

Name Tiffany Holt**Lesson Plan**Learning Segment Focus Erosion Lesson 2 of 3Course & topic addressed Earth Science/Weathering Date 12/01/2020 Grade 4th**Student Outcomes**

Specific learning objectives for this lesson.	Students will be able to compare and contrast weathering and erosion along with list the process that causes the weathering and erosions, and to identify the various effects of weathering and erosion.
Justify how learning tasks are appropriate using examples of students' prior academic learning .	This task will allow the assessment of spelling, properly following instructions (implementing listening skills), and properly using their collaboration skills. This will also allow the assessment of the retained information.
Justify how learning tasks are appropriate using examples of students' personal, cultural, linguistic, or community assets .	The lesson plan will be one or more of the following: personal and community. Students will learn how their community was formed. The students will have personal experiences that they will be able to share with the class. They will understand, after the lesson, how their favorite creek, pond, tree, or spot was made.

State Academic Content Standards

List the state academic content standards with which this lesson is aligned. Include abbreviation, number & text of the standard(s).	4-ESS2-1. Make observations and/or measurements or provide evidence of the effects of weathering or the rate of erosion by water, ice, wind, or vegetation.
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Key Vocabulary

What vocabulary terms/content specific terminology must be addressed for students to master the content?	Weather, erosion, abrasion, absorption, condensation, lakes, rivers, rivers, creeks, evaporation, soil, gravel, decompose, decomposer, deposition, oxidation, infiltration, mass movement, land, surface, continental divide, transpiration, acid rain
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Academic Language Support

What are the Academic Language Function(s) (the content and language focus of the learning task represented by the active verbs within the learning objectives/outcomes) and explain how they are utilized in the lesson plan? What planned Academic Language Supports will you use to assist students in their understanding of key academic language to express and develop their content learning and to provide varying supports for students at different levels of Academic Language development? How do these supports address all three Academic Language Demands (vocabulary, syntax, and discourse) ?	The academic language used will be that of the vocabulary: weather, erosion, abrasion, absorption, condensation, lakes, rivers, rivers, creeks, evaporation, soil, gravel, decompose, decomposer, deposition, oxidation, infiltration, mass movement, land, surface, continental divide, transpiration, acid rain. The vocabulary words will be utilized by performing activities and experiments during class. The students will list the words while performing the activities. They will demonstrate their listening, speaking, and writing skills.
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Materials

Materials needed by teacher for this lesson. (such as books, writing materials, computers, models, colored paper, etc.)	Projector or smart board, internet, computer, paper, pen or pencil, cookies, water, toothpick, q-tip, water, safety goggles, paper plates, cups, timer
Materials needed by students for this lesson. (computers, journals, textbook, etc.)	Paper, pen or pencil, cookies, water, toothpick, q-tip, water, safety goggles, paper plates, cups

Lesson Timeline with Instructional Strategies & Learning Tasks

Amount of Time	Teaching & Learning Activities (This should be a BULLETED LIST)	Describe what YOU (teacher) will be doing and/or what STUDENTS will be doing during this part of the lesson. (This should be VERY DETAILED)
5 minutes	<u>Introduction:</u> We will review what we have learned about the difference between weathering and erosion.	I will be standing in the front of the classroom helping the student review. I will ask them questions about the material previously learned on weathering and erosion.
35 minutes	<u>Instruction:</u> <ul style="list-style-type: none"> • Students will be placed into groups (depending on how many students are in class, there will be 3-4 per group. • Students will get the necessary materials to complete the activity. (Per group: safety goggles, 3-4 chocolate chip cookies, 3-4 paper plates, 3-4 q-tips, 3-4 toothpicks, and a small cup of water.) • The very first thing students will do is put their safety goggles on. • Students will start with Q-tip erosion. Students will place their cookie on the first plate and they will try to break the cookie with the q-tips. (not much will happen) Students will record their data onto the worksheets they were given. • Students will put the second cookie they were given on a second plate, get a toothpick, and try to break their cookie. (This is when it is important for the students to have their goggles on because pieces will fly off of the plate.) Students will record their data on the worksheets they were given. • Students the last cookie and place it on the third plate. They will designate a person from their group to control the timer. The students will pir the small cup of water onto the cookie 	<p>While students prepare to begin their activity, I will prep my erosion table. I will explain the steps that we will be taking. I will ask them questions while explaining the steps such as, what do you think the outcome will be for the Q-tip erosion? For the toothpick erosion? For the water erosion?</p> <p>As we go through the erosions, I will be completing the activity as well. This will ensure that the students will know how to complete the lesson and assure them that they are doing it correctly. Using the overhead projector and the computer I will also be showing the students slides of erosion so they can compare and contrast what happens. (There are a few erosion pictures attached to the bottom)</p> <p>As we complete the activity, we will discuss why we think erosion happens. What benefits we get from it and what kind of problems it could cause. The answers that the students provide will help give me an understanding on their comprehension of the lesson.</p>

