

Our Honeybee Unit

Elementary Social Studies Method – Project Plan Kindergarten Unit Overview

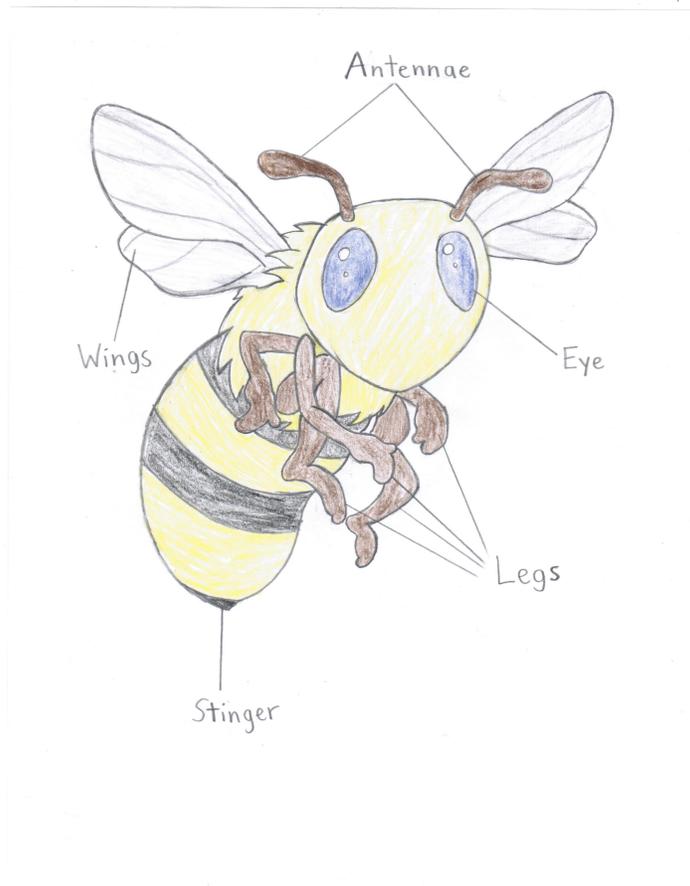


Table of Contents

Class Description.....	3
Overview.....	4
Lesson Plans.....	5
Lesson Plan 1: Introduction to Honeybees.....	5-6
Lesson Plan 2: Honeybees Lifecycle.....	7
Lesson Plan 3: Busy Bees.....	8
Assessment Rubric.....	9
Resource Critique.....	10
Craft Example.....	11-13

Class description

We had the pleasure of being assigned to a friendly and amusing group of kindergartners who were very diverse in their background and in their learning abilities. Our kindergarten class consisted of 22 students: 6 ELL students → Chinese, Korean, Spanish, and Philippines. We noticed during our Bee Lifecycle lesson plan that the students in our class worked hard to express their thoughts and ideas in English. Although the students are not able to read and write fully yet, most of them are able to recognize letters and make inferences on what the word may be. There is one student who was able to read quickly, so we adapted our lesson by allowing a student to be our helper. This prevented the student from reading quickly ahead of the other students. We greatly enjoyed teaching this group because not only were they an energetic group, but also they were also very eager and determined to learn.

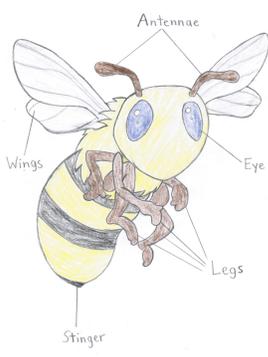
Overview

Our first visit in our school advisors (SA) class was very welcoming. We were inspired by our SA's classroom because it provided students with rich learning opportunities, such as animal bones, surrounded the students, fur, part of a wasps nest. We had a great conversation with our SA about how she collected these pieces that made the classroom greatly diverse. Our SA shared with us that growing up she was always on the move with her family and was used to collecting corpses of animals, while waiting for them to degrade, and cleaned them thoroughly. We had a great interest in the real life learning applications because one of us did an undergrad in Archaeology, so being exposed to bones once again felt like a treat. After speaking with our SA, we decided to do our unit project plan on Honeybees.

The first lesson that we delivered was a lesson on what the students knew about Bees. Our hook for our lesson was showing the students a part of a wasp's nest to promote scaffolding, which will help students, activate their prior knowledge. When he held up the wasp's nest, all the students' attention was directed towards us. Not only was this a great way to get the students engaged and active by learning how to make inferences and observations about the wasp's nest, but the students also learned the importance of a bee's role in their community. Throughout our lesson plan, enactivism was present. For instance, students were shown a part of an interior wasp nest, which helped them gain an understanding of where bees live and deposit their honey. Also students acted out the poem by participating and following us in kinesthetic movements. Our first lesson plan was a success and we were looking forward to the next time we get to work with the Kindergarten students.

