



Mill House
Day Nursery

Growing –
Home Learning Resource
April 2020



About this resource

This resource has been produced as a 'home learning resource' for Mill House parents to use during this period of 'lock-down' brought about by the Coronavirus.

'Growing' is a theme which we generally address during late spring/early summer as this is the time of year when planting seeds yields the quickest and most reliable results. Children can learn a great deal about science and nature by planting seeds and by observing the growth of plants. They can also begin to understand the food cycle.

Using this resource

Use this resource for ideas on how to engage children in this subject.

Experiments

This resource also contains some experiments for children to take part in. Keep a photo log of the outcomes of these experiments to share with us.

The learning outcomes of this type of play

There are many learning outcomes from this type of activity which will support development across all 7 areas of learning and development which form the Early Years Foundation Stage.

Activities which promote a child's overall development are referred to as 'holistic development' opportunities.

The Early Years Foundation Stage

The framework which we use in England to promote and measure development in the early years is called 'The Early Years Foundation Stage'. As previously mentioned, this framework covers 7 identified areas of learning and development. The first three areas are '**prime**' **areas** of learning and development. The remaining four are referred to as '**specific**' **areas** of learning and development.

The **prime areas** are supported from birth to the end of the Foundation Stage (the term after a child's 5th birthday) whereas the **specific areas** do not become a focus until a child is aged 36m+ or sooner if ready. That said, we understand that the **specific areas** are underpinned from birth through everyday activities. E.g., whilst babies are not 'taught' to read, babies will be read to, they will handle books, they will visit libraries, they will be exposed to environmental print from birth (even a very young toddler will recognise the 'M' for McDonalds sign!), they will observe people around them reading from books, computers, tablets and other sources, they will likely have access to soft toys from their 'favourite' books, they will likely have a favourite TV show etc, so on and so forth. So, the **specific areas** are not ignored, they are simply underpinned through daily activities.

School readiness

Contrary to popular belief, school readiness is not about reading, writing and arithmetic. School readiness is about being secure in the three **prime areas** of learning and development. A child who is unable to manage his/her own behaviour (PSED), wipe his/her own bottom (PD), or ask for help (C&L) will be less likely to engage with the **specific areas** of learning and development than his/her peers who are secure in the **prime areas**.

Active Learning

Growing activities provide 'active learning' experiences for children. These activities should be hands on activities which children take responsibility for. There should be resources available to extend learning; Provide opportunities for children to mark make, e.g., labelling plants, and also to explore foods by cutting them up to see what is inside.

See below for guidance on how 'growing activities' support learning and development.

Supporting learning and development

Prime area of learning	PSED Personal, Social and Emotional Development	Select and use resources with help and confident to try new activities. Able to select the tools they may need to complete activities.
	C&L Communication and Language	Listens to others and is able to follow direction. Able to maintain attention and to concentrate on directions, following instructions. Uses talk to organise, sequence and clarify thinking, ideas, feelings and events (40-60m+)
	PD Physical Development	Has control over use of tools and uses them safely. Understands need to stay safe and shows understanding of how to transport and store equipment safely. Shows understanding of personal hygiene practices.
Specific area of learning	LL Language and Literacy	Knows information can be retrieved from books and computers.
	M Mathematics	Begins to make comparisons between quantities. Uses some language of quantities, such as 'more' and 'a lot'. Knows that a group of things changes in quantity when something is added or taken away.
	UTW Understand the World	Comments and asks questions about aspects of their familiar world such as the place where they live or the natural world. Can talk about some of the things they have observed such as plants, animals, natural and found objects. Developing an understanding of growth, decay and changes over time. Shows care and concern for living things and the environment.
	EAD Expressive Art and Design	Understands that different media can be combined to create new effects. Manipulates materials to achieve a planned effect. Constructs with a purpose in mind, using a variety of resources. Uses simple tools and techniques competently and appropriately. Selects appropriate resources and adapts work where necessary. Selects tools and techniques needed to shape, assemble and join materials they are using.

