



Watersheds And You!



4-H Pledge

I pledge:

My **HEAD** to clearer thinking,
My **HEART** to greater loyalty,
My **HANDS** to larger service,
My **HEALTH** to better living,
For my club, my community,
my country and my world.



4-H Motto

Learn To Do By Doing

Leadership Development Pillars

Community Engagement & Communications

Science & Technology

Sustainable Agriculture & Food Security

Environment & Healthy Living

The Rural and Remote Youth Experiential Learning Outreach is supported by the Government of Canada's Emergency Community Support Fund and Community Foundations of Canada.

**Emergency
Community
Support Fund**



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OF CANADA

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DU CANADA

Canada 

Welcome to 4-H Saskatchewan's Watershed and You!

Watersheds are all around us, if you can see the basin or not, all of our lands are part of a watershed. Anything we put on and in the ground affect our water sources. Members will learn more about the watersheds that are all around them they will have the opportunity to create a miniature replica of a watershed at home!

What are watersheds?

A watershed is all of the land that drains into the same location or body of water. People tend to think only of bodies of water like rivers, lakes and wetlands as watersheds when in fact any land such as parks, farms, forests, schools, towns and cities all belong to the watershed systems. Think of a watershed as a funnel that collects all the water within a specific area and draining into the lowest part of the geography. Slowly the water is then channeled into soil, groundwater, creeks, and streams making its way into larger rivers and lakes or the ocean.

No matter where you live, the water quality in rivers and streams is determined by what happens on the land around them. The land around a stream or river is called a watershed.

One watershed is separated from another watershed by a low rise, the crest of a hill or a mountain chain. Rain or snow that falls on opposite sides of the higher land causes water to flow into different watersheds.

Not all watersheds are the same. Some watersheds are hilly, while other watersheds are flat plains. In all cases, precipitation that falls on the watershed flows over land to reach the lowest point – a lake, river or stream.

As water flows over land, it picks up soil, chemicals and other pollutants and carries them to lakes, rivers or streams. This water transportation system is called runoff.

In rural or agricultural areas, runoff water carries a wide variety of materials, including pesticides, soil and animal wastes, directly into waterways.

In urban areas, hard surfaces such as driveways, sidewalks, rooftops and roadways prevent water from soaking into the ground. As a result, the runoff water, which can be contaminated with road salt, heavy metals, or automobile fluids, flushes quickly into storm drains that dump directly into streams and rivers.

Pollutants that do not have a single source are called nonpoint source pollution. This pollution originates from many different places.



There are 100,000 lakes and rivers in Saskatchewan offering
60,000 square km for water sports.

What watershed are you part of?

THE WATERSHEDS OF SASKATCHEWAN



Assiniboine Watershed Stewardship Association
 Canora-Pelly
 Kelvington-Wadena
 Last Mountain - Touchwood
 Melville - Saltcoats
 Yorkton

Carrot River Valley Watershed Association
 Batoche
 Carrot River Valley
 Humboldt
 Kelvington - Wadena
 Melfort

Lower Qu'Appelle Watershed Stewards
 Arm River - Watrous
 Indian Head - Milestone
 Last Mountain - Touchwood
 Melville - Saltcoats
 Moosomin
 Regina - Wascana Plains

Lower Souris River Watershed
 Cypress Hills
 Moose Jaw Wakamow
 Thunder Creek
 Wood River

Moose Jaw River Watershed Stewards
 Indian Head - Milestone
 Moose Jaw North
 Moose Jaw Wakamow
 Thunder Creek
 Weyburn - Big Muddy

North Saskatchewan River Basin Council
 Batoche
 Biggar
 Cutknife - Turtleford
 Kindersley
 Lloydminster
 Martensville
 Meadow Lake
 Prince Albert Northcote
 Prince Albert Carlton
 Rosthern - Shellbrook
 Saskatchewan Rivers
 The Battlefords

Old Wives Watershed Association
 Cypress Hills
 Moose Jaw Wakamow
 Thunder Creek
 Wood River

