

God is Protector Teacher's Topic Guide Year 4

Topic: Taste and Smell

Duration: 3 weeks

Spiritual overview

God has created foods for us to enjoy that not only smell and taste delicious, but also provide nourishment for our bodies. God has provided us with the sense of taste and smell, not only for pleasure, but also as a way of protecting us from foods and gases that may be harmful. If we smell gas from the gas stove, then we know there is a gas leak and we must get away from it, into fresh air. We can taste and smell when food has gone off, and we should not eat it. Spoiled food contains bacteria that can make us sick.

Outcomes: Students will

- understand the role of taste and smell in protection.
- understand the role of taste buds and their ability to adapt to tastes.
- classify, compare and identify tastes of foods – sweet, salty, bitter, sour.
- identify smells.
- explain the different areas of the tongue responsible for different tastes.
- explain the connection between taste and smell.
- understand the protection in the ability to smell.
- Understand that we can protect ourselves from sickness by eating healthy food.

Bible references

Exodus 15:22-27 Bitter water made sweet. As the Israelites were crossing the desert, God provided water for them by turning the bitter water to sweet, drinkable water. Their sense of *taste* told them that the water was bitter or sweet.

James 3:5-6 The tongue not only detects taste, but can be responsible for sweet words or bitter words.

Psalm 34:8 Taste and see that the Lord is good.

Discussion:

What is a 'main meal' and when do we eat it?

What do you like about family meal times?

Why is it better to eat at the table rather than in front of the TV?

What do we mean by a balanced meal?

What are your family favourites?

What are 'processed' and 'unprocessed' foods?

Activities

Sweet, salty or sour?

Ask the students how they would describe the tastes of these foods: lemon; soy sauce, mango?

Play the taste game

Prepare a plate of different fruits. Include both sweet and sour fruits. Cut the fruit into pieces and put a toothpick into each piece. Ask a few students to volunteer to taste and identifying the fruit while blindfolded. Ask how the fruit tasted: sweet or sour?

Classify tastes

Make a list of sweet fruits (most fruits) and sour fruits (lemon, lime, grapefruit) Think of other foods that taste: salty and bitter. Bitter foods are sometimes hard to think of. They include coffee, black tea, unsweetened dark chocolate, some bitter herbs.

Make a taste chart

Children cut an A4 piece of paper into the shape of a tongue. Then fold the piece of paper into quarters. Label the sections: sweet, sour, salty, bitter. Different foods can be drawn or cut and pasted into the right taste sections.

Play the smell game

Collect samples of things that smell – e.g. perfume, vinegar, disinfectant, lemon, orange. Children take turns of guessing the smells while blindfolded.

Play the taste-smell game

While blindfolded, children taste some fruits or salad vegetables while holding their nose. Ask:

“Can you taste the food?”

“What does this show us?”

“Why do you sometimes lose your sense of taste when you have a cold?”

Try a new vegetable

Encourage children to try a vegetable that they have not tried before. Perhaps they could visit the market with their parents on the week-end.

Draw your vegetables

Children can draw/write the names of all the vegetables they have tried, and write about the tastes and smells.

1. My new vegetable is.....It tastes...
2. My favourite vegetable is.....

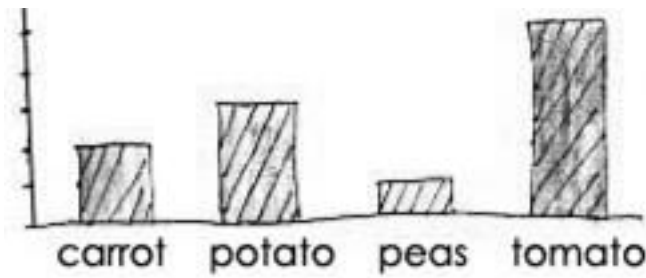
Take a survey of favourite vegetables. Graph the results.

You can do the same with fruits.

To make a bar graph:

- Ask children to choose their favourite vegetables or fruits.
- Go through the class list and record favourite fruit next to each name.
- Collate data. e.g. 5 children chose apples, 6 children chose oranges etc.
- Record data in graph form by drawing a large grid.
- Write the names of favourite fruits across the bottom of the page, one fruit/vegetable per square.

