



10 minutes

Activity Theme: Water Pollution

Grade 2-5

Activity Type: Ball Toss 

Protect Mr. Thirsty's Water

Activity Overview: This activity shows that contaminants can pollute our drinking water. Students will toss balls representing "water drops" and "waste materials" into their proper places in order to give Mr. Thirsty a clean drink of water.

Objectives:

The elementary students will learn how to:

- Protect our surface water and groundwater through proper waste management.
- Handle hazardous household products and dispose of them in an environmentally responsible and safe manner.

Materials:

- Mr. Thirsty wooden structure
- Balls of various colours to be used in the game
- Bucket to hold balls
- Pink tin that says HHW on it
- Mini Blue Bin

Setup:

- Activity 1 - Set up Mr. Thirsty game, ensure that the various coloured balls are available
- Activity 2 - Review different disposal methods for various HHW's.



Takedown: Make sure you keep all the materials together.

Safety:

- Remind students not to throw the balls at anything other than the designated areas of the game.
- Students should take turns tossing the balls.

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: Activity

Say: “Welcome to Protect Mr. Thirsty’s Water. This activity will teach you how to prevent pollution of our aquifers and lakes, which provide our water supply, by properly throwing out waste items. Remember to keep our lakes and well water pollution-free by disposing of household hazardous waste properly.”

Say: “Household Hazardous Waste (HHW) is waste found around your house that contains chemicals that are dangerous to human health and/or the environment. This includes items like batteries, paint, and car oil.”

Depending on the size of the group, have students work individually or as a group to take turns tossing the various coloured balls at the display. The Red balls represent HHW items that could get into our water supply if not disposed properly and should be sent to the CRC. The Blue balls represent items that can be recycled instead of going to the CRC but could also get into our water supply if not disposed of correctly.

Students will attempt to toss coloured balls into the appropriate spots on the display.

Ask the students if the ball has entered the correct spot. Ask them to explain why and help them out if required.

Balls that do not land in the Recycling bin or HHW bin end up in Mr. Thirsty’s tap water.

Part 2: Answers

Review with the students the correct disposal method for each item below:

Community Recycling Centre – All Household Hazardous Waste items, **EXCEPT** the empty aerosol can, paint can and shampoo and detergent bottles, should be taken to one of the Region’s Community Recycling Centres for safe disposal.

Garbage – **No items.** HHW items should never be put into the garbage. When these items are sent to the landfill, they can seep into the soil and contaminate (poison) our groundwater.

Blue Box – EMPTY paint can (lid removed), EMPTY aerosol can, EMPTY shampoo and detergent bottles. These items, when empty, can be safely recycled.

Sink – shampoo and dish detergent. Soap and shampoo can be safely poured down the sink. Household hazardous items such as bleach and cleaners (or other bad examples that the students have placed in the sink) should not be poured down the drain because they can damage the pipes and contaminate (poison) our water.

Part 3: Recall with the students what you have taught them in this activity

Specifically remind them that:

- Try to use environmentally “friendly” cleaning products that contain natural ingredients, such as baking soda and vinegar.
- Always dispose of HHW in a safe and responsible manner. None of these items should be put in with our “regular garbage” or dumped into our creeks, streams and rivers.
- Keep our lakes and well water pollution-free by disposing of household hazardous waste properly.



Background Information:

Almost every household uses (and discards) items that contain hazardous waste, such as:

- | | |
|-------------------------------------|--|
| • Paint | • Durable goods, such as refrigerators and televisions |
| • Batteries | • Motor oil |
| • Cleaners and solvents | • Prescription drugs |
| • Garden fertilizers and pesticides | |

What should I do with hazardous wastes?

- HHW items require special attention during handling, storage, collection, transportation, treatment and disposal.
- The best solution to managing HHW is not to create the waste in the first place. You can do this by buying only what you need and using up the product entirely or giving the unused portion away to someone who can.
- Rather than buying toxic products, you can try using safer non-toxic ones such as baking soda and vinegar for cleaning.
- Always take your household hazardous waste to one of Peel Region’s Community Recycling Centres.
- Remember to always store hazardous products out of the reach of small children and pets.

You should not treat hazardous wastes like other kinds of garbage:

- HHW should not be mixed in with your regular garbage and should never be emptied into your toilet, laundry tub or storm sewer.

How do I know which products are hazardous?

Hazardous products are categorized into four classifications and will display at least one of the following warning symbols on them:

Corrosive



Explosive



Flammable



Toxic



Vocabulary:

Aquifer - a layer in the ground that carries water; wells (to access water) are drilled down into aquifers

Household Hazardous Waste (HHW) - waste items around your house containing chemicals that are dangerous to human health and/or the environment (i.e., batteries, paint, motor oil)

Hazardous household products - any product that has the potential to harm people, animals and/or the environment

Flammable - can be easily set on fire

Corrosive - able to eat into, wear away, or dissolve materials such as metals (i.e., acid in batteries).

Reactive - able to react in a harmful way (e.g., can produce a toxic gas or an explosion) when mixed with another substance.

Toxic - poisonous/harmful to humans and other living things