

Compost Critters (KS2)

Season: All	Duration: 1-1.5 hours																					
Overview: Delve into compost and get up close to the critters living amongst it! Find out how they help make compost, how to provide them with a good compost bin habitat and in turn make great compost to use in the school garden. Make a plastic bottle mini-greenhouse or newspaper plant pot and plant some seeds to nurture.																						
Learning Objectives: <ul style="list-style-type: none"> • To identify what compost is and what we use it for. • To identify that making compost is a useful method of recycling organic waste and why this is important. • To identify the types of micro-organisms and minibeasts found in a compost bin or heap and understand the role of these organisms in the process of making compost. • To identify that a compost bin/heap can be a valuable wildlife habitat and to understand how to look after this habitat e.g. using appropriate organic waste, maintaining a good mixture of waste types etc. • To use compost to plant seeds and understand how to care for seeds so that they grow well. 		Key Vocabulary: <table border="0"> <tr> <td>Recycle</td> <td>Nutrients</td> </tr> <tr> <td>Landfill</td> <td>Minerals</td> </tr> <tr> <td>Compost</td> <td>Bacteria</td> </tr> <tr> <td>Compost bin</td> <td>Mini-beasts</td> </tr> <tr> <td>Compost heap</td> <td>Habitat</td> </tr> <tr> <td>Organic waste</td> <td>Food-chain</td> </tr> <tr> <td>Rot</td> <td>Herbivore</td> </tr> <tr> <td>Micro-organisms</td> <td>Carnivore</td> </tr> <tr> <td>Mould</td> <td>Decomposer</td> </tr> <tr> <td>Fungi</td> <td></td> </tr> </table>	Recycle	Nutrients	Landfill	Minerals	Compost	Bacteria	Compost bin	Mini-beasts	Compost heap	Habitat	Organic waste	Food-chain	Rot	Herbivore	Micro-organisms	Carnivore	Mould	Decomposer	Fungi	
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National Curriculum Links: Science: Sc2 Life processes and living things: <ul style="list-style-type: none"> 4 b: how locally occurring animals and plants can be identified and assigned to groups; 5 a: about ways in which living things and the environment need protection; 5 b: About the different plants and animals found in different habitats; 5 d: to use food chains to show feeding relationships in a habitat; 5 f: that micro-organisms are living organisms that are often too small to be seen, and that they may be beneficial or harmful. Sc3: Changing materials: 2 f: that non-reversible changes result in the formation of new materials that may be useful Geography: 5: Knowledge and understanding of environmental change and sustainable development: <ul style="list-style-type: none"> a: Recognise how people can improve the environment or damage it and how decisions about places and environments affect the future quality of people's lives; b: Recognise how and why people may seek to manage environments sustainably, and to identify opportunities for their own involvement. Design and Technology: 2 Working with tools, equipment, materials and components to make quality products.																						
Resources to be provided by school: Interactive whiteboard or projector and screen, access to school composting and outdoor areas (where appropriate), Materials Children should bring from home: Newspaper (one sheet per child is plenty) for making plant pots or clear plastic bottles complete with lid (1 per child) for mini greenhouses.																						

Compost Critters (Key Stage 2)

Outline of Activities with approximate timings:

Please note: We can tailor activities to suit the abilities of your class and time available.

Introduction (20 minutes) :

Use powerpoint presentation and props to introduce the topic of compost and to discuss:

- What compost is and what we use it for.
- The compost bin/ heap as a habitat for minibeasts and micro-organisms: Types of organisms, role in nature's recycling and why this is so important.
- How to provide the best conditions for survival of compost minibeasts, and therefore make the best compost.
- Why it is important to compost organic waste rather than putting it in the rubbish bin.

Investigating composting minibeasts (20 minutes)

Children explore their school compost bin/ heap and/or our portable wormery. We first examine and discuss whether the composting process is working: Is there a good mixture of organic material? Does it provide a good habitat for mini-beasts? How could we improve the habitat? Children then work in small groups to find and identify minibeasts amongst the compost and think about their characteristics and adaptations for life in the compost bin. If time we can also use a digital microscope to display certain minibeasts to the whole class.

Then choice of activity:

A: Newspaper pots (15-20 mins)

Children use strips of newspaper to make mini pots using wooden 'potter' tools. They fill their pot with compost and plant seeds (type appropriate for the time of year). We discuss what the seeds need to grow, what plants gain from the compost and what to do once their seedlings have grown big enough to plant out.

B: Mini-greenhouses (30mins)

Children reuse an old plastic drinks bottle to make a mini greenhouse. They cut the bottle in half to form the 'greenhouse', decorate it with permanent marker pens and fill it with compost. They then plant seeds (appropriate for the time of year) in their greenhouse. We discuss what the seeds need to grow, what plants gain from the compost, how the greenhouse works and how to care for their plants.

Extra activities (time allowing):

Compost food-chains (15 minutes)

Following our investigations we discuss the roles of composting minibeasts within garden food-chains. Working in small groups children choose a minibeast and brainstorm what it might eat/ be eaten by, 'building' a food-chain to show the rest of the class.

'Sort out your compost!' (15-20 minutes)

Using picture cards children must decide if their rubbish is compostable and put it in the correct place on the compost sorter board. We then discuss their choices as a class, making any corrections needed and giving reasons for this. If time allows we can then build a rotter timeline using the compostable items from the game and from identifying which items an ideal compost mixture should contain.

Compost Tig (10 minutes):

A fun and active way to reinforce learning: Each child becomes a piece of organic waste and has to collect the 4 things they need to get to the compost bin and rot! They must watch out for the 'wicked waster' who is out to tag them and throw them away instead of making compost!

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Eco– Schools Links:

Curriculum-linked activities and practical action on waste and recycling, or developing your school grounds could be used as evidence towards an Eco Schools Award. For more information visit: <http://www.keepbritaintidy.org/ecoschools/>

Suggested follow-up activities:

Make mini wormeries from a plastic bottles and care for some composting worms– download instructions [here](#).

Make a mini composter and investigate the composting process and factors affecting it in more detail: <http://www.littlerotters.org.uk/pdfs/MiniComposter.pdf>

Set up a composting scheme at school– a great way to reduce the amount of waste going to landfill and nourish your school garden at the same time. WRAP’s school composting leaflet has some top tips:

http://www.wrap.org.uk/downloads/compost_leaflets_eng_final_7.5879ebec.7700.pdf

General home composting information on the recycle now website:

http://www.recyclenow.com/home_composting/

Cut-price compost bins, wormeries and accessories:

<http://www.somerset.getcomposting.com/>

Use your compost to enhance your school garden by growing plants to attract wildlife or creating a school vegetable patch. As well as linking to the Eco-schools and Healthy Schools awards schemes, school gardening projects provide a wealth of cross-curricular learning opportunities. There are a number of organisations providing encouragement, ideas and support :

<http://www.growingschools.org.uk/>

<http://www.thegrowingschoolsgarden.org.uk/>

<http://www.gardenorganic.org.uk/organicgardening/schools.php>

<http://apps.rhs.org.uk/schoolgardening/default.aspa>

<http://www.foodforlife.org.uk>