The second and third lessons were both executed on March 11, 2016. In our previous class we introduced students to bees. Two weeks had gone by since we taught the students, so we decided that we should do a quick review activity. We began our second lesson by using a chart paper and we drew a bee, where the bee's legs were used as pointers to write down the brainstorm ideas the students came up with. We will ask students what they remember/know about bees. Our first lesson plan was a Bee Hive activity. This activity was to engage students in writing about the lifecycle of a bee. The students wrote the stages underneath their images: adult, pupa, larva, egg. Following the written activity, the students got to color the beehive and glue on the bees that we created last class. Lastly, the students shared their diagrams and went through the sequence of the bee life cycle with a partner next to them at their table. The students Honeybee project was complete and these lesson included a variety of activities, which the students thoroughly enjoyed. During this lesson, we assessed the students through our observations of their participation and how involved and engaged they were in the activities.

To conclude the Honeybee unit, our third lesson was a wrap up of the roles that each honeybee helper fulfills. The goal of the game is for the students to collect honey (pom pom balls) and move them to designated targets (queen bee, drone, beehive). The students were engaged in playing a *Busy Bee* game that was a fun way to end the unit!

Lesson # 1- Honeybees		
Grade: Kindergarten Date: February 26, 2016		Subject: Science and Art Time: 35 minutes
Big Ideas Science: Plants and animals have observable features		
Lesson Objectives: SWBAT <ul style="list-style-type: none"> • Share with others information obtained by observing • Describe features of bees • Demonstrate curiosity and a sense of wonder about the world 		
How I Will Teach This		Assessment
Materials: <ul style="list-style-type: none"> • Chart paper that has lyrics for our poem • Construction paper • Pipe cleaners • Markers • Poem • Bee diagram • Beehive • Goggles eyes 	Hook: (2 minutes) Show a stuffed animal of a bee OR show the students the interior of the wasp nest that is in the classroom. Ask students what they remember – engage prior knowledge.	Formative Assessment FOR learning For - Observation of behaviour and participation in discussion and activities - Checklist of students names and objectives, with comment section for note-taking during lesson - Give immediate feedback throughout activities - Follow-up during center time - Take detailed notes after lesson for reflecting future planning As: Students give thumbs up/down for understanding <i>Assessment OF learning</i> Of: Ask students to stand up and teachers will ask, “where are the wings on a bee?” We will check if students are pointing to the correct parts of the bee. Ask students individually “are those stripes?” and we will point to the wings and this will
Lesson Overview: Introduction (5 minutes) <ol style="list-style-type: none"> 1. At carpet, today we are going to start learning about bees. What do you know about bees? What do they look like? Where do they live? What do they do? 2. Hold up the bee diagram Show a Visual to the Students (15 minutes) <ol style="list-style-type: none"> 3. A large labeled diagram of a bee with its different body parts  <ol style="list-style-type: none"> 4. Read <i>Every Insect</i> by Dorothy Aldis. Discuss each and its purpose. 5. During the poem the students will be asked to act out the poem → kinesthetic movement and lyrics will be written on a large chart paper 6. Sing the poem Art Activity (10 minutes) – the bee body, and antennas will be pre-cut so students will only be piecing the art activity together <ol style="list-style-type: none"> 7. Students will be asked to return to seats to complete a craft representation of a bee. 8. Demonstrate to the students: how to make a bee out of construction paper and pipe cleaners. 		

<p>Closure (3 minutes)</p> <p>9. Review what we have learned today</p> <p>Enactivism</p> <ul style="list-style-type: none"> ❖ The students classroom is a diverse and rich environment with many skeletal remains of animals and animal hide – physical material that students can see and touch= activating the senses ❖ Students will act out the poem by participating and following Eric and I in kinesthetic movements ❖ Students will be shown a part of an interior wasp nest, which will help them gain an understanding of where bees live and deposit their honey 	<p>help us see if students will correct us or not. Collect work completed.</p>
<p>Resources:</p> <p><i>Every Insect</i> by Dorothy Aldis</p> <ul style="list-style-type: none"> ○ A poem ○ Strengths: the poem was a gateway for us to do kinesthetic movements with the students, especially with student who needed to channel their energy towards something ○ Cautious: We were doing a lesson on bees and the poem is more general, and this could confuse the students 	
<p>Extension:</p> <ul style="list-style-type: none"> • Create a book about the lifecycle of a bee. They will share their book and go through the sequence of the bee life cycle with a partner next to them at their table. • Show a clip from “The Bee Movie” 	
<p>Adaptations:</p> <ul style="list-style-type: none"> • Pre-cut honeybee body’s and antennas 	