- Write numbers going up the left hand side of the page.
- Draw a bar to show how many children chose the favourite fruits/vegetables.



Our favourite vegetables

Classify foods according to plant or animal

Take a piece of paper and make two columns: food from plants and food from animals. Make a list of healthy foods in each group.

Draw a healthy main meal

Children can draw around a dinner plate and draw a healthy meal inside the circle or alternatively, draw a meal on a paper plate.

List and draw a healthy breakfast

Children can divide the paper into two columns. On one side, list or draw their usual breakfast. On the other side, they list or draw their ideal breakfast. (What changes could be made to make the breakfast healthier or more balanced?)

Make a place mat with a healthy food design.

Design a healthy school lunch

Discussion: snack foods

What are some healthy snack foods? What are some not-so-healthy snack foods?

When should we snack, and what is wrong with snacking for a long time? e.g. watching TV.

Values education Year 4

God is Protector

Keeping safe

To keep ourselves safe we need to ...

- ask God to protect us every day.
- show wisdom in behaving safely.
- care about the safety of others.

Discussion and activities

1. Who helps you to keep safe? (parents, teachers, police, government laws)
2. How can you help yourself to keep safe?
3. Make a list of safety rules for keeping safe:
 1. at home
 2. walking in a place where there is traffic
 3. when swimming

Bible passages

Proverbs 28:26 Those who walk in wisdom are kept safe.

Proverbs 18:10 The name of the Lord is a strong tower; the righteous run into it and are safe.

Bible stories: Daniel in the Lion's den; Shadrach, Meshack and Abednego were kept safe in the fiery furnace.

Practical Science Year 4

Taste Testing Without Smell

<http://www.sciencekids.co.nz/experiments/smelltaste.html>

We all know that some foods taste better than others but what gives us the ability to experience all these unique flavours? This simple experiment shows that there's a lot more to taste than you might have first thought.

What you'll need:

- A small piece of peeled potato
- A small piece of peeled apple (same shape as the potato so you can't tell the difference)

Instructions:

1. Close your eyes and mix up the piece of potato and the piece of apple so you don't know which is which.
2. Hold your nose and eat each piece, can you tell the difference?

What's happening?

Holding your nose while tasting the potato and apple makes it hard to tell the difference between the two. Your nose and mouth are connected through the same airway which means that you taste and smell foods at the same time. Your sense of taste can recognize salty, sweet, bitter and sour but when you combine this with your sense of smell you can recognize many other individual 'tastes'. Take away your smell (and sight) and you limit your brains ability to tell the difference between certain foods.

Practical Science Year 4

Topic: Taste and smell

Test your taste buds

What you need

- 4 cups of water
- ice-block sticks (or cotton buds)
- Lemon juice
- Salt
- Sugar
- Someone to do the taste test

Instructions

1. Dissolve sugar crystals into one cup, salt into another cup and pour lemon juice into a third cup.
2. Leave the fourth cup as a 'control', i.e. something you can compare against.
3. Mix a wooden ice-block stick through one solution and place it on the tip of your tongue.
4. Record the taste i.e. salty, bitter, sweet, no taste. Wash your mouth out with pure water.
5. Now repeat steps 3 and 4 for the back, sides and middle of your tongue.

Were there areas of the tongue that didn't strongly sense the taste?

Now repeat the steps 3, 4 and 5 for the other solutions.

What were your results?

Extension activity:

Now try blind folding a friend. Can they tell which solution is which?

Thinking Skills

Year 4 Protector

<p>Taste and smell 1</p> <p>What if you lost your sense of smell?</p> <ul style="list-style-type: none">• What would you no longer be able to do?• What dangers might you face?	<p>Taste and smell 2</p> <p>What if you lost your sense of taste?</p> <ul style="list-style-type: none">• What would you no longer be able to do?• What dangers might you face?
<p>Taste and smell 3</p> <p>Make a list of 10 things that you like to smell.</p>	<p>Taste and smell 4</p> <p>Make a list of 5 things You love the taste of.</p>
<p>Taste and smell 5</p> <p>Think of 3 foods with tastes that would go well together.</p>	<p>Taste and smell 6</p> <p>List foods or liquids to match with these smells:</p> <p>sweet, fruity, strong, calming, refreshing</p>