

## Matter

<b>Grade:</b> 2 <sup>nd</sup> Grade		<b>Subject:</b> Science	
<b>Materials:</b> PowerPoint and math manipulatives (different colored/ shape blocks or buttons)		<b>Technology Needed:</b> Active Board	
<b>Instructional Strategies:</b> X Direct instruction X Guided practice € Socratic Seminar € Learning Centers € Lecture X Technology integration € Other (list)		<b>Guided Practices and Concrete Application:</b> X Large group activity € Independent activity X Pairing/collaboration € Simulations/Scenarios € Other (list)	
<b>Standard(s)</b> 2-PS1-1: Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties.		<b>Differentiation</b> <b>Below Proficiency:</b> I pair this student with an at or above proficient student.  <b>Above Proficiency:</b> I will pair this student with a below proficient student.  <b>Approaching/Emerging Proficiency:</b> I will not change anything for this student.  <b>Modalities/Learning Preferences:</b> Visual – I will have information displayed on the active board. Auditory – I will provide verbal explanations. Tactile – Students will be sorting the items in the bucket. Kinesthetic – Students will be walking to the active board for a interactive game.	
<b>Objective(s)</b> By the end of the lesson students will know how to plan and conduct an investigation to describe and classify different kinds of materials by their observable properties by sorting a variety of materials and classifying whether it is a solid, liquid, or gas.  <b>Bloom’s Taxonomy Cognitive Level:</b> Apply and Analyze			
<b>Classroom Management- (grouping(s), movement/transitions, etc.)</b> <ul style="list-style-type: none"> <li>Students will follow the classroom rules and procedures</li> <li>They will be partnered with a person sitting next to them</li> <li>I will use callbacks to gain students attention</li> <li>Students will walk up to the activeboard when it is their turn and walk back to their desks when they are finished.</li> <li>While working in groups or individually students voice levels should be at a 1.</li> </ul>		<b>Behavior Expectations- (systems, strategies, procedures specific to the lesson, rules and expectations, etc.)</b> <ul style="list-style-type: none"> <li>Students will follow classroom rules and procedures.</li> <li>Students will participate in group turn and talks</li> <li>If student(s) are distracted but the flexible seating choice they choose they will be asked to get a different chair.</li> <li>During groups instruction students voice levels should be at a 0.</li> </ul>	
<b>Minutes</b>	<b>Procedures</b>		
<b>5-8 Minutes</b>	<b>Set-up/Prep:</b> - Put together PowerPoint on Matter - Set out manipulatives for students to sort.		
	<b>Engage: (opening activity/ anticipatory Set – access prior learning / stimulate interest /generate questions, etc.)</b>		