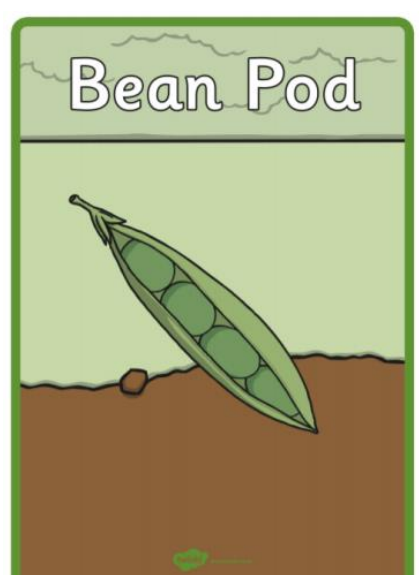
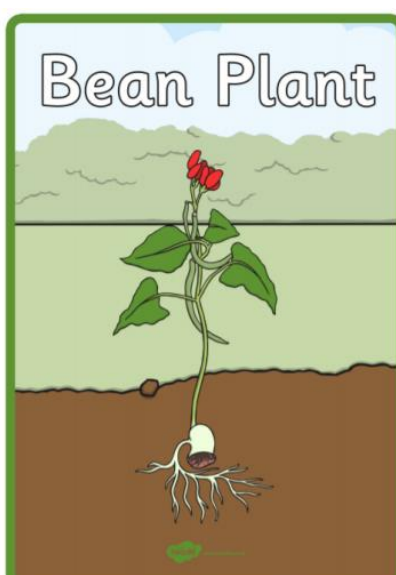
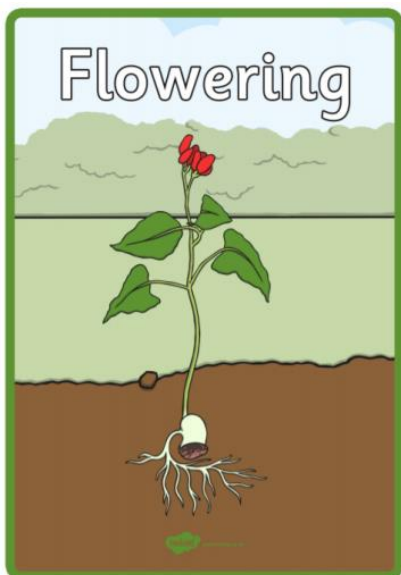
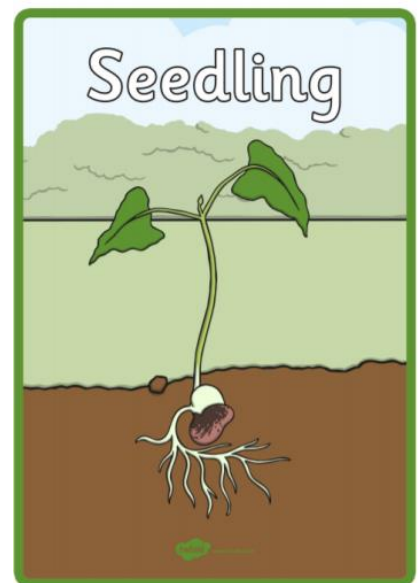
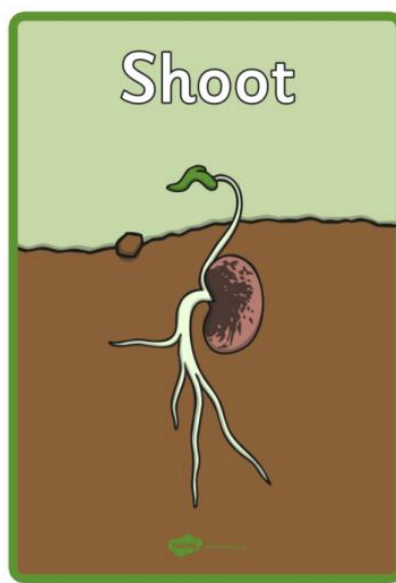
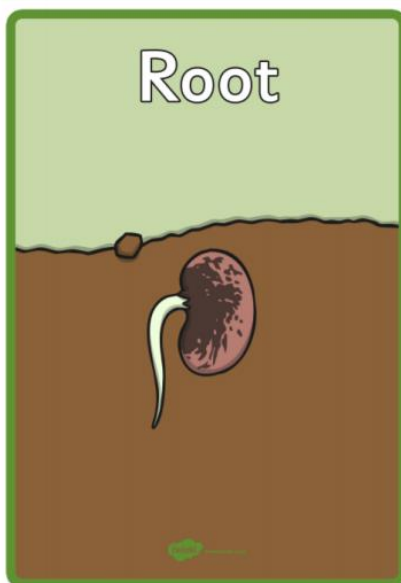
You will see the value of this type of activity and we hope that you enjoy exploring this type of activity with your child.

