



## Brightwater Site

### Discovery Hike at Brightwater along Creek Trail

**Objective:** To explore the three areas represented in and around the Brightwater creek trail (creek, creek forest, and prairie) through observation and the senses (sight, touch, sound, smell, and sometimes taste!).

Leading a nature hike – tips

\*Be the leader, at the front, with another adult at the back of the group to usher students/ support in learning. Go over expectations for listening, participation, etc.

\*Stay on the path please, but point out areas we are restoring due to erosion – wood chips, burlap covers, roped off areas, and any trails that lead off the main trail.

\*Don't collect anything from the trail. Thank you.

\*Respect – all around for the environment, other people and self

\*Let nature be your guide – if an animal shows up, celebrate the gift. Low voices and no movement usually allow for an observation opportunity worth more than anything!

**Kit:** in office, dark green backpack. It should include:

Loupes (magnify scopes)

Riparian Plant Booklets

Loupe discover cards

Discover cards

Sit Up-Ons

Brightwater Scavenger Hunt

Pipecleaner

Blindfolds

### ICEBREAKERS:

**GAME:** Who Am I? Pin (paperclip, stick) the name of something that is found at Brightwater (animal, plant, ecosystem) to the back of the student. They ask yes/no questions to determine what they are. Set students up for this by introducing questioning...some groups may get stuck after the first!

**FOCUS:** Create a list of things for students to discover. Can include examples of: shapes, texture, erosion, decomposition, colours, animals, animal signs, animal homes, sounds, and/or the Brightwater Scavenger Hunt.

## 1. CREEK TALK

Begin at beginning of creek trail by looking out onto the creek (by the box on post).  
Question: Which way does the creek flow? (A: It flows to the left towards the South Saskatchewan).

Look for erosion of the river banks. Did you know the older a creek/stream, the more twisting and winding it will be? The reason: water flows more quickly on the outer edge of the stream (look far left, or North bank – the high one!) than on the inner bank. The water will slowly carve out the bank and carry away the dirt, causing it to erode and eventually fall into the water. (Think houses in Edmonton that fell into the river a few years ago). Opposite of the steep bank, the shallow bank will slowly build itself into the water because water flows more slowly, thus depositing sediment and allowing for the buildup.

Q: Where does this water come from? A: Primary sources are the glaciers at the Saskatchewan crossing in Alberta (along the Columbia Ice Fields Highway). These melting glaciers form the North and South Saskatchewan Rivers. This tributary stream comes off of the Diefenbaker Lake (Gardner Dam) and flows from Blackstrap to Brightwater Creek, which turns into Beaver Creek (as it passes under the highway) before rejoining the South Saskatchewan. The North and South Saskatchewan River join north east of Prince Albert and empty into the Hudson's Bay.

Q: What three areas (ecoregions) are represented here? A: Prairie, Creek, Creek Forest.

## 2. CREEK TRAIL HIKE

### Activity One:

Material – 10 x jeweler's loupes and cards for the loupe look, focus cards (red marker on reused cartons) for observing, pipe cleaner circles or string, riparian (wetlands) plant booklets.

1. Again, take a peak by entrance to trail near meander of creek, there might be animals or sign, or simply water flowing. Lots of beaver and muskrat activity in this area.
2. You are entering a mature creek forest. The large trees are Balsam Poplar with tan furrowed bark. The shrubs all around are High Bush Cranberry with a strong fragrance in the fall, Red Osier Dogwood with purple bark and Willow with yellow bark. The forest creates home for animals. Look for signs but don't collect nests, etc.

**ACTIVITY:** Pass out the 10 power loupes (magnifying glasses). Let the students practice using them by looking at their hands. If it is sunny, really caution them to not focus the sun on anything as we can't have a wildfire out here! Then look at leaf

veins, tree branches – moving to the tree to take a closer look. If you want, pass out the blue loupe look cards (labeled in pocket). Use sting/pipecleaner to focus (frame) a particular area.

3. Continue along trail toward stairs – at the top of the stairs, introduce the observation/ trust game for partners – takes about 5-10 minutes.

#### Activity Two:

**ACTIVITY:** 'Camera'. It is a fun observation partner game. Have player's pair off in twos. One player takes the role of the photographer, and the other plays the camera. The photographer takes good care of the camera, guiding along holding the arm at the elbow. The camera keeps his eyes closed until the photographer sees an interesting subject for a picture. The photographer then taps the camera on the shoulder, and the camera opens its shutter (eyes) until the photographer taps, again signaling to close the shutter (3-5 seconds is a good exposure time). Tell the camera to be creative, choosing unusual camera angles, panning the camera during exposures and taking close-ups. Take three photos each. Switch. Share observations, favorite shot along trail, coolest photos. Source: Sharing the Joy of Nature with Children by Joseph Cornell.

4. Probably you have descended the set of stairs are among the Birch Trees by now. The birch is our provincial tree, known as White Birch or Paper Birch. A sweet sap flows from the birch tree just like in maple trees, and if we tapped the tree, we would have birch syrup.  
Point out a tree that has it's bark removed, with black showing through. Bark was used in the past for fire starter or basket making, but along this trail that wound has created a place for insects to get in as shown by the woodpecker holes. Removing bark from a tree creates openings just like a wipe out on a bicycle. If the knee is not cleaned or covered, stuff gets in and can cause infection. The 'infection' is the insects accelerating the decay process in the trees – a bit of conservation chat here. The lichens are really cool on these trees, another opportunity to loupe look. Lichen is a plant that grows on tree trunks, rocks, soil where there is no or very little pollution. They are Algae and Fungi living symbiotically, and form one of the most primitive plants on earth.
5. Check out the spring that flows from the Earth. Running all year long, it is ground water fed from back in the sand dunes and pops out at the surface in the little coulee (coulee is a drainage coarse created by water flow) behind the rocks and then flows down the hill, into the creek. Frogs, deer, hare and other animals use the spring. The water has not been tested for drinking. It is high in Iron due to the minerals in the soil.

#### Activity Three

**ACTIVITY:** Pass out the sit-upons and sit for a minute or so, listening or observing quietly. Students can share quietly, on your signal, what they noticed, felt,

observed. If your hike is an hour, probably you need to head back to Somers Hall by now. Still lead the group and then wrap up the hike by the wood pile/ campfire area.

Observe the organic matter on the bottom of the pool (It is dark brown compared to the sandy bottom). Talk about organic matter decomposing to contribute to nutrient rich soils.

**OTHER ACTIVITIES:**

- See booklet “Sensory Awareness”
  - Other activities to do with the students include Ethnobotany, more games – which are found in the pack in a plastic pocket as well as a bit more plant identification. Other options include using binoculars to take a closer look at birds along the trail. Ask the project leader to borrow a set and to find out what birds are out and about lately
6. Wrap the hike – review what you did on the hike, some observations, explore why this little trail is so special and important. How does nature discover us? (Discussion about human impact, animals’ curiosity about us...) Review their discoveries and/or scavenger hunt. Celebrate the stories! Review the five senses and encourage using them, except taste. Have fun.