

Environment and Sustainability

September 2020

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1. Environment and Sustainability Statement

Intent

William Patten Primary School is committed to being an environmentally friendly and sustainable school. We will enhance the progress being made towards this, by further reducing the school's ecological footprint, embedding sustainable practises in our everyday lives. We are committed to ensuring that children understand their roles and responsibilities in looking after the school environment and beyond, and how they can lead more sustainable lifestyles. We are proud of our links with external agencies, such as, Trees for Cities, FairTrade and the The Green Schools Project and the Eco School's framework which we are following to achieve our Ecological goals.

Implementation

As a whole school community, we are excited and committed to raising the profile of environment and sustainability at William Patten, through its effective integration within the curriculum. We believe that increased awareness of the environment and sustainable living supports and promotes students' spiritual, moral, social and cultural development. Children's understanding of environment and sustainability is supported by practical, first-hand experiences and collaborative activities which take place in the school grounds. Planned and coordinated activities involving shared resources, such as the edible playground and landscaped roof garden, ensure the children develop a deep understanding of their relationship with the environment and how their choices and actions can support sustainable living. Opportunities for applying this to a wider context, both on an immediate and wider local scale, as well as on a global scale, are then supported directly through the school's curriculum, with specific coverage of these themes in a number of curriculum areas, including science and PSHE. The children also have access to positive role models from the local and wider community, with specific expertise, through our partnership working with external agencies, including those mentioned above, as well as STEM.org and representatives from our families.

Impact

The school's commitment to sustainability is evident in both the indoor and outdoor school environment. Each classroom, for example, has a recycling area and the timetabled use of the edible garden and roof garden ensure that children observe the impact of their project work in these areas throughout the school year. The school has achieved the Learning Outside the Classroom (LOtC) award at gold level, in recognition of 'exemplary LOtC provision...ensuring that all pupils have access to frequent, continuous and progressive learning outside the classroom to support their learning and achievement.' The external assessment report also acknowledges 'wonderful improvements' to the school grounds, specifically recognising the roof garden refurbishment and inclusion of 'planters for each class and a greenhouse'. The school also holds the British Council's 'International School Award', acknowledging the depth in which sustainability as a theme has been taught throughout the school. Planned special events, including the summer picnic, in which children eat the food they have grown, as well as the annual Nature Day, ensure that children develop a secure understanding of their responsibility to the environment and the importance of sustainable living. Children learn of the impact that lifestyle choices can make in the natural world and develop their understanding of the implications and benefits for themselves and others. William Patten Primary School aims to educate students on making environmentally friendly choices for life. It has achieved an Eco Schools Award at bronze level, in recognition of the progress it has made towards a sustainable lifestyle.

2. Teaching and Learning

All teachers have access to Edible Playground Project Planning, from Trees for Cities. Teachers use ~~these to inform~~ this to ensure their use of the edible playground and rooftop terrace is linked effectively to National Curriculum programmes of study. Laminated copies are also distributed in class planting packs and an example of a planning overview, for adaptation by teachers, is given below. The subject leader promotes and ensures the completion of identified termly tasks in line with those identified for each year group.

YEAR 1 EDIBLE PLAYGROUND CURRICULUM GUIDE

YEAR 1	TERM 1	TERM 2	TERM 3
History	The Great Fire of London Make a series of cardboard houses and stage a great fire of London in your Edible Playground (if you're allowed and you have a Forest School leader to help).	Historical Events Give an outside performance. Act out a scene from a historical event that you are studying in your Edible Playground.	Castles Build a castle using plant pots and decorate it with natural materials. Create a living castle for the bugs in your Edible Playground.
Geography	Physical Geography Using a weather chart, record the weather out in your Edible Playground.	Geographical Skills and Fieldwork Choose a sunny day. Mark out a giant compass in your Edible Playground. Can you work out the direction the sun is moving across the sky?	Geographical Skills and Fieldwork Give the children a map of the school. They have to find clues marked on the map by going to the correct part of the school.
Art and Design	Sculpture Make leaf sun catchers using willow, a leaf (laminated) and wool to thread in the laminate. Display in your Edible Playground.	Painting Collect a variety of crops from your Edible Playground and using finger paint make a picture of your favourite one. Explain why it's your favourite.	Food Artists Using some of the crops you have grown, serve your food on a plate in a creative way. Make a food picture with the food!
Design and Technology		Technical Knowledge Create and build a structure out of eco-bricks.	Design and Make Look at the shapes of the crops and plants in your Edible Playground and use them as vegetable stamps.
Computing	<ul style="list-style-type: none"> Take pictures of your Edible Playground, save and print them to make a collage. Use the Garage Band app to record then loop natural sounds to make music. Take photos of bugs and write notes about them. 		
PSHE	<ul style="list-style-type: none"> Read the 'Tadpoles Promise' in your Edible Playground and then discuss what is a promise, and is it ever okay to break one? The carrot or a chocolate bar. What would you save and why? Discuss how an Edible Playground/outdoor space could be used to help make playtimes happier. 		
RE/PE/Music	<ul style="list-style-type: none"> Vegetable yoga, vegetable dance moves, dance inspired by the growth of a plant from seed to tree. Food with religious significance, recording a soundscape, making seed shakers using different sized seeds. Write a song about your Edible Playground and how it makes you feel. 		