The Lifecycle of a Bean

Let's take a look at how a bean grows from a seed into a fruiting plant.

- 1 The planted bean seed germinates and roots appear
- 2 The bean seed sends out a shoot which pops through the surface of the soil
- 3 The shoot grows into a seedling which is a small two leafed plant
- 4 The seedling grow stronger and eventually 'flowers'
- 5 The flowers are 'pollinated' by insects and bean pods start to grow
- 6 Beans develop and swell in the pods which are harvested for us to eat. This is how haricot beans grow which we make baked beans from! Yummy!

Images from Twinkl



Experiment 1 – Grow a Bean Plant

Would you like to see how a bean seed grows into a plant? It's a very quick process which you will find very interesting!

You will need:

- 1 A clean jar
- 2 Some kitchen paper
- 3 Water
- 4 A bean seed

Take a look at this short YouTube clip entitled 'Plant Life Cycle of a Bean Seed' to find out how the 4 'ingredients' above are used to create a miracle! Click on the picture or on the link provided.



<https://www.youtube.com/watch?v=pg92cspLy0I>

Your challenge

Your challenge is to grow a plant which is taller than your ruler!

How many days did it take for your plant to grow taller than your ruler?

Plant-on your young bean plant

Once your plant has grown taller than your ruler, plant it carefully into a pot of soil. You may need to support your plant to stop it toppling over.

Care for your plant by watering it regularly!

Experiment 2 – Grow Carrot Tops

Did you know that you can grow carrot leaves from a carrot top? Let's give this a go! We're going to grow two carrot tops, one in water and one in soil.

You will need:

1st Carrot Experiment

- 1 1 carrot top about 2 cm thick. Ask a grown-up to help you and use your ruler to ensure that your carrot top is thick enough. The video clip below explains why this is important.
- 2 A saucer of water

2nd Carrot Experiment

- 3 Another carrot top about 2cm thick.
- 4 A small plant pot
- 5 Soil

Take a look at this short YouTube clip entitled 'How to Grow Carrot Tops' to find out how the 4 'ingredients' above are used to create 2 small miracles! Click on the picture or on the link provided.



<https://www.youtube.com/watch?v=tSqYvJQBwr0>

Questions

- 1 Which carrot top grew quicker?
- 2 Which carrot top is stronger and healthier? Why do you think this is?
- 3 Taste the leaves. What do they taste like?

Other Growing Experiments using Scrap Food

There are other growing experiments you can try at home.

Pineapples



Cut the top off a pineapple and insert cocktail sticks to hold the top above a shallow container filled with water. Place the container in direct sunlight and change the water every day or so keeping the container filled so it reaches just above the base. Roots will appear in a week or so. Once roots have formed you can plant your pineapple into soil. Due to our climate it's best to grow your pineapple indoors.

Lettuce

Place a lettuce leaf in a glass with a little water in the bottom. Place the glass in good sunlight and mist the leaf every other day. After 3 or 4 days, you will notice roots beginning to appear along with some small new leaves. Transplant your lettuce in soil and you'll soon enjoy fresh lettuce leaves.



Chilli Peppers



You can grow chilli peppers from the left over seeds. Collect the seeds and pot them in soil. Keep in direct sunlight and they'll soon grow. They should grow quite quickly. If it's warm outside try planting them in your garden.

Tomatoes

Wash and dry some tomato seeds. Plant them in soil and they'll soon germinate. Grow them outdoors in the sun or indoors in the winter.



Basil



Use your ruler to cut a stem of basil about 4 inches long and place the stem in a glass of water. Do not allow water to go above the leaves. Leave the glass somewhere bright but not in direct sunlight. Roots should appear in a few days. When the roots reach about 2 inches long you can transplant the stem into soil.

Celery

Ask an adult to cut the bottom off a celery. Lay the bottom in a bowl with a little warm water. Place the bowl in direct sunlight and after a week or so you should see leaves growing along the base. When this happens you can transplant your celery in soil and wait for it to grow to full length.



