

Lesson Plan Template

Grade: 4		Subject: Science	
Materials: VennDiagram Worksheet, Science Journals		Technology Needed: ActiveBoard	
Instructional Strategies: <input type="checkbox"/> Direct instruction <input type="checkbox"/> Guided practice <input type="checkbox"/> Socratic Seminar <input type="checkbox"/> Learning Centers <input type="checkbox"/> Lecture <input checked="" type="checkbox"/> Technology integration <input type="checkbox"/> Other (list) <input type="checkbox"/> Peer teaching/collaboration/cooperative learning <input checked="" type="checkbox"/> Visuals/Graphic organizers <input type="checkbox"/> PBL <input type="checkbox"/> Discussion/Debate <input type="checkbox"/> Modeling		Guided Practices and Concrete Application: <input type="checkbox"/> Large group activity <input type="checkbox"/> Independent activity <input checked="" type="checkbox"/> Pairing/collaboration <input type="checkbox"/> Simulations/Scenarios <input type="checkbox"/> Other (list) Explain: <input type="checkbox"/> Hands-on <input checked="" type="checkbox"/> Technology integration <input type="checkbox"/> Imitation/Repeat/Mimic	
Standard(s) DISEASE AND ILLNESS 4.2.3 Describe the different types of pathogens (e.g., bacteria, viruses, fungi, protists) and the diseases they cause.		Differentiation <p>Below Proficiency: Students will be unable to take notes down about bacteria, viruses, and diseases for comparing and contrasting in the venn diagram. Students will not be able to openly discuss bacteria and viruses with a partner.</p> <p>Above Proficiency: Student will be able to identify what a pathogen is as well as define and identify the differences between bacteria and viruses and identify which diseases they cause. They will show this by comparing and contrasting bacteria and virus in a venn diagram format. Student in addition will ask questions about different disease.</p> <p>Approaching/Emerging Proficiency: Student will be able to identify what a pathogen is as well as define and identify the differences between bacteria and viruses and identify which diseases they cause. They will show this by comparing and contrasting bacteria and virus in a venn diagram format.</p> <p>Modalities/Learning Preferences: Auditory (Video), Visual (Video and Venn Diagram), Kinesthetic (working on diagram)</p>	
Objective(s) Student will be able to identify what a pathogen is as well as define and identify the differences between bacteria and viruses and identify which diseases they cause. They will show this by comparing and contrasting bacteria and virus in a venn diagram format.		<p>Bloom's Taxonomy Cognitive Level: Synthesis</p>	
Classroom Management- (grouping(s), movement/transitions, etc.) Students will remain seated for the entire lesson- there will be many breaks and transitions in between the lesson plan to keep students interested. Students will be paired up for venn diagram activity		Behavior Expectations- (systems, strategies, procedures specific to the lesson, rules and expectations, etc.) If student(s) are misbehaving, they will lose the privilege to watch the video and complete a separate worksheet individually. If the students misbehave during pairing, they will not have the privilege to work with a partner. Make sure to take many pauses during the video for a chance for the students to catch up on notes as well as a mini chance for discussion.	
Minutes	Procedures		
5	Set-up/Prep: Make sure activeboard is up and running.		
3	Engage: (opening activity/ anticipatory Set – access prior learning / stimulate interest /generate questions, etc.) Introduce myself to the students- make it clear that my expectations for them are the same as they would be for Mrs. Deitrich, Mr. Larson, and Mrs. Churchill. Now let's get to the fun part, get the science part of our brains on, and get into full gear! Thumbs up or down for this question- When you think of a virus, do you think of a good thing or a bad thing- what about when you think of the word bacteria- thumbs up or thumbs down. You all have heard of bacteria or germs, you've been told many times before to wash your hands before you eat, when you sneeze, to cough in your elbow. Today, we are going to go a little deeper in the scientific knowledge of viruses and bacteria- you're going to know what they look like, how small they really are- let's get right into it.		