Amount of Time	Teaching & Learning Activities (This should be a BULLETED LIST)	Describe what YOU (teacher) will be doing and/or what STUDENTS will be doing during this part of the lesson. (This should be VERY DETAILED)
	<p>and time it for 1 minute. They will lift the cookie gently to see if anything has changed. They will record their observations while the timer is still moving. They will stop the timer at 5 minutes. The students will view the cookie to see if there was a change and record their observations.</p> <ul style="list-style-type: none"> • Lastly, the students will record their conclusions about which form of erosion was most effective and most efficient. 	
10 minutes	<p>Closure: We will play a jeopardy review game (attached below). Students will stay in groups and each group will get a chance to choose and answer a question. Students will have paper and pencil to keep score.</p>	<p>I will start with instructing the students on how to play the game. I will also inform them that it is up to the groups to keep score.</p> <p>I will be in front of the classroom using the projector and/or computer. I will be clicking the groups option, reading the questions, and revealing the answer.</p> <p>Once the game is over, I will dismiss for the next class.</p>

Accommodations/Modifications

<p>How might I modify instruction for: <i>Remediation?</i> <i>Intervention?</i> <i>IEP/504?</i> <i>LEP/ESL?</i> (All students who have plans mandated by federal and state law.)</p>	<p>For my students that need modification or help, I will provide worksheets that are filled in with the necessary information. I will provide illustrate instructions, so they will be able to look at the picture and see what is supposed to happen. I will also invite them to my table where I will be doing the activity along with the other students. There I will be able to provide the necessary assistance. I will be able to demonstrate the activity while closely viewing and interpreting their reactions.</p>
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Differentiation

<p>How might you provide a variety of techniques (enhanced scaffolding, explicit instruction, contextualized materials, highlighters/color coding, etc.) to ensure all student needs are met? (All students who are not on specific plans mandated by federal and state law.)</p>	<p>I will provide the materials needed to properly complete the lesson such as Paper, pen or pencil, cookies, water, toothpick, q-tip, water, safety goggles, paper plates, cups. There will be an explanation or instructions of the activity that we will be performing provided in the front of the classroom on the monitor or to the side of the screen on the white board.</p>
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Assessments: Formative and/or Summative

Describe the tools/procedures that will be used in this lesson to monitor students' learning of the lesson objective(s) (include type of assessment & what is assessed).	<input checked="" type="checkbox"/> Formative / <input type="checkbox"/> Summative	The cookie worksheets that the students will be filling out as they perform the activity.
	<input checked="" type="checkbox"/> Formative / <input type="checkbox"/> Summative	The jeopardy review game that will be performed towards the end of class.
	<input checked="" type="checkbox"/> Formative / <input type="checkbox"/> Summative	What knowledge the students have gain by doing the erosion activity.

Research/Theory

Explain connections to theories and/or research (as well as experts in the field or national organization positions) that support the approach you chose and justify your choices using principles of the connected theories and/or research .	It shows that erosion is a potential danger to our environment as it washes or takes away nutrient-rich topsoil that is needed to grow our food. It is important for students to understand the process, so that if there is a problem, they are able to help find a solution. It also helps students become aware of the geographic changes that may occur.
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Lesson Reflection/Evaluation

What went well ? What changes should be made? How will I use assessment data for next steps?	<i>TO BE FILLED IN AFTER TEACHING</i>
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Include supporting material such as slides, pictures, copy of textbook, and handouts for any activities students will be using as part of your lesson.

