

Science – Year 3/4A Spring 2

Plants

A Feast of Flowers, Fruits and Seeds

Session 6

Resource Pack

Chewy No-Bake Granola Bars

Ingredients

125g brown sugar
75g butter (or dairy free margarine)
6 dessert spoons honey
300g porridge oats
150g rice crispy cereal
100g nuts (roughly chopped)
100g seeds/dried fruit (*e.g. sunflower, sesame and pumpkin seeds with a few raisins, chopped apricots etc.*)



The ingredients shown in red can be adjusted to suit your taste or dietary requirements. Just leave out what you don't like and make up the weight with a different dry ingredient.

Method

1. Melt together the butter, sugar and honey -either in a saucepan or in a plastic jug in the microwave (full power for 1 minute, stir, then full power for another minute).
2. Put all the **dry ingredients** in a very large bowl or other large, clean container and stir them up.
3. Pour the melted buttery mixture over the dry ingredients and stir until thoroughly combined.
4. Spread the mixture into a large metal baking tin (24cm x 33cm approx.) and press it down evenly across the surface. Refrigerate for an hour.
5. Cut into squares and enjoy.



Mmmmmmm!
Delicious and nutritious!

Flowers Group

We can report on findings using oral presentations and displays

Our names are:



Our food is a Flower Salad and we will teach guests all about flowers

Key words: petals, colourful, female, stigma, style, male, stamens, pollen

Read the list of ideas below and together choose 2 or 3 you would like to do (or you could think of some ideas of your own instead). Divide into teams of 2 or 3 people and take a task each. You may need to make things or do some research using books or the internet. Then practice your presentation.

Presentation ideas

- Show some of your annotated botanical paintings and explain how you made them and what they show.
- Do a flower quiz - Ask the guests to name flowers that you show or can they answer a few flower questions?
- What's in a flower? - Explain all the parts of a flower and their scientific names - use one of your flower models to help.
- Give flower health advice - Explain that although some flowers are delicious and good for you, others are poisonous so you should never eat a flower you find unless you are sure what it is. Guests may also be surprised to learn that some flowers are used to make lifesaving medicines. Put together a short presentation or a Flower Health Poster to show and explain.
- Put together some fascinating "Did you know?" flower facts.

Saffron Stigmas Group

We can report on findings using oral presentations and displays

Our names are:



Our food is Saffron Paella and we will teach guests all about saffron.

Key words: saffron, stigmas, spice, expensive, precious, harvest, Greece, Morocco, Iran

Read the list of ideas below and together choose 2 or 3 you would like to do (or you could think of some ideas of your own instead). Divide into teams of 2 or 3 people and take a task each. You may need to make things or do some research using books or the internet. Then practice your presentation.

Presentation ideas

- Make a model flower with purple paper that looks like a saffron crocus and give it 3 red stigmas. Use it to explain which part of the saffron crocus is used to make this amazing and costly spice.
- Print out a map of the world and mark the places where saffron is grown - explain how it has to be harvested by hand and why this makes it so expensive to buy.
- Show guests some strands of saffron and demonstrate what happens when you add some to a little warm water. Explain how saffron adds colour and flavour to food.
- Put together some pictures of different food made with saffron and label them.
- Put together some fascinating "Did you know?" saffron facts.

Bees Group

We can report on findings using oral presentations and displays

Our names are:



Our food is Honey Dip and we will teach guests all about bees.

Key words: nectar, flower, pollen grains, stamens, sticky stigma, bees, hive, waggle dance, direction, pollination

Read the list of ideas below and together choose 2 or 3 you would like to do (or you could think of some ideas of your own instead). Divide into teams of 2 or 3 people and take a task each. You may need to make things or do some research using books or the internet. Then practice your presentation.

Presentation ideas

- Use some of your bee hand puppets to dance the waggle dance (or dress up as bees yourself). Dance to *Flight of the Bumblebee* by Rimsky Korsakov. Choose one member of the group to be the wildlife presenter who explains what the waggle dance is and how the bee uses it to communicate with other bees.
- Use a bee puppet and some model flowers to explain how bees travel from flower to flower collecting nectar and how this leads to pollination.
- Put together some fascinating "Did you know?" bee facts.
- Explain why bees and other pollinating insects are so important in the world. Make a poster or a leaflet to tell people how to be 'bee friendly', e.g. which plants to put in their gardens or window boxes to attract bees.

Fruit Group

We can report on findings using oral presentations and displays

Our names are:



Our food is Fruit Salad and we will teach guests all about fruits.

Key words: pollination, pollen grain, tube, fertilization, ovary, ovules, seeds, fruit, develops

Read the list of ideas below and together choose 2 or 3 you would like to do (or you could think of some ideas of your own instead). Divide into teams of 2 or 3 people and take a task each. You may need to make things or do some research using books or the internet. Then practice your presentation.

Presentation ideas

- Make a drawing to show what happens inside a flower after pollination. Explain how the pollen grain makes a tube and travels to the ovary to join with an ovule and that this is known as fertilization.
- Use real plants or pictures to show how fruits develop after fertilization. Explain how the ovary becomes the fruit and the ovules develop into seeds.
- Show some of your pastel drawings of different fruits. Explain how you did them and show the different arrangements of seeds in various fruits.
- Put together a fruit quiz - ask guests to name some unusual fruits or answer questions on fruits (remember a fruit is the part of any plant that holds the seeds even if it's fluffy, dry, prickly or poisonous!).
- Put together some fascinating "Did you know?" fruit facts.