YEAR 1 EDIBLE PLAYGROUND CURRICULUM GUIDE

Edible
Playgrounds

list of activities which are age and year group appropriate, linking to the National Curriculum. If your school follows your own curriculum then please use these activities as a indicator and adapt the ideas to suit the needs of your class.

YEAR 1	AUTUMN	SPRING	SUMMER
Reading texts	Where the Wild Things Are by Maurice Sendak	Stanley's Stick by John Hegley	Tadpoles Promise by Jeanne Willis
Literacy	ABC hunt - hide the alphabet in your Edible Playground. Groups have to find their letters and lay out the alphabet in the correct order. <i>(phonics)</i> Story Hunt - hang/hide different characters, settings and objects in your Edible Playground. Children have to choose one and then take it in turns to tell different stories using their chosen character, setting and object. <i>(speaking and listening)</i>	Put out plant pots in the Edible Playground with different digraphs labelled on the front. Give out a selection of objects found in your Edible Playground to match with the correct digraph sound. <i>(phonics)</i> Collect an object from the Edible Playground and then write down words that describe how it looks, smells, feels and sounds. <i>(writing)</i>	Use coloured chalk on the playground floor to mark out a huge hopscotch or a long snake with the letters and sounds that you are focusing on that day/week. Children can have fun hopping along and shouting out the sounds as they land on them. <i>(phonics)</i> Lay out the alphabet. Children have to go on an alphabet hunt to find natural/outdoor objects in the Edible Playground that match each letter, e.g. S = stick W = watering can. <i>(phonics)</i>
Numeracy	Number and Place Value Collect different natural materials in groups of tens. How many groups of tens can you make? Each child gathers 10 leaves/sticks etc. Teacher calls a number (e.g. 5), and they have to organise themselves into groups of that number. They then have to count in tens to tell you how many leaves they have altogether as a group.	Addition and Subtraction Play a game of snakes and ladders on the playground floor using chalk and seeds as counters. Practice counting forwards and backwards.	Fractions/Measurement Create a mandala and divide it into halves and quarters. Fill it in using natural materials. Using different coloured string, children identify which plants are more or less than one metre. E.g. blue string = more than a metre, red string = less than a metre.
Science	Plants Collect a variety of leaves in your Edible Playground and identify which ones are deciduous and which are evergreen.	Animals Using spoons, magnifying glasses and petri dishes, go on a bug hunt. Can you find different types of invertebrates?	Working Scientifically Make a pile of natural materials from your Edible Playground and school grounds. Children have to sort them into different hoops based on different criteria. Can they come up with their own criteria for sorting?

Use of both the Edible Playground and landscaped rooftop garden is an integral part of the school's commitment to ensuring the effective use of the school grounds to provide frequent, continuous and progressive learning outside the classroom (LOtC). In line with the school's LOtC policy, use of these resources provides the means to ensure that children -

- **Experience** a range of frequent and progressive practices
- **Develop** confidence, self-awareness and skills (e.g. responsibility for self and others, working in a team, leadership, communication, problem solving)
- **Learn** new ideas, facts and concepts in a real world context
- **Grow** through challenge and become more independent
- **Demonstrate achievement** through awards, school/setting displays and school events
- **Increase motivation and willingness to learn** contributing to raised levels of attainment
- **Broaden horizons and raise aspiration** believing they can achieve

The following strategies apply directly to how these aims are achieved through the effective use of the specifically developed outdoor resources -

1. Planning high-quality provision of Learning Outside the Classroom (LOtC) experiences
2. Ensuring that all age groups receive a wide range of experiences and activities
3. Recognising different learning styles and taking into consideration the fact that some learners learn best through a hands-on approach, actively exploring the physical world around them.
4. Providing frequent activities which allow for progression in both experiences and learning.

