

INTRODUCTION

At GTT we believe that the beauty of our programme is locked into hands-on learning and that learning by doing makes lasting learning. It holds the enthusiasm of even the most reluctant learners and it also gives different students a time to shine. Rainy days are tough for everyone, when the students are itching to get outside and the adults probably are too. Rainy day activities are ideally as practical and hands-on as possible, but how can we make our rainy day sessions valid and engaging without using a worksheet?

- See the rainy day sessions as an opportunity to explore and discover rather than deliver and listen;
- Keep the session moving – be ready to change activities when the energy is lost or students get off-task;
- Enthusiasm is often noisy but students still need to be able to think. Have very clear boundaries and stick to them. Have you got a non-verbal way of reigning in the noise or getting attention?

It would be ideal if garden specialists can keep writing to a minimum to avoid students who find writing difficult losing interest. How can we avoid this? Work in pairs, share ideas orally, ask for suggestions and write them on the board, draw ideas.

This booklet contains a collection of ideas for indoor Garden to Table sessions. You might need to mix and match an activity with a 5-minute energiser or game.



SCIENCE ACTIVITY: SOIL EROSION

You may want to plant the cress bottle in advance so you can demonstrate on one day.

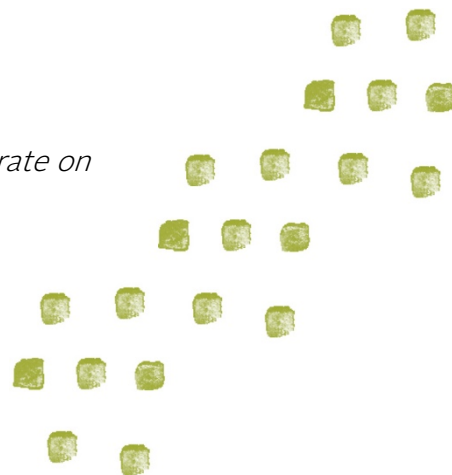
Cut three milk bottles in half longways.
Fill each with soil/potting mix and pack down.
In bottle 1: plant cress in the soil
In bottle 2: cover the soil with mulch
In bottle 3: leave the soil bare

When the cress is growing you are ready to perform the experiment.
Put each milk bottle on a slight slant so that water will pour out into a container.
Each milk bottle needs a collection container that is clear or white, e.g. yoghurt pot or glass jar.

You could ask students to predict what they think will happen and record their ideas.

When you have set the experiment up, gently pour the same amount of water into each bottle at the same speed. You will need enough water to run through the soil and pour into the collection container. Compare the contents of the collection container. Explain what soil erosion is and why the cress holds the soil in place.

Go back to their predictions and discuss. Discuss what the cress represents in their school garden, on a farm, in a forest. Discuss what the soil contains that we need and what happens when we lose it. Discuss what we can do in the garden to prevent soil loss, especially during winter.





GARDEN FACT SHEET RAINY DAY ACTIVITIES FOR GARDEN SESSIONS

CREATIVITY ACTIVITY: DESIGN A GARDEN SUPERHERO

Draw a superhero for the garden.

Name their hero.

Design a cape.

Design a costume.

Describe their superpower.

Design their weapon.

Label any other special features.

They can take elements of real superheroes mash them together with a gardening theme. They might need to solve a specific garden problem.

You could extend the task by making life-sized versions of the cape or speech bubbles or draw a cartoon with lots of whams and pows!

Can they collaborate with another class superhero and write a cartoon together? How can these be celebrated? Can the best example be published in the school newsletter? On the blog?



SCIENCE ACTIVITY: PLANT LIFE CYCLES

Paper Plate Spinners

Make a demonstration of plant life cycles using two paper plates, one with a section cut away and a split pin.

Divide one paper plate into even sections (the number will depend on the knowledge of your students).

On the other paper plate cut out a piece the size of one section, but not quite to middle so the split pin will still work.

Draw the stages of a plant life cycle in order on the sections. You will need to include: seeds germinate, plant grows, plant flowers, plant fruits, produces seeds but you might want to include pollination (maybe with a picture of a bee or wind or another method).

There is a free download with more information on each stage here:

<https://www.teacherspayteachers.com/Product/Life-Cycle-of-a-Plant-Clickable-3109648>

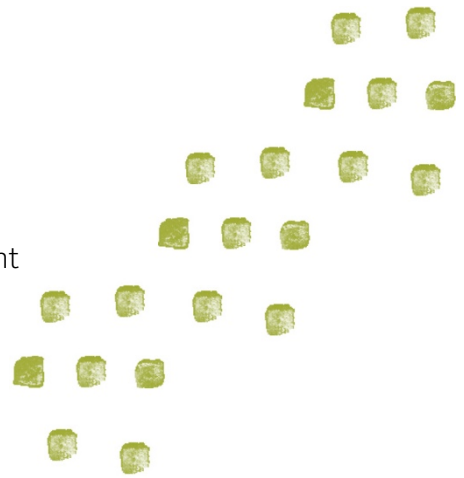
This can be extended by adding extra information to each section, or using one particular plant or vegetable. You might want to give out a variety of plants that are in your garden showing different elements in their life cycles such as method of pollination, e.g. apple tree, corn, beans.



