

## Water Quality

name: \_\_\_\_\_

date: \_\_\_\_\_

class: \_\_\_\_\_

Welcome, teachers, to your guide for successful student completion of the Water Quality Self-Paced Assignment, a webquest designed to help your students become more aware of the science behind keeping water sources clean and able to be used by the populations surrounding them. Your students will want to save a copy of this assignment to a cloud storage platform, flash drive or computer. They will follow your directions for submission of their assignment.

Before students begin this activity, they will need a computer with internet access and a writing utensil. Students will complete the assignment by visiting each of the linked items and answering the following questions.

### Activity 1: Learn about careers in the industry

Students will explore the career opportunities by completing [this project \(grownextgen.org/workspace/uploads/files/natural-resources-careers.pdf\)](https://grownextgen.org/workspace/uploads/files/natural-resources-careers.pdf). Here is the rubric that will be used to grade their project:

	4	3	2	1
<b>Required elements</b>	The poster includes all required elements as well as additional information.	All required elements are included on the poster.	All but 1 of the required elements are included on the poster.	Several required elements were missing.
<b>Labels</b>	All items of importance on the poster are clearly labeled with labels that can be read from at least 3 ft. away.	Almost all items of importance on the poster are clearly labeled with labels that can be read from at least 3 ft. away.	Many items of importance on the poster are clearly labeled with labels that can be read from at least 3 ft. away.	Labels are too small to view <i>or</i> no important views were labeled.
<b>Graphics: relevance</b>	All graphics are related to the topic and make it easier to understand. All borrowed graphics have a source citation.	All graphics are related to the topic and most make it easier to understand.	All graphics relate to the topic. One or two borrowed graphics have a source citation.	Graphics do not relate to the topic <i>or</i> several borrowed graphics do not have a source citation.
<b>Attractiveness</b>	The poster is exceptionally attractive in terms of design, layout, and neatness.	The poster is attractive in terms of design, layout, and neatness.	The poster is acceptably attractive though it may be a bit messy.	The poster is distractingly messy or very poorly designed. It is not attractive.
<b>Grammar</b>	There are no grammatical/mechanical mistakes on the poster.	There are 1–2 grammatical/mechanical mistakes on the poster.	There are 3–4 grammatical/mechanical mistakes on the poster.	There are more than 4 grammatical/mechanical mistakes on the poster.

### Activity 2: Explore the issue

Students can complete the [“Water Quality” e-learning course \(elearning.grownextgen.org\)](https://elearning.grownextgen.org) to gain background knowledge about this topic. In this course, you will describe the factors used to judge water quality, identify activities that might lead to harmful algal blooms, explain the process and effects of cultural eutrophication, and describe the methods farmers can use to reduce the risk of cultural eutrophication. You will also hear from a soybean farmer about the methods he uses to prevent runoff.

1. Record five things you learned from the e-learning course:

***Answers will vary.***

2. In what ways has the growing population of the world impacted water quality?

***Answers will vary.***

3. What would you tell a consumer about water quality after completing the e-learning course?

***Answers will vary.***

4. Did your opinion about water quality change after completing the e-learning course? Why or why not? Be specific.

***Answers will vary.***

### **Activity 3: Connect to your life**

As a part of this activity, you will research the area near your home. To do so, please enter your home address into **Google Maps** ([maps.google.com](https://maps.google.com)). Then scroll through the map by zooming in, scanning left/right, and zooming out to examine the area near your home. Below, please identify landmarks or buildings that would cause non-point (source not easily identified) and point (source easily identified) pollution.

Address examined:

***Answers will vary.***

Sources of non-point pollution:

***Answers will vary.***

Sources of point pollution:

***Answers will vary.***

What were the biggest concerns in your community for pollution? Why?

***Answers will vary.***

**Extension:** Complete the activity at [grownextgen.org/workspace/uploads/files/water-quality.pdf](https://grownextgen.org/workspace/uploads/files/water-quality.pdf) to see the differences in water quality.

The National Environmental Education Foundation has additional information for students to help them learn about watersheds. [neefusa.org/watershed-sleuth](https://neefusa.org/watershed-sleuth) includes many activities for students to complete on their own to learn more.