Lesson # 2- Honeybees Lifecycle	
Grade: Kindergarten Date: March 11, 2016	Subject: Science and Art Time: 35 minutes
Big Ideas Science: Plants and animals have observable features	
Lesson Objectives: SWBAT <ul style="list-style-type: none"> Demonstrate understanding of the lifecycle of the honeybee Share with others information obtained by observing 	
How I Will Teach This	Assessment
Materials: <ul style="list-style-type: none"> Diagrams of a bee life cycle Crayons Pencils Chart paper Laptop Pre-cut bee hives Black construction paper 	Formative <i>Assessment FOR learning</i> - Observation of behaviour and participation in discussion and activities - We will be checking to see if students are on task and using their tools appropriately. As: Students give thumbs up/down for understanding <i>Assessment OF learning</i> - Assessment of learning will be determined by the students completed work. E.g. the final product of the bee life cycle project.
Hook: (5 minutes) In our previous class we introduced students to bees. On a chart paper we will draw a bee and use the legs to write down the brainstorm ideas the students come up with. We will ask students what they know about bees.	
Lesson Overview: Introduction (10 minutes) <ol style="list-style-type: none"> Today we will begin our lesson by reading <i>A Bee's Life</i> by Sue Onstead. Discuss the bee life cycle using image representations that will be placed on a board. We will show the students one picture at a time and tell them the word that associates with the picture. We will have the students repeat after us. E.g. we will say larva and the students will repeat larva A Bee Hive activity (10 minutes) <ol style="list-style-type: none"> Students will return to their seats and write about the lifecycle of a bee. Students will engage in writing the stages underneath their images: adult, pupa, larva, egg Students will color the bee hive and glue on the bees that we created last class They will share their diagrams and go through the sequence of the bee life cycle with a partner next to them at their table. Critical thinking - comparison <ol style="list-style-type: none"> Difference between a bee and a wasp Enactivism <ul style="list-style-type: none"> Show students images of a honeybee lifecycle – visual Hands on – a bee hive activity: students will color a bee hive and glue it on to a piece of black construction paper 	
Resources: <i>Watch it grow: A Bee's Life</i> by Nancy Dickmann	
Extension: <ul style="list-style-type: none"> A game to help students learn the difference between a wasp and a bee Pollen transfer: Students will be given a display that resembles a bee hive, so they can carry pollen from flowers to the drone bees and the queen bees 	
Adaptations Pre-cut bee hive and color the bee hive yellow	

Lesson # 3- Busy bees		
Grade: 6/7 Date: March 11, 2016		Subject: Science and P.E. Time: 35 minutes
Big Ideas Science: Plants and animals have observable features		
Lesson Objectives: SWBAT <ul style="list-style-type: none"> Understand the relationship between bees and flowers Understand the importance of community – building on Tara’s and Lisa’s lessons Understand pollination 		
How I Will Teach This		Assessment
Materials: <ul style="list-style-type: none"> Pom-pom balls 2-3 buckets or mini cups Labels: bee hive, queen bee, and drone bee 	Hook: (3:30 minutes) Show a YouTube clip of Bees <i>Why do we Need Bees?</i>	Formative Assessment FOR learning - Observation of behaviour and participation in discussion and activities - We will be checking to see if students are on task and using their tools appropriately. Assessment OF learning - The students understand the concept of the game. Students are collecting the pom pom balls (pollen) and placing it in the mini cups.
Lesson Overview: Introduce the relation between a flower and a bee (10 minutes) <ol style="list-style-type: none"> A flower is a seed factory. A flower and a bee have a strong, vital connection with each other. Without this connection the flower cannot manufacture seeds and bee would not have food. We would not have any food, either. The bee pollinates the flower. Show students a picture of a flower → identify the petals and sepals Who are the pollinators? A pollinator is anything that helps carry flower pollen to the beehive. Cheetos demonstration (5 minutes) <ol style="list-style-type: none"> Demo what pollination looks like using a bag of Cheetos Teacher will tell student to imagine their thumb/fingers are like pollinators (bees) and the powder is the pollen Teacher will transfer the Cheetos powder from the bag to the bee hive If time permitted, allow a couple of students to volunteer and try it out Busy Bee Game (10-12 minutes) <ol style="list-style-type: none"> Teacher will go over expectations before explaining the game Teacher will explain the rules of the games and demo for the students what they will be doing The goal of the game is for the students to collect honey (pom pom balls) and move them to designated targets (queen bee, drone, beehive) Start off with groups coming up and moving honey to a certain target Then shift to game where teacher calls out location for honey to be placed in 		
Resources: YouTube https://www.youtube.com/watch?v=6CxCTyxRFh0 http://www.kidsgardening.org/node/11422		
Extension: <ul style="list-style-type: none"> The location of the targets will change overtime with obstacles in the way Play red light, green light with the students while they are transferring pollen 		
Adaptations: <ul style="list-style-type: none"> The students will walk in slow motion to drop off the pom-pom balls Making buzzing sounds like bees 		

Assessment Rubric:

The assessment rubric can be assessed with both the student and the teacher together to clarify what each level means. The lower end is the bee and as the students understanding grows, they morph into a larva and eventually into a bee.

Egg	Larvae	Bee
		
<p>I do not completely understand what we learned about bees but I am working hard to get better!</p>	<p>I understand some things about bees and I will continue to learn more.</p>	<p>I learned a lot about bees but I can always learn more about them!</p>

Resource Critique

Bees, Flowers, and Pollination. (n.d.). Retrieved March 4, 2016, from <http://www.kidsgardening.org/node/11422>

We used this website as a resource to gain some personal knowledge for ourselves while we were teaching. The website had good information about bees, flowers, and pollination. Once we saw this site we came up with our idea to do our third lesson plan on having the students become the busy worker bees and going out and collecting pollen. Refer to lesson plan #3.

Dickmann, N. (2010). *Watch it grow: A bee's life*. Chicago, IL: Heinemann Library.

Watch it grow: A Bee's Life is a book by Nancy Dickmann. We chose to use this book because in our SA's classroom, the students are exposed to real images as opposed to cartoon images. The benefit of using a book with real images was that the book caught all of the student's attention. The student's eyes followed as we shifted the book across the range of students, so they all had a chance to focus in. The book had large bold words that were visible to all students; it was simple, and easy to follow. The only critique we had for the book was that it did not clearly state the 3rd stage of the bee life cycle, which is pupa. The book consists of the egg, larvae, and an adult bee. Once we finished reading the book, we informed the students immediately about the third stage. Overall, the book was a great read and the students enjoyed it.

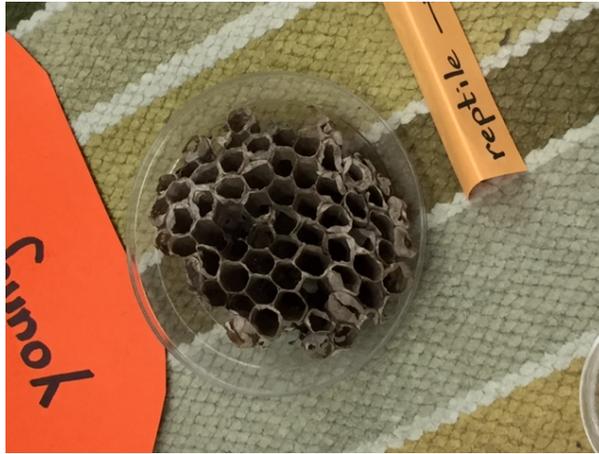
***Every Insect* by Dorothy Aldis**

Every Insect by Dorothy Aldis is a poem that we used for our first lesson to introduce general characteristics of insects. The Strengths of the poem were that it served as a gateway for us to integrate kinesthetic movements into our lesson plan. This aspect of our lesson was important, especially with students who needed an outlet for their energy. A weakness that we noted was that we were doing a lesson on bees and the poem is directed towards insects in general, and this could confuse the students.

Why do we Need Bees? (n.d.). Retrieved March 10, 2016, from <https://www.youtube.com/watch?v=6CxCTyxRFh0>

For our third lesson, we decided to incorporate technology. Using our laptop we presented a short YouTube clip called, *Why do we Need Bees?* The implementation of technology in our lesson was the perfect way to bring in all of the students attention. Students who had a difficult time keeping their hands to themselves also gave us their undivided attention when we told them "...next we will be watching a video clip on Bees." The YouTube video, *why do we need bees?* was a student friendly resource that presented Earth Ranger Jovanna chatting with Dr. John Purdy to learn all about the importance of bees. The students were engaged because this video represented a young student asking a teacher questions about bees. The students were able to relate to the video. Also the video incorporated a few cartoon images that the students liked. We felt that this YouTube video was a great resource to use with our Kindergarten class.

Craft Examples:



A wasp's nest



Craft from Lesson 1



Collection of the crafts from Lesson 1



Lesson 2: Learning About the Bee's Life Cycle – Art project complete



Lesson 3: Flowers containing "pollen"



Lesson 3: Students are busy bees collecting pollen to take back to the Bee Hive