Lesson Plan

Grade: fifth

Subject: science

Materials: science book, white board, marker, pencil, observation checklists

Technology Needed: none

Instructional Strategies:

- € Direct instruction
- € Guided practice
- € Socratic Seminar
- € Learning Centers
- € Lecture
- € Technology integration
- € Other (list)
- € Peer teaching/collaboration/ cooperative learning
- € Visuals/Graphic organizers
- € PBL
- € Discussion/Debate
- € Modeling

Guided Practices and Concrete Application:

- € Large group activity
- € Independent activity
- € Pairing/collaboration
- € Simulations/Scenarios
- € Other (list)
- € Hands-on
- € Technology integration
- € Imitation/Repeat/ Mimic

Explain:

Standard(s)

5-PS1-3- Mark observations and measurements to identify materials based on their properties.

Objective(s)

By the end of the lesson, students will have created a T-chart to demonstrate their understanding on categorizing different materials based on their properties of solid, liquid, gas.

Bloom's Taxonomy Cognitive Level: create

Differentiation

Below Proficiency:

- Students will be able to gain ideas from their book as they were reading
- Student will be able to talk about different materials and properties with their peers during turn and talks
- Students can use the ideas from the T-chart on the white board

Above Proficiency:

- Students can write different materials down that they come up with on their own
- Students can write a brief description as to how they know a material is categorized in a certain way
- Students can help explain their thought process and knowledge to another student during turn and talks

Approaching/Emerging Proficiency:

- Students can use the teacher's white board for ideas and then add onto them
- Students can use the book to guide them to categorizing different materials and naming what they are
- Students can start to explain how they know that a material is categorized in a certain way

Modalities/Learning Preferences:

- Visual - through reading information in a book, looking at the information on the t-chart/board,

	and looking at the information on the properties chart ● Kinesthetic - actually moving around and pretending to be the particles of a solid, liquid, or gas (in a safe way with our masks on) ● Auditory - listening to their partners and themselves read aloud to each other, listening to the class discussion when discussing different materials and categorizing them, and listening to their peers during turn and talks.
Classroom Management- (grouping(s), movement/transitions, etc.) ● Attention getter ○ (give me ___, hold up ___ amount of fingers) ○ Eyes and ears on me in three, two, one ○ Back to your seats in five, …, one ● When students will be seated at their tables and have a voice level of 0 during instruction time ● Students should have nothing on their tables until asked to get their science notebook and pencil out ○ if they have something on their table, then I will ask the students if their job is to be listening or to have materials out right now ● Teacher will use the "give me __" method to gain the student's attention back to start cleaning up ● After turn and talks, I will call the students back to me by saving, "eyes on me in 5,.. 1" ● When students will be moving into groups for the reading activity with their peer, they will be except to move quietly, safely, and efficiently ● Teacher will share out how many minutes the students have left so they can pace themselves while reading through their book with their peer ● When I need to get the students attention back, I will call out "class, class" for them to reply "yes, yes" ○ Repeat if needed ● Students will use voice level 1 while they are reading with their partners and also during the pair and share time ● If a student is talking out of turn or during instruction, the teacher will remind them that she only wants to hear from students who raise their hand	**Behavior Expectations- (systems, strategies, procedures specific to the lesson, rules and expectations, etc.)** ● Students will not blurt out when teacher is talking ● Students must have whole body listening (listening with their eyes and ears) ● Students must not lay their heads on the table when teacher is talking ● Students must raise their hands when they want to answer a question ● Students will work independently when they are creating their T-chart ● During turn and talks, students must participate with their peers ● Students must be working, and if they have a question they may ask a neighbor for help or raise their hand so a teacher can help ● Students must participate during the reading time with their partner. They can choose if one partner reads the whole section or if they take turns, as long as they are active listeners and/or readers. ● Students must come back to their seats and put their books back when they are called in by the teacher ● When students are helping their peers, they will be expected to be on task and help guide their classmates to the answers, not just tell them the answers

Minutes	Procedures
	Set-up/Prep: ● Set up books on every other table ● Have markers accessible at the front of the room at the white board ● Video up and ready - https://thewonderofscience.com/phenomenon/2018/7/9/supercooled-water

