Science - Year 3

Plants – Block 3P

Roots and Shoots

Session 3

Resource Pack

Session 3 Teacher's Notes

Second Message from Zinnia

The session begins with a new communication from Zinnia. As before this needs to appear to be a live transmission so model surprise and astonishment as the film begins. Once again she asks the children simple questions so be ready to come in with a response. Hopefully the children will enjoy joining in.

Food Plants

For this session you will need a wide selection of food plants and at least 2 (but ideally more) from each of the following groups:

1. **Root vegetables** – e.g. potatoes, carrots, parsnips, beetroot, swede
2. **Stems and shoots** – e.g. celery, rhubarb, chard stems (onions, leeks and spring onions are a form of adapted stem and leaves so these could be used with some explanation)
3. **Leaves** – e.g. spinach, lettuce, rocket, cabbage, kale
4. **Flowers –** e.g. cauliflower, broccoli, nasturtium, borage
5. **Fruits –** e.g. tomatoes, peppers, apples, cucumber, melon, strawberries, squash, courgette, mangetout, oranges
6. **Nuts and seeds** – e.g. peas, sweetcorn kernels, chickpeas, sunflower seeds, hazel nuts, and even a coconut (remember dried, uncooked, kidney beans are poisonous so avoid using these)

Preparation of food plants for the tasks

Task 1 - Classifying Food Plants

Lay out your samples from the lists above and beside each put a label (for durability use chunky permanent pen on card), e.g. *celery* do not write the group label (e.g. Stems) as this is what you want the children to deduce.

For some plant foods it would be helpful to cut a section through one example e.g.

- Fruits - so children can see the presence and arrangement of seeds
- Leeks –to show the way the adapted leaves are wrapped tightly round giving the impression of a stem
- Cauliflower - to show the stem dividing into little florets

The children will be classifying different food plants according to which part is eaten.

Task 2 – Food Art

Cut a number of thin sections through a variety of attractive fruits like tomatoes, peppers, strawberries, cucumbers and oranges, also if you have them, open up some pea and runner bean pods to reveal the seeds inside. The children will be using Plasticine to sculpt a detailed model of a section of fruit of their choice. This will encourage them to look very closely at the patterns, colours and shapes created in the arrangement of flesh and seeds. They will look stunningly vibrant on black paper and can be displayed to great effect or photographed as a record. Consider sending photos to the Hamilton blog as it is delightful to see the children's creativity.

Health and Safety Warning – If you have a sharp knife in class in order to slice the sections, be careful to store it out of sight and reach of the children.

Organisation

You will need to prepare the resources for the tasks ahead so they are ready when needed. Set them out in 2 zones - one for each task.

How to Play "Delicious Nutritious"

Resources

An A3 sheet of paper and a pen per group

A 3 minute timer

A flip chart and marker pen

How to play

1. Divide children into teams of 4-6 and give each team a sheet of paper and a pen
2. Tell the children they have 3 minutes to write down as many food plants as possible. Remind them that they should not just think of fruit and vegetables but also other foods like breakfast foods, main meals, drinks, snacks and treats. They will be amazed how many of them are made from plants.
3. Suggest that each team chooses one person to write down all the suggestions (they should be a quick writer if possible) while everyone else does the thinking.
4. Call out "Begin!" as you turn over the timer and "Stop!" when the 3 minutes are up
5. Wow! You have thought of so many. But which team will win?
6. Ask each team in turn to give you the name of a food plant. Write each plant name on the flip chart. At the same time all the groups should cross out that plant on their list.
7. Continue going round and round the groups in turn, each time they should give you a plant that has not yet been named.
8. If a group run out of food plants on their list, they are out.
9. The winning team is the last team to give you the name of a food plant that is not already on the list.

Name

I can classify different parts of a plant

Fruit, Shoot, Leaf or Root?

Look at the range of different plant foods. Find, draw and label two in each section

Root	Stem/ shoot	Leaf
Flower	Fruit	Seed

How to Play "Fruit or Veg"

This is a quick active game that will reinforce the difference between fruit and vegetables. At the start of the game you may want to remind the children that a fruit contains seeds. All the other parts (root, stem, leaves, and flowers) are classified as vegetables.

Tell the children you will call out the name of a food and they must make a choice between a fruit or a vegetable. If it is a fruit, they should crouch on the ground with their arms curved downwards (as if they are an apple or a tomato), if it is a vegetable, they should stand with their arms raised above their heads in a V shape.

You could add a competitive element if you like, e.g. stand the children in 2 or 3 teams. Award a point to the first team each time where everyone has made the correct shape.

Take care not to call out a seed, e.g. coconut or a pea as strictly speaking these are neither fruit nor vegetable. Below is a selection of fruits and vegetables to help you.

Broccoli (V), banana (F), spinach (V), lettuce (V), strawberry (F), onion (V), apple (F), cabbage (V), cucumber (F), leek (V), pepper (F), pumpkin (F), cauliflower (V), tomato (F), potato (V), blackberry (F), carrot (V), parsnip (V), plum (F), swede (V), pear (F), rhubarb (V), orange (F), mango (F), sweet potato (V), courgette (F), mangetout (F), kale (V), raspberry (F)

Second Message from Zinnia

Hello once again my dear Earthlings. I have managed to arrange a very short communication window so we must be quick, we don't have much time.

Have you begun on your task to find out what Earth plants need to grow strong and healthy? You have? Well that is brilliant! I knew I could rely on you! I know it takes a few yargons to collect good data, so don't worry if you haven't finished yet. Just keep up the research!

Now, before I go, I wanted to check that you are able to find out which parts of plants humans like to eat? Great! And could you also make a list of Earthling favourite food plants? You are amazing!

I'll try to – oh no I'm losing you! Goodbye Earthlings!