

CREATIVE COMPOSTING TEACHER'S PACK

Key Stage 2

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Teacher's Notes

BACKGROUND INFORMATION

About the Waste & Resources Action Programme (WRAP)

WRAP (the Waste & Resources Action Programme) is a major UK programme established to promote resource efficiency. Its particular focus is on creating stable and efficient markets for recycled materials and products and removing the barriers to waste minimisation, re-use and recycling. A not-for-profit company in the private sector, WRAP is backed by substantial Government funding from Defra and the devolved administrations in Scotland, Wales and Northern Ireland.

Details of all WRAP's activities are available at www.wrap.org.uk

About this Pack

This pack is designed for use with children aged seven to eleven. It contains pupils' resource and activity cards and teachers' work cards introducing you to the world of composting. Where possible the activities have been designed to link back to aspects of the National Curriculum including Geography, Science, English and Maths, whilst at the same time increasing general awareness of environmental issues.

The Home Composting Schools Pack also provides an ideal opportunity for you to approach the concept of citizenship with pupils. Each pupil can experience the process of recycling kitchen and garden waste, see it happening and make use of the end product.

Further details on how composting can be used within the National Curriculum may be found in Appendix Two of these notes and at www.hdra.org.uk

GETTING STARTED

What is compost?

Compost is an organic material derived from decomposed kitchen scraps and garden waste. It has a soil-like, often spongy texture and is rich in nutrients.

Items of rubbish that rot are organic materials. They are biodegradable.

Composting is a natural recycling process whereby tiny micro-organisms and minibeasts feed off decomposing kitchen and garden scraps. This helps to break down the organic matter. After six to nine months the rubbish will have turned into a nutrient-rich, brown compost, ready for use on plants and soil.

You can compost almost anything that was once alive apart from cooked food, meat and fish and waste of animal origin. These items can attract pests and vermin like flies and rats.

Teacher's Notes

Why should we compost?

By home composting, we reduce the organic waste that is sent to landfill sites. At landfill sites all the rubbish is dumped together, organic waste is left to rot without air (anaerobic decomposition) and forms the gas ammonia. Ammonia is poisonous to fish and spoils drinking water. Anaerobically rotting organic waste also produces methane – a powerful greenhouse gas that is contributing towards climate change. The compost you make is great for your garden and works as a feed and soil conditioner, improving soil quality and encouraging your plants to grow and stay healthy.

COMPOSTING GLOSSARY

- Compost** The material that is formed when organic material rots.
- Organic Matter** Plants, fruits and vegetables – living things (meat and fish should be avoided when making compost because they attract flies and vermin and tend to putrify).
- Biodegradable** Materials that are able to rot.
- Decompose** To rot.
- Greenhouse Gas** Some greenhouse gases occur naturally in the atmosphere, others result from human activities. Naturally occurring greenhouse gases include water vapour, carbon dioxide, methane, nitrous oxide and ozone. Human activity can add to the levels of these natural gases, trapping heat within the earth's atmosphere, leading to global warming.

Problems at landfill sites include:

- Landfill gas** A mixture of gases including methane and carbon dioxide that have to be captured and burnt off at landfill sites. In many modern sites the burning of gas is used to make electricity or to generate heat.
- Leachate** The liquid wastes generated at landfill sites, which also have to be captured and treated before being returned to the watercourse.

GENERAL GUIDANCE – using this pack

For each session, pupils will need a copy of the activity card and where appropriate its corresponding resource cards. Resource and activity cards can be printed off and photocopied for pupils to write on. Some activity cards have no corresponding resource card as they are intended for distribution to pupils as activity items only.

Preparation

Before starting the project, ask the children to think about the rubbish they generate each day. They could look in their lunch boxes at the wrappers and fruit peel that they will be throwing away or look in the classroom waste paper basket. Use a plenary session to ask the pupils what they think happens to the rubbish they throw away? Do any of them recycle at home? For example taking bottles to the bottle bank, or putting it in a recycling box that is collected with their rubbish? List the different things that can happen to rubbish once it leaves the home or school.

Teacher's Notes

Activity Card 1A

Read through and discuss Resource Card 1A as a class. Ask the pupils to work independently or in pairs to complete Activity Card 1A. On completion ask the pupils to report back their answers to the class (or hand in their completed work sheets for marking).

During the feedback session ask the pupils to consider the added pollution that taking rubbish to the landfill site will cause. For example, traffic congestion, carbon monoxide from petrol fumes, and the added costs of maintaining and running refuse vehicles.

Activity Card 1B

Show the pupils a sample of compost, enable them to touch, feel and smell the compost. Also bring in examples of 'Greens', 'Browns' and 'No-Nos' for the pupils to see at first hand.

Explain that over a six to nine month period the 'Greens' and 'Browns' they see in front of them will transform into compost.

