



**Horticulture**  
IRELAND  
BORD BIA THE IRISH FOOD BOARD

## Seedlings Programme



Dear Teacher

We are delighted to introduce you to our **Seedlings Programme** for primary schools. Aware of the ever increasing demands on your time and energy, we hope that the Seedlings Programme will assist you in a very practical, yet educational way.

Part of Bord Bia's role is to contribute to the health and wellbeing of the nation by promoting increased consumption of fruit and vegetables as part of a balanced diet. The Board also promotes the purchasing of plants and flowers and gardening as an enjoyable leisure activity, which also improves the environment we live in.

As part of promoting an awareness of healthy eating and living, we want to support you in your work and particularly in those areas of the primary school curriculum in which we have a mutual interest. By working through the Seedlings Programme you will cover a substantial part of the Science and S.P.H.E. curriculum as set out in the revised Primary School Curriculum, 1999. You will also be covering significant areas of the Language (English) and Arts (Visual and Musical) curriculum.

To date the Seedlings Programme contains two packs - one for the junior and senior infant classes and one for first and second class. In time this will be extended to the senior classes. The enclosed Seedlings Pack contains six original posters with corresponding lesson plans and worksheets. A wall planner highlighting the appropriate time of the year for each lesson is also included. In researching, planning and producing these lessons, we have sought to be of practical assistance, providing a classroom resource in which the preparatory elements of your work are available through this pack.

These lessons have been compiled by an experienced primary teacher with several years' expertise in the development of classroom based materials. As part of piloting this material, she has received the support and critique of teachers and their pupils in a representative sample of different schools in both urban and rural locations. Our own horticultural advisors have referenced the lessons too.

I hope that you and your class will benefit from the Seedlings Programme.

Yours sincerely

Michael Maloney  
Director of Horticulture  
Bord Bia



The enclosed lesson plans draw from the Primary School Curriculum as follows:

### SCIENCE

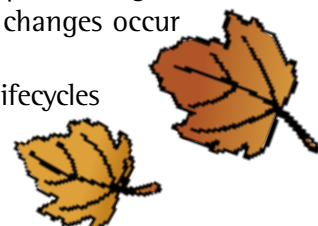
#### STRAND - PLANTS

##### *Variety and characteristics of living things*

- Identify common trees and other plants.
- Develop some awareness of plants from wider environments.
- Recognise and describe the parts of some plants - root, leaf, stem, trunk, branch, flower, petal etc.
- Recognise that trees are plants.
- Group and sort plants into plants we eat and plants we don't eat.

##### *Processes of life*

- Appreciate that plants have essential needs for growth.
- Explore through the growing of seeds, the needs of plants for water and heat.
- Design, make or adapt a suitable container for growing seeds.
- Investigate how plants respond to light.
- Understand that seasonal changes occur in living things.
- Become familiar with the lifecycles of common plants.



## ENGLISH

### STRAND - RECEPTIVENESS TO LANGUAGE

- Listen to a story or description and respond to it.
- Hear, repeat and elaborate words, phrases and sentences modelled by the teacher.

*Developing cognitive abilities through oral language*

- Listen to a story or narrative and ask questions about it.
- Focus on descriptive detail and begin to be explicit in relation to people, places, times, colours, processes, events, colour, shape, size etc.

*Developing emotional and imaginative life through oral language*

- Listen to, learn and retell a rich variety of stories, rhymes and songs.
- Respond through discussion to stories, rhymes and songs heard and learned.



## SPHE

### STRAND - TAKING CARE OF MY BODY

*Food and nutrition*

- Become aware of the importance of food for growth and development.
- Explore food preferences and their role in a balanced diet.
- Discuss and explore some qualities and categories of food.
- Realise the importance of good hygiene in relation to food preparation.

*Environmental care*

- Appreciate the environment and realise that each individual has a community and individual responsibility for protecting and caring for the environment (i.e. in this lesson, the classroom).

## ART

### STRAND - MAKING CONSTRUCTIONS

- Look at, investigate and talk about spatial arrangements and balance in collections of objects.
- Explore and experiment with the properties and characteristics of materials in making structures.
- Grouping, balancing and building with components that allow free play.
- Discovering the tallest, widest, lowest parts of the arrangement.

### STRAND – PAINT AND COLOUR

- Discover colour in the visual environment to help develop sensitivity to colour.
- Discover colour, pattern and rhythm in colourful objects.
- Discover the relationship between how things feel and how they look.

