

LESSON PLAN

KS2 SCIENCE - NUTRITION



Length of lesson: One hour

Lesson objectives:

To understand the importance of a balanced and healthy diet.

Lesson outcomes:

All children will be able to describe what a balanced diet is and why it is important.

Most will be able to identify the different food groups and place foods into the correct groups.

Some will be able to describe how carbohydrates, proteins, fats and vitamins/minerals help our bodies.

National curriculum link:

Animals, including humans

To identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat.

They might research different food groups and how they keep us healthy, and design meals based on what they find out.

Preparation:

- Eatwell plate sheets
- Blank healthy eating plates
- Pictures of different food

Starter/warm up:

What do humans need to grow and keep healthy?

Whole class teaching:

Explain that today we will be focusing on food. Should we eat whatever we want to? Explain that to keep healthy we need to eat a balanced diet. Show the healthy eating plate and talk about the five different food groups. Introduce the terms carbohydrates, proteins, fats, vitamins and minerals and link to the healthy eating plate (eg breads, pasta etc are carbohydrates and there are two types of proteins: dairy and non-dairy). Ask pupils to think about which food group gives us the most vitamins and minerals? Can pupils name something they ate last night and identify which food group it comes from? Which foods do we need to eat more of? Explain that different types of food help our bodies in different ways. Carbohydrates give us energy (so we need lots of those), proteins help our bodies to grow (so we need quite a lot of this too), fats provide stored energy and help us to keep warm (but we don't want too much fat in our bodies) and vitamins/minerals help our bodies in lots of ways eg strong bones/teeth or making blood cells (so we need lots of those too).

Independent activities:

1. Pupils to sort pictures of food into the different categories on the healthy eating food plate. OR
2. Pupils to create a healthy eating plate for a day's food. Decide what they want to eat in their day and add it to the healthy food plate - some foods may be in more than one category and pupils must make sure they get the right balance. (Use of food pictures to support this.)

Extension work:

Pupils to identify the four food types on the healthy eating plate (carbohydrates, proteins, fats, vitamins and minerals) and write an explanation about how they help our bodies in different ways.

Plenary:

What have the pupils learned about healthy eating today? Why is a balanced diet important? How do you think this might affect people in African countries like Kenya who are struggling to grow enough crops to feed their family? Do you think they find it easy to eat a balanced diet? How could Farm Africa help them? (providing livestock, helping them to grow the correct crops such as orange-fleshed sweet potatoes, sorghum or green grams.)

Next steps:

This could link to a D&T project where pupils design and make healthy and balanced meals. This could be tied in with growing their own produce in schools and using the ingredients for cooking. Pupils could design and make healthier versions of traditional recipes such as carrot or courgette cake, savoury scones or even sweet potato brownies using our recipe below and use them for a fundraising cake sale.

Sweet potato brownies:

Ingredients :

- 250g sweet potato
- 70ml boiling water
- 1tsp instant coffee granules
(use decaffeinated coffee for children)
- 50g butter, softened
- 125g milk chocolate chips
- 2 eggs
- 150g light brown sugar
- 1tsp vanilla extract
- 150g plain flour
- 1/2tsp baking powder
- 80g cocoa powder
- 1/2tsp salt

