Flow Factor

Indoor/Outdoor Activity

Curriculum: literacy, numeracy, science

Watch a 5 min clip from Kananaskis Country's Interpretive Show, *Flow Factor* to learn more about the water cycle from Great Blue Herron and Mountain Goat. Entire show runs 45 minutes or cue to 13:20-18:50 for specific segment.

Learning Extension – Breathing Leaves

Materials: small clear plastic bag, elastic or string, writing journal

Instructions:

- Go outside for a walk. Find a small deciduous shrub or tree with low hanging leaves. (If you cannot find a tree with its leaves out yet, you could use an indoor houseplant instead).

- Place your clear plastic bag over the leaves of the branch. Leaves that have access to lots of sun will show results of your experiment the best.

- Using your elastic or string tie the bag opening to the branch sealing off the bag from the outside air.

- Examine your tree. How do you think trees breath?

- In your writing journal, draw your tree, showing your bagged branch. Make a prediction or a best guess on what will happen in the bag over time.

- Leave the bag on your tree for one day (or at least 6 hours).

- Go back to your tree. Carefully remove the bag. What do you see?

- In your writing journal, draw your bag showing what the contents are inside the bag.

- Describe what you think happened while the bag was on the leaves. If the bag was not there, where would the water go?

- Draw a diagram in your journal showing the water cycle. Can you include plants in your diagram?

Discussion:

Water is constantly being recycled from land to sky and back down again, interacting with all living and non-living elements. In this experiment, the process of transpiration becomes visible. Transpiration is the evaporation of water from plant leaves. Similar to humans who exhale water with every breath; plants also release water in the air. Transpiration from plants equates to approximately 10% of the water in the atmosphere with the remaining 90% coming from open bodies of water like lakes, rivers and oceans.