*adapted from: <http://webcache.googleusercontent.com/search?q=cache:EsQcNWuG1ZoJ:web.mnstate.edu/harms/StudentTeachers/edTPA-LessonPlan.doc+&cd=2&hl=en&ct=clnk&gl=us>; <http://www.moreheadstate.edu/getmedia/cd3fd026-939f-4a47-a938-29c06d74ca01/Lesson-Plan-and-Reflections.aspx>;
<http://www.mcneese.edu/f/c/9cb690d2/Lesson%20Plan%20Rubric%20Aligned%20with%20InTASC.docx>; <https://www.uwsp.edu/education/Documents/edTPA/Resource12.pdf>; <https://www.uwsp.edu/education/Documents/edTPA/Resource11.pdf>;
<https://www.uwsp.edu/education/Documents/edTPA/Resource11a.pdf>; <https://www.uwsp.edu/education/Documents/edTPA/LessonPlanTemplateSOE.docx>;
<https://www.uwsp.edu/education/Documents/edTPA/SpecEdLessonPlanGuide.docx>;
<https://www.uwsp.edu/education/Documents/edTPA/SpecEdLessonPlanTemplate.docx>

Jeopardy Powerpoint



EarthScienceReview
GameWeatheringErr

Erosion Worksheet

Cookie

Erosion Exploration

Exploration #1

When I used the Q-tip to erode the chocolate chip cookie, I observed:

Exploration #2

When I used the toothpick to erode the chocolate chip cookie, I observed:

Exploration #3

When I used water to erode the chocolate chip cookie for one minute, I observed:

When I used water to erode the chocolate chip cookie for five minutes, I observed:

Conclusions:

Pictures of Erosion



Padlet


Weathering and erosion

4th grade

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Erosion at home

Games



Make Your Own Erosion! - #sciencegoals by SciShow Kids

YOUTUBE

Updated 12-17-19 NLC

Students, this video shows how to make your own erosion activity home. Get your family involved. You WILL need to ask for an

This will lead to a set of games that you may choose from and at participate in. adult to help.

Rocks, Minerals, and Landforms: 2 StudyJams! Interactive Sciene Activities | Scholasti

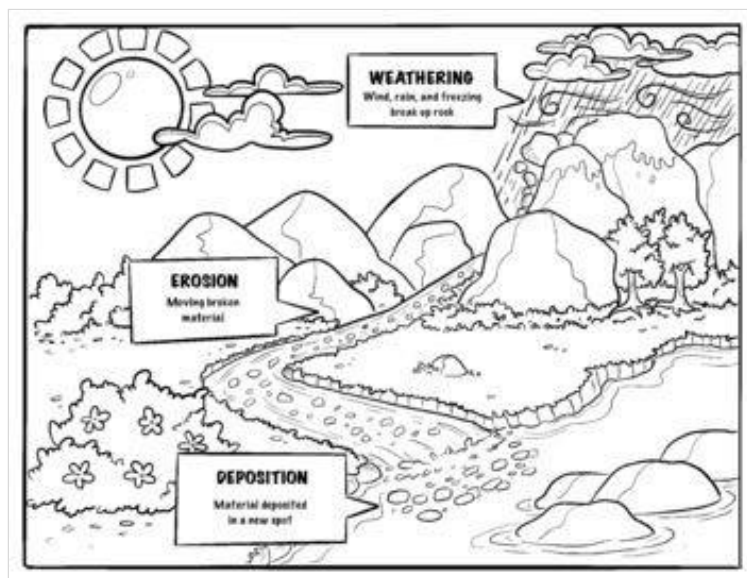
Introduce students to everything from volcanoes and earthquakes to fossils and sedimentary rocks using these 12 fun StudyJams! science activities.

SCHOLASTIC



Coloring worksheet

Print this worksheet off, color it, and turn it in. If you need help printing this off please let me know.





EarthScienceReviewGameWeatheringErosionandDeposition

Powerpoint presentation

PADLET DRIVE

Updated 12-17-19 NLC

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