



Activity Theme: Tap Water

Activity Type: Relay Race 

Grade 2-5

The Tap Advantage

Activity Overview: This activity will highlight the benefits of tap water and compare them to the use of bottled beverages. Students will learn the benefits of drinking tap water and the impacts of using plastic beverage bottles.

Objectives:

Students will learn:

- The environmental impacts of using plastic beverage bottles
- The reasons why people choose tap water
- Tap water is a sustainable and healthy choice

Materials:

- 1 reusable water bottle
- 30 plastic water bottles
- 30 multi colour balls (6 yellow, 6 pink, 6 green, 6 red, 6 blue)
- 28 blue balls
- 2 cylinder containers ("cups")
- 1 small recycling bin
- 1 large storage tote

Setup: Ensure that there is adequate separation between the two relay lines. Position the "cups" 30 paces from the ball bins/start line. Place the recycling bin an additional 5 paces from the plastic team's cup. Before each group arrives, return balls to starting bin and return plastic water bottles to starting bucket.



Takedown: Collect all the materials used in the activity and organize them so that everything fits into the storage tote.

Safety:

- Remind students to be paying attention during the whole activity as there will be others running.
- Ensure that students have proper footwear that is tight and safe to run in.

What will I be doing? (Procedure)

Before you start your presentation check with the teacher or chaperone that the entire group is present and ready to start.

*Remember that **doing** an experiment and **discovering** the answer is more powerful than watching and listening to someone, so try to involve as many children as possible.*

Part 1: Discussion

Say: “Welcome to The Tap Advantage. This activity will teach you the benefits of tap water compared to bottled beverages. In Peel, tap water is clean and safe to drink because it goes through a treatment process before it comes through the tap. When we drink tap water from our reusable bottles and cups, we reduce the amount of waste made from disposable plastic bottles.

Say: “Here is a disposable plastic beverage bottle. Raise your hand if you have ever used a plastic bottle.”

Ask: “Why do you think people would buy bottled beverages? What are the benefits of drinking bottled beverages?”

- Sample answers: Convenience, taste (if students say they like the taste of bottled water better, tell them to use a Brita filter; in taste tests around the world, people usually pick tap water).

Ask: “Why do you think people would choose tap water versus bottled beverages? What are the benefits of drinking tap water?”

- Sample answers: Cheaper, better for the environment, comes right from the tap, tested daily

Part 2: Relay Race

Say: “Now we are going to have a relay race to see which is better; tap water or bottled beverages. Divide the group into two groups; (1) disposable bottles, and (2) reusable bottles

Say (also good to demonstrate as you explain): “The goal is to fill the bucket with as many balls, which will represent water. Each team member must carry one ball and either a disposable plastic bottle or a reusable bottle.

The Disposable Bottle Team has to:

- Pick up 1 ball and 1 disposable plastic bottle
- Run to the bucket and place their ball in the bucket;
- Throw their water bottle in the recycling bin from a few steps back (like they are trying to shoot a basketball into a net). If the disposable bottle does not land in the recycling bin, just leave it on the ground. As soon as the bottle is thrown, the next person can go.

The Reusable Bottle Team has to:

- Pick up 1 ball and a reusable water bottle

Orange Colour Group – Easy

- Run to the bucket and place their ball in the bucket;
- Bring their reusable water bottle back to the line and hand it to the next person before the next person starts.

Both teams will have 5 minutes (or less) to try and fill the bucket with as much water as they can. Any questions?"

Play the game. When you want the kids to stop playing, simply start a loud 10-second countdown.

Say: "Now before we determine a winner, we need to make a few adjustments to the disposable bottles team and I will explain why..."

Part 3: Discussion

At the end of the game, the leader will say: "I am going to take out all yellow balls because they are expired water."

Explain: "Water bottles have expiry dates that usually last for a few years. Many people ignore them because they think water does not go bad. In fact, it is the packaging that 'goes bad' over time and chemicals could get absorbed into your water. After the bottled water is filled up, who knows how long it is going to sit around for. It may have sat in a warehouse for a few weeks or a few months before going to the grocery store. Then it could have sat at the grocery store for another few weeks before you purchased it. Then it might have been in your home unopened for another few weeks or months. So how fresh can this bottled water be?"

Say: "Now I am going to take out pink balls because they are water that has not been tested"

- **Explain:** "There are **no regulations on testing** for bottled water. Tap water is tested several times daily, and must meet very high standards. Bottled water might be tested once a month or even less; no one knows! Tap water is tested for over 100 contaminants, while bottled water has no testing requirements!"

Say: "Now I am going to take out red balls because they are simply tap water"

- **Explain:** "Almost all bottled water is just tap water. Even if it has a picture of a mountain on it, that does not mean it comes from a mountain. Bottled water might be tap water from here, or from another city further away. This generates waste because we need to transport these bottles to here, and then when we are done, we need to also dispose of them. Tap water is very cheap compared to bottled drinks. Bottled drinks usually cost at least \$1.00."
- **Ask:** "Can anyone guess how many times you can refill a reusable bottle using tap water for \$1?" (Answer: 770 times!)

Say: "Now I am going to take out green balls because they are using energy from our resources"

- **Explain:** "As you can see, most water bottles do not even make it to the recycling bin. Only 15-35% of plastic water bottles make it into recycling. Also, it takes 3 times the amount of water to create the plastic, lid and label of the water bottle, than it does to fill it with water. This means we are wasting a lot of energy just to make the bottles!"

Say: "Now I am going to take out blue balls because they are polluting our air"

- **Explain:** "Transportation of water bottles to the store pollutes the air because we need to move it in a truck. Transportation of water bottles to your house can also cause pollution because we need to drive to the store. This means that using these disposable bottles also means we are causing more pollution."

Specifically remind them that:

There are many reasons to drink tap water such as:

- 1) Tap water is tested on a daily basis
- 2) Tap water is cheaper
- 3) Tap water does not expire
- 4) Not all plastic beverage bottles make it into recycling

In Peel, tap water is clean and safe to drink because it goes through treatment before it comes through the tap, and we reduce our waste from disposable plastic bottles!