

WHAT IS A WATERSHED?

SCIENCE SUBJECT: Earth science, environmental science

GRADE LEVEL: 6-12

SCIENCE CONCEPTS:

A watershed is the land area drained by a river and its tributaries. Everyone lives in a watershed. Pollution in one area of a watershed may impact other areas downstream.

VOCABULARY:

Watershed; tributary; drainage divide

LESSON SUMMARY:

Students will outline watershed boundaries on a map showing a river and its tributaries.

STUDENT LEARNING OBJECTIVES:

At the end of this unit students should be able to:

- Delineate watershed boundaries on a map.
- Describe how water moves through a watershed.

MATERIALS

- Watershed map (attached)
- Pencils
- Highlighters



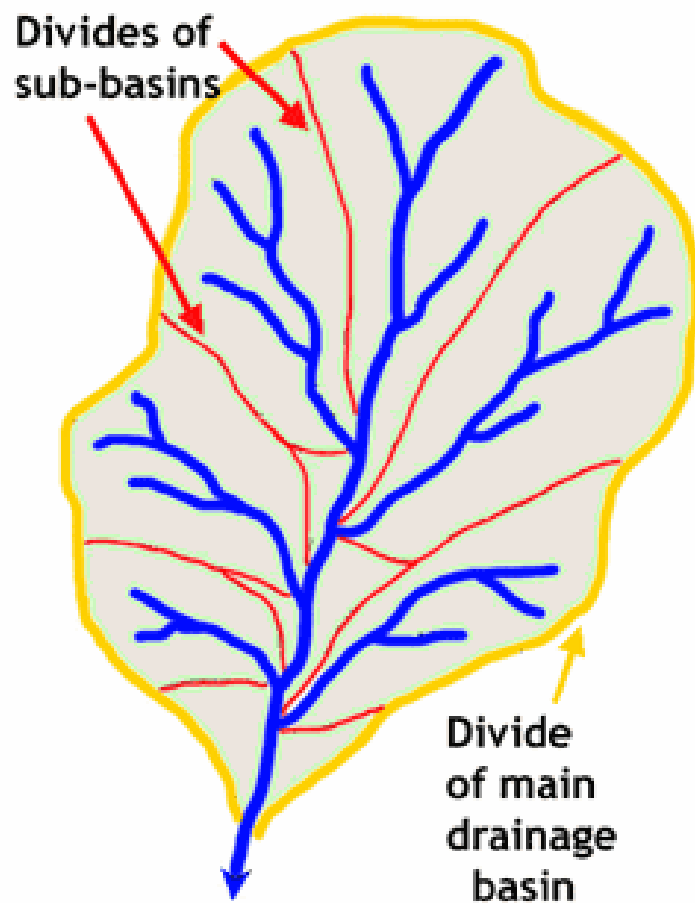
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Using a Web-based GIS to Teach
Problem-based Science In High School and College
<http://www.foothill.edu/fac/klenkeit/nsf/>

BACKGROUND INFORMATION:

A **watershed** is the area drained by a river and all of its **tributaries**. All of the precipitation that falls on the land within a river's watershed will eventually drain into that river.

Wherever you live, you live in a watershed (also called a **drainage basin**). A watershed is divided from surrounding watersheds by a **drainage divide**. Rainfall on one side of a divide will drain into one watershed; precipitation on the other side will collect in a different watershed.



http://www-atlas.usgs.gov/articles/geology/IMAGES/contDiv_basin.gif



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PROCEDURE

- Introduce the concept of a watershed using the diagram provided.
- Give students the watershed map and the following questions:
 1. Use a pencil to outline the watersheds for:
River A
River B
River C
 2. What is a **drainage divide**?

Find a drainage divide on the watershed map and label it.
 3. Which has a higher elevation, point x or point y?

Explain
 4. Use a highlighter to trace the path of a raindrop that falls at point x.
 5. There are several farms in squares 1-5 at the top of the map. How might this affect water quality for those living near the mouth of River C?

RESOURCES/REFERENCES:

<http://www.museumca.org/creeks/index.html>

An interactive guide to Bay Area creeks from the Oakland Museum.