Explain why it is not a good idea to include some organic materials in your compost recipe, for example meat or fish, because they can attract vermin and pests (rats and flies).

If appropriate, show the class a compost bin – and talk through how it works.

Ask the pupils to work individually or in pairs to complete Activity Card 1B and on completion ask the pupils to report back their answers to the class or hand in their completed work cards for marking.

Activity Card 1C

Discuss the uses of compost with the class. Do any of their parents use compost at home? Explain that compost can be used as a 'soil improver' to make plants and flowers grow better in the garden. It can also be added to potted plants or window boxes to condition the soil already in there.

Discuss how composting can also help the environment.

Ask pupils to work individually or in pairs to complete Activity Card 1C.

Activity Card 2

Assemble the following items prior to the beginning of the session, which has been designed to let pupils create a RotPot and see the composting process take place over a four to six week period. The items listed are enough for one RotPot, and should be duplicated if multiple RotPots are to be made by a number of pupil groups.

Equipment Ingredients

2 litre plastic 'pop' bottles	straw or twigs
scissors	leaves
watering can/plant spray	grass
wooden stir stick	vegetable scraps
saucer	fruit scraps
mesh/muslin	water
rubber band	seeds*
labels	soil
pen	<i>*We recommend Marigold or Bean seeds</i>

If appropriate invite the class to split into pairs or small groups. Ask the class to prepare the ingredients by tearing or cutting them up into small pieces. Then ask them to build up layers in the RotPot by first putting in the straw and twigs, then the leaves and grass, followed by the scraps and finally the soil on top.

Teacher's Notes

Then ask the class to add three to six tablespoons of water. The mixture should be moist like a wrung out sponge. They should then cover the top of the RotPot with some muslin or mesh and secure it with a rubber band.

The RotPots should then be placed on a sunny window sill and watered if they start to dry out. Compost will be created over a four to six week period. The process will be complete when the ingredients look like dark rich soil.

At this stage you should poke a few holes in the bottom of each RotPot and place each one on a saucer. Then ask the class to plant the seeds in the compost.

Ensure that once the seeds have been planted the RotPots are placed in a sunny spot and are watered regularly (as per instructions on the seed packet).

The exercise demonstrates the composting process in action and shows how it can be used successfully as a growing medium.

Activity Card 3

A number of classroom items have been included within this pack, with Activity Card 3 providing a classroom quiz which can be run individually or in small groups.

Activity Card 4

Activity Card 4 encourages pupils to both think further about composting and to use their creative talents to develop a giant classroom poster to bring all their knowledge to life.

Activity Card 5 and 6

Activity Cards 5 and 6 provide individual activities in the form of crosswords and wordsearches to help children develop their skills.

Finally, you will find an additional Teacher Resource Card in this pack showing a visual depiction of the composting life cycle. This can be copied, distributed and discussed with children as a means of increasing their understanding of the world around them.

SUPPLEMENTARY ACTIVITY 1

The following are designed as additional activities that you could undertake with your class.

Introduction

How many pupils have got compost bins or heaps at home? What do they already know about composting?

If the school already has a compost heap or bin then go and have a look at it.

Pupil Activity

In small groups, the pupils design an information leaflet or brochure. It should aim to persuade the public to start composting and enable them to do so by providing all the necessary information.

Plenary

The groups look at one another's leaflets. A vote could be taken to decide upon the most informative and persuasive leaflet.

NB. If the school does not have a compost heap or bin already, the pupils could work at setting one up. They will need to consider the following issues:

- Where will the organic waste come from? (eg, Leftover lunch scraps, garden waste).
- How will the organic waste be collected?
- Who will 'feed' and tend the compost bin?
- How will the compost be used once it's made?

Teacher's Notes

SUPPLEMENTARY ACTIVITY 2

Learning Objective

How much waste do we produce?

Introduction

How much waste does a class produce in a week? How much of that waste could be recycled or used in the composting process?

Reconfirm which items can be used in the composting process and which items cannot.

Pupil Activity

For one week, ask the pupils to divide the rubbish they throw away between two bins or bin liners. Put compostable items in bin one and non-compostable items in bin two.

At the end of each day, weigh each bag or bin. Ask the pupils to log the total weight of rubbish and the individual weight of the compostable and non-compostable rubbish.

Ask the pupils to plot the weight variations on a graph.

At the end of the week, add up the total of weight of rubbish that a class produces in a week. Also add up the weight of compostable rubbish. Ask the pupils to calculate the percentage of total rubbish that could be composted.

USEFUL WEBSITES

Below you will find a list of useful websites that look at the issues of waste management, recycling and composting. If you wish to continue working on compost related projects they may offer useful sources of additional information.

General waste information

Recycle Now - www.recyclenowpartners.co.uk

Helping local authorities, retailers and publishers promote recycle now to the public. Includes brand guidelines, fun facts, recycling statistics and information.

