

## Weath R. Ing and E. Rosion

**WebQuest Description:** You will embark on an adventure to investigate weathering and erosion and develop a creative way to prevent some of their effects!

**Grade Level:** 3-5

**Curriculum:** Science

**Keywords:** Weathering, Erosion, Rocks, Earth, Processes, Compare, Contrast, Science, Solve, Prevent, Presentation

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### Introduction

Imagine you live on the edge of a beautiful mountain right next to a rushing river. You have lived here your whole life, and all the people in your village enjoy the river and the windy climate. But there's a problem... Two forces worked to make your home such a wonderful place with a huge river and beautifully carved cliff on your mountain by wearing away the edges of the mountain to make room for the water to flow, but they just won't stop working now. And these forces are starting to wash more and more off the edge of your mountain cliff, threatening to destroy your homes! And all the while, your friends who live on the beach are dealing with a similar problem: these two forces are washing away the sand that they have built their homes on! Who are these two forces? They are weathering and erosion, commonly called Weath R. Ing and E. Rosion. Your town needs someone to come up with a way to stop them, to learn their strengths and weaknesses in order to protect the village from them. And they have chosen YOU!

### Tasks

In order to save your village and your friends' homes, your job is to find a partner so that you won't be outnumbered in your fight against Weath R. Ing and E. Rosion, investigate on the internet to get to know your enemies, then brainstorm ideas together on how to stop ONE of these enemies of your rock home! Finally, you and your partner will choose ONE idea to present at our village meeting on Friday. Your presentation should last 5 minutes, and you'll need to use some kind of visual (like a PowerPoint or poster) to help us understand your plan!

### Process

1. You may have heard it said that it's important to keep your friends close, but you have to keep your enemies closer, because the best way to learn how to defend yourself from them is to know their strengths and weaknesses. In order to fight Weath R. Ing and E. Rosion, you'll first need to investigate them by following the links below. Take notes on what you find, and pay close attention to the way they work together, but have different jobs: Read Chapter 4 and Chapter 5 on this KidsGeography website, using the arrows to navigate through the different parts of each chapter. Read the Geography4Kids articles on weathering and erosion. Watch this video on water erosion in Hawaii by clicking "view" next to the video, then review the short "background essay" on erosion under the video. You may locate and gather clues from a few more websites of your own during your investigation if you want ;)
2. Now, to help you interpret and remember the things you have been reading about, scroll to the bottom of this page and watch video on weathering and erosion...but don't be fooled: this video was made early in their career when they were superheroes, but now they've become supervillains!
3. To make sure you are fully prepared for your mission and that you can tell the differences between Weath R. Ing and E. Rosion, take the quiz (by clicking the Quiz button on menu on the left).
4. Once you feel confident with your knowledge, work with a partner to brainstorm ideas on how to stop one of these enemies! Choose your favorite idea to develop, thinking through every part of it carefully.
5. Finally, before you can commence your mission, you must share your plan with the rest of the village at our town meeting on Friday. Put together a presentation to last 5 minutes and include some kind of visual (like a poster or a PowerPoint presentation) to explain your plan. Make sure you choose just ONE villain to fight, and that you make clear how your plan will stop the effects of this force. And remember, you were chosen for your creativity and intelligence; your village is counting on you!

### Evaluation

Your quiz grade will only count towards class participation, and help the teacher make sure everyone understands the material we're investigating. The rubric below will be used to evaluate the class presentations based upon: completeness, creativity, communication, and correctness of information.

Category and Score					Score
Completeness	More than 2 minutes to long or short, solution does not address either problem, no visual aid	2 minutes too long or short, solution only addresses part of one of the problem or attempts to address both without distinguishing between them, inadequate visual aid	1 minute too long or short, solution addresses one problem but not sufficiently, adequate visual aid	Within 30 seconds of 5 minute length, solution is directly related to one of the problems, excellent visual aid	5
Creativity	Presentation is dull and uncreative, evidence that insufficient time was put into the preparation.	Presentation displays some effort or creativity, but there evidence that insufficient time was put into the preparation.	Presentation displays adequate effort and creativity, evidence that time was put into the preparation, but not as good as it could be.	Presentation displays excellent effort and creativity, evidence that sufficient time was put into the preparation.	5
Communication	Communication is unclear and difficult to understand.	Communication is clear, but ideas are difficult to understand	Communication is understandable, but unclear and/or difficult to follow.	Excellent, clear communication of ideas that is easily understood by audience.	5
Correctness of Information	Most information is factually incorrect, displays misunderstanding of the two processes.	Some information shared is factually incorrect, and shows a limited understanding of the two processes.	All information shared is factually correct and shows an adequate understanding of the two processes.	All information shared is factually correct and shows a complete understanding of the two processes.	5
				Total Score	20

## Conclusion

You have completed your mission, and your ideas will work to save your village and your friends' beach homes! Remember, while Weath R. Ing and E. Rosion work together, they have different jobs: Weathering is the breaking down of rock by wind, water, ice, temperature change, and plants Erosion is the movement of rock by gravity, wind, water, and ice Share what you've learned with your friends and family, and next time you see the news talking about weathering and erosion, you'll know exactly what they mean :)

## Teacher Page

Florida Sunshine State Standard: SC.4.E.6.4 Describe the basic differences between physical weathering (breaking down of rock by wind, water, ice, temperature change, and plants) and erosion (movement of rock by gravity, wind, water, and ice). Process Skills Involved: Observing, Inferring, Classifying, Communicating, Organizing/Analyzing Data, Understanding Cause and Effect Objective: Through reading and viewing internet sources, students will develop an understanding of weathering and erosion so that they can complete a quiz comparing the two forces with a minimum score of 80%, then work with a partner to design and present a prevention plan for one of the two forces, which will be graded using the rubric on the evaluation page. Materials: art supplies to create poster (markers, crayons, stencils, etc.) OR presentation software such as PowerPoint References: Teachers' Domain. Water Erosion. (18 November 2008). Retrieved from <http://www.teachersdomain.org/resource/nat08.earth.geol.eros.erosion/> KidsGeo.com. (2010). Chapter 4-An Introduction to Erosion. Retrieved from <http://www.kidsgeo.com/geology-for-kids/0059-introduction-to-erosion.php> KidsGeo.com. (2010). Chapter 5-Erosion by Water Processes. Retrieved from <http://www.kidsgeo.com/geology-for-kids/0074-erosion-rivers-lakes-streams.php> Rader, A. (2009). Erosion. Retrieved from [http://www.geography4kids.com/files/land\\_erosion.html](http://www.geography4kids.com/files/land_erosion.html) Rader, A. (2009). Weathering. Retrieved from [http://www.geography4kids.com/files/land\\_weathering.html](http://www.geography4kids.com/files/land_weathering.html) Scholastic. Study Jams!: Weathering and Erosion. Retrieved from <http://www.youtube.com/watch?v=lyysL02ZvQ8> Note: This webquest requires students to spend the first part of their time on the computer, but the rest developing a presentation to share with the class. I would suggest using this over the course of a week or two so that students have ample time to create enjoyable presentations, and since they will be working with partners, they will need in-class time to work on the project prior to presenting.

### Standards

### Credits

### Other