## METHODOLOGIES

The methodologies used will include:

- Discovery learning
- Teacher guided learning
- Poetry reading
- Talk and discussion
- Interpreting through art (drawing).



## SKILLS DEVELOPMENT

Skills developed will include:

- Working scientifically and imaginatively
- Imagining – what is possible in an imaginary world and in the ‘scientific’ world
- Questioning, predicting, sorting and classifying, investigating and experimenting, recording and communicating.

## ASSESSMENT

- Teacher observation.
- Teacher designed tasks (carrying out, recording results of experiment).
- Oral response in discussion.

## THE CALENDAR (Junior/Senior Infants and 1st/2nd class)

Fill in the children’s birthdays and write in the various ‘Special Days’.

### DISCUSSION

- How many seasons are there?
- What are their names?
- The characteristics of each season – what season has most sunlight, is coldest, has Christmas in it, has Halloween in it, has Easter etc.
- What season are we in now?
- What season comes next?
- What season is your birthday in?



**AIM:** To help children, through exploring poetry, to realise that:

- a) There are three categories of living things – plants, animals and people
- b) Plants can be sorted into ‘plants we eat’ and ‘plants we don’t eat’.

### DEVELOPMENT OF THE LESSON

Having looked in the infant lessons at the basic biological classification of matter into ‘living’ and ‘non-living’, we move on in this lesson to classify living things further into plants, animals and people. From their experience of the world already, children will know what people, plants and animals are. However, they may not be aware of these as ‘categories’. Categories are best established by having to ‘sort things out’. The following ‘nonsense poem’ has deliberately mixed up plants, animals and people. In order to allow the children’s imagination as much scope as possible, you might like to leave the poster until the end of the lesson i.e. after the children have done their own imaginary drawings.

### DISCUSSION

- How is Peplantimal land different from where we live?
- What do you think it would be like to live there?
- What are some of the differences between a plant and an animal? A plant and a person?  
An animal and a person?
- Can you think of anything that’s not a plant or an animal or a person?
- Does this thing grow?
- Can you finish this sentence: All living things belong to either people, animals or . . .
- Can you finish this sentence: There are two kinds of plants, plants we eat and . . .
- We call plants we eat f. . . and v. . .

Read the poem (without the introduction) a second time, more slowly, asking the children to shout ‘Stop’ each time they hear the name of a plant or something to do with a plant. Ask them to describe it:

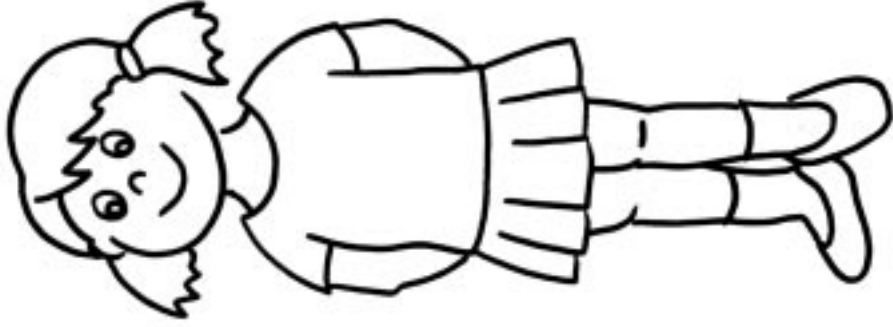
- Have they ever eaten it?
- Do they think it’s a fruit or a vegetable?
- What’s the difference? (It is important to let the children come up with their own ‘schema’ here as a way of learning to classify).

