# Prevention of Infection: Oral Hygiene



**Key Stage 2**

# Lesson 8: Oral Hygiene

Pupils learn how they can prevent tooth decay. The activities demonstrate the importance of brushing teeth twice a day and how many sugar many common drinks contain.

## Learning Intention

### All pupils will:

* Understand the importance of oral health by exploring the causes and consequences of tooth decay and developing effective habits to maintain healthy teeth.

## Northern Ireland Curriculum Links

### Curriculum Key Elements

* Personal Health and Moral Character

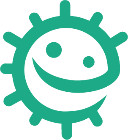
### Curriculum Skills

* Communication
* Thinking
* Problem Solving and Decision Making
* Working with Others

### Curriculum Areas of Learning

* Personal Development and Mutual Understanding (PDMU)
* The World Around Us (TWAU)

## 

**Lesson 8: Oral Hygiene**

## **Resources Required**

### Main Activity: Attack the Plaque

#### Per group

* Water
* Food colouring (any colour but white)
* Cornflour
* Flour (optional)

#### Per pupil

* Toothbrush
* Yoghurt pot
* Paint brush

### Activity 2: Sugar Drink Activity

#### Per Group

* Empty Drinks Bottles
* Teaspoon
* Self-Sealing Bag
* Sugar

### Extension Activity: Tooth Brushing Diary

#### Per pupil

* Copy of SW1

### Additional Resources:

* Copy of PP1 (available from the e-bug.eu website)

## Supporting Materials

* SW1 Brushing Diary/Chart
* PP1 Oral Hygiene MS PowerPoint Presentation

## **Advanced Preparation**

During the lesson or the week before, distribute the tooth brushing diary (SW1) alongside the weekly homework. Students should tick if they brushed their teeth that morning or the previous night. Results do not have to be discussed in class.

Set up PP1 (available on the e-Bug website, e-bug.eu).

**Lesson 8: Oral Hygiene**

## Key Words

Plaque

Disease

Enamel

Fluoride

Hygiene

Teeth brushing

## Health & Safety

For safe microbiological practices in the classroom consult CLEAPPS

[www.cleapps.org.uk](http://www.cleapps.org.uk)

## **Weblinks**

e-bug.eu/eng/KS2/lesson/ Oral-Hygiene

## Introduction

Begin the lesson by explaining to the pupils that tooth decay is a preventable disease using the information contained in the teacher refresher section. Explain pupils will learn what causes tooth decay and the simple steps they can take to prevent it. Show the pupils PP1. Use the questions within the presentation to begin a discussion and gather pupils knowledge.

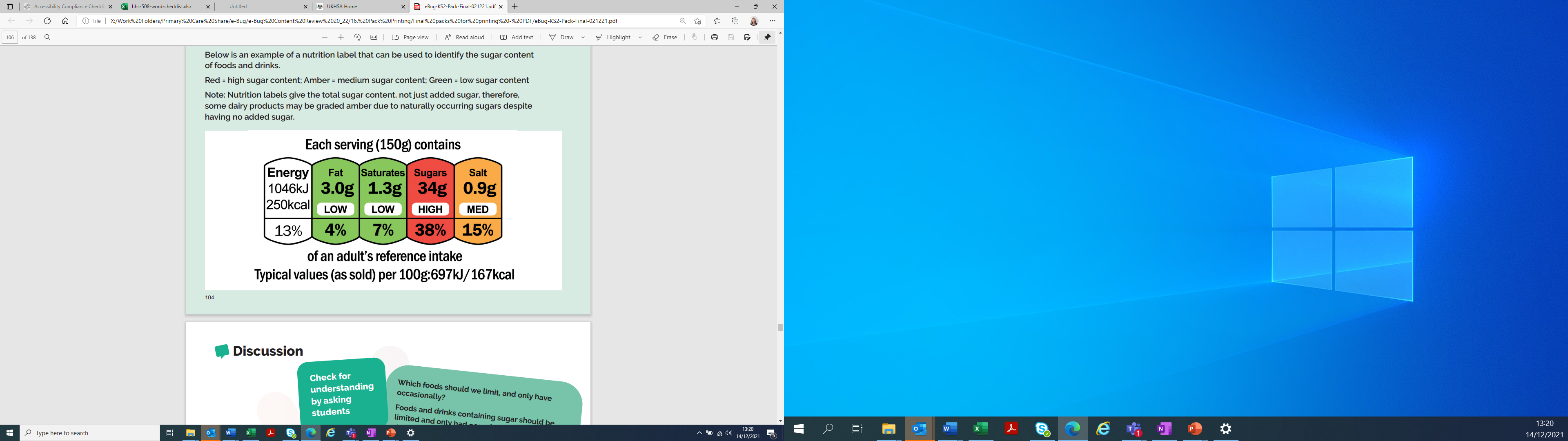
1. Complete the Main Activity – Keeping your teeth healthy – Attack the Plaque experiment
2. Complete Activity 2 – Healthy Diet – Sugar drink activity

