Dandelion

have a grow
Have a go at growing ......................................................... 3
Beetroot ............................................................................. 4
Chives (Garlic chives) ......................................................... 5
Kohlrabi .............................................................................. 6
Lemon Balm ......................................................................... 7
Lettuce ................................................................................. 8
Sunflower .......................................................................... 9
Curriculum for Excellence Experiences and Outcomes ........ 10

Visit the Dandelion website
Dandelion Schools’ Growing initiative

HAVE A GO AT GROWING

This guide will help you on your way to growing a range of vegetables, flowers and herbs. There are fun facts and helpful tips to grow 6 different plants from seed, all of which can be eaten!

Seeds for each of these 6 species have been supplied to schools hosting a Grow Cube. There are enough seeds to run the Grow Cube experiments and to grow some outside in the school grounds, in pots, open soil or in raised beds.

These seeds are widely available if you fancy having a grow yourself. Your crops could be part of a tasty dish for your own harvest celebration. What would you like to grow to eat?

Before you dive in, there are some important terms to note:

**Growing media**
this is a term used for the substrate used for growing plants. It is soilless, and usually contains materials like wood fibre, wood bark and sometimes coir. The word compost is often used, but compost is technically a soil amendment that is very rich in nutrients. Try to avoid peat based growing media as harvesting from peat bogs releases greenhouse gasses. There are government initiatives to reduce the use of peat in horticulture.

**Seed mix**
this is a term used to describe the growing media used for seed sowing. If you can, use a seed mix for sowing seed to maximise the rate of success. Seed mix does not contain any nutrients – nutrients at this stage could reduce the germination of your seeds. If you can’t use a seed mix, don’t worry – just look at the label of the growing media and it will tell you if it can be used for sowing seeds.

**Propagation**
the process of creating new plants from other plant parts, such as from seed, cuttings or dividing plants. This guide refers to seed propagation.

**Fertigation**
watering with nutrients added

**Germination/germinate**
when seeds start to grow

**Irrigation**
simply means watering

**Pots and trays**
pots come in a range of sizes, but for seed sowing, using a seed tray or 6 cell trays are best. Once the plants are large enough to handle, they can be moved into 1 or 2 litre pots. Garden centres stock a range of commonly sized pots and trays, but if you’d like to recycle more, yoghurt pots, tetra paks or even tins from beans and soup can be used – just make sure you put a hole in the bottom for drainage!
Beetroot is a colourful crop packed with nutrients! Interestingly, most people think you only eat the root, but you can eat the leaves too, so it’s a great crop that has multiple uses. Beetroot comes in a few colours, mostly the reddish-purple ones you see in the shops, but you can grow yellow, white and orange ones too. There are some really cool ones that are white with pink rings inside!

They’re very easy to grow and can be sown directly into the ground, but the only thing to watch for is bolting. Bolting refers to when the plant starts to flower too early and usually only happens when the weather is very hot.

- To grow beetroot, simply prepare the soil by raking so it is fine and crumbly, sow the seed 2.5 cm deep, every 5 cm, in rows about 20 cm apart. Irrigate well.
- Once the seeds germinate, and the seedlings are about 2.5 tall, thin them out to leave 1 plant every 10 cm. Irrigate weekly and fertigate once a month.

Once the beet is about the size of a golf ball (from mid-June onward), they can be harvested.
ChIVES

(Allium tuberosum)

Chives are from the same family as onions (Allium), which is why they have a similar smell. Some types smell slightly different, such as garlic chives, which as you can probably guess, smell and taste more like garlic. They grow as individual stems which can be cut regularly to add to salads and other dishes, and grow small flowers that are edible, too! Garlic chives have white flowers, whereas ordinary chives have purple flowers.

A great thing about chives is that they are perennial, so they grow back every year. After a few years, they will form clumps, which can be divided up to make more plants!

Growing chives is very easy as they require virtually no input other than watering now and again. To grow chives, simply fill small pots with general purpose growing media or seed mix and smooth the surface. Sow about 10-20 seeds and sprinkle with more growing media. Irrigate well (remember to put holes in the bottom of the pots if recycling a food container!) and then place in a warm windowsill. You can seal them in a polythene bag if you have one. Water every 2-3 days, or more often if the growing media looks dry.