CREATIVITY/SCIENCE ACTIVITY: MAKE A WEATHER STATION

Home-made rain gauge – make a rain gauge by cutting the top off a plastic bottle and inverting it into the rest of the bottle. Use a permanent marker to mark a scale on the outside. What will you measure in? How will you empty it? How will you stop it falling over?

Weather vane to measure wind direction – use a piece of dowel as the cross bar. Cut out an arrow and an arrow tail from an ice cream container to attach to the ends of the dowel, either with glue or preferably by sawing a slit in the dowel. The arrow pieces need to be big enough to catch the wind. Bang a nail through the middle of the dowel and attach to a bigger piece of wood (mounting block) that can be mounted somewhere high. Make sure the nail hole is big enough for the arrow to turn freely. On the mounting block draw the compass points. Use a compass or a cellphone app to mount the mounting block facing the right directions.



Anemometer to measure wind speed – use a tin can or aluminium drink can. Use a tin opener to cut the upper seam off. Put on gardening gloves and then use tin snips or strong scissors to cut even slits in the tin, stopping 3cm from the base. Use a block of wood to bend each slit in one direction to catch the wind. Mount it horizontally on a nail (make sure it can spin freely) where it will catch the wind. You might want to raise it on a bottle top so the edge of the tin does not rub against the mounting block. The more spins per minute the faster the wind. If you want more accurate measurements, you could paint one wing red so you can count the rotations more easily.

Here are instructions to make a barometer to measure air pressure if you wish:

<http://www.k12science.org/curriculum/weatherproj2/en/docs/barometer.shtml>

Do you need a Weather Watch recording sheet to take regular measurements during your GTT sessions or even every day in conjunction with the class teacher?

CREATIVITY ACTIVITY: PLAN A BEE FRIENDLY GARDEN

Plan a bee friendly garden – research different bee-friendly plants. Find out their spread and the conditions they need to grow. Design a bee-friendly garden using the needs of the plants they have chosen. Draw the points of the compass and make sure the bigger plants that create shade for other plants have shade-tolerant plants behind them. Draw the plants as circles that represent their spread by size. You might want to give the dimensions of the garden for students to fill in.

Can they come up with some creative ways of planting, e.g. in a bee shape, in flowers planted in yellow and darker coloured stripes or in the shape of the letter B, or a giant flower shape?

Will they only have bee-friendly plants in the space, or a mixture of plants that attract bees and edible ones that need pollinating?



CREATIVITY ACTIVITY: I ATE DIRT FOR BREAKFAST - WHERE DID YOUR FOOD COME FROM?

Ask students if they had dirt for breakfast? They should come back with a range of foods that they actually had. Demonstrate the link of their food back to its natural state growing in the soil. Cornflakes come from corn which is grown in soil. Toast is made from bread which is made from wheat which is grown in the soil. Pancakes are made from eggs which come from chickens which eat corn/vegetables/grain which is grown in the soil/flour comes from wheat which is grown in the soil/milk comes from a cow which eats grass which is grown in the soil.

They can draw the links in any way they choose.

This activity could be extended to look at their favourite dinner or GTT recipe, or using a supermarket catalogue to look at the food origins of popular foods.

Did you find anything you eat that didn't start off in the soil?

This could be linked to/changed to bee pollination to show how important bees are to produce all of the food we eat.



MATHS/SPATIAL AWARENESS ACTIVITY: PLANT SPACING

Give the students a piece of paper and a range of different sizes of bottle and jar lids to draw around. Each jar lid represents the spread of a different plant or tree. You could label the lids before you start: apple for the big lid, blueberries for the smallest lid, etc. Draw around each lid to represent each plant or tree.



Challenge 1: what is the maximum number of plants you can fit into your garden (represented by the piece of paper). You must have at least one of each plant. You must label each different plant. Tip: Spacing the plants in lines with the next row offset, instead of in columns will help.

Challenge 2: specify the number of each plant you want and set the challenge again.

Challenge 3: Change the boundary. Cut the paper in half and place end to end to make a long garden. Set challenge 1 again. What difference does it make?

Challenge 4: set a real challenge for your students based on a real area in your garden where you might be looking to establish an orchard. Research spread for each desired plant and draw in scale 1cm:1m. Are you looking to plant the most plants in the space or do you want the most space for each plant?

PREPARATION ACTIVITY: PREPARING FOR THE GARDEN

Prepare some tools that would be useful in the garden:

Iceblock sticks with planting depths for various seeds. Keep them with the seed packets.

Outdoor weighing scales for weighing harvest – Use a coathanger that can hang on a nail on a garden post or fence. You will need to attach some baskets to hold produce and the weights. You will need to make some standard weights e.g. can, or water of various volumes in a bottle.

Watering bottles with various sprinkling holes for tender seedlings. Repurpose milk bottles by banging holes in their lids with different sized nails to create gentle water sprayers for tender plants.

Potting mix scoop – cut a milk bottle with the handle still on to make a potting mix scoop.