Apples and Lemons



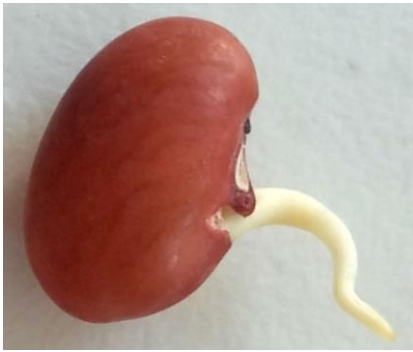
You can save seeds from fruit such as apples and lemons. Dry them out and plant them in soil. They'll take a while to grow and you'll need two trees to produce fruit. The point is, you'll get a plant from the seeds! Give it a try!



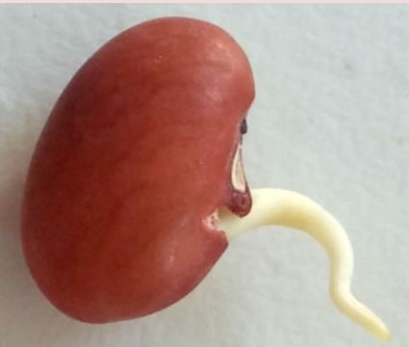
Keep a record

Don't forget to keep a record of your achievements! Draw pictures and take photos. Keep a record of how many days it took for your experiment to produce roots. To do this you'll need to record the date you started each experiment. What was your favourite experiment? Most importantly, have fun!!!

