

ORCHARD EXPLORERS & APPLE TASTING

Describe and identify trees ... become an apple juice connoisseur.

LEARNING OUTCOMES

KS2 Science

- identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers

KS2 Art

- to improve their mastery of art and design techniques, including drawing, painting and sculpture with a range of materials [for example, pencil, charcoal, paint, clay]

KS2 Literacy

- Spoken language: maintain attention and participate actively in collaborative conversations, staying on topic and initiating and responding to comments



RESOURCES

- Orchard with young or mature trees, cagoules for wet weather work, first aid kit, whistle
- Camera or iPad – check device and usage permissions
- For tree detectives and art – Clipboards x 15, A4 paper, large crayons, pencils, vocabulary board
- For juice tasting – Cox, Worcester and Bramley apple juice, cups, map of UK with regional varieties, available for £10 from <https://www.commonground.org.uk/shop/apple-map-poster/>.

WALK TO THE ORCHARD (5 MINS)

Make sure that the children walk in pairs and check they know who is person 1 and who is person 2. They'll work with this partner for the tree detective work. When you arrive at the orchard, make your way to the centre.

INTRODUCTION (5 MINS)

Where do you think you are?

Why are there lots of trees here? What kind of trees do you think they are?

Orchards are a group of five or more trees, planted with the intention of providing food. They often have quite big spaces between them to allow people to harvest the fruit easily and to allow light to reach all the fruit.

In order to help fruit-trees grow well, we need to be able to identify them by looking carefully at the bark and leaves. We're also going to do an apple juice tasting and become apple juice connoisseurs!

(If there are veteran or fragile old trees) Do you have any grandparents?

How do we need to treat older people? Can anyone see any old-looking trees? How should we treat them?

Check they know to avoid touching any tree props or damaging new growth on trees.

TREE EXPLORERS (25 MINS)

Over 150 years ago, Joseph Hooker, who was a good friend of Charles Darwin, travelled all around the world finding new plants. He explored Antarctica, India and North America finding and naming new plants. Joseph Hooker had to draw detailed pictures of the plants and write descriptions of them so that everyone would know exactly what the plant was like. I want you to imagine you are explorers in this garden, discovering new trees.

Show the children the picture of Joseph Hooker in the Rockies, USA and the picture of a rhododendron he made.

In pairs, you're going to describe one tree and make a bark and leaf rubbing.

How could your partner help you with your bark and leaf rubbing?

What will you do after you've made a bark rubbing?

Model doing a bark and leaf rubbing of one tree, using a partner.

If you were an explorer describing this tree for the rest of the world, how would you describe the bark?

What colour is it? Is it rough or smooth? What other words could you use to describe it?

Then model using specific vocabulary to describe the bark and recording them in the explorer's log.

What about the leaves?

Are they glossy or rough? What shade of green? What colour is the underside? Is it hairy? Does it have a serrated edge? Or a lobed edge? Or is the edge smooth? Does it smell of anything? Does the leaf have a stalk? What shape is the leaf?

Then model using specific vocabulary to describe your leaf and recording them in the explorer's log.

What do you think the bark on this tree is for?

How did the bark feel? Why do you think trees have bark? What is the trunk for?

The trunk is for supporting branches and leaves, lifting them away from grazing animals and towards the light. The bark is for protecting tree from the cold/ insects/ fungi/ bacteria/ grazing animals and allowing the tree to survive over winter.

And what role do leaves have?

Leaves act like mini solar panels that move to face the sun. They are thin to let gases and air into them easily. They use the sun's energy and water to trap carbon dioxide from the air and they transform it into starch and oxygen.



Photo credit - Geoffery Kehrig,
https://www.flickr.com/photos/looking_and_learning/8081813597

APPLE TASTING (10 MINS)

I wonder if you can tell the difference between these three apple juices? They came from different parts of the UK. Imagine you are tasting the juice of this newly discovered fruit for the first time. What would you think of it?

- Bramley's Seedling – came from Southwell, Nottinghamshire in about 1810. Miss Mary Ann Brailsford grew it from a seed and it became the most famous cooking apple. It was named after the local butcher, Mr Bramley, who owned the house by the time the apples had become hugely famous. Bramley's Seedling apples are large and green and they have a higher vitamin C content than other apples.



Bramley's Seedling, by English: National Fruit Collection, Brogdale. [OGL 2], via Wikimedia Commons

- Cox's Orange Pippin – came from Colnbrook Lawn, Slough in 1825. It was grown by Richard Cox who was a retired brewer. Perhaps he was trying to grow a cider apple, but instead he grew one of the most popular dessert apples grown that comes from this country.



Cox's Orange Pippin, by English: National Fruit Collection, Brogdale. [OGL 2], via Wikimedia Commons.

- Worcester Pearmain – came from St Johns, near Worcester in the 1870s. William Hale grew it from seed. The trees can live for over 130 years and the apples are delicious.



Worcester Pearmain, by English: National Fruit Collection, Brogdale. [OGL 2], via Wikimedia Commons.

Let the children try the juices one at a time. At the end they can vote on their favourite juice.

TIME TO RECAP (10 MINS)

 **What trees did you all discover?**

 **Who can guess what kind of tree I am? What kind of tree am I**

Play 'What Kind of Tree Am I?' by describing a leaf to the children. Choose a tree they have just been looking at. If there is time, let one or two children try the game.

 **What have we learned about trees today?**

What are tree trunks for? What are the leaves for? Who can tell me something they've learned about orchards? What have you learned about trees? What flavour apple juices did we try?

WALK FROM THE ORCHARD (5 MINS)

JOSEPH HOOKER IN THE ROCKIES, NORTH AMERICA



**FIELD STUDY &
FINISHED PAINTING OF
A RHODODENDRON,
BY JOSEPH HOOKER
IN INDIA**



BARK AND LEAF

YOUR NAMES: _____

YOUR TREE: _____

BARK

Rough	Brown	Grey	Black	Smooth
Bumpy	Gnarled	Flaky	Peeling	Stripy
Banded	Furrowed	Twisted	Spotty	Pitted

LEAVES

Heart shaped	Spear shaped	Round	Oblong shaped	Oval
Green	Red	Orange	Purple	Grey
Lobed	Serrated	Smooth	Rough	Hairy
Shiny	Glossy	Matt	Aromatic	Bitter
Pronounced veins	Glands	Leaf stalk	Thorny	Pointed

MY LEAF AND BARK DRAWING

LABELS TO GO ONTO TREE MAP

Worcester Pearmain



Worcester

Bramley's Seedling



Nottingham

Cox's Orange Pippin



Slough