Pictou County Forest School - Grade 2 Lesson Plans
Physical Science: Motion

Activity: Build a boat! (suggested time 60 minutes)
Overall Curriculum Outcome: Learners will test motion of objects.
Specific Curriculum connections:

- Factors that affect motion
    - ▪ How can I design a fair test to determine which toy boat will move the fastest? Farthest? Slowest?
    - ▪ How can I build an object that moves?
    - ▪ How can I change how an object moves?

Materials:

- Water totes for buoyancy experiments
- Orange for buoyancy experiment
- Various found logs, sticks, birch bark,
- Drills (adult use), hammer, nails
- String, duct tape, elastics
- Pencils, clipboards for sketching

Intro/Activation:
Students will be provided the opportunity to brainstorm and experiment with the concept of buoyancy using natural materials found onsite at Forest School. Groups will be given water totes to drop their found objects into to experiment with buoyancy.

- What concepts can we discern from this experiment?
- How could we apply these ideas to designing a model sailboat?
- Teachers will be present to challenge students with new concepts (e.g., why does an orange float, while a peeled orange sinks?)

Activity:
Students are posed with the challenge to build a sailboat using (mostly) natural materials found at Forest School. We will launch our sailboats off of our little bridge into the Big Caribou River.

Students are invited to search the forests and grounds surrounding Base Camp for materials that would be useful for boat building. We will discuss with students what attributes are relevant when thinking of designing a sailboat. Paper and clipboards are available for sketching out plans and blueprints.

Adults will be available to help use drills and hammers etc as the students embark on constructing their sailboats.

We will walk down MacBain Road to the bridge crossing the Big Caribou River. Adults will facilitate the launch of students' sailboats.

Reflections/Further wonderings:
What trends did we observe in terms of materials used for successful boats?
What changes would students make to their boats going forward?
Which boats were the most stable? How is stability achieved in the water?