



Next Gen Science Standards:

Students who demonstrate understanding can:

HS-ESS2-2. Analyze geosciences data to make the claim that one change to Earth's surface can create feedbacks that cause changes to other Earth systems.

SCIENCE AND ENGINEERING

2. *Analyzing and interpreting data*

DISCIPLINARY CORE IDEAS

ESS2.A: Earth Materials and Systems
ESS2.D: Weather and Climate

CROSS-CUTTING CONCEPTS

7. *Stability and change*

Instructional Objective(s):

Students will be able to:

1. Complete a stream assessment lab activity.
2. Record and analyze appropriate data and report findings through an appropriate medium.

Prerequisite Concepts and Skills:

Tables, charts, graphs

Vocabulary

channel morphology, floodplain development, benthic cover, riffle zone, biomass, species richness, tolerance.

Materials and Resources:

Teacher	Students
Option 1: Schedule a field trip with Devils Postpile National Monument or your local NPS site to bring students on a hydrology program. Visit www.nps.gov to find sites in your area. Option 2: Take students out to a local stream for a teacher led lesson on hydrology (Procedure 5.1). Visit www.nps.gov/DEPO for information on having the equipment mailed to you. Option 3: Schedule a ranger from Devils Postpile National Monument to come into your classroom to discuss hydrology. Option 4: Set up a virtual lesson with Devils Postpile National	Stream Flow River Study Trunk (NPS provided, except for oranges) Worksheet 5.1 (NPS provided master copy)

Monument or another NPS site to bring a lesson on hydrology into the classroom. Contact Devils Postpile National Monument for further information. Procedure 5. 1 (NPS provided master copy)	
---	--

Lesson Activities: 58 min.

Teacher Activities	Student Activities	Time:
Introduction: 1. Display DoNow. 2. Take attendance. *If time allows, display hydrology podcast	1. DoNow: Why would scientists want to know the flow-rate of particular streams and rivers? *Watch podcasts on how scientists study hydrology.	5 min *5 min
New Content: 1. Instruct students on how to travel to the stream assessment site. 2. Monitor students safety during travel. 3. Monitor students as they take stream assessment readings, procedure 5.1.	1. Walk or ride to the stream assessment location. 2. Follow instructions to perform stream assessment. Record data and observations on worksheet 5.1. 3. Return to school.	10 min 30 min 10 min
Wrap-up: 1. Assign post-lab questions and write-up for homework. 2. Dismiss students.		3 min

Organizational and/or Behavioral Management Strategies:

Assessment and Evaluation:

Extensions:

Adaptations:

Teacher Reflections: