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.