Use an old T-Shirt to cut soft ties for plants.

Use a wet day to design and decorate a handy storage system for your gardening gloves.

Make and paint garden signs: use me, leave me signs for compost bins, plant labels and pick me, taste me, leave me, smell me signs for different vegetables and herbs. You can pick up vouchers for free Resene test pots on the back of supermarket receipts and in DIY magazines. Ask your school community for donations too.

Make organic Bug Spray – there are lots of recipes in gardening magazines and on the internet or perhaps you have a great one of your own. Use garlic and perhaps chillies to keep those pesky bugs away.



COMPARISON ACTIVITY: SEED SIZES VS PLANT SIZES

Have a range of seed packets available for students to examine. Let students observe the size of various seeds and compare to the final plant size on the back of the seed packet. Do big seeds produce big plants? Do small seeds produce small plants? Do big seeds take longer to germinate? Do delicate seeds germinate more quickly?

How can they present their findings? Can students tape seeds onto paper in order of size or germination rates? What generalisations can you make about seeds?



ART ACTIVITY: NATURAL DYES

Lots of plants produce surprising pigments as natural dyes. Boil up some of these and use to dye light natural wool or bits of light cotton fabric (synthetic fabrics might not take the dye so well).

- peach leaves
- fig leaves
- onion skins
- eucalyptus
- wild fennel
- avocado skins
- coffee grounds
- red cabbage
- chamomile

This article has lots more New Zealand information, including a useful fact on using rhubarb leaves to help the dye take and set: <https://thisnzlife.co.nz/make-natural-fabric-dyes/>





GARDEN FACT SHEET RAINY DAY ACTIVITIES FOR GARDEN SESSIONS

GROUP GAMES

Who Am I?

Play a version of 20 questions to guess a vegetable name, or a gardening skill. Choose one student to guess. Show the other students what their word is. The guesser can ask questions begins with "Am I...?" and the other students can only say Yes or No. You can limit this to 20 questions if it makes more students get a turn guessing.

Scattergories

Play a game of GTT Scattergories.

Give each student or team a list of topics. Choose a letter from the alphabet.

The students need to write a word for each topic starting with the chosen letter.

Possible topics: a vegetable, a garden tool, a food, a kitchen tool, gardening tasks, GTT skills, GTT smells, spices.

Possible variations:

- **EASY:** change the topics to easier ones like boy's name, girl's name, country, book, etc, but set G or T as the letters.
- **MEDIUM:** change as above, but set the rule that if another team has the same word no points are gained. Give one point per correct (and unique) word

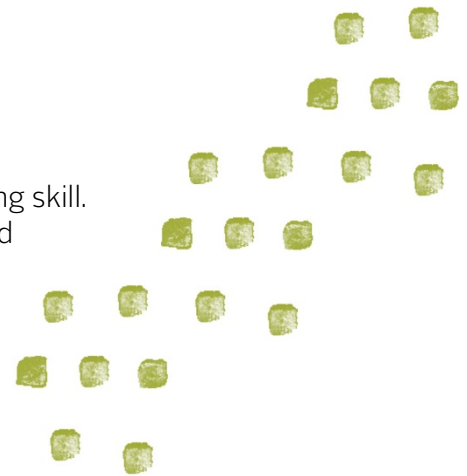
Headbandz

Play a game of GTT Headbandz.

Stick a Post-It onto each student, either on their forehead or their back. Their job is to guess their own word and give answers to the questions of other students who are trying to guess their words.

You could limit the words to:

- gardening vocabulary, including skills and tools.
- Kitchen vocabulary, including skills and tools.
- GTT vocabulary
- Vegetables
- Foods that we might make in GTT



EXTRA IDEAS

If you have a Garden Shed to work in:

- Planting seeds.
- Separating seedlings.
- Making flowerpot scarecrows. You will need drill, wire and plastic pots.
- Garden Art – cutting and sawing wood to size for garden signs.
- Spray paint odd shoes from lost property, fill with soil and a plant.

Rainy Day Ideas for the classroom:

- Quickly gather some leaves from the garden before the session. Then test the children to see what they can identify. Ask them to smell and touch the leaves (and taste if safe). This could also be done with herbs, or spices from the kitchen.
- Make bird feeders from pine cones.
- Sew lavender pouches or tea bags using previously harvested and dried produce – this can be a great fundraiser for your school's Garden to Table programme.
- Ask children to draw a plan of the garden and come up with a planting plan for the following season. What might they need to consider?
- Ask the children to draw a plan of their garden at home or their dream garden. Is there anything edible in their garden? What is their favourite thing about the garden?
- Give the children seed packets to read for information and then work out how many of each type of seed they could fit in one of your garden beds – a great maths activity.
- Start your own seed bank and investigate what you might need. If seeds you have saved from the garden are dry, you can sort and label them and set up a storage system.
- Quizzes, crosswords, word finds about the garden.

See the Resources section of the Garden to Table website for more ideas and downloads:

www.gardentotable.org.nz/resources

Explore the various curriculum resources and Empower resources, many of which include small extension activities relating to growing and cooking food.