### LET’S DO IT

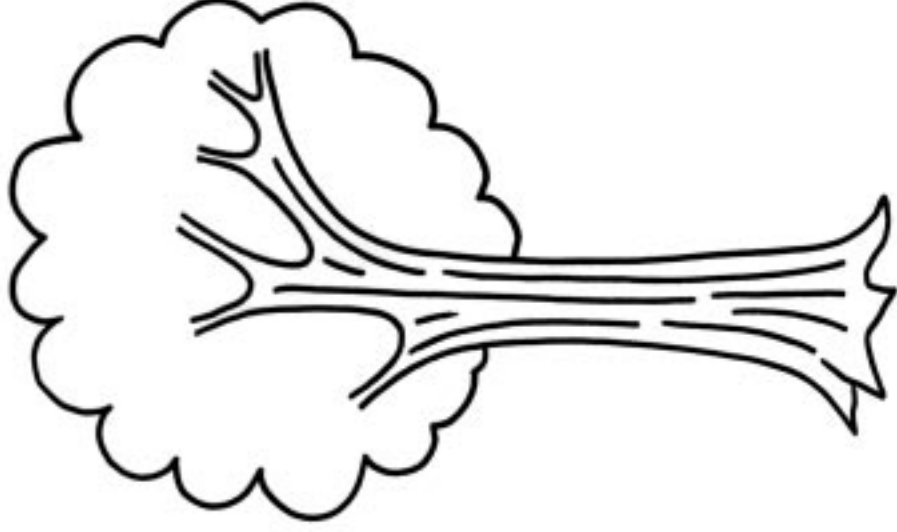
- Read the poem one last time. Ask the children to pick out their favourite ‘Peplantimal’ and invite all the children to draw a picture of it on a length of wallpaper. Display this art work under the title ‘Peplantimal Land’.
- Divide the class into three groups – a plant group, a people group and an animal group. Give each group a large piece of paper. Each group draws what belongs in their group.



There are three kinds of living things . . .



P\_\_\_\_\_



P\_\_\_\_\_



A\_\_\_\_\_

**AIM:** To develop the children's awareness of:

- a) The Autumn season
- b) Fruit and vegetables in the shops in Autumn
- c) The value of fruit and vegetables in the diet.

#### YOU WILL NEED

Invite each child to bring in one of or a piece of the vegetables shown on the poster.

#### DEVELOPMENT OF THE LESSON

- What season are we in now?
- Which are fruit and which are vegetables?
- What is the difference between fruit and vegetables? (Allow the children to suggest criteria e.g. vegetables are usually cooked before you eat them; fruit can be eaten raw etc.)
- Although we can get most of these fruit and vegetables all year round, they are said to be 'in season' now. How many of these can you name?
- How many have you eaten?
- How would you describe the taste - Bitter? Sweet? Salty? Sharp?
- Have you ever eaten any of these raw?
- Do you know how they are cooked?
- Have you ever seen bananas, oranges, peaches or grapes growing in Ireland?
- What do you think is the reason for this?
- Vegetables and fruit are packed full of goodness for our eyes, teeth and hair; our skin and our heart, giving us lots of energy and helping us to fight illness. By eating lots of different coloured vegetables and fruits we will get all the different kinds of goodness they contain (Children might write this in their nature copy).
- How many portions of fruit and vegetables should we eat every day? - five a day.

#### WORKSHEET

Colour and name the fruit and vegetables. Colour the boy's body using the colours of the different vegetables and fruit.

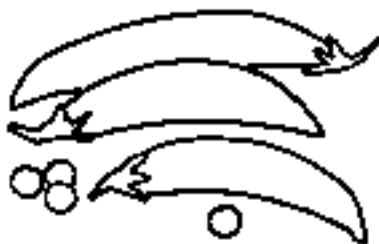
#### LET'S DO IT

- Invite volunteers to bring in a variety of fruit and vegetables. Dissect a sample of each, identifying the different parts - skin, root, flesh, seeds, stem etc.
- Make or adapt containers for growing seeds. The trays in the supermarket used for mushrooms or carrots will make a good starting point. Pips are seeds - sow / plant a variety to emphasise the point e.g. apple pips, orange pips, tomato, cucumber, melon etc. See which sprout and which don't. (The idea isn't to grow an apple tree but simply to show the connection between the pip-seed and the tree.)





