User Fact Sheet for SAHRA’s Watershed Visualization – Module 2 – Watersheds

Key concepts

What is a watershed?
We all live in a watershed.
Watershed boundaries are formed by peaks and ridges.
The size and climate of a watershed determines how much water their streams collect.

Key vocabulary words

<table>
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<th>Watershed (WS)</th>
<th>Area that produces runoff to a downstream point. Similar to “Basin”</th>
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<td>- sub WS</td>
<td>- A smaller watershed.</td>
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| - drainage divide                    | - An imaginary boundary separating watersheds; often a high ridgeline.
| (spatial) Scale                      | A term used in discussing relative lengths, areas, distances and sizes. |
| Continental divide                   | The imaginary boundary separating many of the major watersheds in the U.S. that runs through the Rocky Mountains. |
| River flows (kaf/yr)                 | Thousand acre-feet is a measure of water volume. An acre foot is the amount of water it would take to cover an acre (about the size of a football field) with 1 ft of water = 325851 gallons |
| Perennial Flow                       | This is stream flow that continues all year long. In contrast, ephemeral streams, only flow during the wet part of the year. |
| Habitat                              | This is an ecological or environmental area that is inhabited by a particular animal or plant species. |
| (bio) Diversity                      | The number and variety of organisms found within a specified geographic region. |
| Lee’s Ferry                          | Point on the Colorado River near AZ-UT border that, by convention, divides the Upper and Lower Colorado Basins. |
| Gulf of Mexico                       | The Gulf between Baja California and the Mexican mainland into which the Colorado River drains. |

What questions will engage your students?

What watershed are we in?
How do climate and area/size affect the streams in a watershed?
What are some differences between the following WS’s: Amazon, Mississippi, Colorado, Verde
Why does the flow of the Verde no longer reach the Gulf of California?
Vocabulary words – cont. | What do you think it means?
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Amazon watershed | Largest watershed in the world: 2.3 M mi², 6.35 M cfs
Mississippi WS | Largest watershed in the continental US: 1.24 M mi², 620 k cfs
Colorado WS | Largest watershed in the western US: 247 k mi², 15 k cfs
Verde River WS | Large Watershed in central AZ: 6.2 k mi², 400 cfs = 290 kaf/yr
cubic feet per second (cfs) | Standard measure of river flow in US; 100 cfs=72.4 kaf/yr=748 g/s

Activities that you would use to *introduce* this module

- Vocabulary
- Trace tributaries – “Seeing Watersheds activity”
- Discussion of prior knowledge
- Review basic geography

Activities that you would use to *extend* this module

- Build a scale model of a watershed to illustrate collection of water and WS divides
- Visit a local watershed

How would you use this module in the classroom?

- Develop connections between human water needs and sources
- Explore connections between Arizona geography and settlement and development

What are this module’s strengths and weaknesses? | Grade Level ___
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Optional: Your name ____________________________________________
(we will mail back to you after we make a copy)