3. **Assessment**

The Environment and Sustainability Subject Leader regularly meets with the Eco team to review if the following ecological objectives are being addressed and adhered to in each classroom and key stage:

Energy

- To promote a 'switch off and save' policy for technological equipment, lighting and heating/cooling.
- Children to engage in units of work relating to energy, with strong links to science.
- Children will investigate the best ways to conserve energy.

Waste

- To assign children to dispose of waste and recycled products daily in the appropriate manner.
- To assign children to monitor rubbish free lunches and each term award the class who has the most rubbish free lunches.
- For monitors to collect food waste daily and transfer it to the compost bin.
- For children to dispose of paper into recycling bins.
- Promote the reuse principle of paper in classrooms, staffroom and office.

Biodiversity

- To grow and harvest a range of vegetables/herbs to be utilised by the kitchen or selling produce.

- Involve parents, carers and community members in planting and maintaining the Edible Playground and roof garden.
- Engage children and staff in the maintenance of our gardens.

Water

- To promote a 'water-wise turn off' policy.
- Students to engage in units of work relating to water conservation.
- If children bring in a water bottle it should be a reusable one to reduce single use plastic.
-

4. **Planning and Resources**

At the beginning of the academic year, all class teachers will be issued with a class planting pack, which will include laminated Edible Playground designs, planting plans and crops guides. Seeds will be issued by the Environment and Sustainability lead to each year group. All planning and resources linked to our Edible Playground project, and any Eco matters, can be found on the shared drive in the Environment and Sustainability folder. Below is a link to the Edible Playground Google drive which has a variety of planning and resources.

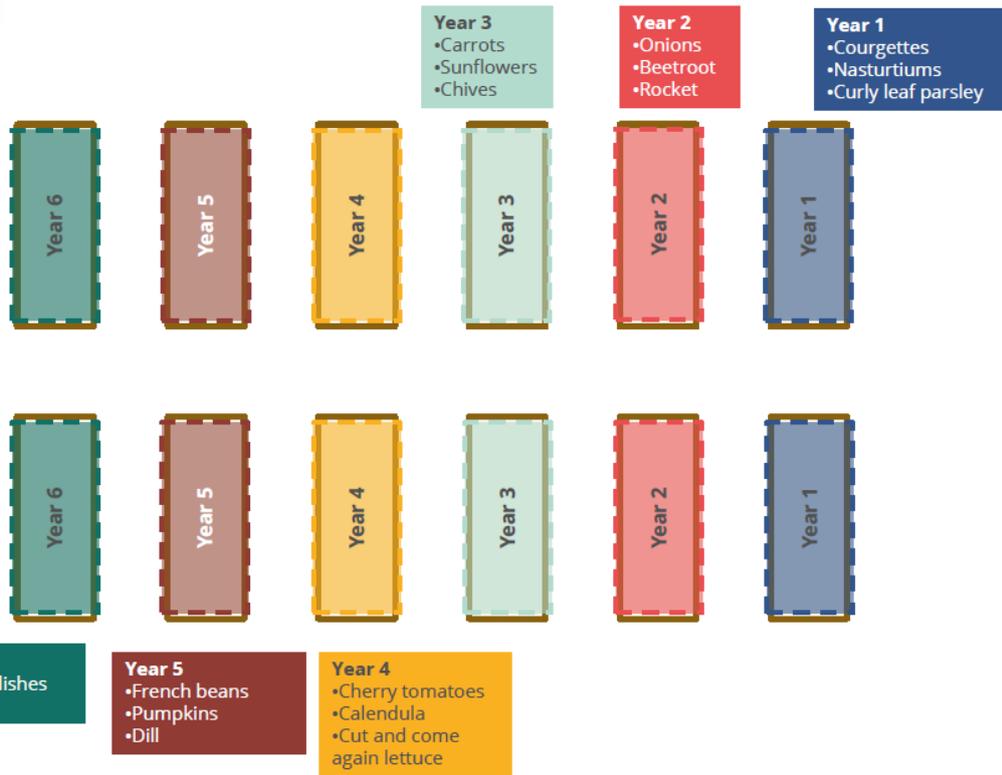
<https://drive.google.com/drive/folders/1nYGMhymDLLS2I3ZypILfOZI3Jp3qq8E4>