Key message - you can stop tooth decay by:

Pupils should learn that you can prevent tooth decay by eating sugary foods and drinks less often, and in smaller amounts, and by brushing teeth with a fluoride toothpaste last thing before bed and in the morning.

### Guidance for Teachers

Below is an example of a nutrition label that can be used to identify the sugar content of foods and drinks. Red = high sugar content; Amber = medium sugar content; Green = low sugar content Note: Nutrition labels give the total sugar content, not just added sugar, therefore, some dairy products may be graded amber due to naturally occurring sugars despite having no added sugar.



## Activity

### Main Activity: Attack the Plaque

1. Ask pupils to mix a small amount of water with cornflour and a drop of food colouring.
2. Paint this mixture onto the outside of small white yoghurt pots.
3. Wait for yogurt pots to dry.
4. Now ask the pupils to try brushing the cornflour mixture (representing plaque) off the yoghurt pots with a toothbrush.
5. Notice that when the cornflour mixture (representing plaque) dries, it is very difficult to brush off. If we don't brush our teeth twice a day, the plaque can harden and become more difficult to remove.

### Extension Activity: Attack the Plaque Scientific Investigation

This experiment can be expanded to include scientific investigation of the effects of not brushing teeth regularly verses everyday:

Set up three yoghurt pots as below:

1. No cornflour = brush twice a day
2. Wet cornflour = brush once a day
3. Dry cornflour = no brushing

Ask the pupils to try brushing the cornflour mixture off the pots with a toothbrush. Which is easiest to remove the plaque from?

Pupils should recognise that brushing teeth everyday makes brushing easier, and that plaque can be hard to remove over time if left on teeth. Hardened plaque is called calculus.

### Activity 2: Sugar Drink Activity

This activity is for groups of 2-3 pupils.

1. Provide each group with a different empty drink bottle from a popular brand (include flavoured and plain water and a range of soft and fizzy drinks), a teaspoon, a bag of sugar and a clear plastic bag (such as a sandwich bag).
2. Before they begin, ask pupils to look at the nutritional information label and identify how much sugar is contained within each bottle. Help pupils locate the sugar content on the label, check the amounts and explain the use of the red, amber, green system on the food label. For foods:
   * Red = high amount of sugar
   * Amber = medium amount of sugar
   * Green = low amount of sugar
3. Ask pupils to fill each bag with the equivalent amount of sugar contained within each drink (1 teaspoon is approximately 4 grams).
4. Once the activity is complete, each group can present their findings (drink name, amount of sugar in grams and number of teaspoons of sugar) to the rest of the class.
5. Pupils can collate the project and produce a 3D poster board for display within the classroom; containing drink bottles and sugar bags attached to the paper.

## Discussion

Check for understanding by asking pupils the following questions.

### How do we get dental decay?

Answer: Plaque is a build-up of bacteria on our teeth, the bacteria within the plaque breakdown sugars we eat and use them to produce substances including acid. If plaque is not brushed away regularly or if there is too much sugar in the diet, the acid formed dissolves our teeth causing cavities (holes).

### Which foods should we limit, and only have occasionally?

Answer: Foods and drinks containing sugar should be limited and only had occasionally. Snacking during the day and at bedtime on sugary foods and drinks (especially fizzy drinks!) should be avoided to prevent dental decay. Sugary foods include fizzy drinks, fruit juice and smoothies, full sugar squash, sweets, chocolate, cakes, biscuits, jams, ice-cream, some breakfast cereals, honey and syrups. It’s also best to eat dried fruit with a meal, such as with breakfast cereal, instead of as a snack – dried fruit can stick to teeth and cause tooth decay.