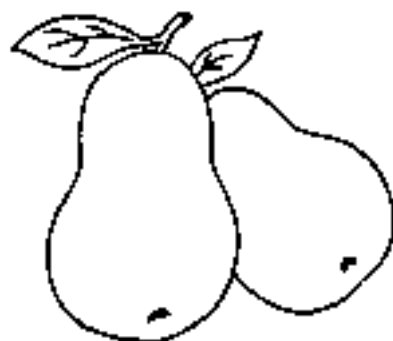
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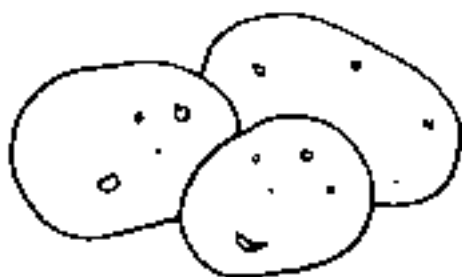
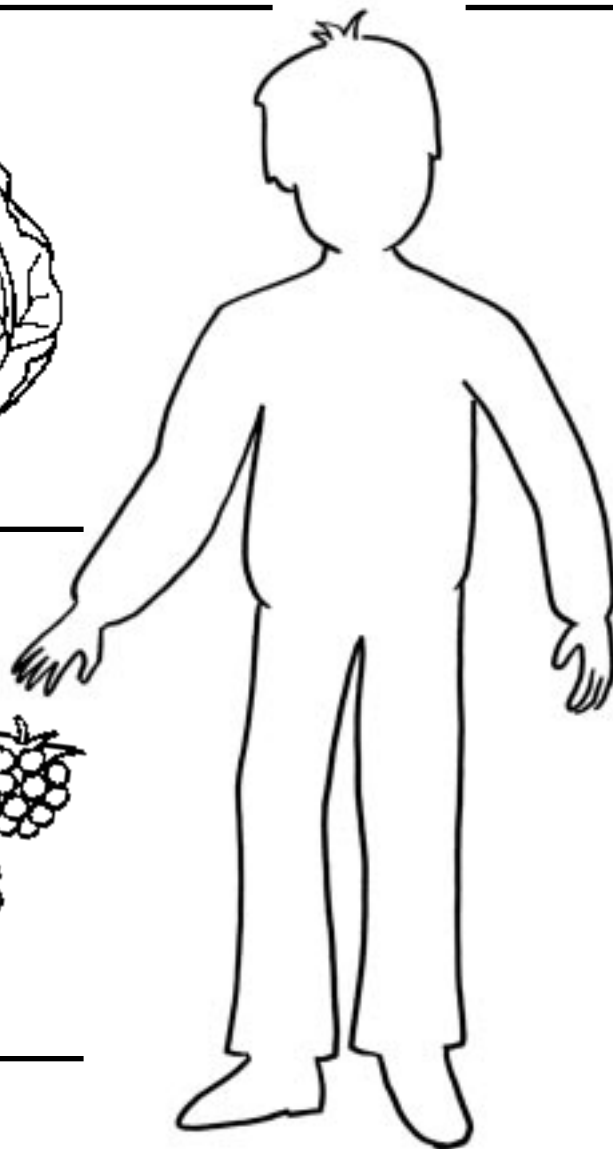
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**AIM:** To help children understand how light is necessary for plant growth.

**YOU WILL NEED**

Some dried Marrowfat peas, some soil and jam pots.

**DEVELOPMENT OF THE LESSON**

Look at the poster and read the poem.

**DISCUSSION**

- Can you think of two things we get from the sun?
- How does the light and warmth of the sun (or lack of it) affect the plants in each season?
- People are not plants - but can you think of any ways in which people and plants behave in similar ways towards the sun?

**WORKSHEET**

Colour the pictures and fill in the missing words to finish the sentences.

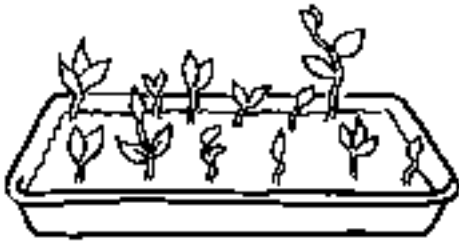
**LET'S DO IT**

- Invite the children to handle the peas and describe them before and after steeping.
- Fill each jam pot or other clear container with soil.
- Point out the prospective shoot in each pea.
- Plant a few peas in the soil at the side of the jar, one with the shoot facing down and one with the shoot facing up.
- Water and place on a window sill.
- Repeat this, placing the second set of jars in a dark cupboard.
- Observe, record and evaluate over the next three weeks.



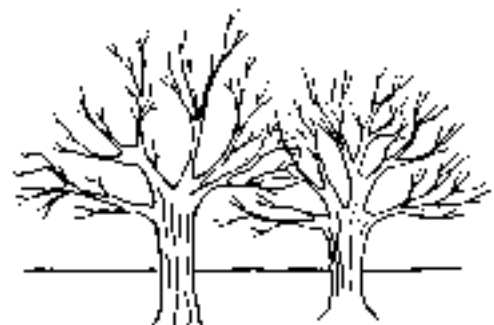
In\_\_\_\_\_ baby veg in their vegetable plots  
 Wake and stand up like babies in cots  
 Reaching wee fingery\_\_\_\_\_ to the sun  
 Who holds out her rays and calls –  
 “Come children, \_\_\_\_\_!”