To ensure that environment and sustainability are embedded in the curriculum, consideration is given to how these can be incorporated at topic planning level. The 'School Context' section of the Knowledge and Skills Progression Maps for each subject, indicates, for example, how the school grounds (including the roof terrace and edible garden) and community links can be used in the context of a specific subject topic to support the acquisition of key identified knowledge and development of skills.

5. **Organisation**

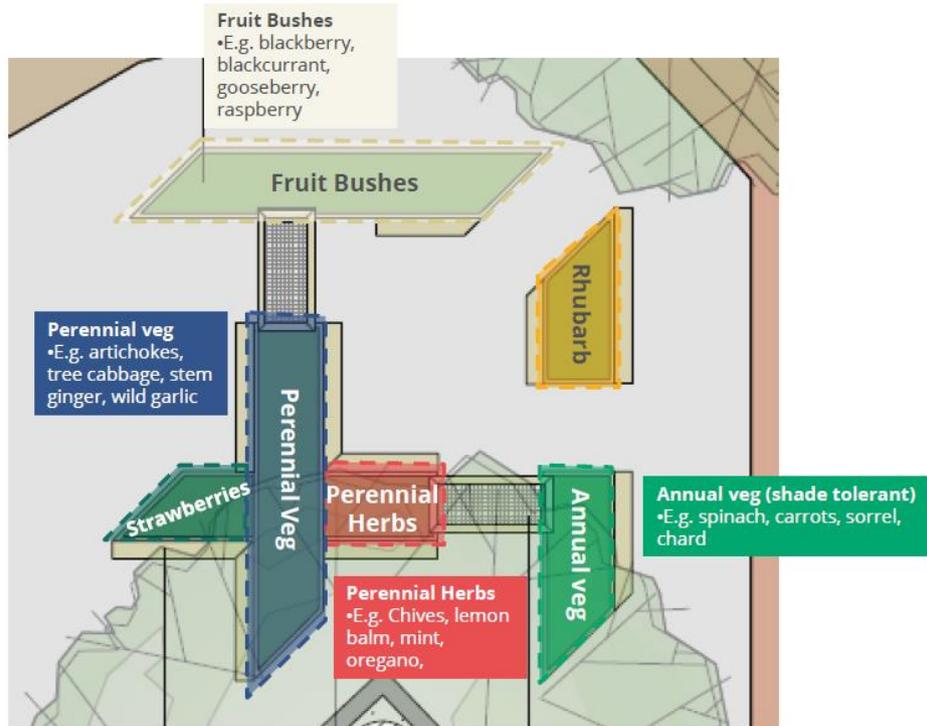
The Edible Playground provides detailed planting plans with helpful curriculum links relating to the seeds/bulbs that each year group is provided with. The following examples, show how the outdoor spaces are used throughout the Spring/Summer term –

WILLIAM PATTEN PRIMARY SCHOOL



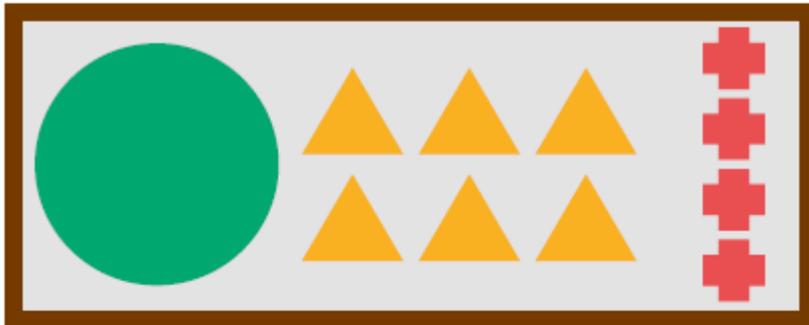
Spring/Summer 2019

WILLIAM PATTEN PRIMARY SCHOOL



Spring/Summer 2019

NURSERY'S RAISED BED



REMEMBER! Check your crop guides to find out exactly how much space each crop needs then plot out how many of each crop you can fit in your class's bed. This is just a rough idea of spacing and where to plant each crop in your bed.