### Is it OK to drink fizzy drinks that do not contain sugar?

Answer: Although these drinks do not contain sugar and are better than sugary versions, the acid can dissolve our tooth enamel over time, making them smaller and sometimes painful. The best drinks are plain water and plain (non-flavoured) milk with no added sugar/sugar-free squash.

### How often should we brush our teeth, and how?

Answer: It is essential to brush our teeth twice daily, at night and in the morning, as soon as they erupt (around 6-9 months of age), with a smear of toothpaste containing fluoride for under 3 years. Once aged 3 years old, we should use a pea-size amount of toothpaste containing fluoride. Tooth brushing should be supervised by an adult until 7 years of age. After brushing it is important to spit but not rinse (to leave a protective layer of fluoride on the surface of our teeth). Fluoride helps to keep enamel strong, reducing the chance of acid damaging the teeth.

### What event occurs at around the age of 6 years?

Answer: At around age 6, the first permanent molar teeth (at the back of the mouth) erupt. These teeth can be mistaken for milk teeth and often missed when brushing. It is essential to brush these teeth effectively to prevent the onset of dental decay.

### How can we remember to brush our teeth?

Answer: To remember to brush our teeth, it is best to add tooth brushing to a twice daily hygiene routine morning and night.

## Extension Activities

### Tooth Brushing Diary

Provide pupils with tooth brushing diary SW1 during the lesson or 1 week before. Pupils can keep track of their tooth brushing, encouraging them to brush their teeth as part of their daily routine.

### Timing tooth brushing practice

1. In groups encourage pupils to practice their tooth brushing technique on models.
2. Each pupil should demonstrate how long they think it takes to clean the whole mouth effectively.
3. See how long they took compared to the ideal 2 minutes.

Note- pupils may use their electric toothbrushes if they have them.

Tip: Music can help demonstrate to pupils how long they need to brush for. Consider playing a pop song that lasts 2 minutes whilst they practice brushing again.

## Learning Consolidation

At the end of the lesson, ask the class the questions below.

* What is the sticky substance made up of bacteria that clump together on our teeth? Answer: Plaque
* What sweet substance found in many food and drinks can lead to bacteria and acid attacking our teeth? Answer: Sugar
* Why should we limit the number of times we eat foods and drinks with added sugar? Answer: To prevent plaque build up and tooth decay
* How many times a day should we brush our teeth with fluoride toothpaste? Answer: At least twice a day

Alternatively, use the questions above as part of a challenge for pupils to become Oral Health Ambassadors. Their task is to create a campaign to teach others about how to maintain healthy teeth and prevent tooth decay.

Provide pupils with different options for their campaign, such as:

* Designing a poster or infographic.
* Creating a short skit or role-play to present to the class.
* Writing a short story or comic strip featuring characters learning about oral health.
* Composing a jingle, song, or rap about brushing teeth and avoiding sugary foods.

Encourage pupils to address the following in their campaign:

* What is plaque, and how does it form?
* Which foods and drinks can lead to tooth decay?
* Why is it important to limit sugary foods and drinks?
* How should we brush our teeth effectively?
* What happens if we don’t take care of our teeth?

Once pupils have completed their campaigns, invite each group or individual to share their work with the class. As they present, ask open-ended questions to encourage reflection and critical thinking, such as:

* Why did you choose this format to share your message?
* How do you think this campaign could encourage others to take care of their teeth?
* Is there anything else you learned that you want to add to your campaign?

Wrap up the activity by discussing how their campaign could help their family, friends, and community understand the importance of oral health. Use the fact-checking questions subtly during the discussion to reinforce key points and direct Q&A format.



## SH1 – Class discussion

Tick for every time you brush your teeth

Week total

Day 7

Day 6

Day 5

Day 4

Day 3

Day 2

Day 1

Day



### Brushing Diary

Write the day of the week in the diary and tick each time you have brushed your teeth in that box that day