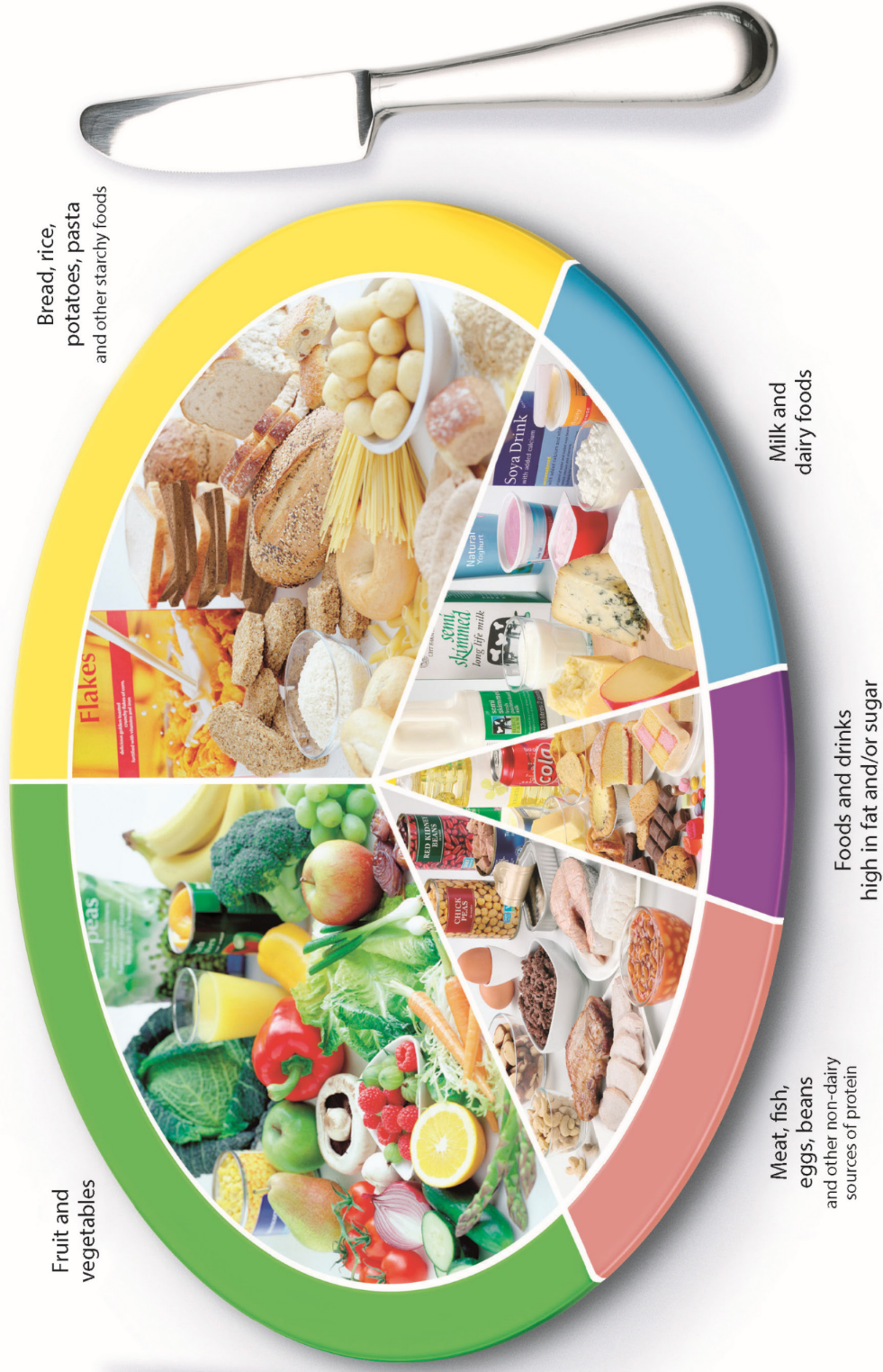
Method:

1. Preheat oven to 175°C / 350°F / Gas Mark 4. Line a brownie tin (8" by 10" / 20cm by 25cm) with baking paper.
2. Peel and chop your sweet potato into small cubes. Steam until soft.
3. Pour 75g of your chocolate chips into a small bowl. Mix the coffee with the boiling water and pour over the chocolate chips. Stir slowly until all the chocolate is melted and set aside to cool.
4. In a medium bowl, mash your sweet potato, and then mix together with the butter, eggs, sugar, and vanilla extract until well combined. Once cool, add the coffee/chocolate mixture and mix together.
5. In a separate larger bowl, sift together the flour, baking powder, cocoa powder and salt. Slowly add the dry ingredients to the sweet potato mixture and stir until they are just mixed together, then add most of your remaining chocolate chips, setting a few aside for topping.
6. Spread the mixture evenly across the tin. Sprinkle over the remaining chocolate chips. Place in the oven for 20-25 minutes, or until the edges are just starting to brown. Remove from the oven and place the whole tin on a wire rack. Allow the brownie to cool completely before removing it from the tin, cutting into squares or triangles with a sharp knife, and serve.
7. For extra 'gooeyness', wrap tightly with cling film and freeze overnight. Once defrosted, your brownie will be extra moist and soft, and the chocolate flavour will be even more delicious.

Thank you to Cakings for creating this recipe for Farm Africa.

The eatwell plate

Use the eatwell plate to help you get the balance right. It shows how much of what you eat should come from each food group.



BALANCE OF GOOD HEALTH BLANK PLATE