Dwarf French Beans

This is an exciting purple bean that is a dwarf bush variety which shouldn't need supports but give them a bit of bamboo if they look unstable.



Violets

These edible flowers can be grown at the front to look pretty, and dotted around your other crops.



Mixed Lettuce

Grow these in the middle of the bed and be sure to thin them out so they have space to grow larger.

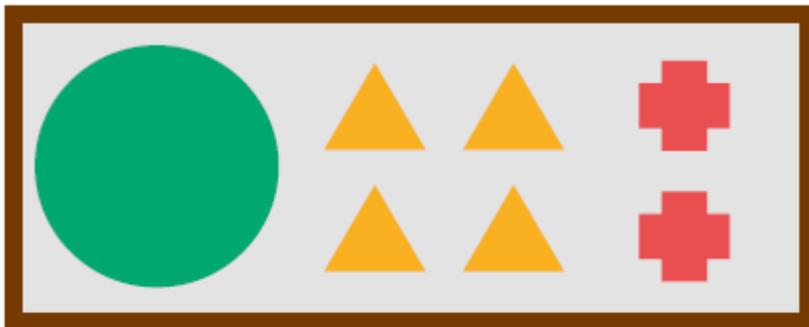
Why grow these?

- French beans have large seeds so are easier for little hands to plant. They can be used for the Jack and the beanstalk story at story time!
- Violets are very colourful little flowers and will be fun for them to eat
- The mixed lettuce will provide lots of interest as there will be lots of different types to watch grow – plenty of different colours and textures.
- These are all very common plants and link to the understanding the world area of the EYFS curriculum.

EYFS curriculum links

- Physical development (dexterity)
- Understanding the world

RECEPTION'S RAISED BED



REMEMBER! Check your crop guides to find out exactly how much space each crop needs then plot out how many of each crop you can fit in your class's bed. This is just a rough idea of spacing and where to plant each crop in your bed.

-  **Sugar Snap Peas**
 These shouldn't need supports to grow as they are a dwarf variety, but give them some bamboo to climb if they look a bit unstable in the wind.
-  **Sorrel**
 These leafy herbs can grow quite wide if given the space, so give them room in the middle of your bed.
-  **Mixed Lettuce**
 Grow these at the front of the bed and be sure to thin them out so they have space to grow larger.

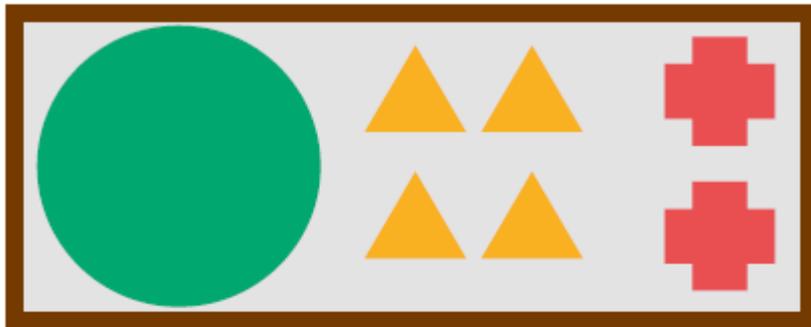
Why grow these?

- Sugar snaps have fairly large seeds so are easier for little hands to plant. The children can compare their own sugar snaps with the ones they get at break time.
- The mixed lettuce will provide lots of interest as there will be lots of different types to watch grow – plenty of different colours and textures.
- Sorrel is a popular but new flavour for children and has an apple-like tang to it.
- These are all very common plants and link to the understanding the world area of the EYFS curriculum.

EYFS curriculum links

- Physical development (dexterity)
- Understanding the world

YEAR 1'S RAISED BED



REMEMBER! Check your crop guides to find out exactly how much space each crop needs then plot out how many of each crop you can fit in your class's bed. This is just a rough idea of spacing and where to plant each crop in your bed.

**Courgette**

Dwarf, non-climbing variety. Needs lots of space to grow.

**Nasturtium**

Can climb up an archway if you have one. Needs moderate amount of space.

**Curly Leaf Parsley**

Can be grown at the front, or in spaces between the other plants.