South Saskatchewan River Watershed Stewards
 Arm River- Watrous
 Batoche
 Biggar
 Cypress Hills
 Humboldt
 Kindersley
 Martensville
 Rosetown - Elrose
 Rosthern - Shellbrook
 Swift Current
 Thunder Creek
 Saskatoon Centre
 Saskatoon Eastview
 Saskatoon Fairview
 Saskatoon Greystone
 Saskatoon Massey Place
 Saskatoon Meewasin
 Saskatoon Northwest
 Saskatoon Nutana
 Saskatoon Riversdale
 Saskatoon Silver Springs
 Saskatoon Southeast
 Saskatoon Sutherland

Swift Current Creek Watershed Stewards
 Cypress Hills
 Swift Current
 Thunder Creek
 Wood River

Upper Souris Watershed Association
 Estevan
 Cannington
 Indian Head - Milestone
 Moosomin
 Weyburn - Big Muddy

Wascana Upper Qu'Appelle Watersheds Association Taking Responsibility
 Arm River- Watrous
 Humboldt
 Indian Head - Milestone
 Last Mountain - Touchwood
 Regina Coronation Park
 Regina Dewdney
 Regina Douglas Park
 Regina Elphinstone - Centre
 Regina Lakeview
 Regina Northeast
 Regina Qu'Appelle Valley
 Regina Rosemont
 Regina South
 Regina Wascana Plains
 Regina Walsh Acres
 Thunder Creek

<http://caringforourwatersheds.com/wp-content/uploads/2013/12/Watershed-Map-and-Contact-Information-Updated-May-2015.pdf>

NOTES: _____

Making a Miniature Watershed

Materials Supplied:

- white plastic bag
- Permanent marker
- Powdered, unsweetened drink mix

Additional materials needed:

- Bucket
- Spray bottle
- Cup of water
- A box cover or cooking pan with raised edges that is 12" x 12" or larger
- Foam pieces, Styrofoam, paper or other building materials
- Additional drink mix colors (optional)

Everyone lives in a watershed. What we may not realize is that what happens somewhere in the watershed will eventually have an impact on the lowest point in the watershed – a lake, a river, or a stream.



Directions:

1. Get a box. Use a box cover or a shallow cooking tray (with edges) box to contain the runoff model.
2. Create land forms. Arrange pieces of foam or crumpled paper to represent hills and land forms in the bottom of the box. Encourage your children to be creative. *Remember, the highest points should be near the box walls. Leave a gully or valley in the middle of the box to represent a stream or river.*
3. Cover the land forms. Cover the land forms with a white plastic bag. Start in the middle of the box and gently press the bag into all of the hills and valleys, working your way towards the box walls.

Push the edges of the bag up along the walls of the box and fold the bag over the edge of the box. Be careful not to tear the bag.

4. Create a community. With a permanent marker, draw on the bag to outline the streams or rivers in your model. Next, draw houses, roads, farm fields, feed lots, stores or anything else that you want in your community.
5. Add some pollution.

Optional Sprinkle different colors of powdered drink mix onto the model. The colors represent different kinds of pollution. For example:

- Use red powder to represent yard care chemicals and sprinkle it around the houses.
- Use yellow powder to represent salt on the roads or automobile waste and sprinkle it along roadways or in a parking lot.
- Use purple powder to represent exposed soil at a farm field or a construction site.
- Use blue powder to represent human or animal waste and leave little piles of powder near homes and farms.

Directions continued on next page

6. What will happen with the pollution? What do you think would happen if it rained?

7. Make it rain. Using the spray bottle to represent a rain storm, spray water on the hillsides. Watch the water flow towards the rivers and streams.

8. Follow up. What happened? How they would redesign the community to prevent water pollution?

9. Try it again. Dump the water from the model into a bucket. Remove the bag from the model dry it and flip over to use the unmarked side (or place a new bag on the watershed). Ask the group to redesign the community to prevent water pollution.

10. Sprinkle powdered drink mix in the appropriate areas. Let it rain. Was there an improvement?



What went better in your second model?

Observations: _____



CANADA
4-H Saskatchewan

Saskatchewan 4-H Council

3830 Thatcher Avenue

Saskatoon, SK

S7R 1A5

Phone: 306-933-7727

Fax: 306-933-7730

Email: info@4-h.sk.ca

Website: www.4-h.sk.ca