CANADA
4-H Saskatchewan

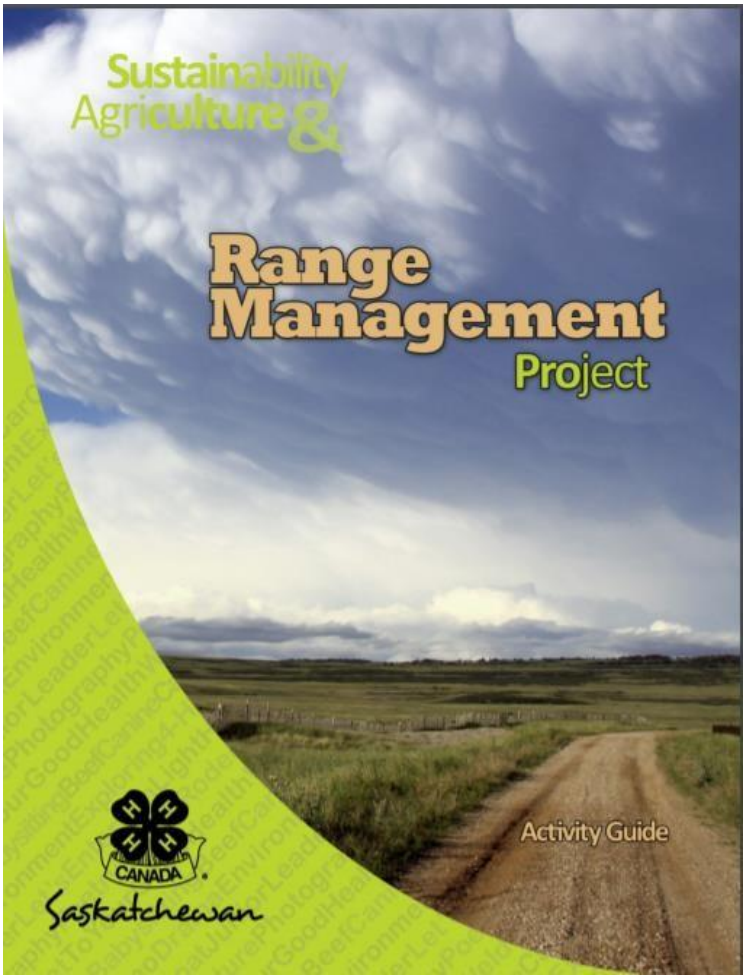
Exploring 4-H at Home

Science and Technology

Pillar: Science & Technology

Project: Range Management

Activity: Grassland Stewardship: Creating a Watershed



What is a Watershed?

A watershed is a territory that drains water into rivers and streams into a larger body of water such as a lake or ocean. It provides homes to numerous plants and wildlife, supplies the source of our drinking water, affords recreational opportunities, and allows for agricultural productivity.

Everyone lives in watershed because water anywhere, including groundwater, drains into larger bodies of water: what happens on a watershed doesn't stay on the watershed. So, before you start thinking about preservation for lakes, rivers, streams, and oceans, it might be wise to first focus on protecting our community watersheds. Why? You wouldn't start sweeping the stairs from the bottom up, would you? Watersheds are more important to your community than you may think!

Healthy watersheds are worth billions of dollars of food, tourism, manufactured products, and fibre. There are many factors such as urban and agricultural runoff that threaten watersheds, along with all other connected ecosystems. If our watersheds become polluted, the water we use for agriculture and to care for our animals will also be polluted which is harmful and detrimental for future generations.

Building Your Own Watershed

Materials

- A shallow pan or container
- Blocks, small containers, boxes
- Aluminum Foil
- Water
- Drink flavouring crystals (optional)

In this activity, you will construct your own watershed, develop it with farms, cities and services and protect it from pollution.

Instructions

1. Place the blocks or other building material at one end of your container. Watersheds flow from a high point to a low point, often starting in the mountains as tiny streams before becoming massive rivers that drain into lakes and oceans.
2. Place other blocks around the container, these represent the shape of your watershed. Is it very hilly or flat? Do you have multiple mountains or just one?
3. Wrap the foil over the blocks. It is important to have a tight seal so that none of the water spills over.
4. Now you have to develop the land. Do you have a place for people to live? Do you have flat land for agriculture? Do you have buildings? What services are there? Hospitals, schools, roads, or stores?
5. Think about how the water is going to flow. Will anything get flooded? Is there anywhere that doesn't have access to water? Where will all the water end up?

6. Now you are going to test your watershed! Take a cup of water and slowly pour it down the start of your watershed (high point). Were you correct about where the water would end up? Did anything surprise you? Did all your developments survive?
7. [Optional] Now you are going to test your watershed with pollution. Take the drink crystals and pour them somewhere in your watershed. What kind of pollution is this? What caused this pollution? Do you think that the watershed (with plants, animals and humans!) will be okay?
8. Pour the water again from your high point and observe how the drink crystals spread. How badly was your watershed affected? How could have this been prevented?

Don’t forget to post a picture of your watershed on the 4-H Saskatchewan Exploring 4-H At Home Page and use #exploring4hathome