

# École Secondaire Highwood High School

Little Bow Watershed, Alberta

## Demonstration Green Roof

The students at École Secondaire Highwood High School learned about controlling the effects of run-off from residential structures. They built garden sheds and are in the process of adding green roofs as a demonstration to showcase how design and green building techniques can help to reduce our impact on the environment.

The green roof will absorb and filter rainwater, helping to reduce run-off. The sheds will be placed in local community gardens, where they will also be equipped with a rain barrel to capture any excess water not absorbed by the green roof. The water collected in the rain barrels can then be used to water the vegetables in the garden.

Green roofs are living roofs, with live plants that can help capture and filter rainwater. In addition to helping manage stormwater, green roofs also provide other benefits such as reducing the urban heat island effect, improving energy efficiency, and providing habitat. A complex layer of membranes, growing mediums, and plants are used to create a green roof.

Grade: 10-12

Teacher: David Connell

## Dive A Little Deeper

Visit the links below for more information:

### Green Roofs

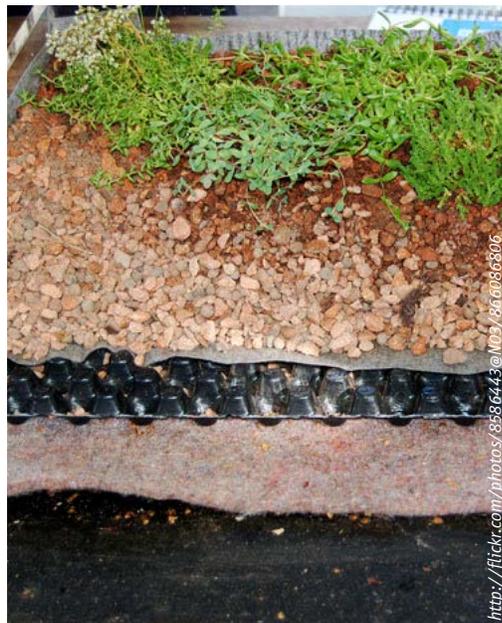
Learn more about the benefits of green roofs and how they work from the City of Calgary's website

### Managing Stormwater with Green Roofs Lesson plan

build a model green roof and explore its capacity to collect stormwater with this lesson plan from [ecokids.ca](http://ecokids.ca) (Grades 4-7)



École Secondaire Highwood High School



<http://flickr.com/photos/8386443@N03/860086806>



Evergreen

From left to right: Student built shed; Sample green roof layered construction; Example of a demonstration Green Roof at Evergreen Brick Works.

## More About Storm Water Runoff

Impermeable surfaces such as pavement and concrete prevent rainwater and snowmelt from soaking into the ground, causing runoff which flows over the ground instead. Storm water runoff can collect pollutants and debris carrying them directly into the water system as it flows untreated into storm sewers, rivers and lakes. During heavy rainfalls, storm water runoff can also contribute to flooding.

