

LESSON PLAN



Activity: How Lucky Is Your Duck?

Time: 30 minutes*

Grades: 6-12

Education Standards (NGSS):

MS-LS2-3, MS-LS2-4, MS-LS2-2, MS-LS1-5, MS-ESS2-4, MS-ESS3-3, MS-ESS3-4, MS-ES1-1, HS-LS2-6, HS-LS2-7, HS-LS4-5, HS-ESS2-5, HS-ESS3-1, HS-ESS3-4, HS-ETS1-2

Objective:

To understand the types of nonpoint source pollution, how our actions impact aquatic ecosystems, and what individual steps we can take to protect our waters and prevent stormwater pollution.

Materials Used for Activity

- Kiddie pool filled with numbered ducks
- Pictures of nonpoint source pollution
- Brochures on stormwater pollution
- Watershed map
- Worksheet on pollution prevention

Learning Outcomes

- What is a harmful algal bloom, and how does it affect aquatic ecosystems?
- What is cyanobacteria or blue-green algae and how does it affect humans?
- What is *E. coli*, and how does it affect humans?
- How does chloride affect aquatic ecosystems?
- How do excess nitrogen and phosphorus affect aquatic ecosystems?
- What kinds of everyday products contain surfactants, and how do they affect fish?
- How do excess sediments in water affect aquatic ecosystems?
- What are the common elements in fertilizer, and why is it important to test your soil?
- How do you maintain and extend the life of your septic system?
- How do hazardous wastes, like heavy metals and oils, affect aquatic ecosystems?

Lesson Plan Schedule*

- Pick a duck and find the source of pollution that has affected it: 5 minutes
- Q & A on how nonpoint pollution affects aquatic wildlife and ecosystems: 15 minutes
- Pollution Prevention Worksheet: 10 minutes

**Can be added to Nonpoint Source Pollution in Your Watershed Lesson Plan*

Out of Class Assignment(s)

- Watch a harmful algal bloom video on how to stay safe at mywatersheds.org/report.
- Discuss behaviors to take and products to buy that can prevent stormwater pollution.