

Pollination Lesson Plan

Age Level: Kindergarten

Subject(s) Area: Science & Art

Materials Needed: Cotton balls, 21 pieces of white paper, chalk (6 sets), Poem (written out on poster board)

S standards:

- **K.LS1.1: Use observations to describe patterns of what plants and animals need to survive**

O bjectives:

- I can **explain** the process of pollination with 80% accuracy.
 - Level 2: Comprehension

L earning Activities:

Technology:

- Video: <https://www.youtube.com/watch?v=7CdoBCEEpz4>
- PowerPoint (with pictures of flowers and picture of bee)

Required Vocabulary: **Have them repeat these words when you use them**😊

- Pollination: movement of pollen from one flower to another
- Pollen: yellow powdery substance produced by flowers
- Nectar: a sweet liquid secreted by glands in the flowers of plants
- Pollen Basket: an area on the hind legs of honeybees used to transport pollen
- Worker: besides the queen, these are the only female bees that live in a beehive

Opening Element: To begin, we will sit on our rectangles and recall what our topic for our lesson is about: honeybees. Then we will go into the poem about honeybees (see below)

Reflective Questions:

- How can we use lines to draw a flower?
- What shapes do you see in the flower?
- What shapes are the petals and leaves?
- What do you think the chalk is similar to on a flower?
- What happens to the chalk when it touches the cotton ball?
- What happens to the different colors of chalk?
- How do you think the mixing of chalk is similar to the mixing of pollen?

Instructional Methods:

1. **Poem:**
 - i. Five Busy Honey Bees

- ii. Five busy honey bees were resting in the sun.
- iii. The first one said, "Let's have some fun."
- iv. The second one said, "Where shall it be?"
- v. The third one said, "In the honey tree."
- vi. The fourth one said, "Let's make some honey sweet."
- vii. The fifth one said, "With pollen on our feet."
- viii. The five little busy bees sang their buzzing tune,
- ix. As they worked in the beehive all that afternoon.
- x. Bzzzzzzzz! Bzzzzzzzz! Bzzzzzzzzzz! Bzzzzzzzzzz! Bzzzzzz!

- b. First, I will give the students a short amount of time to look through the poem and try to read as much of it as they can.
- c. After letting them read through the poem, I will go through it with them (sitting down). We will read it line by line.
- d. Then, we will try it standing up with actions
- e. **You did a great job with this today but call by colors or quietly like a ninja** After we go through the poem a couple times, I will have them go to the front of the room to their circle spots

2. Pollination

- a. I will ask them: "You all know that bees pollinate flowers, but do you know what pollination actually is?" **how about...but we are going to see how bees actually do pollinate flowers. Who has seen a bee on flower before? Was in on the stem? Where was the bee?**
 - i. I will lead this into an open ended discussion
- b. After a short discussion, I will play the short video of the bee pollinating a flower and pause it to show the pollen basket **Let's watch and see how they get pollen from flower to flower**
- c. <https://www.youtube.com/watch?v=7CdoBCEEpz4>
- d. Then, I will show them the picture of a honeybee and show them how hairy the back legs of a honeybee are
- e. I will ask them to remember the "with pollen on our feet" line of our poem because bees catch honey with the hairs on their legs
- f. Info: "The bee puts pollen into a part of the flower and the pollen helps the flower make seeds and fruit. Without that pollen, the flower would die and there would be no more seeds to help it reproduce (make more flowers)"
- g. **What are bees important?**
- h. Then, I will lead this into the art lesson

3. Art

- a. (Active movement if needed)
- b. After talking about pollination, I will tell the students we will be using art to show pollination
- c. First, I show pictures on the active board of flowers
- d. Then, I will demonstrate how to draw the flowers **FABULOUS!!!!**
 - i. We begin with a simple line to show the stem.
 - ii. Then I want to draw the middle of my flower, what shape do you think the middle looks like?

- iii. Okay, now I want to draw the petals. Does it matter if the petals aren't perfectly the same?
- iv. I am going to draw my filament (say that after me "filament". This is the part that holds the pollen) 😊
- v. Now I am going to draw two more flowers because we are busy bees and have lots of pollination to do
- vi. Last, I am going to color in my flower with chalk
- e. After I am done demonstrating, I will explain the expectations
 - i. Name on paper
 - ii. At least 3 flowers
 - iii. Draw with a pencil or a sharpie right away
 - iv. Color the flower with chalk
- f. I will dismiss by quietest row
- g. When most of the students are done coloring the flower, I will have them come back to the circle spots
- h. After they are at their circle spots, I will demonstrate how the cotton ball represents the bee's hairy legs and the chalk represents the pollen
- i. I will demonstrate how to jump from flower to flower with my cotton ball and to pollinate my own page **They are going to LOVE this**
- j. **What are we going to do? Pollinate**
- k. Then, I will dismiss by row to go back to the tables and pollinate their papers
- l. After they are done, they will set their papers on the ledge and quietly read

- Guided Practice Strategies: I will be doing a lot of demonstrating and I am breaking down the information to a very basic level.
- Independent Concrete Practice/Application: Each student gets a flower to draw and pollinate
- Classroom management/movement: I will have them get up and move from their tables, the rug, and around the room. Classroom management: class class & clap, give me 5
- Differentiation: I will be giving lots of visuals. The activity is very tactile for the hands on learners. I will also explain what I am doing for auditory learners.

Wrap-Up: As I am demonstrating my pollinating, I will show the students how the chalk mixes and gets on all the flowers. Then I will talk about how pollen is dropped off on some flowers and is also picked up.