Ollie Recycles - www.ollierecycles.com/uk

A child-friendly website, full of games, quizzes, puzzles and information. Ollie and his friends show you around and teach you more about the 3Rs - reduce, reuse and recycle.

US Environmental Protection Agency - www.epa.gov/kids/garbage.htm

Waste education resources from the US Environmental Protection Agency, including Recycle City, in which you explore how an imaginary town has restored itself from Dumptown to Recycle City.

Global Action Plan - www.globalactionplan.org.uk

Action at School is an environmental programme that helps the whole school community to go green and save money. Contains a good kids' area and a questionnaire to find out how green you are.

The Recycling Consortium - www.recyclingconsortium.org.uk

This site, from the Bristol based Recycling Consortium, contains some great games that will help you to learn about reducing, reusing and recycling waste.

Environment Agency - www.environment-agency.gov.uk

The kids' section of this site contains games, movies and animations on the themes of waste, plastics and the 3Rs. Put the postcode of your home or school into 'What's in your Backyard?' to locate information about landfill sites, pollution, and other environmental features in your local area. Also gives useful background information on a whole range of waste related topics.

Global Footprints - www.globalfootprints.org

An introduction to the concept of global footprints. The children's part of the site includes games, facts, poems, stories, quizzes, and web links on the subject of sustainability. For teachers there is background information and numeracy and literacy based classroom activities.

Green Choices - www.greenchoices.org

This site provides a useful material by material guide to recycling as well as listing environmental websites for teachers, school managers and children of different ages.

Composting

Schools Organic Network - www.hdra.org.uk/schools_organic_network

The Learning Zone on this site contains information on making compost and how to build an organic garden in which to use this. There is also a Fun Zone with online quizzes and word searches.

The Microbe Zoo - www.commtechlab.msu.edu/sites/dlc-me/zoo/

Discover the many worlds of hidden microbes.

The Adventures of Herman the Worm - www.urbanext.uiuc.edu/worms

An American site all about Squirmin' Herman the worm!

Growing Schools Programme - www.schoolsgarden.org.uk

Advice on how to set up a school garden, including information on composting and wormeries.

Mansfield Middle School Composting Programme - www.mansfieldct.org/Schools/MMS/compost

A website created by an American school that has created a school-wide composting system.

Could your school do something similar?

Environ - www.littlerotters.org.uk

Information and advice on encouraging schools to get composting.

Buy recycled

UK Recycled Products Guide - www.recycledproducts.org.uk

WRAP's online guide to products made from recycled materials. The comprehensive and regularly updated database catalogues over 930 items made from recycled materials, including stationary and furniture of use to schools.

What your school can do about waste

Cardboard School - www.cardboardschool.co.uk

A fascinating website about the design and construction of a 15 by 6 metre school building made from cardboard, which in itself has been made from recycled paper.

Eco Schools - www.eco-schools.org.uk

Information on the Eco Schools programme which aims to get everyone in the school community involved in making the school environment better.

Greening Britain's Schools - www.greening.org.uk

Results of a study into the environmental impact of schools. Send for a copy or download the report from the website.

Think Leadership - www.thinkleadership.org.uk

You can use this site to carry out an environmental assessment of your school or to access information and links to sites about environmental sustainability.

Wastebusters - www.wastebusters.co.uk

This site, which draws on 10 years experience of the Wastebusters Consultancy, provides loads of useful information about environmental efficiency in the business environment, much of which could be applied to schools, especially school offices.

COMPOSTING AND THE CURRICULUM

Learning about home composting within the context of recycling and waste management can be used to deliver many parts of the National Curriculum (NC). Here are some examples for pupils working at Key Stage 1 or 2.

Science

Learn about the role of micro-organisms in the breakdown of waste. e.g. through work on composting. NC link: KS 2/Sc2/5f.

Investigate materials and their properties by grouping and classifying different types of waste materials and considering why they are used for specific purposes e.g. different types of plastic, paper and card. NC links: KS1/Sc3/1c,d & KS2/Sc3/1a.

Use the concepts of non-renewable and renewable resources, reuse and recycling to explore the way in which changes in materials are either reversible or irreversible. NC link: KS2/Sc3/2d & f and QCA unit 6D - Reversible and irreversible changes.

Geography

Include the issues of waste and litter when asking pupils to express their views about local places. NC link: KS1/1c,5b & QCA unit 8 -Improving the environment. Consider waste when identifying how people can improve the environment [e.g. by reducing their level of resource use] or damage it [for example, by flytipping and over-reliance on landfill and incineration]. NC link: KS2/5a & QCA unit 21 - How can we improve the area we see from our window?

Use waste as an example when identifying and explaining the different views that people hold about topical geographical issues. NC link: KS2/1d.

Citizenship & PSHE

Consider how resources can be allocated in different ways and that these economic choices affect individuals, communities and the sustainability of the environment. NC link: KS2/2j & QCA unit 2 – Choices include the establishment of a composting scheme as part of the development of school grounds. QCA unit 6 - Developing our school grounds.

