

| ACTIVITY | TIME | EQUIPMENT |
|---|-------|-----------|
| <p>Measure slope of land for same 10 m with clinometer (if time allows). One student stands at 0 m mark and look to other student standing at 10 m mark. Reads scale on right-hand side of clinometer for % slope. Enter on chart.</p> <p>Streambed Material – check off any that you see.</p> <p>Riparian Vegetation – make a subjective estimate.</p> | | |
| <p>Reflection:</p> <p>Some questions (while sitting amongst the vegetation.)</p> <ol style="list-style-type: none"> 1. Who might live in this creek? What animals or plants? 2. How does speed of water (current) influence life in the stream? (hints, getting food, staying in one place, moving) | 5 min | |

SSI Conservancy Stewards in Training Program

FOREST/POND BIOME – *BIOME DE LA FORÊT ET LA MARE*

Theme: Destruction and creation of a landscape – a natural process

Objectives:

✧ Engage in camouflage – a strategy of adaptation in nature.

✧ Demonstrate a connection with nature through drawing.

Duration: Each station is 40 min for activities, 5 min for reflection, 5 min to move on

| ACTIVITY | TIME | EQUIPMENT |
|---|---|--|
| <p>Introduction:</p> <p>Camouflage Encourage students to take their time finding a really good hiding spot – see rules to game.</p> <p>Reflections on Camouflage What was your experience hiding?</p> <p>Activity: By pond’s edge – something happened here to change the forest to this pond – can you find the signs that tell the story – what are they? What happened here? Walk the students down to the water’s edge and ask them to identify signs of change or animal life. There are lots of signs of beaver. Destruction and creation – there had to be destruction before there could be this creation – it is a natural process. Watercolour drawing: Find a place that attracts you and draw the forest we hid in and the flooded forest, now a beaver pond, using one page for each. Be sure to include in your drawing signs that tell the story of change – destruction and creation and if possible, that show camouflage.</p> | <p style="text-align: center;">15 min</p> <p style="text-align: center;">2 min</p> <p style="text-align: center;">5 min</p> <p style="text-align: center;">18 min</p> | <p style="text-align: center;">Rules for Camouflage</p> <p style="text-align: center;">Whistle</p> <p style="text-align: center;">Water colour pencils</p> <p style="text-align: center;">Water</p> <p style="text-align: center;">Paint brushes</p> <p style="text-align: center;">Pens</p> <p style="text-align: center;">8 sit-upons</p> |
| <p>Reflection: Share observations and journal entries.</p> | <p style="text-align: center;">5 min</p> | |

FOREST/POND BIOME – ALTERNATE PROGRAM

(as Jean Gelwicks ran the station)

| ACTIVITY | TIME | EQUIPMENT |
|--|--|---|
| <p>Introduction:</p> <p>Talk about a small tree or limb which a beaver has chewed. Ask questions: What took down this young tree or limb? Why? Do beavers climb? Why do they need to cut down trees.</p> <p>Activity:</p> <p>Lead the students on a silent walk where they are going to count the number of signs that they can see that prove beavers are in the area. As you walk guide their looking, so that most of them will see most of what you want them to see.</p> <p>Find a nice spot by the pond’s edge to hold a discussion. How many signs did you see? What were they? Something happened here to change the forest to this pond – What is the story? What happened here? Give them more information about beavers (see beaver information sheet).</p> <p>Learning – Destruction and creation – there had to be destruction before there could be creation – it is a natural process.</p> <p>Activity:</p> <p>Watercolour drawing: Find a place that attracts you and draw the forest we hid in and the flooded forest, now a beaver pond, using one page for each. Be sure to include in your drawing signs that tell the story of change – destruction and creation and if possible, that show camouflage. Share observations and journal entries.</p> <p>Camouflage Activity:</p> <p>Encourage students to take their time finding a really good hiding spot – see rules to game.</p> | <p>5 min</p> <p>10 min</p> <p>15 min</p> <p>10 min</p> | <p>Limb or small tree that has been chewed by a beaver. Beaver pond.</p> <p>Tarp</p> <p>Whistle</p> <p>Water colour pencils 8 sit-upons Water Umbrellas Paint brushes</p> <p>Area where there are many places to hide in all directions</p> |
| <p>Reflection:</p> <p>Reflections on Camouflage. What was your experience hiding?</p> | <p>5 min</p> | <p>Rules for Camouflage Whistle</p> |

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Camouflage Game Rules:

Camouflage is a physical adaptation some animals use for blending in with their surroundings so they are not seen by a predator. As you can see, this forest has many colours, textures and plants that offer lots of camouflage opportunities. Let's see how well can you hide in this forest?

Camouflage, the game, has some rules.

Rules are suggested below, but likely the students know the game and can offer the rules they prefer to play by.

One person volunteers to be the Red-tailed Hawk

Hawk is shown their spot for their perch.

While Hawk counts to 50 slowly, with eyes covered, all others hide.

RULES TO HIDING – THOSE HIDING MUST ALWAYS HAVE ONE EYE ON HAWK!!

Once Hawk has finished counting, Stationmaster can blow whistle one short blow to let hidiers know Hawk is now looking.

When Hawk spots someone hiding, Hawk says person's name and something about what they are wearing or where they are hiding, like "I see Sarah with her red hat by the tree stump"

A spotted player comes in to the perch and waits for Hawk to find the others.

NOTE: If no one is found for several minutes then Hawk can close eyes while other players move to a new hiding spot. 2 whistle blasts or call out. After everyone in new hiding place, blow whistle 1X for game to recommence with Hawk watching.

