APPENDIX A:
SOIL YOUR UNDIES

As mentioned in this video on the Applications of Soils, a soil's ability to decompose organic material is key to any terrestrial ecosystem. Organisms that live in the soil such as worms, insects, fungi, and even smaller microorganisms such as bacteria break down the organic layer on the ground (fallen leaves, dead plants, and so on) as an energy source. The decomposed material is then free for plants to use in their own growth. Soils with high biological activity, or a more active population of organisms, will be able to decompose more organic matter, and thus be able to provide more nutrients to nearby plants. This high amount of biological activity is an indicator of a healthy soil.

Measuring the biological activity and health of soil in your own backyard or garden is an easy activity to try for yourself, so head outside and #SoilYourUndies!

Materials:

- A new pair of white 100% cotton underwear (no polyester or dyes)
- A shovel
- A marker flag
- A patch of soil
- A bucket of water (in 2 months)

Process:

1. Dig a narrow trench in your soil.
2. With the waistband showing, bury the underwear in the top six inches (6") of soil.
3. Mark the spot with a flag so you can find it again
4. Leave the underwear buried for two (2) months.
5. Dig it up carefully and wash in a bucket of water to remove excess soil.

Once the remains of your underwear have been retrieved, assess the state of the fabric. What does it look like after two months in the dirt?

To add another layer to this experiment, bury multiple pairs of underwear in different soil types (ie. garden vs lawn, shady vs sunny, under a conifer vs broad-leaved tree, etc) on the same day and for the same amount of time. When the time is up, compare them - which was the most active? The least? Why?

Share the result of your experiment online to #ONEnvirothon, #SoilYourUndies, and check out how other pairs of underwear fared across the province!

This activity was adapted from the Soil Council of Canada's "Soil Your Undies" program.