SASKATCHEWAN WASTE REDUCTION COUNCIL

Think more... Waste less

Too Good to Waste / Réduire c'est agir
Waste Reduction Week in Canada

Hands-On Compost Demonstration

What is compost? Compost is "ready to use" soil organic matter. It is dark, crumbly, and sweet smelling, and is made by arranging a mixture of materials in bins or open piles.

Activity Objective: to give participants a simple but meaningful compost - making experience.

Age level: kindergarten to adult (This could be done with a class, an environment club, or as an activity for care-partners. It could also be organized as a learning event for parents and children.)

Number of people: 15-30

On-line Compost Details:

"How-to compost" information: www.saskwastereduction.ca/recycle/resources/composting/

Carbon to nitrogen ratioshttp://compost.css.cornell.edu/OnFarmHandbook/apa.taba1.html

Compost micro-organisms: compost.css.cornell.edu/microorg.html

Summary of Activity: Participants are organized into groups that represent the main ingredients of compost: green materials, brown materials, water, air and soil. With the exception of the person designated as Air, participants are grouped according to the relative amounts used in the compost-making process and provided with pails of material. The compost materials are added gradually and mixed with a fork by 'Air'. The demonstration takes about 15 minutes to complete.

Concepts and associated activities:

Science: micro-organisms at work; nutrient cycles; aerobic and anaerobic respiration; importance of carbon, oxygen and nitrogen in living systems

Social Studies: 'wastes' as resources, co-operative activity

Mathematics: ratios, the concept of units

Literature: incorporate a writing exercise (poems, paragraphs, short stories), make this hands-on activity more dramatic by giving group members spoken lines and 'performing' it for an audience.

Materials & Equipment: Quantities will vary with number of participants.

- Green materials: green grass clippings, vegetable/fruit food scraps, other green plant material
- Brown materials: fall leaves, brown grass clippings, straw, chopped cornstalks or other dead bulky garden plants. (This activity is designed to use browns; the ratios of materials will not be correct if shredded paper, sawdust or woodchips are used)
- Water
- Soil
- 4-litre ice cream pails (ideally one per participant)
- name tags with coloured paper inserts to designate groups (i.e. blue for water, black for soil, green for green materials, brown for brown materials)
- 1 garden fork
- 1 tarp

Group Sizes: The majority of participants will be Browns or Greens. For this activity, we will use relatively equal numbers of Browns and Greens. Here is a breakdown for a group of 25 students plus one adult.

- 9 Greens
- 10 Browns
- 4 Water
- 2 Soil
- 1 Air (adult with fork)

Location: This is an outdoor activity.

Advance preparation

- For older students, show the *Composting on the Prairies* video available from SWRC, or watch it on YouTube.
- For younger students, spend some classroom time beforehand talking about compost—let them see and smell finished compost and look at the kinds of materials used to make compost.
- Gather the materials and equipment. The browns store easily but the greens need to be quite fresh to avoid odours and messiness.
- Prepare coloured tags and divide participants into their groups.
- Assign a narrator (teacher or student) to explain the reason for adding different materials. (A script is available on-line. See www.saskwastereduction.ca/wrw/school under "composting activity".)

Activity

1. Place tarp on ground and assemble participants with filled pails in hands. 'Air' should be poised by the pile and can act as narrator.
2. Give a few short words of introduction.
3. Invite 5 Browns to come forward and start the pile (If chunky browns are available, this where to use them.) Have Air spread out the materials with a fork to a 10-15 cm. depth.
4. Invite 5 Greens to add their materials. Again Air spreads materials to even layer.
5. Invite 1 Soil to sprinkle their pail of soil on the pile.
6. Invite 1 Water to sprinkle their water on the pile.
7. Have Air gently mix the ingredients (a little messy if chunky browns are used)
8. Repeat the sequence, with the 3 remaining water added to the larger pile.
9. Discuss how the materials will change as the composting process occurs. If possible, have a sample of finished compost available so participants can see the end product.
10. Make sure the materials used in this demonstration get added to a functioning compost pile when you are through with them.

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