English & Literacy

Ask pupils to discuss or debate what their responsibilities are in terms of creating and dealing with waste, either at school or at home. Whilst doing so, they should learn to talk effectively as members of a group, qualifying or justifying what they think after listening to others' questions or accounts and dealing politely with opposing points of view. NC link: KS2/En1/3c, d.

Maths & Numeracy

Measure the volume and weight of waste produced by the school in a day and work out from this the amount that would be produced in a year. NC links: KS2/Ma2/1a, 4a & Ma3/4a, b. Draw graphs of the amount of waste produced in different parts of the school. NC link: KS2/Ma4/1a, c & 2c, f.

Design & Technology

Challenge pupils to make things using largely or only waste materials. e.g. for the KS1 QCA unit: - Homes. Consider the issue of waste when investigating and describing a range of packaging. When designing and constructing packaging, seek to minimise the amount of waste produced or seek to use materials that are reusable or recyclable. NC link: KS2/3c & QCA unit 3A - Packaging.

ICT

Use the weblinks provided on this site to research and present findings about a particular aspect of waste, for example, the origins and uses of a specific material and how it is dealt with as a waste product. NC link: KS2/1a,b,c.

Resource Card 1a

WHERE DOES OUR RUBBISH GO?

Every day we each produce lots of rubbish. The wrappers from our chocolate bars, leftovers from our lunch, paper we've written on, newspapers or magazines we have read. Have you ever thought about where the rubbish we produce goes? You put your rubbish in the bin. Once the bins are emptied, the rubbish is collected by refuse collectors. But what happens next? All the rubbish that we throw away and don't recycle gets taken to a landfill site and buried in the earth. Kitchen waste, such as vegetable peelings and grass cuttings, that would normally rot gets squashed together with non-organic waste such as plastic, glass, tin cans - anything we no longer want and throw away in the bin. The air cannot get to the organic waste, so it isn't able to rot as it should.

As a result, a powerful greenhouse gas called methane is produced, which is damaging to the earth's atmosphere. In fact almost half of the things we throw away could be recycled and a third of all the rubbish we produce could be kept at home or school and composted.

Resource Card 1b

WHAT IS COMPOST?

Compost is made when organic material, things like potato peelings, grass cuttings, banana skins, cardboard and straw, rot away naturally. Rotting takes place when waste is broken down by a range of different organisms including: bacteria, fungi, worms and insects. The organisms use the waste as food and help to turn it into compost. When this process is complete we are left with a brown crumbly mixture that looks rather like soil and smells pleasantly earthy.

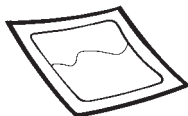
To make compost you need to create the right environment for the organic matter to break down and the right recipe... a mixture of Greens and Browns.

The best environment for the organic matter to break down in, is a compost bin.

Greens include: vegetable peelings, fruit scraps, tea leaves, tea bags, grass cuttings, dead plants and flowers, hedge clippings and weeds. The greens break down quickly and keep things moist.



Dead plants



Tea Bags



Vegetable peelings



Grass cuttings

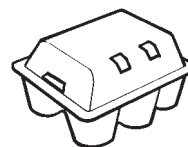
Browns include: straw and hay, wood chippings, sawdust, egg boxes, scrunched up paper and cardboard, leaves and bedding from pet cages. The browns give your compost its fibre and are needed just as much as the greens by the bacteria and insects, worms and fungi in your compost bin. They give the compost structure and provide air pockets to help the waste break down quickly and effectively.



Scrunched up paper

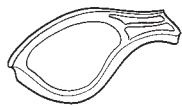


Leaves

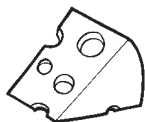


Egg boxes

Never, ever put any of the following in your bin: cooked vegetables, meat, cheese, dairy products, fish, bones, large branches, cat litter, nappies, plastic, glass or metal. They can attract unwanted visitors such as rats, or simply won't break down and rot.



Meat



Cheese



Plastic



Fish



Glass



Bones



Metal

Resource Card 1c

COMPOST AND THE ENVIRONMENT

What do we use compost for?

Compost is used to help grow plants and vegetables in the garden or in tubs. It improves the quality of the soil and feeds plants with lots of essential nutrients.

This means that the plants in your garden or in your pots will grow better and be healthier.

Why should we compost?

It helps wildlife – digging holes in the ground to create landfill sites will damage or destroy the wildlife habitats that existed there previously.

Composting also reduces our use of peat-based fertilizers (peat bogs are rare habitats supporting unique plants and animals).

Compost bins often provide homes to garden wildlife like worms, beetles and toads.