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<b>5-8 Minutes</b>	<ul style="list-style-type: none"> <li>● Today for science we are going to start by sorting. You will partner with one person next to you and together I want to first just look at the object in front of you and I want you and your partner to discuss how you will sort the items. So, I will give you two minutes, go ahead and turn and talk with your partner about how you will sort the items in your bucket. Then once you and your partner have agreed on a way to sort you can start sorting the items.             <ul style="list-style-type: none"> <li>○ Allow students 2 minutes to talk with their partner and another 2 minutes to sort the items.</li> <li>○ Walk around and ask students how they are going to sort their objects.</li> <li>○ Give students 30 second warning to finish their thoughts then use call back, “1, 2, 3 eyes on me”</li> </ul> </li> <li>● Okay, I heard some great ways on how some groups will sort their buckets, now let’s go around the room and discuss how you sorted the items and why.</li> </ul>
<b>8-10 Minutes</b>	<p><b>Explain: (concepts, procedures, vocabulary, etc.)</b></p> <ul style="list-style-type: none"> <li>● (Go through PowerPoint)</li> <li>● So, what is Matter? Has anyone hear the word matter before?             <ul style="list-style-type: none"> <li>○ Allow students to turn and talk to the person next to them on what they think matter is.</li> </ul> </li> <li>● Everything that exists is made of matter. So, the desk you are sitting at and the chair you are sitting in are all made of matter, you are even made of matter. (Go through images on side) These are all made of matter</li> <li>● Scientist categorized matter into 3 categories: Solids, Liquids, and Gases which are referred to as states of matter.</li> <li>● Solids objects have a definite shape and you can not pass through them. Here I have an image of ice, which is the solid form of water.             <ul style="list-style-type: none"> <li>○ Allow 2 students to give other examples of solids.</li> </ul> </li> <li>● Liquid objects do not have a definite shape because it takes the shape of the container it is in and you can pass through them. Here I have a glass of water, which is a liquid. But what about the cup? Would that be considered a solid or liquid? Right, a solid because if I tried to put my hand through the side of the glass, I wouldn’t be able to, right?             <ul style="list-style-type: none"> <li>○ Allow 2 students to give other examples of liquids.</li> </ul> </li> <li>● The last category of the three state of matter is gas, which is loose particles that move around freely or can be tightly compacted together. Here I have a picture of steam and clouds these would be examples of water in gas form.             <ul style="list-style-type: none"> <li>○ Allow 2 students to give other examples of gases.</li> </ul> </li> <li>● So, who can raise their hand and tell me the one of the three states of matter?</li> <li>● Now that you all know what matter is and the states of matter, we are going to play a game on the active board. First, the scientist is going to give us a little more information on matter.</li> <li>● Next, for this game the scientist will have an item in his hand, and you will have to take it out of his hand. You will then have to decide whether that item is a solid, liquid, or gas and place it into the correct category</li> <li>● Can you give me a thumb up is that makes sense or a thumb down if that doesn’t make sense?             <ul style="list-style-type: none"> <li>○ <a href="http://www.abcya.com/states_of_matter.htm">http://www.abcya.com/states_of_matter.htm</a></li> </ul> </li> <li>● (After students have finished the active board activity hand out the matter story)</li> <li>● Now we are going to create a matter story, there are blanks throughout the story that you will fill in, but under each blank it says whether it should be a solid, liquid or gas. There is a word bank at the top for you to use if you would like, but you can also choose your own word to fill in the blank with.</li> </ul>
<b>5 Minutes</b>	<p><b>Explore: (independent, concrete practice/application with relevant learning task -connections from content to real-life experiences, reflective questions- probing or clarifying questions)</b></p> <ul style="list-style-type: none"> <li>● Students will go up to the activity board and decide whether the object presented is a solid, liquid, or gas.</li> <li>● Next, students will complete a matter story.</li> </ul>
	<p><b>Review (wrap up and transition to next activity):</b></p>

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- Now, going back to the objects that we sorted at the beginning of this lesson is there any other way that you would sort the objects.
  - The blocks could be sorted by color, shape or size.
  - buttons could be sorted by color, size, or number of hole

### Formative Assessment: (linked to objectives)

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

- Have students think back on information that has been covered to answer questions.
- Have students share examples.
- Check for understanding by thumb up or thumb down.

#### Consideration for Back-up Plan:

### Summative Assessment (linked back to objectives)

#### End of lesson:

- Have students write on a sticky note one thing that they learner or what they didn't understand. Then collect them and go through any questions with the class.

#### 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?):

#### After implementing the lesson the lesson plan has been revised based on reflection.

Overall the lesson went well. The students knew what matter was and the differences between solids, liquids, and gases by the end of the lesson. Throughout the entire lesson the students were really engaged and willing to participate. I did end up changing the lesson a little before implementing it. Rather than having the student's sort through multiple objects in a bucket I had them sort buttons and blocks in various ways. I felt this would make them think deeper on how to sort the object instead of just sorting the objects based on what they were, they would have to take one objects and either sort it by color, shape, or size. I would do this again instead of having them sort through a bucket of random objects. One thing that I would do differently next time is explain more information on what gas is and provide more examples of gas because I thought this was the type of matter that the students knew the least about. While the students were doing the interactive online game, everyone was engaged, and the students did great. Although, there was two students that were confused about different objects and where to place them and I didn't go a good job of explaining to the students why they didn't belong in that category. If this was to do this activity again or any other activity, next time I would pause the game/ activity and talk the students through why that object does not belong in that category. If I felt that the students didn't understand what matter is or the three type I would create a ghost note booklet for the students fill out while we discuss matter and the three types more in-depth. The students would then be able to reference the journal throughout the year to remind themselves what matter is and the three different types of matter. Lastly, I felt that this lesson was fairly short, I would like to add to the lesson by having the students create a story that involves the three types of matter so that they are able to apply what they learned and I would then be able to know if the students understand what the three types of matter are and different examples of each type.