

What is a Seed? Lesson Plan

7Grade: 2nd		Subject: Science
Materials: Lima bean, cup, water, magnifying glass, parts of a seed worksheet		Technology Needed:
Instructional Strategies: <ul style="list-style-type: none"> ▪ Direct instruction ▪ Guided practice ▪ Socratic Seminar ▪ Learning Centers ▪ Lecture ▪ Technology integration ▪ Other (list) 		Guided Practices and Concrete Application: <ul style="list-style-type: none"> ▪ Large group activity ▪ Independent activity ▪ Pairing/collaboration ▪ Simulations/Scenarios ▪ Other (list) Explain:
Standard(s) 2.4.1 Identify how plants and animals are alike and different (e.g., in the way they look, in their behaviors) 2.LS2.2		Differentiation Below Proficiency: Use small groups at the back with the low students and focus of teaching the students about the different parts of a seed. Using books to help them understand or teach/reteach method. Above Proficiency: Have them research a different seed, and have them draw a habitat that it would survive in. Approaching/Emerging Proficiency: Focus on 1 seed, and helping the student understand the parts of a seed. Modalities/Learning Preferences: physical, auditory, visual, writing
Objective(s) By the end of the lesson, students will be able distinguish the parts of a seed by examining it with a magnifying glass. Bloom's Taxonomy Cognitive Level: Analyze		
Classroom Management- (grouping(s), movement/transitions, etc.) Students will be sitting at the carpet for whole group instruction. While at the carpet they will not need any supplies. No partner work.		
Minutes	Procedures	
2-3	Set-up/Prep: <ul style="list-style-type: none"> ▪ The day before, have the students soak a lime bean in a cup of water. ▪ Know the vocab, DNA, Embryo, and Seed ▪ Complete the worksheet – a peek inside a seed for a guide 	
3-4	Engage: (opening activity/ anticipatory Set – access prior learning / stimulate interest /generate questions, etc.) <ul style="list-style-type: none"> ▪ Today we are going to be talking about seeds, and then doing a little activity after. ▪ From everything that we already know about plants, what is a seed? <ul style="list-style-type: none"> ○ Turn and super secret spy talk, tell your partner what a seed is. ○ Allow them to talk and then call on a group <ul style="list-style-type: none"> ▪ Let them answer with what they know about seed ▪ Write it on the board? ▪ Then ask them for different types of seeds that they know of ▪ Write them on the board 	
	Explain: (concepts, procedures, vocabulary, etc.) <ul style="list-style-type: none"> ▪ Today we are going to be talking all about seeds, and what they are? ▪ But before we talk about that, we need to get to know some vocabulary <ul style="list-style-type: none"> ○ DNA – The substance that contains a code telling the seed what kind of plant to grow into ○ Seed – A baby plant protected by a hard out covering called a seed coat ○ Embryo – The baby plant that is inside the seed ▪ Then read aloud the handout“What is a seed?” to the class ▪ From our previous readings, what else do we know about seeds? 	

