WOW: WATERSHEDS

GETTING STARTED, GRADES K-2

LEARNING OBJECTIVES

A healthy functioning wetland is defined by its robust biodiversity, water and soil quality and amount of water it consistently maintains over the course of a year or season. To better understand wetland systems and improve conservation and stewardship initiatives and projects we must not only look at scientific data, but at our student's ability to identify wetland benefits and needs. A wetland is a part of a larger system and to ensure it remains sustainable we must look holistically at the social, economic and environmental issues.

Students will increase their knowledge and begin developing a conservation and stewardship mindset about watersheds as natural resources.

- Name the basic characteristics of a watershed.
- Give at least one reason a watershed is important.
- Study watershed health through observation, literacy (i.e. informational text and fact-based picture books) communications with resource experts and field investigation.
- Students will use their knowledge and data to inform Eco-Action Team discussions and decisions.
- Communicate watershed information to the larger school community and engage the community in supporting watershed campaigns and initiatives.
- Age appropriately, discuss the societal and economic impacts associated with watershed stewardship, riparian buffers and watersheds, remembering that education for sustainable development addresses society, economics and the environment; smaller systems making up a larger system.

INTERDISCIPLINARY CONNECTIONS
Citizenship, Language Arts, Math, Science, Social Studies

ECO-SCHOOLS USA PATHWAY CONNECTIONS
Biodiversity, Schoolyard Habitats®, Water, WOW-Oceans and WOW-Wetlands

METRICS NEEDED FOR AWARDS
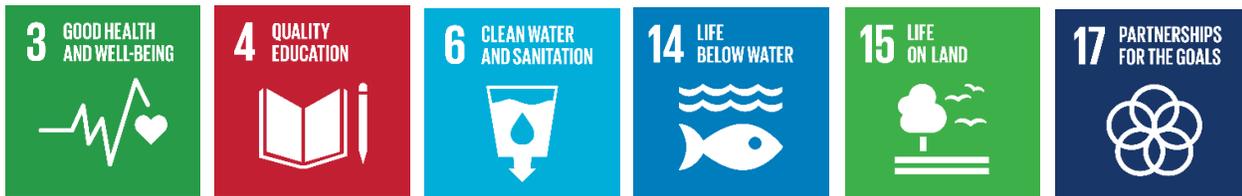1. How many actions did students take to improve watershed health?

UN'S SUSTAINABLE DEVELOPMENT GOALS – CONNECTIONS TO PATHWAY
http://www.un.org/sustainabledevelopment/sustainable-development-goals/

ARE YOU A GLOBE SCHOOL?
The Global Learning and Observations to Benefit the Environment (GLOBE) Program is an international science and education program that provides students and the public worldwide with the opportunity to participate in data collection and the scientific process, and contribute meaningfully to our understanding of the Earth system and global environment. **Learn more at >>** http://www.nwf.org/Eco-Schools-USA/GLOBE.aspx

Below are protocol connections to the Watershed audit. (Optional, but recommended.)

Atmosphere Protocols
Air Temperature | Clouds | Precipitation | Surface Temperature

Hydrosphere Protocols
Freshwater Macroinvertebrates | pH | Water Temperature | Water Transparency

Pedosphere Protocols
Soil pH | Soil Temperature

Biosphere Protocols
Green Up/Green Down

MATERIALS
Internet for research and data collection | GPS coordinates | water and soil test kits | macroinvertebrate kits | regional or state plant and animal field guides | Secchi disk*

  *DIY Secchi Disk
  - https://zebrazapps.com/embed/#/b2f40eb4598249c19bc3028ca532eb55
  - http://www.des.nh.gov/organization/divisions/water/wmb/vlap/documents/secchi.pdf

PROCEDURE

1. Determine who the **resource specialists** are in your community, region or state. These individuals can assist with the audit and provide richer student experiences and deeper understanding.
2. Set aside realistic periods of time with adequate support to complete the audit sections.
3. The Eco-Action Team will work together to gather the audit data required.
4. **Analyze the results** and **develop an action plan**. Be sure to **communicate** results, actions and outcomes throughout the entire process.
5. **Keep this audit** with your records. This information is needed when responding to Eco-Schools USA surveys, when applying for awards and when communicating with the community, school board and members of the media.

   Your data and all evidence, including notes, photographs, sketches, calculations, audits, etc. need to be kept in a location that is easily accessible to the Eco-Action team. We recommend binder, file system or Google folder. Your documentation is very important and will be used:

   - to inform decisions,
   - to engage the community,
   - as evidence to support findings,
   - to update your dashboard, and
   - to apply for awards.