After about 3 weeks the seedlings will appear. Once they are about 5cm tall, they can be transplanted into larger pots with general purpose growing media and place outdoors once frosts have passed (about mid-May). Irrigate every week, or more often in warm weather. No need to fertilise them until next spring.

Harvest the tips regularly throughout the summer and add to salads and other dishes. If they start to flower, you can harvest the flowers and eat them too. If you let them go to seed, they can become quite invasive, so best to cut the flowers off in late summer if you don’t want them to spread.
Kohlrabi

*Brassica oleracea var. Gongylodes*

Kohlrabi is a funny looking vegetable that comes from the same plant family as cabbage and cauliflower, also known as the Brassica family. They come in two colours, green which are for spring sowing and summer eating, or purple which are for summer sowing and autumn eating. They can be eaten raw or cooked.

The seed you have is for summer sowing (purple ones) which can be sown directly into the ground once the frosts have passed (early June).

- To grow kohlrabi, simply prepare the soil by raking so it is fine and crumbly, sow the seed 2 cm deep, every 10 cm, in rows about 25 cm apart. Irrigate well.

- Once the seeds germinate, and the seedlings are about 2.5 tall, thin them out to leave 1 plant every 20 cm. Irrigate weekly and fertigate once a month.

Once the kohlrabi is about the size of a tennis ball (from mid-September onward), they can be harvested. Or you can leave them in the ground for longer – until about November, but they will not be as tasty.
LEMON BALM
MELISSA OFFICINALIS

Don’t be fooled by its nettle-like appearance, lemon balm is a very delicious herb. It can be used to make drinks, added to oils, or even added into salads. The best part? It is a perennial – this means it will grow for years and if it isn’t left in wet conditions, will even survive our cold winters! It can be vigorous, so keeping it in a large pot will stop it from taking over your garden!

Growing lemon balm is easy – just follow the steps below and you’ll be on your way to livening up your food and drinks in no time:

1. Fill your pot or seed tray with seed mix and smooth the surface (using the bottom of another pot is good for this)
2. Irrigate the pot
3. Sow the seeds onto the surface
4. Cover the seeds with a sprinkling of dry seed mix
5. Seal the pot in a polythene bag or place it in a warm and sunny window – the seeds like warmth to germinate
6. Once the seedlings are large enough to handle, they can be transplanted into larger pots of general-purpose growing media and moved outdoors (usually mid-May once the frosts have passed)
7. Once outdoors, they can be irrigated weekly (unless it is very warm and dry, then more often will be required), and fertigated once a month with a liquid feed.
Lettuce

*Lactuca sativa*

Lettuce is really easy to grow and comes in a variety of colours, shapes and sizes. There are two different types: heart lettuce which have a dense centre and loose-leaf lettuce which don’t produce a heart. Most lettuce types can be grown as “baby leaf” or “cut and come again” which means that once the lettuces are about 6 weeks old, you can pick the leaves, and they keep growing back. Just make sure you only pick the leaves on the outside of the plant, or you might accidentally remove the growing part which is found in the centre. Lettuce seeds are a bit unusual too, as they need light to germinate.

If you want to grow lettuce as cut and come again types, you can do this indoors or outdoors, if there is plenty of light. To do this, simply fill a seed tray with seed mix and sow the seeds on the surface, then irrigate well. Place in a windowsill or outside. Once the seedlings have emerged, fertigate every week and water every 2 days unless it is warm, in which case more often (possibly 2 times a day in very warm weather/classroom). Thin the plants if there are too many of them, and harvest after about 6 weeks (earlier if they are growing quickly!).

You can grow lettuce directly in the ground too. Simply prepare the soil by raking so it is fine and crumbly and add some organic matter (compost is great), sow the seed on the surface, every 10 cm, in rows about 25 cm apart. Irrigate well to settle the seed into the soil.

Once the seeds germinate, and the seedlings are about 2.5 tall, thin them out to leave 1 plant every 20 cm. Or you can leave them planted more densely if you plan to harvest the leaves regularly. Irrigate daily and fertigate weekly.
Do you know why sunflowers are called sunflowers? The scientific name for sunflower is Helianthus which comes from the Greek language – “helios” means sun and “anthos” means flower, literally translating to sun flower – this is because the flowers look like the sun. Another cool fact is that when sunflowers are young plants, the unopened flowerheads follow the sun across the sky – this is called heliotropism.

