



curriculum links

Grade 5:

- Health and Physical Education
Fundamental Movement Skills
- Science and Technology
Forces Acting on Structures and Mechanisms



Overview

In this activity, students will learn that water does flow backwards under particular circumstances and how contaminants can enter the drinking water system.

grade 5 expectations

Health and Physical Education Fundamental Movement Skills

Overall Expectations

- 💧 Locomotion/Travelling Skills
- 💧 Manipulation Skills
- 💧 Stability Skills

Science and Technology Forces Acting on Structures and Mechanisms

Overall Expectations

- 💧 Analyse social and environmental impacts of forces acting on structures and mechanisms;
- 💧 Investigate forces that act on the structures and mechanisms
- 💧 Identify forces that act on and within structures and mechanisms, and describe the effects of these forces on structures and mechanisms.

Specific Expectations

Relating Science and Technology to Society and the Environment

- 💧 Analyse the effects of forces from natural phenomena on the natural and built environments.

Developing Investigation and Communication Skills

- 💧 Compare quantitatively and/or qualitatively, the force required to move a load



Cross Connections and Backflow



using different mechanical systems and describe the relationship between the force required and the distance over which the force moves.

Understanding Basic Concepts

- Describe forces resulting from natural phenomena that can have severe consequences for structures in the environment (i.e. hoses and the water supply) and identify structural features that help overcome some of these forces (i.e. a backflow prevention device).

Key Terms

Contaminant: any cross connection or potential cross connection involving any substance that could be a danger to health. Examples include hospitals, all establishments involving chemical usage, high hazard uses as defined by the Ontario Building Code, S.O.1992, as amended or the CSA B64.10-01, as amended and any use where protection is deemed required

Pollutant: any cross connection or potential cross connection involving any substance that could be a nuisance. Examples shall include bath water, dish water, animal water bowl, doggy bath water, anything with a YUK factor that you could but wouldn't want to drink.

Backflow: a flowing back of water or reversal of the normal direction of flow;

Backflow Prevention Device: a device in a water supply pipe with check valves that stop the reverse flow of the water.

