Jigsaw activity for introducing hydrologic cycle vocabulary

This activity works in small to medium class settings (15-60). If you have fewer than 21 students, drop some of the more well-known vocabulary terms (e.g. oceans) or have each jigsaw station do 1 reservoir and 1 transport process. Groups of > 4 students per station gets more difficult to manage.

- Split students into small groups (1-4)
- Have a whiteboard space or poster board for each vocabulary term spread around the room
- Students will move through the stations at regular intervals (!3-5 min per station except the last station they visit), so the instructor should keep track of time and make regular announcements to encourage student movement and organization
- Encourage students to review the material at each station before adding their portion

Instructions for students

- Station 1: research your station's vocabulary term(s) and write a short definition
- Station 2: write down examples of where your station's vocabulary term occurs on Earth
- Station 3: draw a diagram of your station's vocabulary term
- Station 4: write down 3 other vocabulary terms that are connected to your term and describe how
- Station 5: summarize your station's information and report it out to the class (this step usually takes the longest)

Think-Pair-Share activity for exploring relative abundance of water on Earth

The author recommends deploying this activity after introducing vocabulary and terminology.

1. **Think -** Show students a list of the major global hydrologic cycle reservoirs. Ask each student to consider the list and write down (individually) on a piece of paper the size of each reservoir from largest to smallest
2. **Pair –** In groups of 2, have students compare their rankings and come up with a list between them that they think reflects the size of each reservoir. Have them assign a 'confidence level' to each rank (e.g., sure, neutral, not sure). Then have them draw a symbol or assign a color scale to describe how much bigger or smaller each reservoir is in comparison to the others.
3. **Share –** Have groups report out their rankings, confidence, reasoning, and estimates for relative size. Show students the actual ranking (see below) and (if time) discuss the differences in perception vs reality.

Reservoir Size
Oceans
Glaciers/Ice Sheets
Groundwater
Lakes
Soil
Atmosphere (including clouds)
Rivers
Biosphere
Land Surface