WaterViz Investigation 1 Facilitator Guide

1. Watch [The WaterViz Story](#) video.
    1. What is the Hubbard Brook Experimental Forest & where is it?
       Land used by the US Forest Service for research on forests and the water cycle. Located in New Hampshire
    2. What data are collected?
       Data are collected on all components of the water cycle.
    3. How are data collected?
       Environmental sensors monitor the major components of the water cycle.
    4. What is the purpose of WaterViz?
       WaterViz is a new way of presenting water cycle data by creating online animated digital art and music.

2. Read "July 2018 Rain Event" introduction paragraph.
    1. What season does the event take place in?
       Summer
    2. Where is New England?
       NE corner of the US; 6 northeastern states including: Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut
    3. Have you ever been to a forest or experimental forest?
       Answers will vary.

3. Assign partners/teams a water cycle component to become an expert on. They will read the July 2018 Rain Event article and complete the note-catcher in their worksheet with observations about their component.

Components:

- Temperature*
- Precipitation
- Streamflow
- Evaporation/Transpiration**
- Streamflow

*Temperature is not part of the water cycle, but is included since it influences the water cycle.

**Evaporation & Transpiration are treated as 1 component since they are often measured together and they both involve the movement of water vapor.

4. Partners/teams determine a creative way to share what they learned. Ideas include: using tactile art supplies to create an accessible chart, sharing an analogy or word picture (e.g. roller coaster analogy to describe evaporation/transpiration and temperature since these values went up and down on a daily basis), making a video, or recording a voice memo.

5. Virtual Gallery Walk: Partners/teams take turns sharing about how their water cycle component(s) changed during the 2-week rain event. Encourage discussion about daily and longer-term trends and connections between different components.

July 2018 Rain Event Note-Catcher Answer Key			
Water Cycle Component	Days 1-4 July 18-21, 2018	Days 5-10 July 22-27, 2018	Days 11-14 July 28-31, 2018
Temperature	● Moderate ● Daytime highs in the 70's °F ● Nighttime lows in the 50's °F	● Daytime highs in the 70's °F ● Nighttime lows in the 60's °F	● Daytime highs in the 70's °F ● Nighttime lows in the 60's °F
Precipitation	● No rain	● Bands of rain ● Total rainfall 3.2 inches	● Few showers ● Total rainfall 0.2 inches
Streamflow	● Low ● Less than 0.006 cfs	● Rises and peaks at 3.3 cfs, then decreases	● Gradually declines to 0.02 cfs
Evaporation/ Transpiration	● Goes up and down on a daily cycle	● Low	● Goes up and down on a daily cycle
Soil Water	● Moderately dry ● 1.8 inches	● Rises to 4.3 inches, then gently falls	● Soil continues to dry out