Do you see how we use lines in art to represent items we want our audience to focus on? As artists, we can draw our thoughts if we are careful and purposeful. Looking at a hexagon, it looks a bit confusing to draw. Sometimes we don't know where to start. All good artists start with one line and work their way from there. Let's look at how to do that. (demonstrate) Let's look at this top line. Do you see how it is short and straight across? Let's try to make that line. Good, now see how the next line connects with that, it's also short and goes at an angle.... Let's try that.... Good, now, (name), which line should we try next?

 **Assessment:**

Formative: I will assess as I observe the students and through questions and discussion.

Summative: N/A

Reflection:

I had a blast teaching this lesson! So far, this has been the most fun lesson I have ever taught. I felt so passionate about the topic and I felt so engaged with my learners. It began a little rocky, as they usually do until I get going. I started off with the poem rather than the Magic Tree House book since it was so long and would cause the students to get restless. Early in the year, this lesson would not have gone as smoothly and would have needed more movement involved into it. The students have been very well trained to sit for longer periods of time without movement and know routines much better. I like that I added movement to the poem early in the lesson. They are really good readers, so I used that and had them read the poem with me. I think I did a good job stopping and making sure they read the word correctly and then going back to re-read the word if it was difficult. They did an awesome job. I asked them if they wanted to try it standing up with actions and that was definitely a mistake. I always learned to give children choices and options, but I have learned through this practicum that there are so many ways I can use my authority and tell them what to do. During instructions, I should always tell them to stand up and dance with me. Mrs. Shuchard stepped in during this and they all stood up. That helped a lot, so next time I need to either not make the mistake ahead of time OR be more assertive and tell them to all stand up. I really like the classroom set up with two rugs, so there is a lot of movement. Even that small amount of movement from one rug to the next helps. I also need to remember to always have them sitting down when I explain the instructions.

When I began the pollination lesson, I was a little rocky in introducing the topic, but the kids were excited. There was quite a bit of blurting and talking out of turn, so I need to hit that a little better with students raising their hands. However, it wasn't something I was super concerned about because they were so engaged and excited about the topic. I loved that they were so excited about learning that they wanted to blurt out what they know. It was amazing to see. I know how exciting I am to tell people what I know, so I understand the blurting. I just need to find a way to let them get out their awesome thoughts without blurting. I probably should have done turn and talks to decrease it. I had a blast explaining information about bees and the kids were so intrigued by the topic. They loved the video, so I showed it longer than I had planned for. I followed Mrs. Schuchard's advice to have them repeat the term "pollination", so it really stuck in their heads. I should have had them repeat "pollen basket" and I could have introduced more vocabulary in the lesson because they were really interested.

I had it planned to add movement between the art lesson and the pollination lesson, but they were doing a great job listening and were intrigued, so I kept going. I loved being able to demonstrate how to draw the flowers and showed them the chalk. I think my questioning has gotten much better at this time because when I asked them "what does the chalk represent", they were all quiet. So I rephrased it and said "what is the chalk kind of like on a honeybee or a flower". One student said pollen and the activity clicked for them right then. I could feel them all have understanding. I did demonstrate all the steps at once, which wasn't my original intent. If I would do it again, I wouldn't show the pollinating step right away. However, it did lead to great conversation and made it easier to explain why the chalk needs to be flaky. I didn't realize the students would be smearing around the chalk, so I had to stop them and explain to them that they need to leave the chalk alone and let it be flaky. After most of them finished, I brought them back to the rug and showed them the pollinating step again. Then, I explained the clean up steps. I am not sure if I gave them too many steps, but they figured it out so I think it was good. If it

was earlier in the year, I would have had to give them less steps and demonstrated each step. That is one thing I definitely need to learn.

The students were having great epiphanies during the pollinating part and I loved using this time to talk to them about what they were noticing. Lots of them were talking about the colors, so I could have lead this lesson into color mixing. I need to learn more content with art because I am not really sure about many terms and elements with art. It is something I have not really been introduced much, so I struggle with it.

My absolute favorite part of the lesson was the wrap up, which is something I kind of just whipped up because I was so engaged in the lesson and really wanted to talk with the kids about it. I got down to their level and we talked about how important pollinating is. They were so engaged and loved giving their input about the plants we eat are pollinated by bees. I think one of my favorite parts of this lesson was how engaged my student with the behavior problem was. He was so excited and engaged by the conversation. When I asked about our meat, he was like “no way. Bees don’t have anything to do with meat.” But when I explained how the grasses, hays, and plants on the ground are also pollinated by bees, he really went quiet and was like “whoa. I never thought of it that way.” That conversation really showed them how important honeybees are. I had a blast. At the very end, I did my movement exercise and they loved it. They ran as fast as they were and were almost safe the entire time. One kid fell over, but for the most part, they were all very safe. When I said stop, they all stopped right in their tracks. I felt so good at that point that they were that engaged with me and respected me as a teacher to listen to me. It was the best feeling in the world.

A couple small changes for this lesson would be to touch more on the poem. I wanted to talk about it more, especially the line “with pollen on our feet.” I also had it planned to have them all walk back and grab their own supplies, so it was kind of difficult because I kept leaving them in the front to grab my stuff. However, when I came back and they were sitting quietly, I used that time to let them know how much I appreciated how quietly they were sitting. I also think I found my teacher phrase “rockstar.” I kept saying “you are being such a rockstar sitting quietly and listening. Or You are being such a rockstar with your pollinating.”