



# Class Activity: May

## Rotter spotters

Pupils investigate and identify organisms living in the compost habitat, and consider how they are adapted to their environment.

<b>Group</b>	Whole class (lower KS2) or Eco Team
<b>Space needed</b>	The activity can take place outside near the compost bin, or inside the classroom. Pupils will need to put their trays of compost on a flat surface in good light.
<b>Timing</b>	45 mins – 1hour. If a longer session is available, the compost can be collected with pupils as part of the activity. For a shorter session, it should be sourced in advance.
<b>You will need</b>	<ul style="list-style-type: none"> <li>• A medium-sized bucket of compost collected from an active compost bin (compost from the centre of the bin will contain the widest range of organisms)</li> <li>• Copies of the 'Rotter Spotter' sheet: see following pages, and/or the 'Compost branching key' available to download from: <a href="http://zone/recycledevon.org/teachers/compost">zone/recycledevon.org/teachers/compost</a> (1 sheet per pair of pupils)</li> <li>• Old metal spoons (1 per pair of children)</li> <li>• White trays or trays lined with white paper (1 per pair of children)</li> <li>• Magnifying glasses (1 per pair of children)</li> <li>• A microscope connected to the classroom interactive whiteboard (optional)</li> <li>• Antibacterial soap</li> </ul>
<b>Health and safety</b>	Pupils should keep their hands away from their faces while working with soil / compost. Any cuts on their hands should be covered; it may be appropriate for children with skin conditions, such as eczema, to wear gloves. All pupils should wash their hands thoroughly using antibacterial soap at the end of the activity. If working in the classroom, desks should be thoroughly cleaned after the activity.
<b>Introduction</b>	<p>Ask pupils to share with a talking partner three words to describe a compost bin. Discuss their responses as a class. Did anybody use the words 'fascinating', 'amazing' or 'habitat'? This session will help pupils to realise that a compost bin is exactly that: a fascinating and amazing habitat! Ask pupils to consider the conditions inside the compost bin habitat.</p> <p><i>It is dark, damp, and warm. The water comes from the 'green' materials put in the compost such as fruit and vegetable skins. The warmth results from bacterial action as the materials start to break down. There is not much space, but plenty of oxygen for small organisms, since 'brown' materials such as twigs or sawdust provide lots of little air pockets.</i></p> <p>Ask pupils to predict what organisms they will find in a compost bin, given the conditions they have identified.</p> <p><i>The main organisms found in the compost bin are shown on the 'Rotter Spotter' sheet. Pupils' incorrect answers can be interesting and worthy of discussion e.g., a caterpillar does not like a compost bin habitat because it likes fresh, living leaves, not dead ones.</i></p>

<p><b>Main session</b></p>	<p>Explain the activity to the children, emphasising the importance of health and safety, and taking care of the recycling organisms.</p> <p>Pupils work in pairs, each with a tray of compost and an identification sheet. They investigate the compost sample and identify organisms found. If a microscope connected to an interactive whiteboard is available, it is interesting to draw pupils' attention to the particular features of individual organisms.</p> <p>The class can discuss how these show their adaptation to their habitat e.g., the segmented bodies of centipedes and millipedes make their bodies very flexible, allowing them to move through the small spaces in the compost with ease. (The bright light of the microscope and the heat it generates are not comfortable for organisms used to dark, damp conditions, so the compost should not be kept under the microscope for too long.)</p>
<p><b>Plenary</b></p>	<p>Discuss the organisms found in the compost bin. Were pupils' predictions correct? Were there any surprises?</p> <p>Introduce the picture of compost food web and discuss which parts of the compost food web were found.</p> <p>What words would pupils now use to describe a compost bin?</p> <p>At the end of the activity, return the organisms to the compost bin so they can continue their vital recycling job.</p>
<p><b>Curriculum links</b></p>	<p><b>Science</b>  Living things and their habitats: Y4 and Y6 (<i>classification keys</i>)  Animals, including humans: Y4 (<i>food chains</i>)</p>
<p><b>Extension or simplification</b></p>	<p>The 'Rotter Spotter' guide is suitable for younger / less able pupils; the branching key is appropriate for older / more able pupils. Older pupils could use the 'Rotter Spotter' guide during the activity and then create their own branching key as a follow up activity.</p> <p>Follow up by investigating the organisms in other habitats within the school grounds. Pupils can consider the compost bin conditions and suggest other areas that have similar conditions.</p> <p>Alternatively, collect materials from another area (e.g., a pile of rotting leaves) and compare the organisms found in this habitat with those in the compost bin.</p>



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# Class Activity: May

Rotter Spotter ID sheet for pupils



Slug



Slug eggs



Snail



Centipede



Worm



Worm eggs



Ant



Ant eggs



Millipede



Springtail



Woodlouse



Spider



Maggots



Earwig



False scorpion



Don't let Devon go to waste