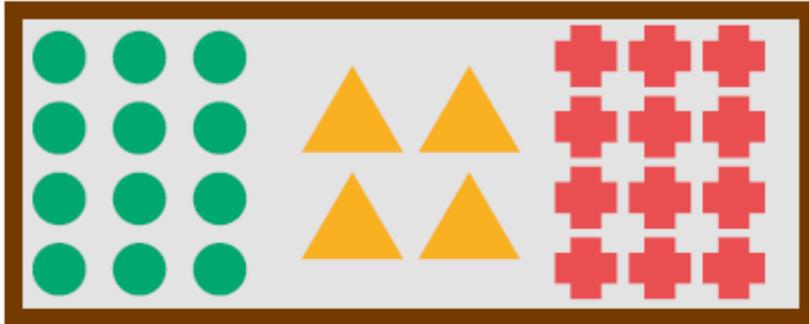
Why grow these?

- Nasturtium is a companion plant for courgettes. Aphids are drawn to the nasturtiums, leaving your courgettes to flourish.
- Curly leaf parsley is very hardy and simple to look after.
- Courgette and nasturtium flowers are edible, meaning children can learn about different parts of the plant.

Science curriculum links

- Basic plant structure
- Identify common plants and animals

YEAR 2'S RAISED BED



REMEMBER! Check your crop guides to find out exactly how much space each crop needs then plot out how many of each crop you can fit in your class's bed. This is just a rough idea of spacing and where to plant each crop in your bed.



Onion
Needs little attention until harvest in June.



Beetroot
Can be picked small or large and will still be tender.



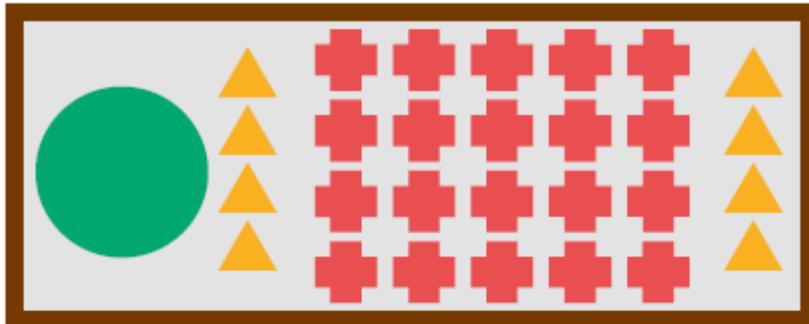
Rocket
Can keep sowing throughout the summer term to fill in gaps in your bed.

Why grow these?

- Beetroot has interesting seeds - there are a few seeds in each cluster/pod you plant.
- All three crops are simple to care for and will be ready to harvest after SATs exams.
- Rocket can 'bolt' quickly meaning the children can observe the plant as it flowers and then produces its seeds (if left over summer).
- Onion flowers are a delicacy and rocket flowers can also be eaten!

Science curriculum links

- Seeds and bulbs maturing into plants



REMEMBER! Check your crop guides to find out exactly how much space each crop needs then plot out how many of each crop you can fit in your class's bed. This is just a rough idea of spacing and where to plant each crop in your bed.



Dwarf Sunflowers

These are a dwarf variety so shouldn't take over your bed.



Carrots

Should be sown in rows around the bed then thinned so they have space to grow.



Chives

Can be grown at the front, or in spaces between the other plants.

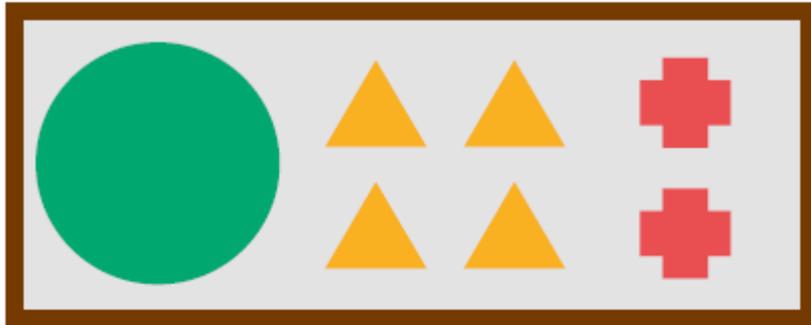
Why grow these?

