagos followed the seasonal rain patterns to grow corn, beans, and cotton. Today the Papagos live in Arizona and also raise cattle to survive. The teacher will hand out the story How Butterflies Got Their Colors to the class. Each will be asked to read the story quietly to themselves. The teacher will allow the students 15 minutes to read the story, as it is very short. The teacher then will allow the students to take turns acting out the story. This story tells about a man who was watching children play. He knew winter was coming soon so he gathered leaves, flowers, sunlight, pine needles, and birds song into a bag. He called to the children and told them to keep the bag. He wanted to keep the prettiness of fall. The children opened the bag and butterflies of every color flew out. The butterflies were able
to sing. Birds then flew over and wanted their songs back. The man who took the songs
gave them back to the birds. So now butterflies dance and fly but they do it quietly.

Students will be broken into parts, some will be the children, some the butterflies, some
the birds, and one will be the man. Students will act out the play. The teacher will
videotape the play so students may watch themselves later in the day.

Students will then read several butterfly poems and songs as provided at the back
of this lesson. The students will be asked to create a Venn-Diagram to compare and
contrast two of these poems or songs. Students will be expected to find at least two
similarities and differences in each of the poems or songs they choose. When the
students complete this part of the activity they will be asked to write a paragraph and tell
which poem or song they liked better and why. After this has been completed students
will read their favorite poem or song to the class. If a student’s poem has been read when
it is his or her turn, he or she will be allowed to read the paragraph he or she wrote.

The Best Book of Bugs by Claire Llewellyn, talks about butterflies flashing their
brightly colored wings. The instructor explains to the students that butterflies find mates
by either visual cues or the sense of smell to detect a suitable partner. After reading this
book to the class in order to bring some bodily-kinesthetic intelligence into this activity
students will play the Butterfly Dating Game. Students will be broken into small groups.
The students will collect strong smelling items such as lemons, flowers, soap etc. Every
child will get one item except one who will go into the middle of the circle. This child
will be blindfolded. He will receive one item that matches one of the items the children
in the circle is holding. This child must sniff out the child holding the matching item.
To close this activity students will be asked to create a story about butterflies using pictures. They will be provided with glue, glitter, tissue paper, markers, paint, and other art materials to create the project. They will then be paired up with another member of the class. The partners will exchange pictures and write a story about each other’s butterflies.

**Explanation for Applicability For All Pupils**

In this class I have a student who is hard of hearing. I will allow the student to sit close to me when I am giving instructions to the class. I will also allow the student to wear a headset that is connected to my microphone and the student will be paired with a child who will be provided with the equipment so the children may communicate without major problems.

**Technology**

This activity is provides for the use of technology through reading books and stories. It also allows for students to use various every day items such as strong smelling soaps or foods to play the dating game. This lesson involves the use of a microphone and headset for the student who is hard of hearing.
Culminating Project
**Culminating Project:**

To complete the unit on butterflies and show that students have learned many new things we are going to form a Butterfly Conservation Agency. Within this agency there will be several tasks that allow each student to participate in at least one way. This allows the students to work with their new knowledge within their strongest intelligences.

One group of 6 students will be in charge of doing the research needed to form an agency. They will do business research and also look for ways to raise funds to help promote butterfly conservation awareness and to send money to butterfly conservations worldwide. These students will be in charge of gathering information, thoroughly analyzing it, and organizing it into sections based on the needs of the brochure creating crew. Students in the research crew will be evaluating what information they think is the most important for the audience to learn. Evaluating of sources allows for the students to engage in higher level cognitive thought processes. This form of learning allows for those with a high verbal-linguistic intelligence to use their strengths and help their fellow more creative students. When students complete the research they will provide the research crew with the needed information and a detailed list or sources to be credited in the brochure.

This research group will also use their research to create a bar graph to provide visual statistics during the Agency’s presentations. The group will research several kinds of butterflies and determine which groups of butterflies are endangered. They will show data on the bar graph labeling the horizontal line types of butterflies and the vertical the
number of the species of butterfly left approximately rounded to the nearest thousand or hundred when accurate. This allows for the verbal-linguistic and the logical-mathematical students to work together and create a new product using synthesis. This leads to the research group using higher level learning. 

One group of 6 will be in charge of creativity for the butterfly conservation. They will begin by creating a tri-fold brochure filled with information about butterflies and ways they can be conserved. This group will have total creative control over the brochure. They will choose all images, formatting, fonts etc. The teacher requires that the creative group consults with the research group at least twice before they begin the rough copy of the brochure. Editing of text and information will be done by the creative crew and then by the research crew to assure that all information is both accurate and up to date. The creative crew will be using Microsoft Publisher to create their tri-fold brochures.

The creative crew will also be in charge of creating educational posters about butterfly conservation. The students will also include drawings and paintings of butterflies. They will work directly with the research crew to create three 42 inches by 42 inches posters. These posters will be displayed in parts of the school and also at the Butterfly Conservation Agency Booth that will be positioned at the main entrance of the school throughout the after school Parent-Teacher Organization meetings.

There will be 6 children grouped together to work on narrative presentations about butterfly conservation. In order to incorporate the use of intrapersonal intelligence during this culminating project, each student will introduce him or herself and explain why he or she thinks butterfly conservation is important. The students will explain
different ways to save the butterflies and why it is important to spread butterfly conservation awareness. As part of the presentations, students will be playing musical selections in the background. To close their narrative presentations they will explain the purpose of the music. The music is to demonstrate the peaceful sounds people associate with natural things such as butterflies. This allows for those with musical-rhythmic talents to show their talents. Students will be demonstrating the narrative presentations at Parent-Teacher Organization meetings and during lunch periods one afternoon.