Sunflowers come in all shapes and sizes, and even in different colours. Some grow really tall and have one flower, and some are really short and have many flowers. They have a big range of uses too – from adding colour to your garden, attracting bees and other pollinators, and the seeds from some types can be eaten (not these ones!).

Growing sunflowers is easy, just follow these steps:
1. Fill small pots with general purpose growing media or seed mix
2. Sow the seed at about 1.5cm below the surface
3. Irrigate well
4. Place the pots in a bright but cool spot – a window is ideal
5. Keep the pots well-watered – irrigate daily, or if leaving them over the weekend, place a container of water under the pot so it has plenty to drink while you’re away
6. Once the seedlings are large enough to handle (about late May), they can be planted outside.
7. Sunflowers are very hungry plants, so when you plant them outside, or into bigger pots, make sure you add lots of organic matter (compost from a compost bin is ideal)
8. Add a stake to stop them falling over and water them every few days, or daily in dry spells
9. Enjoy the blooms!
## Curriculum for Excellence Experiences and Outcomes

This list includes reference to activities in playing and developing the games Top Plants and Mash-up.

<table>
<thead>
<tr>
<th>level</th>
<th>CfE label</th>
<th>explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>LIT 2-26a</td>
<td>By considering the type of text I am creating, I can select ideas and relevant information, organise these in an appropriate way for my purpose and use suitable vocabulary for my audience.</td>
</tr>
<tr>
<td>2</td>
<td>MNU 2-11a</td>
<td>I can use my knowledge of the sizes of familiar objects or places to assist me when making an estimate of measure.</td>
</tr>
<tr>
<td>2</td>
<td>SCN 2-02b</td>
<td>Through carrying out practical activities and investigations, I can show how plants have benefited society.</td>
</tr>
<tr>
<td>2</td>
<td>HWB 2-25a</td>
<td>I am experiencing enjoyment and achievement on a daily basis by taking part in different kinds of energetic physical activities of my choosing, including sport and opportunities for outdoor learning, available at my place of learning and in the wider community.</td>
</tr>
<tr>
<td>3</td>
<td>HWB 3-25a</td>
<td>I am experiencing enjoyment and achievement on a daily basis by taking part in different kinds of energetic physical activities of my choosing, including sport and opportunities for outdoor learning, available at my place of learning and in the wider community.</td>
</tr>
<tr>
<td>3</td>
<td>MNU 3-07a</td>
<td>I can solve problems by carrying out calculations with a wide range of fractions, decimal fractions and percentages, using my answers to make comparisons and informed choices for real-life situations.</td>
</tr>
<tr>
<td>3</td>
<td>RME 3-02b</td>
<td>I can demonstrate my developing understanding of moral values through participating in events and projects which make a positive difference to others.</td>
</tr>
<tr>
<td>3</td>
<td>LIT 3-26a</td>
<td>By considering the type of text I am creating, I can independently select ideas and relevant information for different purposes, and organise essential information or ideas and any supporting detail in a logical order. I can use suitable vocabulary to communicate effectively with my audience.</td>
</tr>
<tr>
<td>4</td>
<td>LIT 4-26a</td>
<td>By considering the type of text I am creating, I can independently select ideas and relevant information for different purposes, and organise essential information or ideas and any supporting detail in a logical order. I can use suitable vocabulary to communicate effectively with my audience.</td>
</tr>
<tr>
<td>4</td>
<td>MNU 4-11a</td>
<td>I can apply my knowledge and understanding of measure to everyday problems and tasks and appreciate the practical importance of accuracy when making calculations.</td>
</tr>
<tr>
<td>4</td>
<td>SCN 4-02a</td>
<td>I have propagated and grown plants using a variety of different methods. I can compare these methods and develop my understanding of their commercial use.</td>
</tr>
<tr>
<td>4</td>
<td>SOC 4-08a</td>
<td>I can discuss the sustainability of key natural resources and analyse the possible implications for human activity.</td>
</tr>
<tr>
<td>Health &amp; Wellbeing</td>
<td>HWB 0-13a / HWB 1-13a / HWB 2-13a / HWB 3-13a / HWB 4-13a</td>
<td>Through contributing my views, time and talents, I play a part in bringing about positive change in my school and wider community.</td>
</tr>
</tbody>
</table>
With thanks to the contributors to this resource:

SRUC https://www.sruc.ac.uk

Keep Scotland Beautiful https://www.keepscotlandbeautiful.org/

Visit the Dandelion website