Composting helps the environment. When organic waste is buried in landfill sites it cannot rot properly. Instead it produces a nasty black slime that can pollute rivers and streams if it escapes and methane, a greenhouse gas that can damage the earth's atmosphere.

Activity Card 1a

WHERE DOES OUR RUBBISH GO?

Read the following questions and answer them using your own words.

1. Name five items of rubbish that you might produce in a typical school day.

2. If we don't recycle our rubbish where does it go?

3. How much of the rubbish we throw away could be recycled?

4. How much of the rubbish we produce could be used for composting?

Activity Card 1b

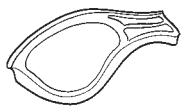
WHAT IS COMPOST?

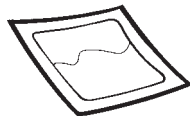
List three organisms that break down organic material to make compost.

Below are pictures of Greens, Browns and No, Nos.

In order to make compost, you need the right mix of Greens and Browns.

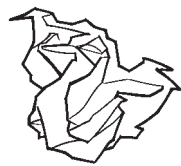
Write the word 'Green' next to the ingredients that are Greens and 'Brown' next to the ingredients that are Browns and 'No' next to the ingredients you should not put in a compost bin.

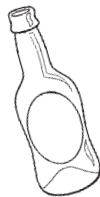


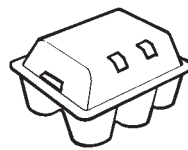


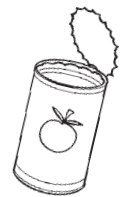






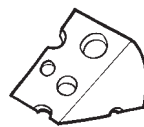


















Activity Card 2

MAKING A ROTPOT*

Working with a partner or in small groups gather together the following:

EQUIPMENT	INGREDIENTS
two litre plastic 'pop' bottles	straw or twigs
scissors	leaves
watering can/plant spray	grass
wooden stir stick	vegetable scraps
saucer	fruit scraps
mesh/muslin	water
rubber band	seeds*
labels	soil
pen	<i>*We recommend Marigold or Bean seeds</i>

- Ask an adult to cut the top off the 'pop' bottle to leave a RotPot.
- Prepare the ingredients by tearing or cutting the organic materials (straw, twigs, leaves, grass, soil, vegetable and fruit scraps) into small pieces.
- Build up the layers in the RotPot by putting in straw and twigs first, then leaves and grass, then scraps, then the soil on top.
- Mix together with the wooden stick.
- Add three to six tablespoons of water. The mixture should be moist like a wrung out sponge.
- Cover the RotPot with mesh or muslin and secure with an elastic band.
- Place the RotPot on a sunny window sill and water it if it starts to dry out.
- The compost RotPot is ready when the ingredients look like dark, rich soil.

This will take four to six weeks.

When the compost RotPot is ready

- Ask an adult to poke a few holes in the bottom of the RotPot. Place it on a saucer.
- Plant seeds in the compost.
- Place the RotPot in a sunny place and water it regularly.

Watch your plants grow!

** The RotPot is an innovation of Christchurch Borough Council*

Activity Card 3

COMPOSTING CLASSROOM QUIZ – QUIZ CARD

Working individually or in small groups, complete this short composting quiz.

1. What is the best way to deal with our rubbish?

- Re-use it
- Recycle it
- Reduce it
- Throw it in the bin

2. What is compost?

- Mud
- Dark brown soil-like material
- A type of plant
- A cake filling

3. Why should we make compost?

- Because it gives us a healthy appetite
- Because it helps us watch TV
- Because it is bad for the environment
- Because it reduces the waste going to landfill

4. Where do worms and other micro-organisms like to live?

- In the fridge
- Down the drain
- In your lunch box
- In a compost bin

5. Which of the following should you NOT put in your compost heap

- Kitchen waste
- Metal
- Nettles
- Old socks

6. Why should you not put meat and fish in your compost heap?

- They don't rot
- They smell
- They might attract vermin e.g. rats
- They are inorganic

7. What percentage of the average dustbin of rubbish can be composted?

- 10%
- 25%
- 50%
- 100%

Activity Card 3

COMPOSTING CLASSROOM QUIZ – QUIZ CARD continued

8. Your compost heap should be placed: -

- On bare ground
- On a patio
- On concrete
- On a wooden base

9. Where can we use compost once it's ready?

- In the garden or vegetable patch
- In the kitchen
- On the road
- In the landfill site

10. How long does it take before the compost is ready?

- 24 hours
- Six weeks
- Six to nine months
- Two years

11. Which of the following is NOT a composting creature?

- Beetle
- Worm
- Snake
- Earwig

12. What is the dangerous greenhouse gas produced at landfill sites?

- Oxygen
- Helium
- Methane
- Carbon Monoxide

13. Which of the following organisms DON'T help the rotting process?

- Bacteria
- Fungi
- Worms
- Shell fish

14. Where do you store your kitchen waste before putting it in the compost bin?

- Kitchen caddy
- Dustbin
- Milk bottle
- Fridge

Activity Card 4

COMPOST CLASSROOM POSTER

Using your knowledge of composting, work in groups to create one giant classroom poster which shows:

1. A compost bin as the central image
2. Household items that can be composted (show these around one side of the poster)
3. Household items that cannot be composted (show these around one side of the poster)
4. A variety of composting creatures that may live in the compost bin

Activity Card 5

COMPOSTING CROSSWORD – QUIZ CARD

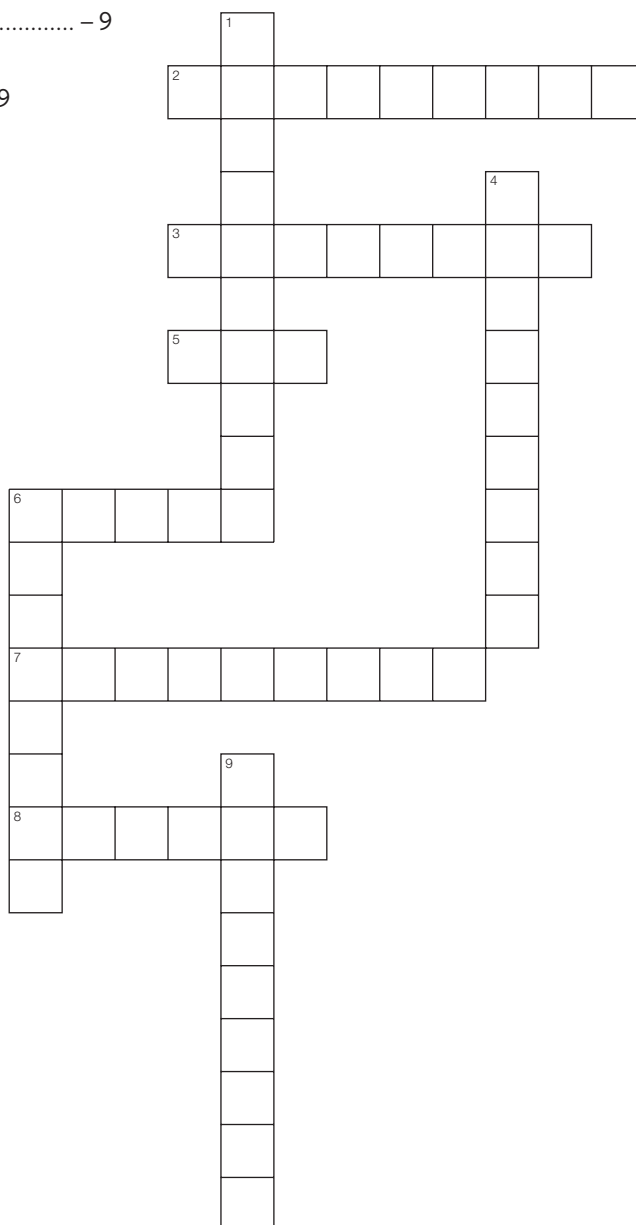
Can you complete this crossword?

Across

2. A composting creature said to have a hundred legs – 9
3. Tiny creatures used in the composting process – 8
5. Compost takes at least months before it is ready for use – 3
6. A composting 'brown' that could come from the classroom – 5
7. Compost provides the soil with these – 9
8. Your compost bin should be sited here – 6

Down

1. Compost can be used as a.....to improve soil quality – 10
4. As the composting process begins, garden waste starts to..... – 9
6. Composting 'greens' that come from the garden – 8
9. Composting is a form of reusing waste known as..... - 9