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20-25	<ul style="list-style-type: none"> ○ Need space to grow, need water and light, need soil? ▪ Today we are going to look take a closer look at seeds ▪ I have soaked some lima beans in water so we can do a little activity with beans. ▪ When I say “GO” I want everyone to come grab a magnifying glass from the front, and then grab their cup and bring it back to their desk, and then grab a paper towel. ▪ “GO” ▪ When they get to their desk, ask them what a magnifying glass is and what it is used for. <ul style="list-style-type: none"> ○ Let them tell you, before you tell them what exactly it is ○ It is a lens that makes an enlarged image of what you are looking at. ○ The magnifying glass will help us see the different parts of our lima bean better ▪ I want you to pick up the bean and examine it <ul style="list-style-type: none"> ○ What do you think the inside of this seed will look like? (making a prediction) <ul style="list-style-type: none"> ▪ On the back of the sheet of paper that is on your desk, I want you to draw what you think the inside will look like? ○ Why does it feel like this? <ul style="list-style-type: none"> ▪ Write what they say on the white board ▪ The first thing we are going to do is grab our lima bean and gently rub off the outer coating of <ul style="list-style-type: none"> ○ Ask the students what it feels like? ○ Why is the seed coat important? (the thing we just rubbed off with our fingers) <ul style="list-style-type: none"> ▪ Write what they say on the board ▪ Then we want to carefully open our lima bean to take a look inside. There is going to be a crack/slit in the middle of your seed where you want to open it) <ul style="list-style-type: none"> ○ Now take a look at the inside ○ What do you see <ul style="list-style-type: none"> ▪ Record what they see on the board ▪ Now grab your magnifying glass and take a look at the inside <ul style="list-style-type: none"> ○ Do you see anything different? <ul style="list-style-type: none"> ▪ If so, what? <ul style="list-style-type: none"> • Write what they say on the board ▪ Go back to the predictions from the beginning, what the inside will look like <ul style="list-style-type: none"> ○ We were correct? <ul style="list-style-type: none"> ▪ Talk about it ▪ Pass out “A peek inside a seed”
3-5	<p>Explore: (independent, concrete practice/application with relevant learning task -connections from content to real-life experiences, reflective questions- probing or clarifying questions)</p> <ul style="list-style-type: none"> ▪ Now I want you to complete a peek inside a seed and hand it in <ul style="list-style-type: none"> ○ Remember to put your name on the top ○ Try your best, and do your own work <ul style="list-style-type: none"> ▪ I don't want to see you looing at your neighbors work and putting it on your paper, because they are already handing in a piece of paper showing me their knowledge. I want to know what you know.
2-3	<p>Review (wrap up and transition to next activity):</p> <ul style="list-style-type: none"> ▪ Talk about what the students learned about seeds <ul style="list-style-type: none"> ○ Did they learn anything new? ○ Do they know all the different parts of the seed now? <ul style="list-style-type: none"> ▪ Put it under the projector, and talk about the basic parts of the seed
<p>Formative Assessment: (linked to objectives) Progress monitoring throughout lesson- clarifying questions, check-in strategies, etc.</p> <ul style="list-style-type: none"> ▪ Walking around and asking questions ▪ Listening in on conversations ▪ Asking the students questions while look at the seeds <p>Consideration for Back-up Plan:</p> <ul style="list-style-type: none"> ▪ No back up plan needed. 	<p>Summative Assessment (linked back to objectives) End of lesson:</p> <ul style="list-style-type: none"> ▪ Handing in the worksheet a peek inside the seed <p>If applicable- overall unit, chapter, concept, etc.:</p> <ul style="list-style-type: none"> ▪ N/A
<p>Reflection (What went well? What did the students learn? How do you know? What changes would you make?):</p>	

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- My science lesson went pretty well. The students were interested and engaged throughout the lesson. I really did a lot of teaching in this lesson, and I think at times the students got bored. I tried different things to make it easier for the students that didn't understand, and I tried to challenge the students who needed a little more. I think that really worked well because those students were engaged throughout the whole thing. There was this one student who pushed my buttons all week and was intentionally trying to make me mad, but I wasn't going to let that happen. He was the only one not following the rules about how to use the magnifying glass, or how to properly look at the seed. The rest of the class knew exactly how to use it because we went over it as a class. We discussed that it is not a toy, it is a tool that scientists use to make them smarter. I did end up taking his things away and he just had to watch and listen. I feel like I might have done the wrong thing, but he was starting to disrupt the entire class. One thing I would do different next time is maybe use different types of seeds, so not everyone was looking at the same thing. Maybe choose 3 different seeds and then the class can compare the different types of seeds and why they might look different. One other thing I might do differently is have the class right down things in a science journal, because the things we were writing on the board was just erased and they will never be able to access that information again. Again I could have gotten more movement in the lesson because I just had them do stretching, with the class choosing what to do, and then walking around for about 30 seconds. I never know what is a good amount of movement and when it becomes too much. I wish I knew a little bit more about differentiation, because that is part of the lesson I question myself at all the time. I never know if what I am doing is right or wrong. I feel like I didn't quite challenge some of the students enough. At the end of the lesson, I had them complete a worksheet and one of the students wrote "I don't know, I don't care, ?, who knows" and that really frustrated me. This student is so smart, and he knew what to write down. Then when I talked to him, he wouldn't talk to me at all. He refused to listen to me. I then told the teacher and she couldn't get him to talk either. I felt like having him do it at recess, but it wasn't my classroom to make that decision. Overall the students were very engaged and were interactive the whole time. We were smiling and laughing throughout the whole thing. There were just a few things that should have and could be better for next time.