

## 2.2. The Journey of Water

**Aim:** To familiarize students with the water cycle and freshwater resources and mobilize them to recycle water, such as rainwater harvesting.

**Duration:** 40 minutes

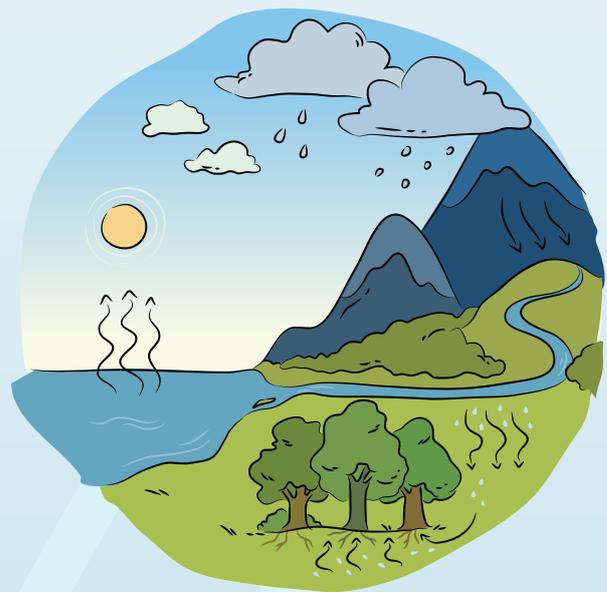
### **Preliminary Preparation:**

- Energetic music is prepared to be played on the smart board.
- The words Evaporation, Condensation, Precipitation and Accumulation are written on a draft A4 paper and pasted in the four corners of the classroom.
- Before the activity, each student is asked to collect one waste plastic bottle.
- At least 1 erlenmeyer of at least 200 ml is prepared for each group.
- The narrow mouth parts of the plastic bottles brought by the students are cut by the teacher beforehand.

### **Instruction:**

#### **Water Cycle Game**

- "Now I will turn on the music and you can dance as you like until the music ends. When the music is over, you will stay where you are without moving." The music is turned on and the students dance for 1 minute. When the time is over, "Find the 5 people closest to you and come together. Considering the class size, for example, if the class has 20 students, 4 groups are formed in this way. (4 groups should be formed for the game).
- Each group gathers at a station. The following explanation is given.
  - Evaporation Station: At this station, students act out "evaporation" by jumping.
  - Concentration Station: In this station, students come together tightly in groups to act out "concentration".
  - Rainfall Station: At this station, students hold hands and lean towards the floor in the shape of "raindrops" and then stand up.
  - Gathering Station: In this station, students gather together to form a "lake" or an "ocean". For example, they can hold hands or hug each other.



- "I'm going to put on some music, while the music is playing, you are going to act out the water cycle phase at your station in your group as I just mentioned. As soon as the music stops, from right to left, those in evaporation will move to condensation, those in condensation to precipitation, those in precipitation to the gathering station. After all groups have arrived at their new station, you will start animating again when the music starts. You will do the animation according to your station." It is said. In this way, after all the groups have acted out once at each station, the round is completed and the game is ended.
- After the students are seated, the teacher asks "Who can summarize what happened in the water cycle?" The teacher can start a discussion about the importance of the water cycle and its effects on the environment. Students can be informed about the role of the water cycle in ecosystems and the effects of human activities on the water cycle. In addition, students are informed that 2/3 of the Earth is covered with water and that 97.5% of the water in the Earth consists of salty water in the oceans. It is pointed out that only 2.5% of the remaining fresh water is used as drinking water and that most of this water is found as groundwater in glaciers and very deep geological layers in the poles (Antarctica, Greenland).

### **Rainwater Collection Barrel**

If possible, students are divided into 5 groups in the classroom, if not in the laboratory. Each group is given at least one measuring jug. With the help of the flasks, students create a rating scale at 100 milliliters intervals in rainwater collection bottles. Students are asked to write a slogan for saving water on the bottle.

### **Exit Ticket**

The students are asked to place the rainwater collection bottles they have prepared in the garden of the school, in the garden of their houses and apartments, to observe and note the amount of water collected for 10 days, and to share them with their friends in the classroom at the end of 10 days. Then, the spokespersons selected among the students are asked to go to the school administrators and talk about the rainwater collection bottle activity and persuade them to place a large rainwater collection barrel in the school garden.