

Natural Resources and Their Products

Grade: Third Grade		Subject: Science	
Materials: 6 computers with internet access, white board, white board marker, 8 premade resource papers, books on natural resources		Technology Needed: Computer with internet access for the video https://www.youtube.com/watch?v=8LfD_EKze2M , 6 computers for group research.	
Instructional Strategies: <input checked="" type="checkbox"/> Direct instruction <input checked="" type="checkbox"/> Peer teaching/collaboration/cooperative learning <input checked="" type="checkbox"/> Guided practice <input checked="" type="checkbox"/> Visuals/Graphic organizers <input type="checkbox"/> Socratic Seminar <input type="checkbox"/> PBL <input type="checkbox"/> Learning Centers <input checked="" type="checkbox"/> Discussion/Debate <input type="checkbox"/> Lecture <input type="checkbox"/> Modeling <input checked="" type="checkbox"/> Technology integration <input type="checkbox"/> Other (list)		Guided Practices and Concrete Application: <input checked="" type="checkbox"/> Large group activity <input checked="" type="checkbox"/> Hands-on <input type="checkbox"/> Independent activity <input checked="" type="checkbox"/> Technology integration <input checked="" type="checkbox"/> Pairing/collaboration <input type="checkbox"/> Imitation/Repeat/Mimic <input checked="" type="checkbox"/> Simulations/Scenarios <input type="checkbox"/> Other (list) Explain:	
Standard(s) 3.5.2. Identify different uses (e.g., building materials, sources of fuel) of Earth's materials based on their properties		Differentiation <p>Below Proficiency: The students below proficiency will be asked to identify some uses of Earth's materials. They will also be placed in groups with peers of other proficiencies so that they may learn from each other. These students will be given further clarification on questions as well as additional help understanding the concepts.</p> <p>Above Proficiency: The students above proficiency will be asked to identify a variety of uses for Earth's natural resources. They will also be responsible for helping their peers to understand the concepts of natural resources and their products.</p> <p>Approaching/Emerging Proficiency: The students approaching proficiency will be asked to identify a variety of uses for Earth's natural resources. They will also be encouraged to ask and answer questions to demonstrate their understanding of concepts.</p> <p>Modalities/Learning Preferences: This lesson is visual, auditory, and tactile. It is very hands-on through allowing the students to dig into their own research to learn about different natural resources and their products. This lesson was designed with a student who is nonverbal in mind. To accommodate their needs, an aid will accompany him in his group research and he will also be allowed to research on his own through a personal iPad. If students prefer to work alone they may also do so.</p>	
Objective(s) At the conclusion of the lesson, the student will discover the different uses of Earth's materials based on their properties by researching the products of given natural resources.			
Bloom's Taxonomy Cognitive Level: Application			
Classroom Management- (grouping(s), movement/transitions, etc.) Each of the groups for the group research will be predetermined by the teacher to prevent chaos and upset students. The students will transition one by one in their groups to a computer for their research time. The groups will be allowed to sit wherever in the classroom to complete this research. During the research, the teacher will ensure at least one person is writing for each group and that they are all taking equal parts of the work.		Behavior Expectations- (systems, strategies, procedures specific to the lesson, rules and expectations, etc.) The students are expected to treat each other and the school property with respect. They are expected to use the computers for only research in the given time frame and not be on any other websites. If the students do not follow this rule, they will be given books to research instead. Discussion within the groups is highly encouraged and the students should be active participants in the research. If a student becomes angry or upset for any reason, they will be allowed to move away from the groups to calm themselves down. They may also be given the opportunity to work alone. If students have any problems, they will be expected to ask questions to each other and/or the teacher.	
Minutes	Procedures		
5-10	Set-up/Prep: Prior to the lesson, the teacher will get six pieces of paper and write the names of three resources on each. The teacher will then get the YouTube video https://www.youtube.com/watch?v=8LfD_EKze2M set up and ready to go and ensure there are 6 laptops available and charged. Next, the teacher will predetermine the research groups and have books on natural resources ready to go. Lastly the teacher will go to the board and create a two column table. The first column will be labeled natural resources and the second will be labeled products.		
	Engage: (opening activity/ anticipatory Set – access prior learning / stimulate interest /generate questions, etc.)		