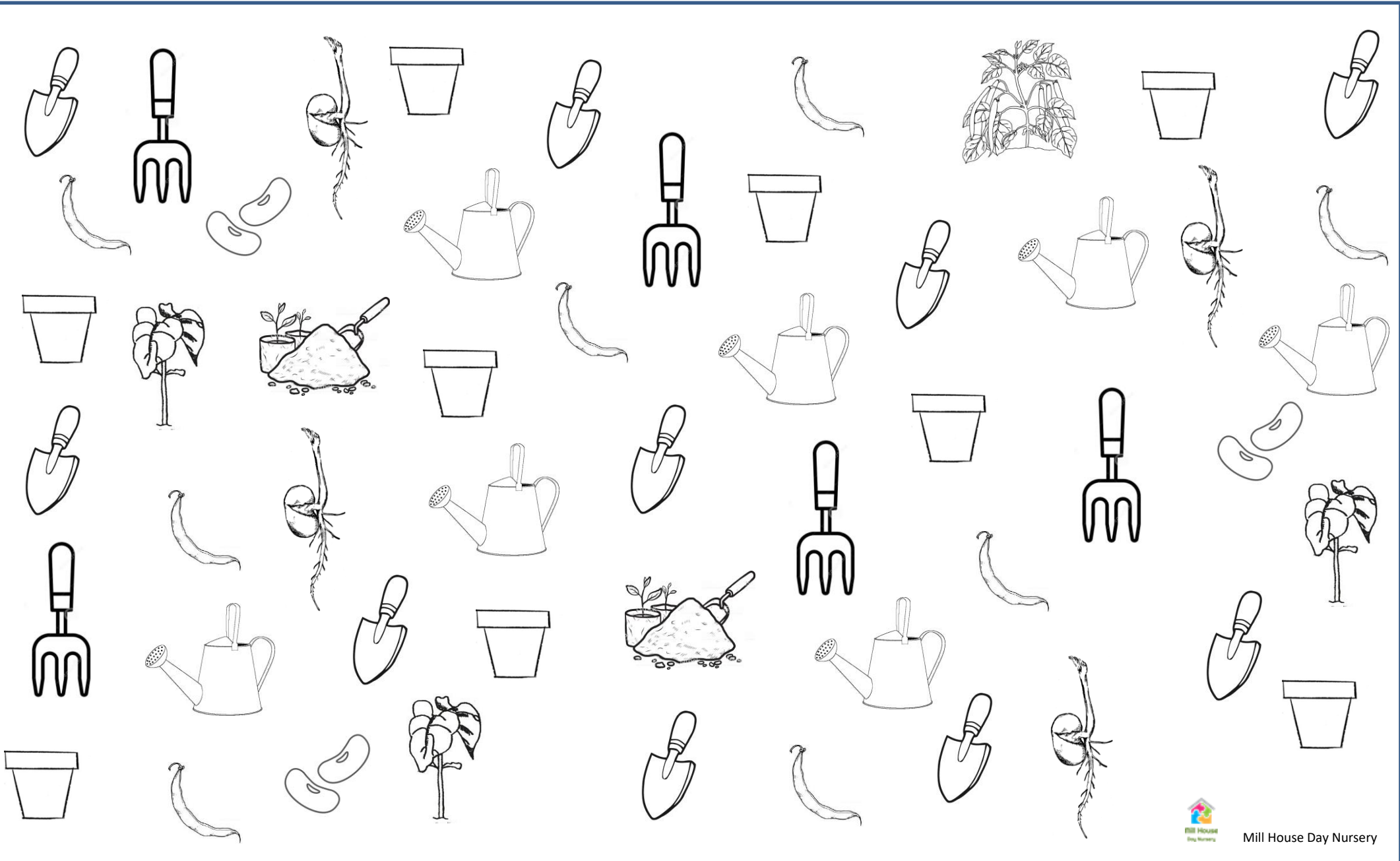
Lotto Playing Boards – 2 Players



Lotto Playing Cards – Cut out for use



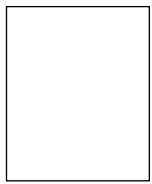
My Vegetable Patch I spy with my little eye



I spy with my little eye - answers

Help your child to record their answers. Older children may be able to copy from the number line below.

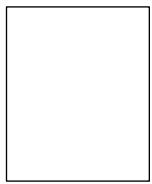
1 2 3 4 5 6 7 8 9 10



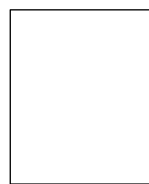
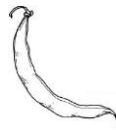
hand forks



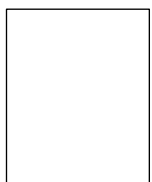
trowels



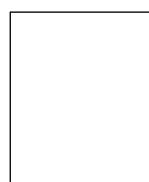
runner
beans



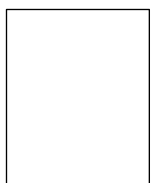
watering
cans



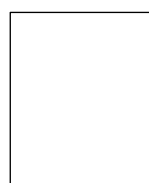
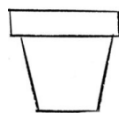
seedlings



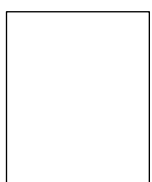
runner
bean plant



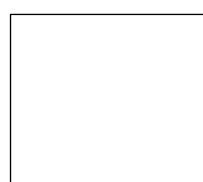
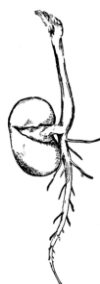
plant pots