In\_\_\_\_\_ the sun shines long \_\_\_\_\_ hours –  
 No better thing for \_\_\_\_\_ young flowers.  
 They\_\_\_\_\_ and they \_\_\_\_\_ their colourful best  
 Just like a garden full of bright wedding guests.



In\_\_\_\_\_ the sun's work is almost done  
 She just has to\_\_\_\_\_her apples, pears, plums  
 She plumps up each one with a juicy little tum  
 Fruit of the labour of\_\_\_\_\_Autumn \_\_\_\_\_

In\_\_\_\_\_ the sun gets so \_\_\_\_\_ – poor thing  
 She slithers down the sky as the \_\_\_\_\_creeps in  
 While many of her\_\_\_\_\_retire to their \_\_\_\_\_  
 Pulling blankets of earth up over their heads.





**AIM:** To develop children's awareness of trees as 'plants', to enable them to distinguish between deciduous and evergreen trees and to enable them to recognise different parts of a tree.

#### DEVELOPMENT OF THE LESSON

Although the poster introduces children to different trees, it is not envisaged that children study the names and leaves of each. Rather, the emphasis is on distinguishing two types of trees - deciduous and evergreen. The children will return to the different varieties of trees later in the programme.

#### DISCUSSION

- Look at the poster and discuss the different trees, the shape of their leaves, which lose their leaves and which do not etc.
- Read and discuss the poem.

#### WORKSHEET

Colour in.

#### LET'S DO IT

Erect and decorate a real Christmas tree in the classroom, using this as an opportunity to develop the children's awareness of the role of real Christmas trees in sustainable development.

#### CHRISTMAS TREES

Choose a real Christmas tree because -

- Growing Christmas trees helps remove harmful 'greenhouse gases' such as carbon dioxide from the atmosphere. Trees turn bad air into good air.
- Most Christmas trees sold in Ireland are replaced each year. Real Christmas trees also provide habitats for birds and wild animals while they are growing.
- A real tree can be recycled; artificial trees are made from plastic and cannot be broken down naturally.