The remaining 6 students in the class will be part of the drama aspect of the Butterfly Conservation Agency. They will perform a skit to help promote butterfly conservation awareness. The first skit will involve 2 students acting like mean children on a playground, 2 others will play butterflies, and the remaining will be the wise student. The two mean students will be teasing the butterflies by trying to pull at their wings. The butterflies will frantically try to get away from the two mean students. The wise student will arrive and quickly stop the two mean students by asking why hurting butterflies is a fun thing. The mean students will not have any good answers. The wise student will show the mean students a few pictures of butterflies and explain how butterflies are important to the environment because they help with some pollination. The mean students will see the error in their ways. The close of the skit will show all three students sitting peacefully and watching as the butterflies “flutter” through the yard, after many butterflies have joined them from all over the world (extra butterflies played by other members of the class). The final scene will show all of the butterflies stopping to sip from flowers in the garden.
The drama crew will be assisted by the other groups to create the backdrop, props, and costumes for the skit. The backdrop will consist of a garden using construction paper, paint, paint brushes, cardboard, markers, and poster-boards. They will be allowed to create their own garden. The garden must be easy to attach to the school stage and easy to move for when students perform for the PTO. Students will also work to make the flowers necessary for the garden. The flowers will need to be large enough so that the butterflies can “sip” from them. Students will be allowed to use many different art materials and other common products such as cups, doilies, pipe cleaners, etc. The most important part of the play, the costumes will be created by the students as well. They will be using enlarged templates of butterfly wings. They will paint the wings in a design resembling one of the many different species of butterflies. They will then be allowed put some glitter on the wings to show that the wings of butterflies shimmer. They will have antennae attached to their heads. On the front of each student will be a large index card with the name of the butterfly he or she is playing. One of the students will not participate in the final scene of the skit because he or she will be videotaping. The videotape will be circulated throughout the school on Butterfly Awareness Day when students set up their Conservation Agency in the lunchroom. Teachers will be asked ahead of time to allow their students to watch the 20 minute tape of the skit and a pre-filmed narrative report on butterfly conservation.

In order to complete the project in a fun and creative way the students will spend an afternoon in the lunchroom creating buttons for Butterfly Conservation. They will work together as a class to create enough buttons to hand out to students in the school at the end of the day. By sharing information on butterfly conservation with the school
students are also reaching out to the community through word of mouth and through display as children leave the school wearing the various “Save the butterflies” buttons.

This culminating project on butterflies allows students to continue their learning experience and demonstrate what they have learned to various audiences. The activities within this project allow for the use of all of Gardner’s Multiple Intelligences. Naturalistic intelligence is used throughout the project because butterflies are a part of nature. Inter-personal intelligence is also used throughout the culminating project because all work is done in groups with students learning and working together. Visual-spatial intelligence is demonstrated when the students create posters with their original artwork and brochures with images. Logical-mathematical learners use graphing to show the audience how many species of butterflies are now endangered. Intra-personal intelligence is brought into the project when students introduce themselves and explain why butterfly conservation is important to them as individuals. Bodily-kinesthetic intelligence is used when the children perform the skit. At the end of the skit they all act out the fluttering and flying of butterflies. Musical-rhythmic intelligence is found in the project when the students explain about butterfly conservation and show their audience different musical selections that make them think of butterflies. Verbal-linguistic intelligence is used during the creating of the brochures, presenting of materials through speech, and through the organization of data to be used in the brochures. The activities within this project demand that students use higher level thinking to achieve their varied goals.
Evaluations:

1. Formal Assessments
2. Performance Assessments
3. Portfolio
**Formal Assessments**

Name________________________________   Date______________

**Butterfly Parts Vocabulary Test**

**Matching:** Each description in column A matches with a term in column B. Read each description and match it to the term that it best defines. Write the letter of the correct term next to the matching definition. One word will not be used. No words will be used twice.

<table>
<thead>
<tr>
<th>Column A- Definitions</th>
<th>Column B-Terms</th>
</tr>
</thead>
<tbody>
<tr>
<td>___ 1. tongue-like structure used for sipping.</td>
<td>A. abdomen</td>
</tr>
<tr>
<td></td>
<td>B. antennae</td>
</tr>
</tbody>
</table>
___ 2. stomach area on the butterfly body
___ 3. sensitive feelers on head.
___ 4. scaly mouth part that tests food.
___ 5. part of body between the neck and abdomen.
___ 6. structures used for flying.
___ 7. the outside part of the butterfly’s body

C. exoskeleton
D. eyespot
E. palps
F. proboscis
G. thorax
H. wings

BUTTERFLY LIFE CYCLE FILL-IN THE BLANK

Read each statement. Write the missing word on the line to complete the statement. Missing words are only used once. No words will be repeated.

1. A complete change in form is known as __________________________.
2. An adult butterfly lays many _____________ on a leaf.
3. The stage in which the caterpillar goes into its rest period is known as the ____________ stage.
4. The larva encasement a caterpillar rests in is the ________________.
5. The last stage of the lifecycle is when the adult _______________ emerges.

6. The caterpillar stage is also known as the _______________ stage.

7. When the caterpillar outgrows its skin the process is known as _____________.

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Butterfly Migration True or False

Read each statement. After reading each statement decide whether the statement is true or false. Write true or false next to each statement on the line provided. You must write the ENTIRE word out.

1. Many butterflies migrate during winter months. _________________

2. Small butterflies fly faster than others. _________________
3. To migrate means to change your habitat. 

4. Butterflies are found in the polar regions of the world. 

5. Butterfly migrations can last 3 generations before they are finished. 

6. Scientists are not able to track the migration of butterflies. 

7. Butterflies migrate to areas that are cold.