beans



shoot and
roots



soil



I spy with my little eye - answer sheet

1

Runner
bean plant



2

soil



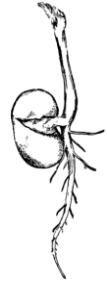
3

seedlings



4

shoot and
roots



5

hand forks



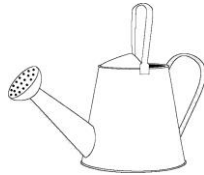
6

beans



7

watering
cans



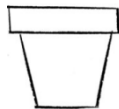
8

runner
beans



9

plant pots



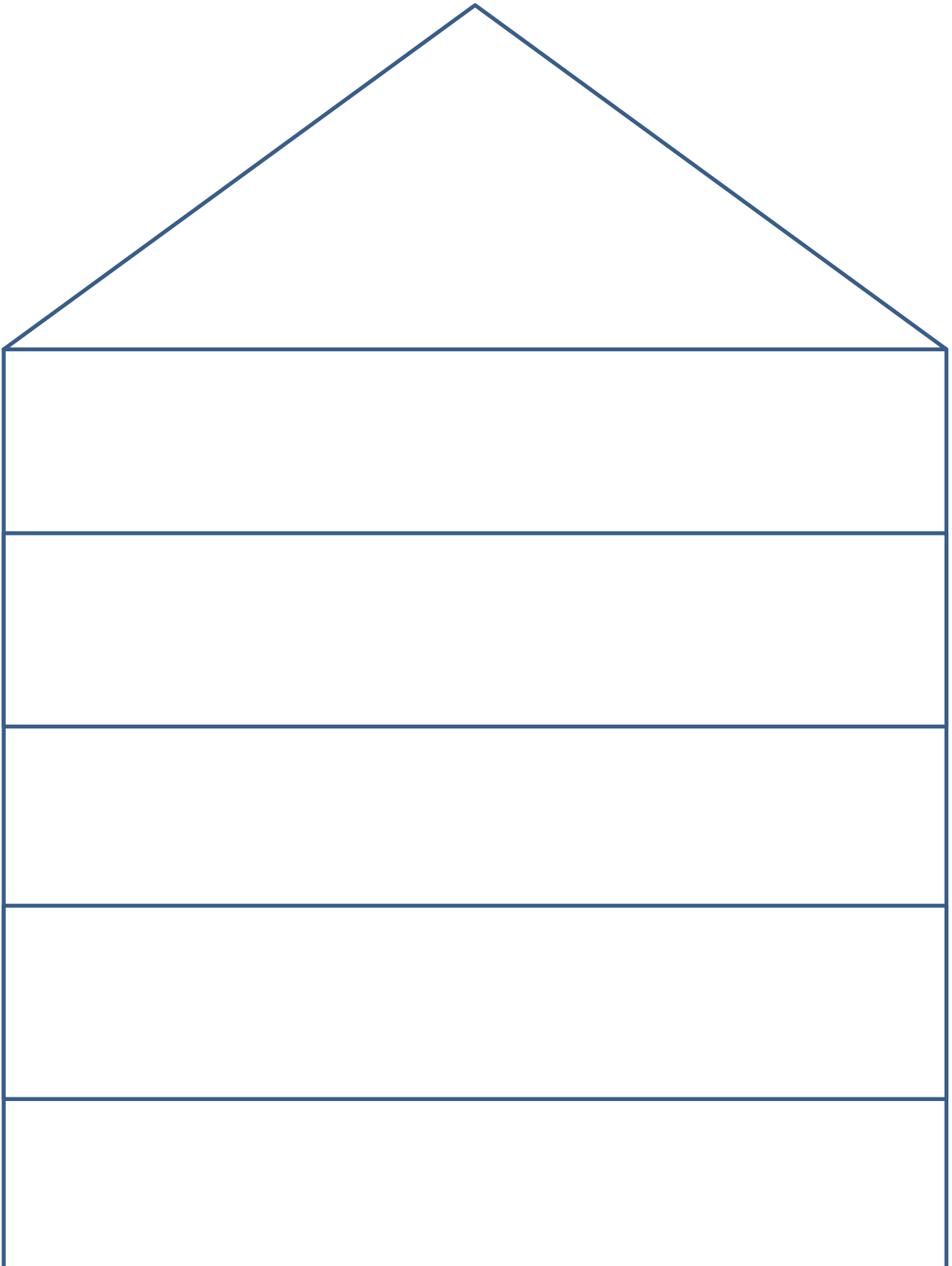
10

trowels



I spy with my little eye

Colour the pictures in and cut them out. Can you arrange them on the greenhouse shelves below?



Signing with Mr Tumble

Learn some Makaton with Mr Tumbles 'In The Garden Compilation'. This compilation lasts for approximately 15 minutes.

Click on the image below or on the adjacent link.



<https://www.youtube.com/watch?v=NWZsOr3q8SE>

Can you remember the Makaton signs for the following words?

hello	carrots	yes	granddad
tumble	grow	dig	hole
good	fill	idea	thank you
carrot cake	watering	look	shed

Easy Carrot Cake Recipe



This is a simple recipe which can be baked as a loaf, a cake or as cup-cakes. Reduce the cooking time if you choose to make cup-cakes.

Ingredients

- 140ml vegetable oil, plus extra for greasing
- 2 free-range eggs
- 200g light brown sugar (or caster sugar)
- 300g grated carrot (grated weight)
- 100g raisins
- 75g walnuts, chopped (optional)
- 180g self-raising flour
- 1 pinch salt
- ½ tsp bicarbonate of soda
- 1 tsp mixed spice

Method

Preheat the oven to 150C/130C Fan. Oil and line a 2lb loaf tin or 20cm cake tin with baking paper.

Beat the eggs in a large bowl, then add the oil, sugar, grated carrot, raisins and chopped nuts if using.

Sift the remaining ingredients and add to bowl using a wooden spoon until well combined.

Pour the mixture into the prepared tin and level the surface. Bake for 1 hour 15 minutes, or until a skewer inserted into the middle comes out clean. Reduce cooking time if making cup-cakes (check after approximately 25 minutes)

Remove from the oven and allow the cake to cool in the tin for about 5 minutes before removing. Cool completely on a wire rack before serving.

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