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Name _____

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River C

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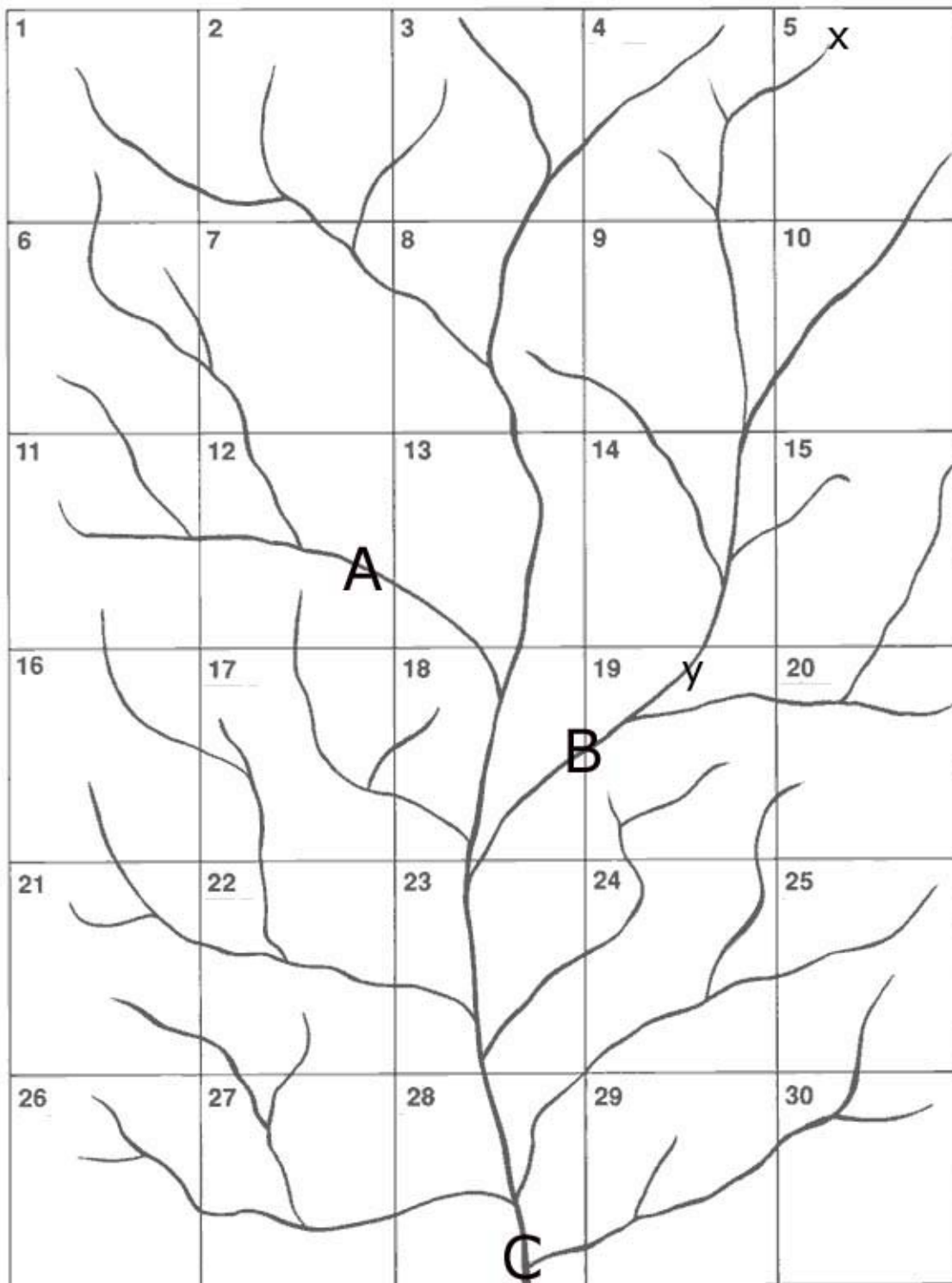
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