	Engage: (opening activity/ anticipatory Set – access prior learning / stimulate interest /generate questions, etc.) ● Start with the video ○ https://thewonderofscience.com/phenomenon/2018/7/9/supercooled-water ○ This video shows a bottle of water changing from a liquid to a solid ○ "Scientists, today we may not be doing this same experiment, but what kinds of properties did you see or are within the video?" ■ (liquid - water, solid - ice, and air in the car - gas) ○ "Today learners, we are going to be talking about states of matter."
	Explain: (concepts, procedures, vocabulary, etc.) ● Vocabulary - states of matter, solid, liquid, gas, property ● Teacher is going to start the lesson out by handing out every other table with a set of books - the students who have books with find someone who does not have a book to be their reading partner ○ Students are going to read the pages pg. 21-25 ○ Students can choose if only one partner wants to read the whole thing while the other partner listens, if they want to talk turns, etc. ○ Students must stay on task and they should be an active listener or an active reader when they are participating in this group work ○ Students will have about 15 minutes to read though this section of the book ■ If students get done early - then teacher will pose them with the question to pick out what they think is the most important information from each section of the reading ○ Teacher will use a time check and count down to see how many minutes students need and/or tell them how much time they have left in their peer reading ○ During this time, the teacher will walk around and talk with the students and as them different questions ● Teacher will use an attention getter to reign the students back in - teacher will also ask students to return to their original seats in the classroom ● After the students have done the peer reading, the teacher will write the words solid, liquid, and gas on the board. Teacher will ask, "What do these words mean? What is the relationship between these words? How do you know if something belongs within this property?" ○ Have the students do a turn and talk for about 2 minutes ○ Give students a countdown (ex: you have about 30 seconds left in your group discussion) ○ Call students back in with an attention getter ○ Reminder that voices are at a level 0 now if needed ● Have students take out their science notebooks and make a T chart with the words solid, liquid, and gas ○ Teacher draws out a t chart on the board as well ○ "Scientists, when I am thinking about these states of property I am wondering to myself how I know that something can be categorized into a certain state of property. When I am thinking of carbon dioxide, how do I know what property it belongs under? Why is a gas a gas? How do you know?" ■ For example… "I know water is a liquid because it doesn't have a definite shape." ○ Give the students about 2-5 minutes to discuss different ideas and how they know when to categorize something under a certain state of property ● "Learners now that you have discussed different ideas of how you know to categorize something under solid, liquid, gas which are different states of matter, what are some things that you have discussed?" ○ Teacher is going to write down a couple examples under each category on the white board ○ Students are going to take notes with the teacher using their T chart in their science notebook ● "Now scientists, you are going to add at least two thoughts or ideas into each category onto your own T chart. You can use your book for a resource if you need to research something."
	Explore: (independent, concrete practice/application with relevant learning task -connections from content to real-life experiences, reflective questions- probing or clarifying questions) ● The learners are going to add onto their t chart explaining ways on how they know something is a solid, liquid, or gas ● Students can list examples of these different states of matter as well

	● Prompt students with questions - "Learners, how do you know _____ is _____? What is telling you that? What are solids made up of? What are liquids made up of? Gas?" ● **Since this is an introductory lesson, the students will be exploring more of this idea on Friday's lesson** ○ **Students will be exploring different states of matter with water and salt. They will be using scales to measure different matter, etc.** ● "Scientits, before you get ready for lunch, I want each of you to come up and write something under one state of matter that you have used under the T chart you created. I will have you come up and write something once I have given you a marker. When you are done with your marker, pass it on to another classmate."
	Review (wrap up and transition to next activity): ● "Scientists, today we were introduced to three states of matter, what are they? We have each of them written down now in our science journals with some facts. When we come back to science on Friday we will be continuing to learn about different aspects about states of matter. Now please get your science things put away and ready for Mr. Silbernagel instructions."

Formative Assessment: (linked to objectives)

Progress monitoring throughout lesson- clarifying questions, check-in strategies, etc.

- T chart - teacher will look in the student's science notebook at their t chart to see if they are understanding the difference between the states of matter
  - Teacher will check to see if there are at least 2 comments under each state of matter
  - Teacher will check to see if the students wrote reasons and not just objects that belong under each state of matter
- Teacher observation when the students came up to the write board to write their answer for the class and also listening in on different conversations during turn and talks

Consideration for Back-up Plan:

Summative Assessment (linked back to objectives)

End of lesson:

For this lesson plan there will be no summative assessment. The students will be continuing to work on this subject during the next science lesson on Friday and they will have a summative assessment that follows that lesson. The students are just being introduced to the topic and were only formatively assessed.

If applicable- overall unit, chapter, concept, etc.:

Reflection (What went well? What did the students learn? How do you know? What changes would you make?):

For this first science lesson, I felt like it was a little bit “blah”. Since the fifth grade students switch classrooms for science and social studies class I modeled what I taught from what I observed the other fifth grader teacher doing. For this particular day the students were just begging the unit on solid, liquid, and gas and the students also start each section from reading from their textbook. If I were to teach this lesson again I would have not had the students read from their tests books together. I feel like this can be boring for some of the students or some students might not understand the context of what they are reading. I would come up with something more interesting for the students to learn about solid, liquids, and gases. If I would teach this lesson again I would like to come up with more of a group discussion and I would introduce this topic but having different materials in front of me as solid, liquid, and the “gas”/oxygen around me. I would also have created a powerpoint for the students so we have gone over these words and terms together. I should have taken the information from their books and created something more engaging where we could have had more of a class discussion about this topic. This lesson still doesn’t sit right with me because I feel like I did a disservice to the students about having to read from a textbook and then I expected them to learn. Out of all my lessons this semester, I wish I could redo it in a different way. On the flip side of things, what I did like about this lesson is the fact that I had the students create a “triple T” chart. This helped students organize their ideas and thoughts. Before the students created these charts, our class discussed what it is that makes a solid, liquid gas a solid, liquid, and gas. The students had many ideas before they were able to create their t chart. I also liked at the end of the lesson how the students each had the opportunity to write up two ideas under two categories on stating whether it was a solid or a liquid. I like this last activity since it was an introductory activity. I was able to see the student’s understanding of what solids, liquids, gases were and their reasoning for defining each of these categories. If I were ever going to do this activity again, I would change over half of this original plan before I thought it!