Grade 6 Science

Topic E – Trees and Forests

General Learner Expectations

6-10 Describe characteristics of trees and the interaction of trees with other living things in the local environment.

Specific Learner Expectations

Students will:

• Identify reasons why trees and forests are valued. Students meeting this expectation should be aware that forests serve as a habitat for a variety of living things and are important to human needs for recreation, for raw materials and for life-supporting environment.
• Describe kinds of plants and animals found living on, under and among trees; and identify how trees affect and are affected by those living things.
• Identify characteristics of that distinguish deciduous and coniferous trees.
• Become familiar with deciduous and coniferous trees.
• Notice leaf arrangements, branching patterns, overall form of tree.

Lesson – Make Like a Tree and Leave!

NOTE: results may better if this can be done in the Fall!

Activity #1 – Probing Student Knowledge (20-30 min)

Start the Lesson by finding out what students know about Forests and Trees in general by asking the following questions for inquiry:
• Are all forests the same? What living and non-living things will you find in a forest?
• How do humans use the forest and trees?
• What is a deciduous tree? What is a coniferous tree?
• What do leaves from a deciduous tree look like? From a coniferous tree?
• Why do you think forests and trees are important?

While discussing the above questions you may want to make a web on the board and have students copy it into their notes.

Activity #2 – Surf and Retrieve (30-60 min)

Divide students into groups and have them check out the Boreal Forest section, the glossary, flash zone, and the photo gallery of the edukit to check the answers that were
recorded on the web in the previous activity. Make sure students clear up any misunderstandings, and then go over the questions again as a group recording all the correct information.

Tell students that the next class (you might need an entire morning depending on the location of the closest park) will be spent outside investigating trees in a park close to the school. They will need to bring the following items:

- Notebook/Journal
- Pens, pencils, crayons, clipboards
- Blank paper provided by teacher for bark rubbings
- Zip-lock bags or containers for collecting leaf specimens
- Snacks
- Proper clothing for a fall field trip
- Teacher bring First aid kit and multiple copies of the Guide to the common native trees and shrubs of Alberta

**Activity #3 – Field Study (1-3 hrs)**

Check to make sure students have the required items. Drive, bike or walk to the chosen site.

Teacher should pick out a tree and asks students to recall the characteristics of deciduous and coniferous trees? So what type of tree are we looking at? What do leaves from a deciduous tree look like? From a coniferous tree?

Have each student pick a tree to observe. Students will record as many characteristics of the tree as possible using the knowledge gained from the previous activities and the Guide to the common native trees and shrubs of Alberta or something similar.

After students have had time to record all their observations, demonstrate a bark rubbing. Ask students to make a rubbing of the tree they have been observing.

Once the rubbing is complete, ask students to begin carefully sketching the tree in their notebook/journal.

Next tell students to try and get leaf samples of their tree from the ground if possible. If not let students take one off the tree gently and put it in their zip-lock bags or containers.

Ask students to pick another tree for observation. This will be the tree opposite to what they first observed (If they observed a deciduous, they now find a coniferous tree). Students will also select a leaf or chunk of needles from this tree to put in their bags or containers. Teacher then asks students to answer the question; “What is the difference between this tree and the one you observed earlier?” Ask students to record their answers in their journals/notebooks.
Finally, the teacher chooses a plant, animal or insect to discuss with the group. The teacher answers the questions: Is this plant/animal/insect on, in or under the tree? What is the relationship between this plant/animal/insect and the tree? Is this plant/animal/insect living in the tree? Is there any evidence that this plant/animal/insect is harming the tree? Then the students choose an plant/animal/insect and write about its characteristics in relation to the tree.

Before leaving the site make sure students have all the data and samples that they were asked to collect and record.

**Activity #4 – Display Findings (30-60 min)**

During the next class have students display their findings, rubbings and collected items on a poster board to be displayed in the classroom.