# **Lesson 5: Watershed Design**

#### **Subject**

Final Assessment

#### **Objectives**

The students will:

- Design solutions to minimize human impacts on watershed health.
- Design a monitoring plan for assessing health of a waterbody

#### **Materials**

Worksheet

#### Size/setting/duration

Full class (independently)/indoors/30 minutes

#### **Background**

As a culmination of this unit student will design a healthy and unhealthy watershed. Key ideas include how they can reduce pollution, how impervious surfaces impact runoff, and how water quality determines the organisms which can live there.

#### **Procedure**

• Remind students of the site assessment completed at Cain Creek. Each student made at least three observations at Cain Creek which they can use to compare and contrast to their watershed designs. Using the information gained during this unit have students fill in the worksheet to show understanding of the unit.





#### **Next Generation Science Standards**

### Performance Expectations

MS-ESS3-3: Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment.

Scientific and Engineering Practices	Disciplinary Core Ideas	Cross-cutting Concepts
Constructing explanations and designing solutions	ESS3.C: Human Impacts on Earth Systems	Cause and Effect Influence of Science, Engineering, and Technology on Society and the Natural World

Graphics

None.

Worksheet

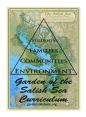




## **Watershed Design**

Design and map a healthy and unhealthy watershed and ocean intertidal zone. Use arrows to show the flow of run-off. Label the following features: a stream, the ocean, pervious and impervious surfaces, storm drains, vegetation, pollution sources, transportation, and energy sources. Indicate where the stream (with riparian or vegetated corridor) lies and where it enters the ocean.

Healthy Watershed	Unhealthy Watershed	







In the section below explain how you would test and monitor the health of both watersheds. What macro-invertebrates or organisms would you expect to find in each waterbody? Compare your designs to the site assessment you completed of Cain Creek.		