#### SAFETY

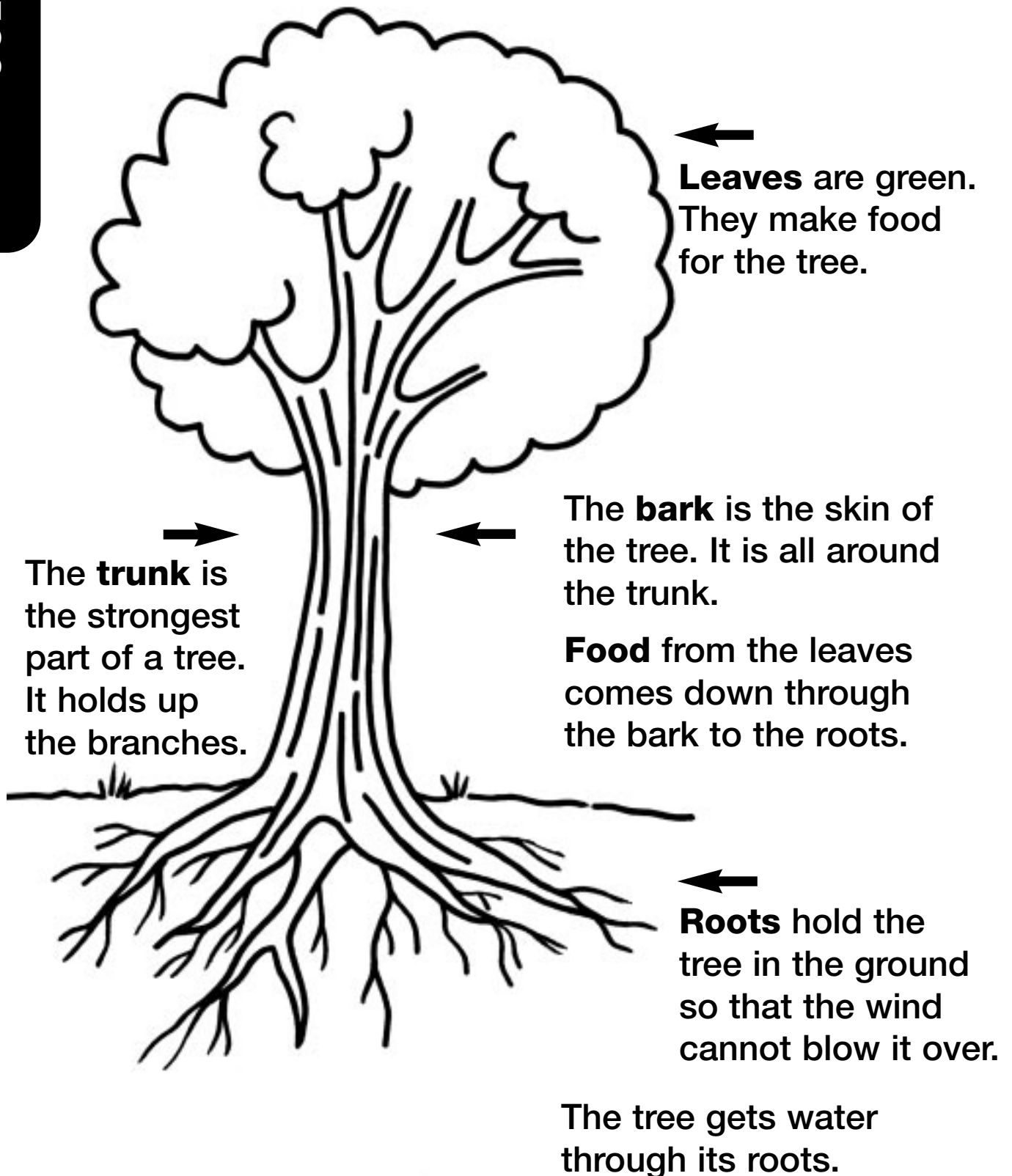
- Stand your tree in a special Christmas tree stand - it's safer.
- Give it a drink - about half a litre of water per day, to keep it from dropping its needles and to help it keep its fresh smell.
- Put it in the coolest part of the room.
- Always unplug your tree's lights at night (at home) or if you are going away.

#### HISTORY

About 1200 years ago, an English missionary called Winfrid (later called Boniface) was travelling through northern Germany. One day he met a group of Druids at a sacred oak tree about to sacrifice Prince Asulf to the God Thor. Winfrid stopped the sacrifice and cut down the tree. Immediately a young fir tree sprang up where the oak had stood. Winfrid called it the new Holy Tree and told the Druids that its wood would provide homes for them. German settlers brought the tradition of the Christmas tree to America and from there it spread around the world. Its colour reminds us that even in winter, there can be 'greenness' and life.



## PARTS OF A TREE



Water from the roots goes up the trunk to the leaves.

**AIM:** To develop children's sensitivity to and appreciation of:

- a) The beauty of wild flowers
- b) The lifecycle of plants by exploring the life of the dandelion.

#### DISCUSSION

- Look at the poster - have you ever seen any of these flowers before?
- Can you remember where?
- Do you have a favourite wild flower?
- Do you know the names of any of these wild flowers?
- Why do you think we call some flowers 'wild' flowers?
- If some flowers are wild does that mean other flowers are tame?
- People have a first name or Christian name and surname. Plants have a common name and a Latin name.
- Can you suggest how we might use wild flowers to make our classroom prettier?
- Can you see the different stems/leaves/petals . . . ?

#### LOOKING AT ONE FLOWER IN PARTICULAR - THE DANDELION

Every living thing grows. Everything that grows, grows old eventually. Dandelions grow old, at first (refer to poster) they are tall and straight and their petals are folded in tight. With the light and the warmth of the sun they gradually open out. Then, after a time they turn white and get blown away. This is a good thing because the white bits that blow away are the seeds. They fall on the ground and next year Dandelions will grow up in a new place.

- Have you ever found a Dandelion whose petals have turned white?
- Have you ever heard of a Dandelion clock?
- Have you ever heard of Bart Simpson?
- Do you know who his father is?
- Who is the oldest – Bart or Homer?
- How do you know?
- What do you think Bart will look like when he grows old?

#### WORKSHEET

- Colour the flowers and write their names.