- Chives are a companion plant for carrots as the scent wards off carrot fly keeping your carrots safe.
- Sunflowers are great for measuring – height, weight, circumference etc. The whole plant from root to flower is edible, with each part of the plant having a different flavour.
- Chive flowers are delicious sprinkled in salads to make them more colourful
- Carrots can grow in very nutrient poor soil, so you can experiment by growing them in sand or rocky soil and see how they differ

Science curriculum links

- Functions of a plant - root/stem/leaves/flowers
- Soils and rocks

YEAR 4'S RAISED BED



REMEMBER! Check your crop guides to find out exactly how much space each crop needs then plot out how many of each crop you can fit in your class's bed. This is just a rough idea of spacing and where to plant each crop in your bed.



Bush Tomatoes

This is a bush variety which means it requires no support and little attention (no need to pinch out the side shoots).



Calendula

This edible flower can be dotted around a bed to help your tomatoes.



Cut And Come Again Lettuce

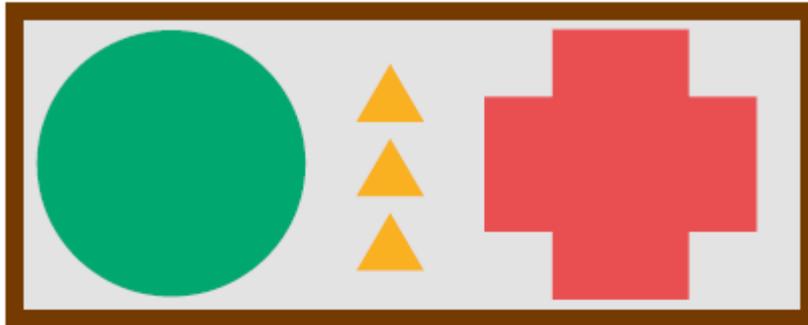
Can be grown around the rest of the bed. Probably near the front as you will be harvesting regularly.

Why grow these?

- The two different tomato varieties are great for talking about classification and grouping.
- Calendula is a companion plant for tomatoes. They are a sacrificial flower and attract aphids, which in turn protects the tomatoes from these pests.
- Cut and come again lettuce is a great source of lettuce throughout the whole season. You can cut a bit at a time and keep coming back for more as the leaves grow.

Science curriculum links

- Classification and grouping
- Food chains - producers/predators/prey



REMEMBER! Check your crop guides to find out exactly how much space each crop needs then plot out how many of each crop you can fit in your class's bed. This is just a rough idea of spacing and where to plant each crop in your bed.



Dwarf French Bean

This is an exciting yellow variety of bean on a dwarf bush so it won't need support and will grow wide on short.



Pumpkins

This pumpkin will need lots of space, so you will only have room for 1 per planter. This is an autumn-fruiting variety ready after the summer holidays. The flowers are also edible.



Dill

Sow seeds early before you plant out the pumpkins so they can outgrow them. Sow regularly if you want to eat the young frilly leaves, or leave them to start to flower to attract pollinators to the bed and then collect the seeds.

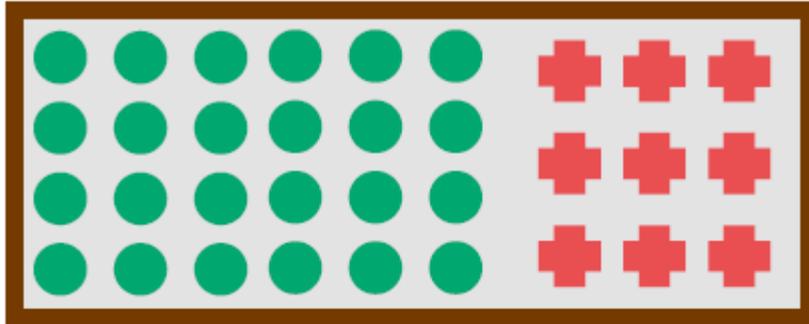
Why grow these?

- Pumpkin plants are really good for teaching asexual vs sexual reproduction. You can clearly see which flowers are male and female (female have the fruits growing behind them).
- Dill is a companion plant for beans and pumpkins as it attracts pollinators such as bees and hoverflies.
- French Beans are easy to grow and are really fun to harvest.

Science curriculum links

- Life cycles of plants and flowers
- Reproduction - asexual vs sexual

YEAR 6'S RAISED BED



REMEMBER! Check your crop guides to find out exactly how much space each crop needs then plot out how many of each crop you can fit in your class's bed. This is just a rough idea of spacing and where to plant each crop in your bed.