When everyone is spotted, someone else is Hawk.

Let others have a turn playing Hawk. (Avoid a person being Hawk for >10 Minutes).

Reflect with students on their experiences

MARSH BIOME – BIOME DU MARÉCAGE

Theme: Sensory Census/*Recensement Sensible*

Objectives:

- ✧ Demonstrate an understanding of the marsh biome.
- ✧ Explore and experience a marsh using sensory perception.

Duration: Each station is 40 min for activities, 5 min for reflection, 5 min to move on

| ACTIVITY | TIME | EQUIPMENT |
|---|----------------------|---|
| <p>Introduction to the marsh:</p> <p>This is a sensory awareness station. We are going to explore the marsh without the use of sight. How many senses can we use? (touch, hear, smell)</p> <p>We want to do a census? What is a census?</p> <p>Students change into rubber boots (if they don't have their own) and choose a blindfold.</p> <p>Students line up, one behind the other with their blindfolds on and place their hand on the shoulder of person in front. The front student is led by Station master by hand or has hand on their shoulder. Stationmaster leads group down into the wet marsh, slowly, introducing them to sedge (edges), rush (round stem), reed canary grass (nodes), yellow iris (broad leaf blades), and skunk cabbage. (Either having students feel down to touch plant or placing one in their hands). Ask for how the leaf feels to them, smells to them. Then listening for birds, the stationmaster asks students to raise their hand with a closed fist and every time they hear a call to open their fist with a finger. The stationmaster tries to identify the bird call, if not they note that it is different and try to determine how many different calls are being heard.</p> <p>Here's a useful poem to recite:</p> <p>"Sedges have edges Rushes are round Grasses have nodes right down to the ground"</p> | <p>15 min</p> | <p>Rubber boots (8)</p> <p>Blindfolds (8)</p> <p>Whistle</p> |

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|--|----------------------|---|
| <p>Activity:</p> <p>Group splits up into 3 smaller groups with one seeing leader and the partner(s) blindfolded. Student leader leads blinded further into marsh.</p> <p>Groups should spread out.</p> <p>At their choosing, the student leader has the blindfolded student stop, asking them to feel the plants at the toe of their boot, or listen for bird calls, or to hold a frog. Student leader makes many stops in marsh. Then students change roles, exchanging blindfold.</p> | <p>20 min</p> | <p>whistle blows to switch blindfold</p> <p>whistle blows to come in and end station</p> |
| <p>Reflection:</p> <p>Review of shared marsh experiences (may include tally of treefrogs found, insects, plants, birds) – students write in their journals. [Some questions to offer: What are the common plants in the marsh? There are no trees in a marsh – it is too wet – a marsh is identified by the predominance of sedges and grasses, and some shrubs (no trees, little moss) How is the marsh biome different from where you got off the bus?]</p> <p>Return gear.</p> | <p>10 min</p> | <p>Bird guide</p> <p>Insect guide</p> |

POND BIOME – *BIOME DE L'ÉTANG* (POND INVERTEBRATE STATION)

Theme: Pond life - invertebrate adaptations
Objectives:
 ✧ Demonstrate use of a dichotomous key to identify invertebrates in the pond community.
 ✧ Observe an invertebrate and record its adaptations by illustration.
Duration: Each station is 40 min for activities, 5 min for reflection, 5 min to move on

| ACTIVITY | TIME | EQUIPMENT |
|--|---------------|---|
| <p>Introduction: What is an invertebrate? (no backbone, has an exoskeleton or no skeleton) What are some examples? (sea stars, jelly fish, crabs, ants etc.)</p> <p>Activity: Review proper sampling of invertebrates. Facilitator demonstrates sampling; larger creatures with a net or cup, smaller ones with a short turkey baster or cup and spoon. Place invertebrate in smaller cup with water for closer observation.</p> <p>Students choose an invertebrate to study, remove it carefully and place it into a cup with water, and then observe it – how does it move, breathe, is it a predator? What animal is it?</p> <p>Pond invertebrates – identification with a dichotomous key (works well if students work in pairs or alone).</p> <p>Students draw their invertebrate. Label it. Make notes of its adaptations to life in the pond.</p> <p>Refer to printouts, identify as to shredder, collector, predator, etc. Note adaptations to life in water.</p> <p>Hint: gills, streamlined, air bubble, biting mouth parts, leg parts for grabbing, fast moving. See notes.</p> | <p>25 min</p> | <p>Aquariums for invertebrates</p> <p>Invertebrates!</p> <p>Loupes</p> <p>Microscopes</p> <p>Small basters</p> <p>Dishes</p> <p>Forceps</p> <p>7 Dichot. keys</p> <p>4 Dip nets</p> <p>8 Sit-upons</p> <p>8 Clipboards</p> <p>Invertebrate images</p> |
| <p>Reflection: Group discussion on findings, general discussion on life in water</p> | <p>5 min</p> | |

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|--|----------------------|----------------------------|
| <p>Extension:</p> <p>As group, create a food web physically using examples from pond and marsh. Use dental floss to make the connections between the members of the food web. Food web must contain, primary producers (plants), consumer (plant eater), predator, decomposer (bacteria, and fungi).</p> <p>After creating food web with lots of connections, (go around group at least twice to each participant), then ask one of players to release their hold and others pull up slack, continue with a few more releasing – note and discuss what happens to the web. Relate to marsh or pond ecosystem.</p> | <p>15 min</p> | <p>Dental floss</p> |