#### LET'S DO IT

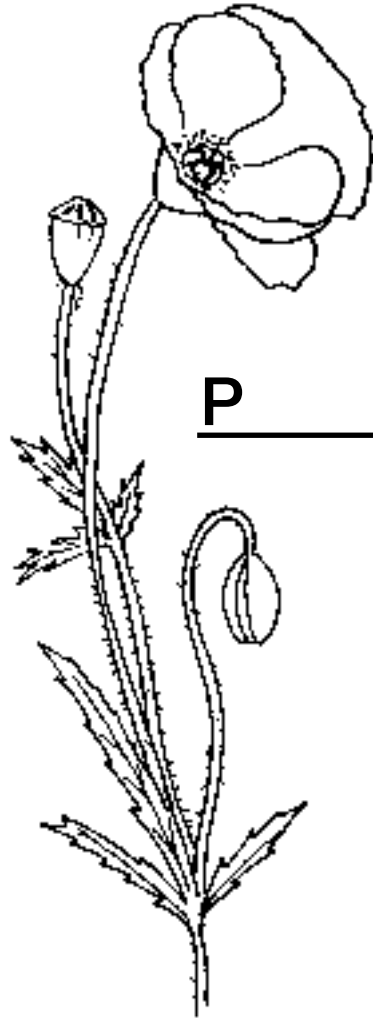
- Go on a wild flower nature walk, collecting samples of the flowers mentioned. Draw children's attention to Dandelions at various stages of growth.
- Ask the children to gather some wild flowers and assemble the 'arrangement'. Display in the classroom.



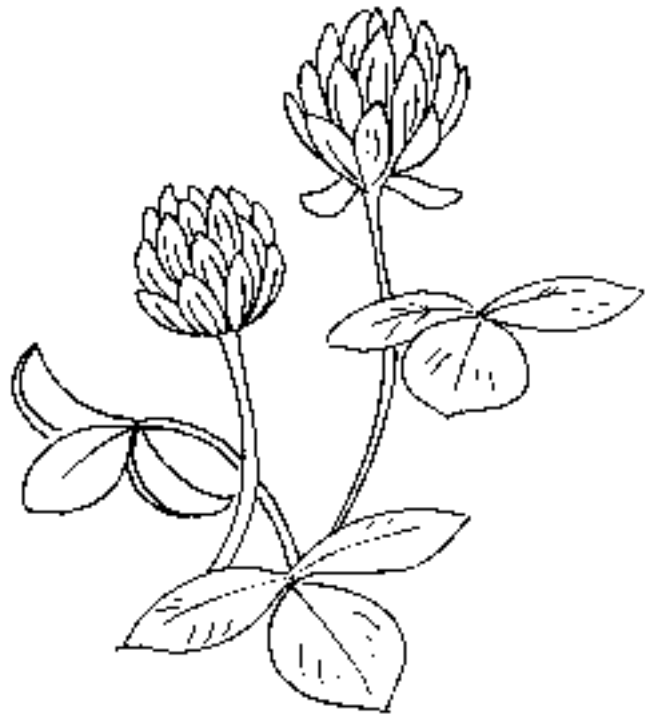
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**AIM:** To show children how to:

- Actively engage in and take an appropriate level of responsibility for eating healthily
- Differentiate between the various summer fruits
- Understand the lifecycle of the strawberry.

### YOU WILL NEED

Depending on the number in the class:

- One or two large-sized pots of yogurt
- 1 small packet of digestive or any plain biscuits
- A selection of fruit (the children may bring in a piece each; the teacher might add one or two 'less usual' fruits)
- Empty Petit Filous or similar pots (one for each child)
- One bowl
- Small doilies or a box of tissues, preferably brightly coloured.

### DISCUSSION

- Revise the reasons why we should eat plenty of fruit.
- Discuss the summer fruits poster.
- Discuss favourite summer fruits.
- Discuss the most common ways of eating these.
- Discuss which of the fruits we eat grow in Ireland and which grow in warmer countries.
- Sort fruit according to sweet/bitter, colour, thick/thin skin, grows on tree/on bush/on ground.

### LIFECYCLE OF THE STRAWBERRY

Although we eat strawberries in the Summer, we can plant them in either the Spring or the Autumn. The strawberry begins as a baby plant/'runner' attached to the mother plant. As the baby plant grows, it develops white flowers which turn into strawberries. We need to pick them quickly as birds love to eat strawberries too! Strawberry plants give fruit for up to four years and then it is time to plant new ones.

