Pre/Post Matching Code

Assign students a unique code for matching pre- and post-tests.

Demographics

What grade are you in?

- o Grade PreK, 1, 2, or 3
- o Grade 4
- o Grade 5
- o Grade 6
- o Grade 7
- o Grade 8
- o Grade 9, 10, 11, or 12

In science, do you usually get…

- o Mostly A's?
- o Mostly B's?
- o Mostly C's?
- o Mostly D's or below?
- o Our school does not give this type of grades

- o I prefer not to answer

Do you identify as (check all that apply):

- o Hispanic or Latino
- o American Indian or Alaska Native
- o Asian
- o Black or African American
- o Native Hawaiian or other Pacific Islander
- o White
- o Other
- o I prefer not to answer

Do you mostly speak English at home?

- o No
- o Yes
- o I prefer not to answer

Are you ....

- o Male
- o Female
- o I prefer not to answer

Objective 1: Define the term "watershed"

How sure are you that you know what a watershed is?

- ❍ Not at all sure
- ❍ A little sure
- ❍ Very sure
- ❍ I'm positive

Which of these is the best definition of a watershed?

- ❍ A building at a water treatment plant
- ❍ An area of land that drains into a specific body of water
- ❍ A significant pollution event
- ❍ Another name for a river or stream
- ❍ Don't know

How sure are you that you know what groundwater is?

- ❍ Not at all sure
- ❍ A little sure
- ❍ Very Sure
- ❍ I'm positive

Watersheds contain groundwater.

- ❍ No
- ❍ Yes
- ❍ Don't know

Look at the picture. Which of the following is in this river's watershed?

	No	Yes	Don't know
The red school building	❍	❍	❍
The farm	❍	❍	❍
The city	❍	❍	❍
The small creek on the right	❍	❍	❍

Objective 2: Identify their local watershed(s)

Do you live in a watershed?

- ❍ No
- ❍ Yes
- ❍ Don't know

Objective 3: Identify how watersheds are connected to the ocean via streams, rivers, and human-made structures

Where does most of the water from the land eventually end up?

- ❍ Ocean
- ❍ River
- ❍ Sewer
- ❍ Lake
- ❍ Don't know

How sure are you that you know what a storm drain is?

- ❍ Not at all sure
- ❍ A little sure
- ❍ Very sure
- ❍ I'm positive

Ultimately, where does water end up after it enters a storm drain?

- ❍ Wastewater treatment plant
- ❍ A local body of water
- ❍ In the ground
- ❍ City sewer
- ❍ Don't know

Objective 4: Identify the functions that occur in a watershed (transport, store, and cycle water)

What are some of the functions that occur within a watershed?

	No	Yes	Don't know
The transport of water	❍	❍	❍
The transport of materials, like soil through rivers	❍	❍	❍
The storage of water in lakes, rivers, groundwater, etc.	❍	❍	❍
The transformation of water from one state to another (liquid, ice, vapor, etc.)	❍	❍	❍

Objective 5: Recognize that both natural processes and human activities affect water flow and water quality in watersheds

Which of these statements is FALSE? Watershed boundaries …

❍ Hardly ever change; they are nearly permanent
❍ Can sometimes be changed by the actions of people
❍ Can sometimes be changed by natural processes
❍ Are constantly altered by both human activities and natural processes
❍ Don't know

Which of the following can change how water drains in a watershed?

	No	Yes	Don't know
A flood	❍	❍	❍
A landslide	❍	❍	❍
A dam	❍	❍	❍
The construction of a storm drain	❍	❍	❍

How sure are you that you know what stormwater is?

❍ Not at all sure
❍ A little sure
❍ Very sure
❍ I'm positive

Stormwater pipes are similar to streams and creeks because they both:

❍ Usually have greater water flow when it storms
❍ Are natural habitats for plants and animals
❍ Are constructed by people
❍ Usually receive most of the water from drains and ditches
❍ Don't know

When trees in a watershed are cut down and replaced with pavement and buildings, …

	No	Yes	Don't know
More water will drain into local rivers and lakes	❍	❍	❍
More water will drain into groundwater	❍	❍	❍
Water will drain into local rivers and lakes faster	❍	❍	❍
There will be a greater chance of flooding and erosion	❍	❍	❍

Vegetated buffers (that is, trees, shrubs, other plants along streams, rivers, and estuaries) ...

- ❍ Increase flooding along streams and rivers
- ❍ Decrease erosion and filter water flowing to streams and rivers
- ❍ Increase erosion and filter run-off along streams and rivers
- ❍ Increase the nutrients that flow into water
- ❍ Don't know

Which human activities might increase water pollution?

