

# Tapping Birch Trees

## Age Range

- 8-18+

## Group Size

- Maximum: 5

## Time

- Set-up: varies
- Activity: varies- this activity is mainly boiling the birch sap to make syrup. Depending on how much birch sap is boiled and what materials are used for boiling will change the amount of time needed.

## Materials

- Large volumes of birch sap (refrigerate or freeze sap until you have sufficient quantities to boil; sap spoils quite easily)
- Large volume pot or evaporator
- Outdoor fire pit or woodstove
- Heat-regulating stove
- Candy thermometer
- Hydrometer/ refractometer (optional equipment)
- Filter paper
- Small volume jars and lids, sterilized

## Notes

- The activity facilitator should be familiar with the information contained in the Birch Basics Resource Sheet. This information can also be presented to children.
- Syrup is made by boiling sap to eliminate about 80-90% of its water. To make even a modest amount of syrup, you must boil a lot of sap.
- It is advisable to do the bulk of the boiling outdoors. Indoor boiling can peel wallpaper, discolour walls and permeate rooms with sweet, sickly odours.



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## Topic

- Local Food Production
- Curriculum connection: elementary and junior high chemistry, biology, social studies, mathematics and aboriginal language/culture

## Objective

- Children will learn how to distill sap to make birch syrup
- Birch sap harvesting and distillation is a traditional Indigenous activity.



## Set-Up

1. This activity can be done in conjunction with the Tapping Birch Trees activity to collect sap for distillation. However, this activity can also be done with sap collected by someone else.
2. Build up a cooking fire in an evaporator, fire pit, or woodstove. If cooking over a fire pit, prepare an apparatus for cooking with the large volume pot over the fire.
3. Prepare other materials.

## Activity Directions

4. Using a large volume pot or evaporator, boil the sap at a rolling boil until it darkens in colour. It should look like very strong tea. Expect this step to take a significant amount of time.
5. Using the filter paper, filter the concentrated sap into a smaller pot and transfer the pot to the heat-regulating stove. Then set-up a candy thermometer on the side of the pot with the thermometer suspended in the concentrated sap.
6. Slowly evaporate the concentrated sap, keeping an eye on the thermometer. The sap should not be heated above 70°C. Evaporate until the desired taste and thickness has been achieved. Keep in mind that sufficiently concentrated birch syrup is about half as thick as maple syrup at a similar concentration.
7. If using a hydrometer or refractometer, measure the density of the cooled syrup to ensure that it achieves a reading of approximately 1.32 or 67 Brix. While this step is not necessary, un-refrigerated syrup must achieve a minimum concentration of sugar to avoid spoiling, which is tested with a hydrometer or refractometer.
8. Re-heat the syrup just until it reaches about 82°C and pour it into sterilized jars. Screw on the sterilized lids.
9. Enjoy the syrup with bannock, fish, meat, in salad dressing, in marinades, on ice cream, waffles, pancakes and French toast. It's also really tasty all by itself!

## Pairs Well With

- Tapping Birch Trees

## Additional Materials

- Birch Basics Resource Sheet

