

Lesson #4: What Can I Do?
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Lesson Components	Description
Identification of the Class	Subject: Earth Science Grade: 9th Number of Students: 26 Method: Problem-based
Virginia Standards of Learning & National Educational Technology Standards (Students)	Virginia SOL: ES.8e: The student will investigate and understand how freshwater resources are influenced by geological processes and the activities of humans <ul style="list-style-type: none"> e) Dependence on freshwater resources and the effects of human usage on water quality NETS-S.1b: Creativity and innovation – Students demonstrate creative thinking, construct knowledge, and develop innovative products and processes using technology. <ul style="list-style-type: none"> b) Create original works as a means of personal or group expression
Lesson Objectives	<ul style="list-style-type: none"> • The students will identify ways that they impact the water quality. • The students will write a two page essay using collaborative writing with Google Documents on ways to improve our water quality in our daily lives. • The students will review at least three other essays and make suggestions and comments.
Materials	<ul style="list-style-type: none"> • Computers
Procedures	<ol style="list-style-type: none"> 1. Have groups of four identified for collaborative writing. 2. Present students with this scenario: <ol style="list-style-type: none"> a. The Rappahannock River's water quality has been decreasing. The "dead zone", where nothing can live, is now seven times larger than all of the other rivers in Virginia combined. This is caused by excess nutrients from pet waste, fertilizers and waste water treatment plants as well as from sediment from erosion and construction. As the population in the watershed continues to increase, protecting the river will be even more important. We have to come up with some practices that people can do every day to protect its water quality. 3. Ask students if they have any ideas of how they affect the river. What can they do to help? 4. Tell students they will be researching ways that they can

	<p>improve water quality in their daily lives.</p> <p>5. After researching, students will begin writing their essays using Google Documents.</p> <p>6. Students will share their essays with me and the three others members of their assigned groups.</p>
Assessment & Evaluation	<p>Students will be evaluated on:</p> <ul style="list-style-type: none"> • Thoughts and quality of the essay • Comments and suggestions to three classmates

Example of a Google Document: <https://docs.google.com/document/d/10cFm-5q1CB3A3JnXEorzb67EriHplVjozMu6n3Y22hU/edit?usp=sharing>