	No	Yes	Don't know
Water running off people's yards and farm fields	❍	❍	❍
Water running off streets and parking lots	❍	❍	❍
Putting chemicals down storm drains	❍	❍	❍
Draining wetlands, such as marshes	❍	❍	❍
Removing trees and other plants	❍	❍	❍

Nutrients (such as nitrogen and phosphorus) in a stream, river, lake, or ocean can be a form of pollution.

- ❍ No
- ❍ Yes
- ❍ Don't know

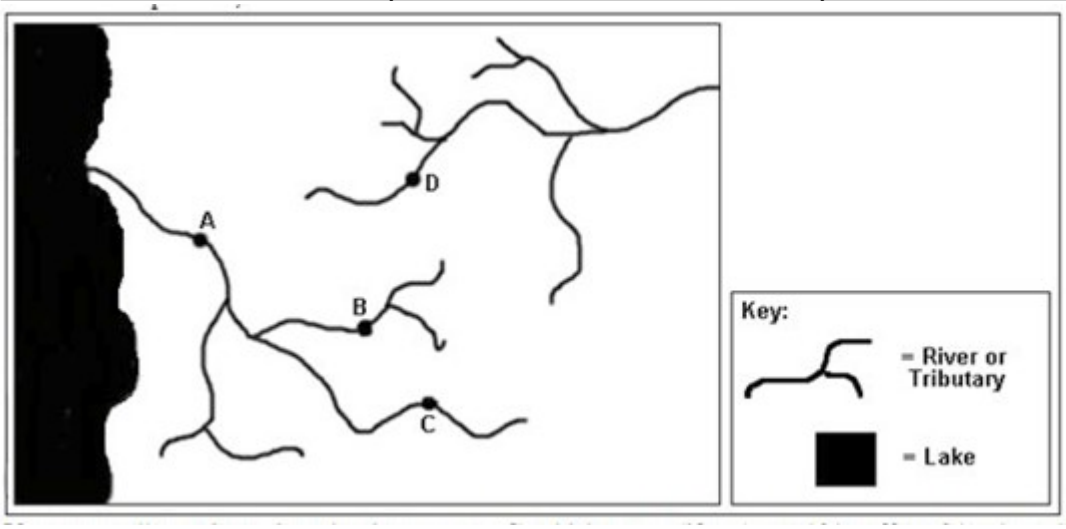
Objective 6: Identify connections between human welfare and water flow and quality

The quality of the water in rivers, lakes, and the ocean can affect the health of people living near them.

- ❍ No
- ❍ Yes
- ❍ Don't know

The water from bodies of water, such as rivers and creeks, is used ...

	No	Yes	Don't know
for drinking after it's cleaned	❍	❍	❍
for farming	❍	❍	❍
by wildlife	❍	❍	❍



If a pollutant is put into the river at Town C, which town(s) (if any) would be directly affected by the pollution? Check all that apply.

- ❑ A
- ❑ B
- ❑ C
- ❑ D

Objective 7: Identify possible point and non-point sources of water pollution

How sure are you that you know what non-point source pollution is?

- ❍ Not at all sure
- ❍ A little sure
- ❍ Very sure
- ❍ I'm positive

Which of these is a type of non-point source pollution?

	No	Yes	Don't know
Oil in the water running off of streets and parking lots	❍	❍	❍
Soil in the water running off of farm fields	❍	❍	❍
Fertilizer in the water running off of lawns	❍	❍	❍
Chemicals in the water coming out of a factory pipe	❍	❍	❍

Rivers are the major ways through which non-point source pollution enters the ocean.

- ❍ No
- ❍ Yes
- ❍ Don't know

How sure are you that you know what point source pollution is?

- ❍ Not at all sure
- ❍ A little sure
- ❍ Very sure
- ❍ I'm positive

Controlling point source pollution is typically easier than controlling non-point source pollution.

- ❍ No
- ❍ Yes
- ❍ Don't know

Objective 8: Identify actions individuals can engage in to protect/restore water quality in watersheds

Which of the following would help keep water clean?

- ❍ Disposing of household chemicals down the drain
- ❍ Washing the car on the grass instead of on pavement
- ❍ Leaving the water running while brushing teeth
- ❍ Cutting down native trees in the woods
- ❍ Don't know

People can help protect the water in their local watershed by:

	No	Yes	Not sure
Conserve water at home or school	❍	❍	❍
Help clean up or take care of a local stream, river, or beach	❍	❍	❍
Participate in a restoration activity such as planting trees or removing invasive plants	❍	❍	❍