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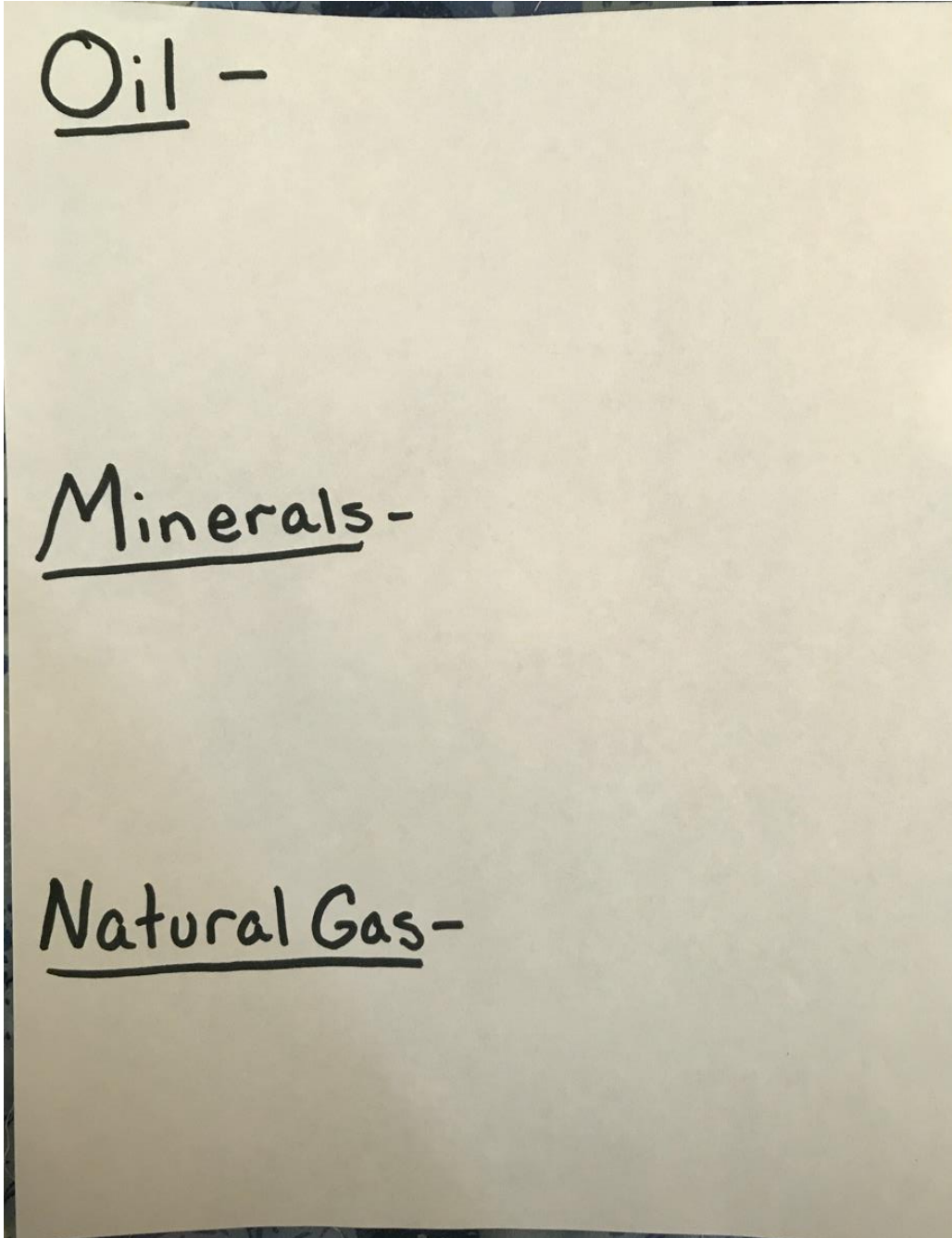
5-10	<p>To begin the lesson, the teacher will ask the students to look around the classroom for a few seconds. Have them come back to you and ask them what they noticed (desks, table, worksheets, pencil, water bottles, etc.) Tell them that each of these things they have noticed comes from something called a natural resource. Ask the students to turn and talk to their neighbors about what they think a natural resource may be. After a minute or less have the students come back and relay their thought. Tell the students that a natural resource is something that we can get from the earth such as air or water. Also tell the students that natural resources are important to help us keep living. Ask them why this may be true.</p>	
5-10	<p>Explain: (concepts, procedures, vocabulary, etc.) Next play the video on natural resources for the students https://www.youtube.com/watch?v=8LfD_EKze2M. Have them pay special attention to the resources that are mentioned in the video and what they can be used for in our everyday lives. After the video is over, ask the students what natural resources were mentioned in the video. Refer to the chart and list these resources in the first column. If the students miss important ones give them hints until they guess it and then have them discuss why.</p>	
20-30	<p>Explore: (independent, concrete practice/application with relevant learning task -connections from content to real-life experiences, reflective questions- probing or clarifying questions) Once the resources are listed, split the students up into predetermined groups of three and give them each a piece of paper with three different resources on it (see attachment 1). (Students can also work alone if they prefer.) Tell them that as a group they will have to research and write down what products can be made out of the natural resources listed on their paper. Inform the students that some may have only one product while others may have many. Ask for questions and allow the students to begin their research in their groups. As they research, the teacher can walk around answering questions, looking for good discussion and collaboration, and helping the groups think through their research.</p>	
5-10	<p>Review (wrap up and transition to next activity): To wrap up the lesson, the teacher will have the students come sit on the floor up front. The groups will then go through their findings on the natural resources they were given and the teacher will write the products down on the board. The students and teacher will then have a quick review of what natural resources are and how they help us in our everyday lives. The teacher will ask for questions, and have the students return to their desk to transition to the next lesson.</p>	
<p>Formative Assessment: (linked to objectives) Progress monitoring throughout lesson- clarifying questions, check-in strategies, etc. The students will be assessed through asking them questions, checking in on their research and what they are learning, and by asking them to make connections between natural resources and their products.</p> <p>Consideration for Back-up Plan: If in the case of technology malfunction, books on natural resources will be available for the students to research.</p>	<p>Summative Assessment (linked back to objectives) End of lesson: At the conclusion of the lesson, the students will be assessed on their discovery and identification of the different uses of Earth's materials based on their properties through their findings on the products of given natural resources.</p> <p>If applicable- overall unit, chapter, concept, etc.: N/A</p>	