### CRUMBLY FRU-GURTS

- Supervise the washing of hands, reminding/discussing with the children why this is important.
- Using some or all of the following: apple (a red and a green if possible), pear, clementine, strawberry, raspberry, gooseberry, banana, kiwi.
- Divide the children into groups, allocating some different fruits to each group.
- The teacher may chop or supervise the chopping/peeling/dividing of the fruit into small pieces.
- Discuss the different parts of each fruit – skin, flesh, seeds, stalk/stem.
- Divide the biscuits between the groups and one person from each group crumbles the biscuits (this might best be done by putting the biscuits in a plastic bag).
- One segment of apple, pear or a lengthways piece of banana (to be used as a 'spoon' ) should be reserved and set aside for each group.
- Mix fruits with some yogurt in the large yogurt pots.
- Wrap a doilie or a tissue around each of the Petit Filous pots, securing it with an elastic band so that it has a 'ruffle' all round its neck.
- Divide the fruit and yogurt mixture between the Petit Filous pots with one pot for each child.
- Sprinkle biscuit crumbs into each pot.
- Stick the reserved segment of fruit into the pot and 'serve'.
- As the children are eating, remind them of the health value for the various parts of the body of what they have just made.

### WORKSHEET

- Colour and write flower, fruit and leaf.

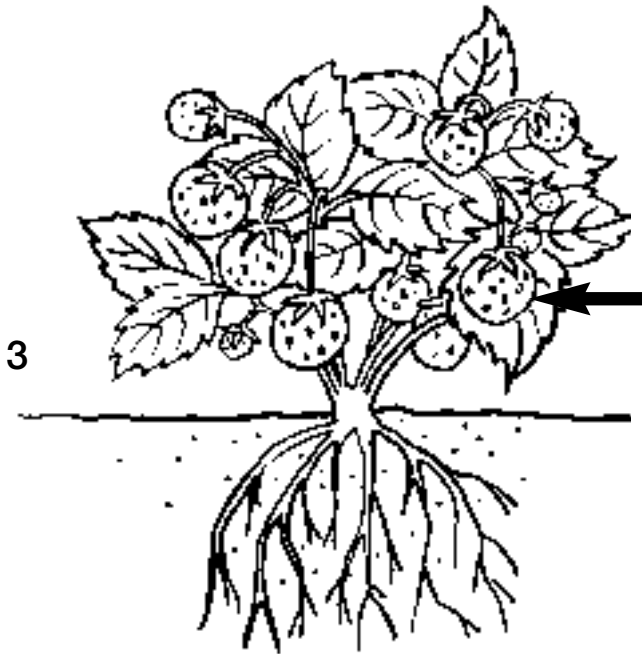
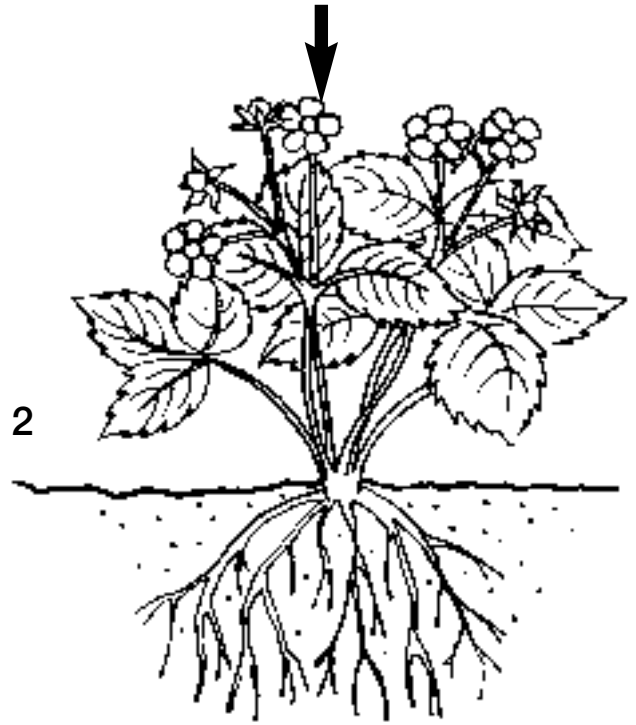


# LIFECYCLE OF A STRAWBERRY

Baby Plant



F \_ \_ \_ \_ \_



F \_ \_ \_ \_ \_

L \_ \_ \_ \_ \_

Baby and  
Mother Plant

