



## Edible Watershed



**Grade Level:** 4-8<sup>th</sup> grade

**Duration:** 45 minutes

**Objective:** Students will be able to define a watershed, its elements and stormwater pollution.

**Materials:**

- Image of a watershed and its features
- USGS Water cycle image
- Storm drain images
- Food to make the edible watersheds (use Table 1 or develop your own list)
- Containers for edible materials (glad 1 cup reusable containers work well)
- Spoons for distributing edible materials

Table 1. Examples of Edible Watershed Materials

Edible Item	Watershed feature
Chocolate chips	Hills and mountains
Graham crackers	Land
Apple sauce mixed with blue food coloring	River, lake or stream
Gummy Candies	Animals, people, buildings, people, cars
Colored sprinkles	Non-point source pollution (ex. pesticide, fertilizers, pet waste, litter, etc...)
Goldfish crackers	Aquatic life
Marshmallows (big and mini)	Buildings or snow-capped mountains
Fruit leather	Impervious surfaces (parking lots and other paved areas)

1. Ask the students to define watershed.
  - Watershed – the area of land that “sheds” water to the same water body.
  
2. Show illustration of a cross section of watershed. Identify:
  - main river,
  - tributaries,
  - and ridgeline.
  
3. Discuss the water cycle and how water moves through the watershed.

- If needed, use the water cycle image to discuss water cycle or use the watershed image instead.
4. Show the image of a storm drain and ask students what it is.
    - If students say the sewer, explain that the sewer pipes from their home carry wastewater to a treatment plant. At the wastewater treatment plant water is cleaned and released to our rivers, lakes and streams. Storm drains and drainage ditches direct water off the road to prevent flooding. Everything that enters the storm drain and drainage ditch flows untreated to our rivers, lakes and streams.
  5. Ask the students “What are some things that stormwater could carry into streams?”
    - Vehicle fluids (motor oil, radiator fluid,, pet waste, litter, leaves, soap (from washing your car or pressure washing homes), dirt, fertilizer, pesticides, etc...)
    - Explain that all of those pollutants collectively have a big impact on our water quality.
  6. Introduce the Edible Watershed.
    - Each individual will be given a graham cracker for their land. Introduce the different edible material. Let the students choose the edible items to make their watershed. Explain to the students that they need to include the ridgeline, water body (i.e. a lake or stream), development and/or impervious surface and storm water pollutants.
      - Table 1 can be used as guidance or allow the students to use their own imagination.
  7. If time permits, have a few students or groups present their watershed models to the other students.
  8. Let the students eat their creations.

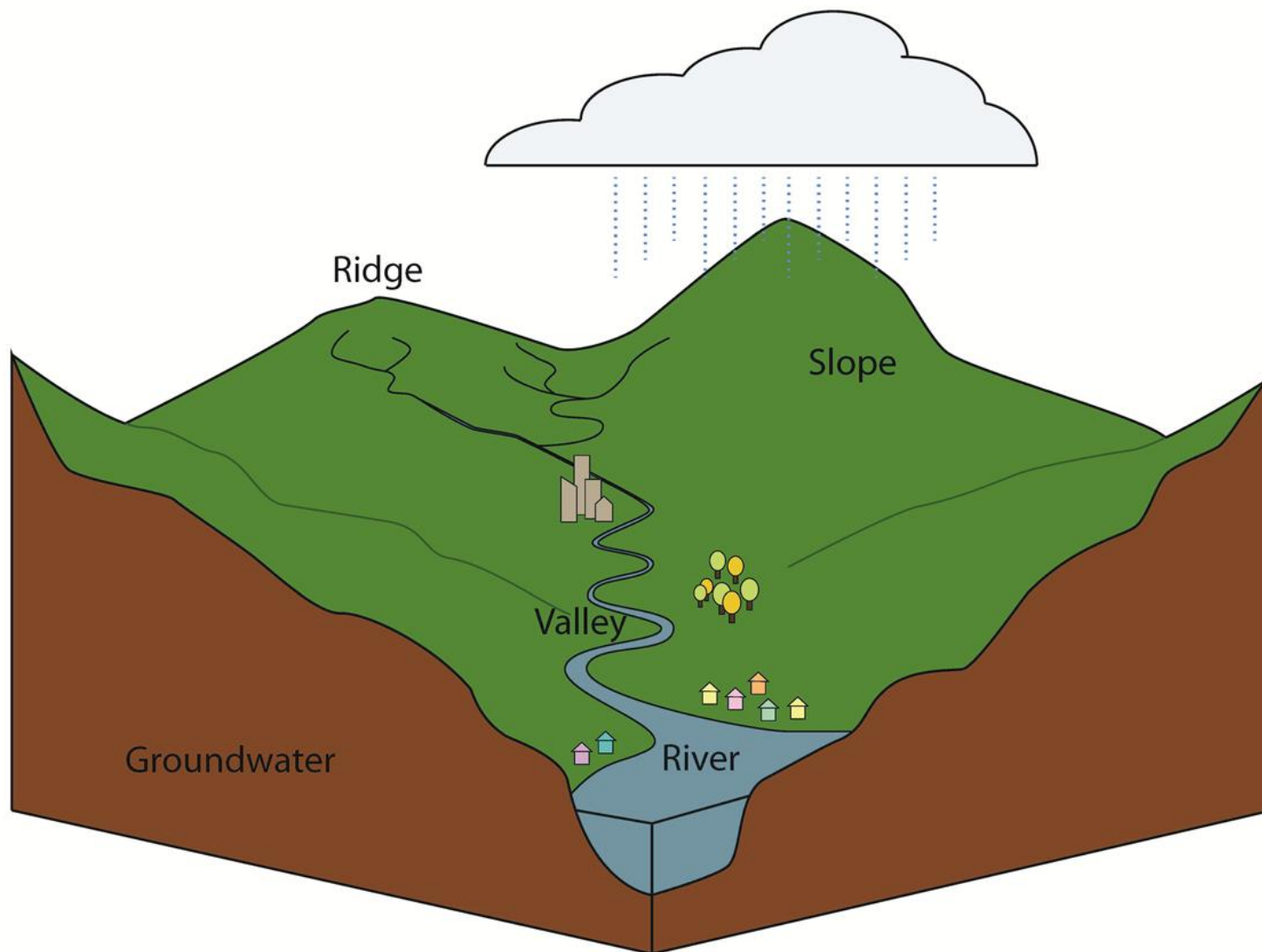
Alternative:

In many school communities sugary foods are discouraged. An alternative to the edible watershed is one made from recycled material. As with the edible watershed, make sure the students include ridgeline, a water body, development, and stormwater pollutants.

***Adapted from University of Kentucky Extension - Southern Region 4-H<sub>2</sub>O Ambassador Program***

<http://www2.ca.uky.edu/enri/4H2O.htm>

# WATERSHED



# The Water Cycle