<p>Reflection (What went well? What did the students learn? How do you know? What changes would you make?): I think this lesson went very well! The students were engaged the entire time, and after I had finished teaching science there was still some talk about the lesson throughout the day. There were many pros to this lesson such as the good engagement and collaboration it fostered, the questions I asked to get the students thinking, and the turn and talks that I incorporated. All of these methods were great to get the students thinking about the subject as well as to draw their interest. Another pro to my lesson is the great grabber that I used at the beginning. By asking the students to make connections to their classroom they were immediately interested in everything else I had to say. One thing about the grabber that I didn't notice when I was teaching is that I referred back to it at the end of the lesson. I had no idea that I actually did this, but it was a great way to wrap up the lesson and give the students closure on what they were learning. One last pro of this lesson was the research. The students loved the research and were excited to share their findings when we came back together later as a group. Even though there were many pros to this lesson, there were also some cons. My biggest con was not finishing on time. At the end when the students could share their findings, we ran out of time, so not everyone could share. To fix this in the future, I will either have a whole group report on a topic, have less topics, or only put down one product for each natural resource. Another con to this lesson were the upset students when it came to the computers. While most of the students had no problem finding a job to do, a few groups struggled. To eliminate this, in the future I will start each group of three off with a book, a computer, and a writer. Then, every five minutes I will have them rotate their jobs. This way the students know they will each get a fair chance to help with the research in the way they want to. With the books in mind, I also plan to have more on hand next time. Prior to the lesson I thought I would use the books just in case, but the students gravitated toward the books way more than I expected them to. Had I known this, I would have gotten way more books! One last con I have for this lesson is that I did not give the best instructions on what the groups should research. As I was walking around many of the groups were confused or looking up the wrong things. When I seen this I tried to tell each group individually which only somewhat worked out. To change this, I will be sure to give clearer directions, and if I notice the students are unsure when working, I will gain their attention and elaborate on what I want them to research. Overall this lesson went very well. I was excited to teach it, and I think that helped in getting the students excited to learn. I was also very happy for myself in how I was able to deescalate situations with the one student. I think knowing him and his needs while also giving him encouragement was so</p>		

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important. Initially when I seen him under his desk at the beginning of the lesson I thought 'oh no,' not this, but I quickly reversed my thinking into 'what can I do to help him.' I think this split decision was the one thing that grabbed him for the rest of the lesson. Having me come and help him out told him that I am there to help him, not make him afraid or angry. In the end, I think the students were able to learn about the concept of natural resources in a way that was fun, engaging, and beneficial to their learning. I know this because I could see them thinking, talking with their peers, and showing great knowledge and excitement when I asked them questions about the subject.

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(Attachment 1)



Oil -

Minerals -

Natural Gas -