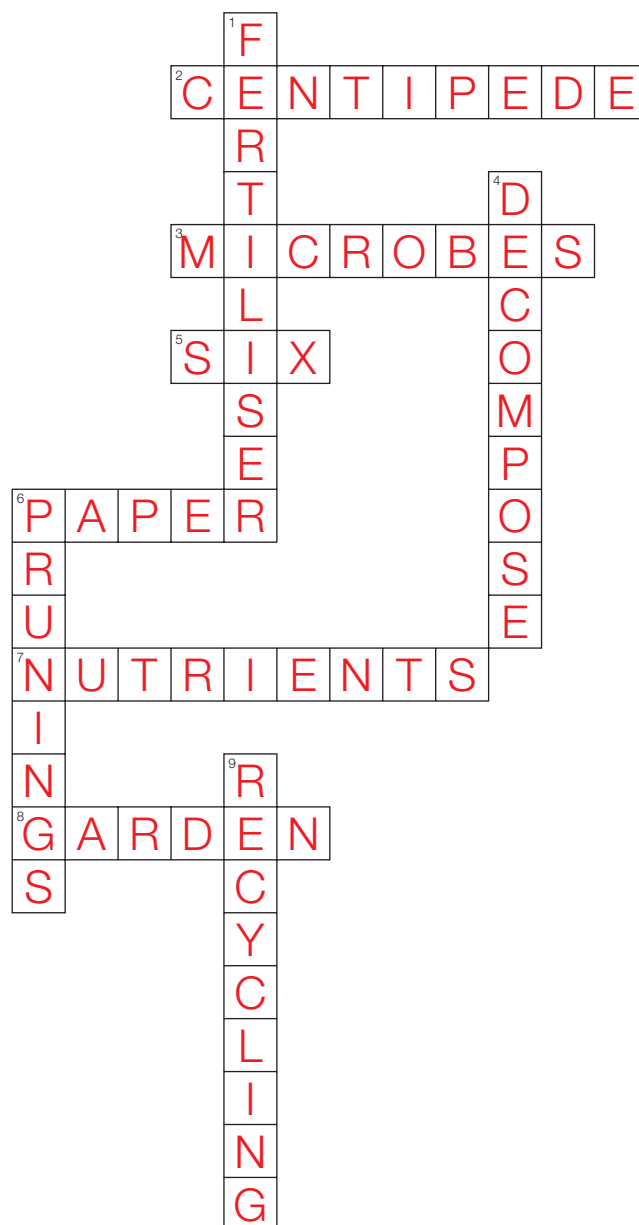
Activity Card 5 ANSWERS

Across

2. A composting creature said to have a hundred legs – 9
3. Tiny creatures used in the composting process – 8
5. Compost takes at least months before it is ready for use – 3
6. A composting 'brown' that could come from the classroom – 5
7. Compost provides the soil with these – 9
8. Your compost bin should be sited here – 6

Down

1. Compost can be used as a.....to improve soil quality – 10
4. As the composting process begins, garden waste starts to..... – 9
6. Composting 'greens' that come from the garden – 8
9. Composting is a form of reusing waste known as..... - 9



Activity Card 6

COMPOSTING WORD SEARCH

Look through the box and find as many words to do with composting as possible.

Words to look out for:-

recycle

microbes

nutrients

organic

bacteria

landfill

compost

garden

clippings

fertilisers

decomposition

millipede

decay

worms

a	g	v	w	b	s	h	u	k	q	z	d	m	u	m	c	u	o	a	k	s	t	x	v	f
p	x	c	e	d	q	u	f	v	d	e	o	a	p	w	l	a	n	d	f	i	l	l	e	p
i	j	d	g	r	i	r	r	t	j	e	s	k	c	t	i	q	u	r	i	s	v	c	o	b
z	t	p	e	h	u	d	e	a	g	o	g	b	s	g	p	t	b	f	t	w	e	v	w	b
h	h	v	u	c	w	m	j	c	o	m	k	m	l	h	p	i	v	w	s	f	n	n	p	x
z	k	n	o	r	o	k	q	m	y	h	p	b	p	r	i	n	s	a	m	t	e	w	i	p
d	c	f	u	a	q	m	t	r	x	c	s	n	o	s	n	v	i	d	i	n	d	z	x	a
a	d	r	z	t	v	x	p	b	t	s	l	u	a	v	g	q	l	u	l	v	w	q	b	c
j	r	x	j	k	p	n	u	o	m	w	c	e	k	l	s	i	t	m	l	u	w	z	p	b
m	k	u	t	r	f	i	x	a	s	t	b	x	c	v	w	a	z	b	i	z	c	d	z	a
e	d	f	g	a	r	d	e	n	s	i	k	t	l	s	f	e	b	z	p	j	s	g	b	c
g	s	o	t	z	p	s	a	r	x	v	t	c	r	v	x	a	k	g	e	b	w	c	d	t
h	w	d	k	x	f	c	h	v	a	l	o	i	a	b	c	n	d	h	d	o	l	k	i	e
b	v	c	w	s	i	w	v	s	r	p	t	u	o	o	j	a	z	f	e	u	a	p	j	r
m	i	o	q	w	m	l	f	i	q	t	s	r	s	n	z	c	g	l	n	a	a	e	m	i
l	b	s	i	a	m	z	v	v	b	x	t	e	p	s	q	a	z	w	u	x	b	b	z	a
c	a	h	j	r	x	i	t	w	i	z	f	e	r	t	i	l	i	s	e	r	s	h	a	v
v	c	d	t	u	z	u	c	o	m	p	o	s	t	g	c	r	b	u	r	b	t	a	h	b
x	d	o	a	z	m	n	w	r	p	d	v	c	s	a	d	m	c	r	c	i	n	u	z	t
h	n	g	l	x	a	h	t	a	o	w	q	u	o	r	g	a	n	i	c	w	e	o	a	x
i	o	q	x	s	p	a	n	s	f	b	w	e	d	j	g	t	q	a	v	p	i	z	j	a
g	l	f	m	r	d	v	u	z	s	p	e	n	g	u	e	a	k	r	g	t	r	e	a	r
u	n	r	n	c	u	e	k	a	i	o	w	s	e	h	t	f	a	j	s	o	t	i	d	b
z	o	u	a	g	u	s	v	t	x	s	o	j	w	s	o	t	d	g	l	a	u	z	n	z
w	o	w	z	l	a	r	u	t	d	e	c	a	y	x	o	s	u	b	q	i	n	v	a	k

To find out how well you've done look at the answers on the accompanying answer sheet.