Seeds Group

We can report on findings using oral presentations and displays

Our names are:



Our food is Chewy Granola Bars and we will teach guests all about seeds.

Key words: parent plant, seeds, drop, dispersal, animals, water, wind, sticky burrs, germinate

Read the list of ideas below and together choose 2 or 3 you would like to do (or you could think of some ideas of your own instead). Divide into teams of 2 or 3 people and take a task each. You may need to make things or do some research using books or the internet. Then practice your presentation.

Presentation ideas

- With some drama and narration, explain the problem plants have in moving their seeds away. One person could be the plant and grow up from the ground, spread out their branches and drop their seeds, e.g. counters or cubes, while another person explains that these seeds would be too crowded and not get enough light, water and space to grow.
- Use drama to explain all the different ways that seeds can be dispersed (spread out).
- Show some plants that disperse their seeds using wind and explain what you did to investigate the type of paper seed makes the best flier. Show what you found.
- Put together some fascinating "Did you know?" seed facts.
- Explain what happens when a seed finds a good place to grow - remember to use the scientific word "germination".
- Show the guests a number of different seeds - Can they guess what plant they will grow into?

Name or Names



Quiz on Flowers, Fruits and Seeds



Question number	Answer
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Flowers, Fruits and Seeds

Quiz Answers

Question number	Answer
1	B
2	B
3	C
4	C
5	C
6	A
7	B
8	C
9	A
10	B
11	A
12	B
13	A
14	C
15	A
16	C
17	C
18	A
19	A

Session 6 Teachers' Notes

Making Chewy No Bake Granola Bars

Adapting the recipe for children with dietary restrictions

This recipe is gluten free and can easily be made dairy free by replacing the butter with a dairy free margarine. The recipe does include nuts and seeds however which can carry a risk of allergy so it is vital to check your children's dietary restrictions and if necessary double check with parents. If necessary replace nuts with other ingredients, e.g. extra fruit and porridge oats (see recipe).

Saving Time

This is a simple recipe that with a little organisation could be made in just a few minutes and put into the fridge to be cut up and tasted at the end of the session. In an ideal world, children would benefit from measuring/weighing all the ingredients themselves but in a typically time-pressured lesson you may decide to cut a few corners to allow more time for the main lesson outcome. Therefore a quick method is provided which is as follows:

- Just ahead of the session, melt the butter, sugar and honey together in a plastic jug in the microwave (or if you have a microwave in the classroom, have these 3 ingredients already measured in a jug so the children can see the effect of melting).
- Have nuts (if using) and larger fruits, e.g. dried apricots, roughly chopped ahead of the session.
- Use the second recipe which gives tablespoon measures.
- Set up 3 measuring tables ahead: one for oats, one for rice crispy cereal and one for nuts/seeds/fruit. At each table have the ingredient(s) ready: a tablespoon, a bowl to spoon into and a sticky note showing the required number of spoonfuls for that ingredient.
- Ask one child at each table to be in charge of counting and allocate a team of measurers, e.g. 8 children adding 2 spoons of oats each and 9 children adding 3 spoons of rice each.
- Have a very large container ready to combine the measured ingredients and allocate other children to stir, pour out and press down.

In this way all children can help and enjoy the experience but it will be a quick process that will enable you to have enough time for the rest of the session.

An alternative way to run this would be to use an additional adult who will take a few children at a time to help weigh and measure.

The Feast Outcome

The sessions in this block have led children through the stages of plant reproduction but at the same time explored the possibility of each stage as food. Five recipes have been introduced which use: flowers, saffron (stigmas), honey, fruits and seeds. The possibility of inviting guests to a feast gives children the excitement of presenting their learning to an audience - powerful motivation indeed. The guests could be parents, local residents or even another class. **Check on the dietary restrictions of guests ahead of the event.**

Managing the time, cost and work load of organising the feast

If it seems a bit daunting and you are short of time, the following tips may help:

- See it as a tasting experience rather than a meal and keep the quantities small and affordable. This will also cut down on preparation time.
- Reduce the number of dishes and therefore the expense, time and workload by combining key ingredients, e.g. add some ground saffron to the honey dip and cut out the paella (the most time consuming dish).
- Recruit some additional adult helpers for the preparation session.

Assessment

The Quiz PowerPoint will give you the opportunity to assess children's knowledge and understanding of the learning throughout this block. If you wish to use it as an assessment activity, give the children individual quiz sheets and ask them not to discuss their answers with one another. It is suggested that each question is read aloud including the choices of answer since the assessment is of the child's scientific knowledge and not their reading ability. If you do not wish the quiz to form part of an assessment, the children could participate in pairs to stimulate discussion around the questions and answers. If this is the case, give out one quiz sheet between two children. At the end of the quiz, collect the papers in to mark later if you are doing an assessment (an answer sheet is provided in the session resources), but if not, show the Answers PowerPoint so children can mark their own or swap and mark - this will help to reinforce the learning of the block.