**Radishes**

This is an exciting mix of different colours of radish. Keep sowing throughout the summer term for a continuous crop.

**Coriander**

This variety is slow to go to seed and creates nice bushy plants. Be sure to keep sowing throughout the spring, not just once. That way you will get lots of fresh young leaves.

Why grow these?

- Coriander is a herb that can be added to cooking and salads either in their leaf form or seed form and is great for talking about health and nutrition and making dishes more palatable.
- Radishes only take 4-5 weeks from seed to harvest so are a perfect crop for the summer term when children are busy with exams. The leaves are also edible so you can eat the whole plant! Interesting to discover the different colour stems and talk about inheritance.

Science curriculum links

- Evolution, adaptation and inheritance
- Diet, exercise and nutrition

6. **EYFS**

Having regular access to the Edible Playground and roof garden supports the children in making sense of their physical world through opportunities to explore and observe crops being grown. Each class has their own raised bed as well as access to the Edible Playground, which supports the progress that children make in this specific curriculum area.

7. **KS1 and KS2**

Teachers are supported by the Environment and Sustainability lead to highlight key dates and teach about specific environment and sustainability issues according to these throughout the year, for example, Earth Day, Fairtrade fortnight etc. Both key stages ensure utilisation of the Edible Playground and roof garden by planning and teaching cross curricular activities in the space and attending to their allocated raised bed. This is monitored by the E&S lead. Curriculum links, planting plans and a variety of lesson ideas can be found within the Environment and Sustainability folder on the shared drive. Curriculum mapping in each subject also evidences the extent to which these aspects are covered through the wider curriculum. In the autumn term, an Eco Team is established. They will meet regularly with the E&S lead to support the progress being made toward the school's ecological objectives (see section 3) at classroom and key stage level.

8. **Equal Opportunities**

All children at William Patten, regardless of their socio economic background, will have the opportunity to learn in both the Edible Playground and the roof garden. Sustainable living will be promoted throughout the school and will support children in being able to make informed choices and to live in a way that does not damage our planet. Every effort will be made to ensure that learning experiences and activities are fully inclusive and take account of the varying needs of learners.

9. **Inclusion**

In school we aim to meet the needs of all our children through effective differentiation in our Environment and Sustainability planning and in providing a variety of approaches and tasks which provide an appropriate level of challenge to all individuals and groups of learners. This involves providing opportunities for SEND children to have time in Edible Playground and the roof garden, with adult guidance, to develop their understanding of nature as well as embedding scientific skills and knowledge. This will enable children with learning and/or physical difficulties to take an active part in learning outside the classroom (and specifically outdoor learning), as well as practical activities and investigations. Some children will require closer supervision and more adult support to allow them to progress whilst those who are quick to grasp new concepts will be extended through differentiated activities and questioning. By being given enhancing and enriching activities, more able children will be able to progress to a higher level of knowledge and understanding and make the progress of which they are capable. Teachers will use the school's inclusion planning key to ensure that a range of strategies are used which include and motivate all learners, ensuring that optimum progress is made throughout each part of the lesson. The Edible Playground will

help improve health and wellbeing, open up access to nature, and provide an outdoor learning environment that is fun and which supports cross-curricular learning.

10. **Role of the Subject Leader**

It is the responsibility of the subject leader to monitor the standards of children's work, engagement and learning. The subject leader is also responsible for supporting colleagues in their teaching, for being informed about current developments in the subject, and for providing a strategic lead and direction in the school.

The subject leader monitors the budget, oversees resources for the Edible Playground, and books trips and workshops to support learning. The role of the Environment and Sustainability lead is to ensure the Edible Playground roof garden is a well-maintained space for children to have opportunities for progressive learning outside the classroom. The Environment and Sustainability lead will be present at Eco Team meetings and allocate responsibilities for the different children present.

11. **Parents**

We will encourage community participation in environmental projects undertaken, as well as, invite parents with expertise to help maintain and improve the Edible Playground and roof garden. Parents and carers are a much valued part of our school community and this will continue to build on our positive relationships with families. A gardening club will be maintained in which families can garden together in the school's outdoor learning spaces.

Policy Agreed: September 2020
Policy Review Date: September 2021