Activity Card 6

COMPOSTING WORD SEARCH - ANSWERS

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p	x	c	e	d	q	u	f	v	d	e	o	a	p	w	l	a	n	d	f	i	l	l	e	p
i	j	d	g	r	i	r	r	t	j	e	s	k	c	t	i	q	u	r	i	s	v	c	o	b
z	t	p	e	h	u	d	e	a	g	o	g	b	s	g	p	t	b	f	t	w	e	v	w	b
h	h	v	u	c	w	m	j	c	o	m	k	m	l	h	p	i	v	w	s	f	n	n	p	x
z	k	n	o	r	o	k	q	m	y	h	p	b	p	r	i	n	s	a	m	t	e	w	i	p
d	c	f	u	a	q	m	t	r	x	c	s	n	o	s	n	v	i	d	i	n	d	z	x	a
a	d	r	z	t	v	x	p	b	t	s	l	u	a	v	g	q	l	u	l	v	w	q	b	c
j	r	x	j	k	p	n	u	o	m	w	c	e	k	l	s	i	t	m	l	u	w	z	p	b
m	k	u	t	r	f	i	x	a	s	t	b	x	c	v	w	a	z	b	i	z	c	d	z	a
e	d	f	g	a	r	d	e	n	g	i	k	t	l	s	f	e	b	z	p	j	s	g	b	c
g	s	o	t	z	p	s	a	r	x	v	t	c	r	v	x	a	k	g	e	b	w	c	d	t
h	w	d	k	x	f	c	h	v	a	l	o	i	a	b	c	n	d	h	d	o	l	k	i	e
b	v	c	w	s	i	w	v	s	r	p	t	u	o	o	j	a	z	f	e	u	a	p	j	r
m	i	o	q	w	m	l	f	i	q	t	s	r	s	n	z	c	g	l	n	a	a	e	m	i
l	b	s	i	a	m	z	v	v	b	x	t	e	p	s	q	a	z	w	u	x	b	b	z	a
c	a	h	j	r	x	i	t	w	i	z	f	e	r	t	i	l	i	s	e	r	s	h	a	v
v	c	d	t	u	z	u	c	o	m	p	o	s	t	g	c	r	b	u	r	b	t	a	h	b
x	d	o	a	z	m	n	w	r	p	d	v	c	s	a	d	m	c	r	c	i	n	u	z	t
h	n	g	l	x	a	h	t	a	o	w	q	u	o	r	g	a	n	i	c	w	e	o	a	x
i	o	q	x	s	p	a	n	s	f	b	w	e	d	j	g	t	q	a	v	p	i	z	j	a
g	l	f	m	r	d	v	u	z	s	p	e	n	g	u	e	a	k	r	g	t	r	e	a	r
u	n	r	n	c	u	e	k	a	i	o	w	s	e	h	t	f	a	j	s	o	t	i	d	b
z	o	u	a	g	u	s	v	t	x	s	o	j	w	s	o	t	d	g	l	a	u	z	n	z
w	o	w	z	l	a	r	u	t	d	e	c	a	y	x	o	s	u	b	q	i	n	v	a	k

Teacher resource card

COMPOSTING LIFE CYCLE



Gary the Gardener digs up the dead flowers

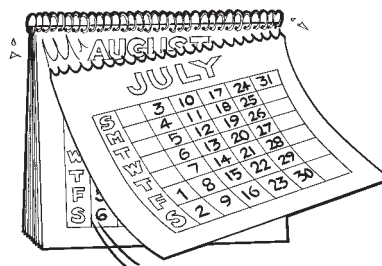


He puts the dead flowers in the compost bin



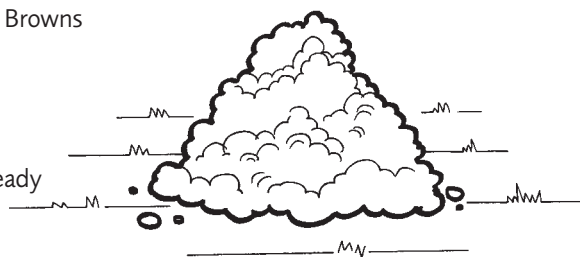
The compost creatures get to work slowly eating the dead flowers

Six to nine months go by



Gary continues to top up the compost heap with Greens and Browns

The compost is ready



Gary empties the compost and uses it to bed in some new plants

The plants use the nutrients from the compost and begin to flower