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15 minutes	<p>Explain: (concepts, procedures, vocabulary, etc.) Video on Bacteria and Viruses https://www.youtube.com/watch?v=24IYt5Z3eC4</p> <ul style="list-style-type: none"> • Explain that before the video, we will list out the vocabulary words that the students are looking for- (viruses, bacteria, fungi, immune system)—with viruses and bacteria, we are looking for the diseases that are caused by having these in our bodies – looking for characteristics (what the pathogen does), and what it can cause • Students will have everything written- have partner check that everything is written and we are good to go with the video • Explain that I will pause after every vocabulary word is explained. • DURING VIDEO, EXPLAIN THAT MOST BACTERIA IS GOOD BACTERIA!!! –has white blood cells which help us to protect our tonsils, lymphnodes—talk about when we get a soar throat, that is our tonsils and lymphnodes fighting hard to knock off any kind of bacteria in our bodies 	
15 minutes	<p>Explore: (independent, concrete practice/application with relevant learning task -connections from content to real-life experiences, reflective questions- probing or clarifying questions)</p> <p>Venn Diagram Activity</p> <ul style="list-style-type: none"> • Students will gather up the information that they have written down from the video and compare and contrast the differences between Viruses and Bacteria (quickly review venn diagram and how to write on one) • Together as a class, we will do the similarities of bacteria and viruses (both are single cell viruses and both are very small in size- microscopic) • Students will work in groups of two but will have individual sheets (this will be for visual help for other days) • Once students have as many as possible and have risen hand to show teacher (for approval), they can draw the bacteria and virus in their notes – MAKE SURE THIS IS LABELED • For students that need an alternative or written out version of lesson plan, have sheets available that are pre-written to keep them interested and not frustrated – have students underline facts on the go 	
	<p>Review (wrap up and transition to next activity): Students, today we learned so much more scientific detail about viruses and bacteria- I want to make sure that you guys are thinking about this as we go. I want you to tell two people today two ways that you can prevent getting a bacteria or virus or disease- those people have to be outside of this room and no 4th graders.</p>	
	<p>Formative Assessment: (linked to objectives) Progress monitoring throughout lesson- clarifying questions, check- in strategies, etc.</p> <p>-Make sure students are writing down notes properly- students should have at least two facts about each vocabulary word.</p> <p>Consideration for Back-up Plan: -Students will have a sheet for information that I can pull up if the information in the video is too fast.</p>	<p>Summative Assessment (linked back to objectives) End of lesson: T-Chart: Viruses vs. Bacteria</p> <p>If applicable- overall unit, chapter, concept, etc.:</p>
	<p>Reflection (What went well? What did the students learn? How do you know? What changes would you make?): I had taught the same rotation three times because in the fourth grade, they switch with social studies, science, and language arts rotations twice a week. Overall, I thought this lesson was a hit and miss depending on which class I had. The first class I had was Mrs. Dietrich’s class, which by previously talking with her, I knew that there were mixed learners in the classroom. The lesson plan prior to speaking with my cooperating science teacher involved creating a Venn Diagram to help compare and contrast Viruses and Bacteria. This was modified into a T chart because of the difficulty it might have caused in drawing out circles, as I wanted them to keep this in their notes to look back on and not have a separate template. I think this helped at the end and made it simpler for some of the students to understand. Other than this modification, the lesson plan template stayed the same. I think I did a really great job of engaging all of the classes that I taught, and I kept them</p>	

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interested in the topic by making it relevant to their life. We watched a video that explained the role of bacteria, viruses, fungi, parasites, and the immune system as well as what kinds of diseases could be caused based on the pathogens. Students did really well with following my instructions and writing out the vocabulary words prior to watching the video. One thing that my supervisor advised me of was thinking about a differentiation for students that don't write as quickly- I think I could have had the vocabulary words down for the students on a worksheet, as well as any other difficult words that might have come up in the video, such as lymphocytes, phagocytes, and some of the definitions. I need to remember to make modifications for other students.

I thought that my pausing in the video gave the students enough time to catch up on their expected definitions, which were provided in the video. I think the video choice was entertaining for the students to follow along and kept them ok with having to pay attention and write down vocabulary as the video went along.

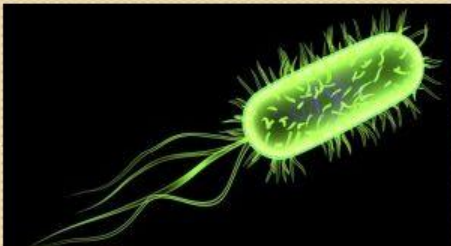
Because my first class was the first time teaching science, I was a little nervous and trying really hard to get to the activity rather than taking enough time to find things that relate to each student's life. However, this class was the only class that got to the activity at the end. I took a lot more time on science content and information in the following two classes, which was crucial- I wish that I had two days to teach this lesson, but I also think it is so important to figure out which content to keep and which to knock out. I could have just focused on bacteria and viruses so that we had more time to get to the activity in the other two classes.

Another aspect that my supervisor mentioned and that I agree with is my discipline. I definitely how to get all of the student's attention in an efficient way, but I think variation in this as well as other ways to say "voices off" should occur. It's a tough balance because some of the fourth graders can be extremely difficult to have behave for you unless you're stern with them, but I want to make sure to build that rapport with them before being stern in discipline.

Bacteria vs. Viruses

Bacteria

- Prokaryotic cell
- Most are free-living (some parasitic)
- Relatively large size
- *Antibiotics* used to kill bacteria



Virus

- Not a living cell (genes packaged in protein shell)
- Intracellular parasite
- 1/1000 size of bacteria
- *Vaccines* used to prevent viral infection
- Antiviral treatment

