



# Prevention of Infection: Oral Hygiene

**Students learn how plaque forms and why and how sugary food and drink can damage your teeth.**

## Curriculum Links

### Science

Working scientifically, Living things and their habitats,

### PSHE/RSHE

Health and prevention

### English

Reading and comprehension, Writing

## Key Words

Bacteria, Plaque, Cavity, Sugar, Acid, Tooth brushing, Decay.

## @ Weblink

[e-bug.eu/eng/KS1/lesson/Oral-Hygiene](https://e-bug.eu/eng/KS1/lesson/Oral-Hygiene)

## Learning Outcomes

All students will:

- Understand what dental plaque is and how it forms.
- Understand the consequences of tooth decay.
- Understand that limiting sugary foods and drinks can reduce tooth decay.
- Understand the importance of eating healthier snacks.



## Resources Required

### Activity: Eggshell Experiment

#### *Per group*

- ☐ Egg shells – cracked and then cleaned out
- ☐ Clear cups
- ☐ High sugar cola
- ☐ Semi-skimmed milk or water
- ☐ High sugar juice drink
- ☐ Labels for cups

### Extension Activity: Tooth Brushing Chart

#### *Per student*

- ☐ SW1 e-Bug Healthy Teeth Progress Chart

### Extension Activity: Healthy Food Swaps

#### *Per class*

- ☐ TS1 Oral Hygiene True/False Quiz

#### *Per student*

- ☐ SH1 Healthy Food Choice Fact Sheet
- ☐ SH2 Oral Hygiene True or False cards
- ☐ SW2 Healthy Food Choice

## Advance preparation

1. Set out 3 cups per 3-4 students and label these as 1 to 3.
2. Divide up the eggshells so that each cup has one eggshell half.

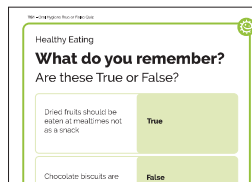
## Health and Safety

Ensure students do not drink the cola, especially those who may have diabetes. Students with egg or milk allergies or intolerances must not directly handle these components.

See the e-Bug website for alternative activities.

For safe microbiological practices in the classroom consult CLEAPPS [www.cleapps.org.uk](http://www.cleapps.org.uk)

## Supporting materials



Healthy Eating  
What do you remember?  
Are these True or False?


Dried fruits should be eaten at mealtimes not as a snack	True
Chocolate biscuits are a healthy snack	False

### TS1 Oral Hygiene True/False Quiz



Healthy Food Choice Fact Sheet


Breakfast

			
Healthy	Healthy	Unhealthy	Unhealthy

Drinks

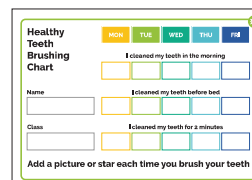
			
Healthy	Healthy	Unhealthy	Unhealthy

### SH1 Healthy Food Choice Fact Sheet



TRUE	FALSE
TRUE	FALSE
TRUE	FALSE

### SH2 Oral Hygiene True or False Cards



Healthy Teeth Brushing Chart

MON TUE WED THU FRI

I cleaned my teeth in the morning

I cleaned my teeth before bed

I cleaned my teeth for a minutes

Add a picture or star each time you brush your teeth

### SW1 e-Bug Healthy Teeth Progress Chart



What healthy breakfast, drink and snack would you eat to help keep your teeth healthy?

Breakfast

Drink

Snack

### SW2 Healthy Food Choice

# Lesson Plan



## Introduction

1. Ask the students to think about their teeth; ask the what are they like (they are hard and white and shiny). Ask the students why they think their teeth are like that (so that they are strong and can chew and bite food).
2. Pass around the eggshells, have the students (carefully) examine them. Ask them if they think they are like any parts of their body? The students should be able to identify that they are like their teeth. Tell the students that teeth are made of layers. The eggshell is similar to the hard layer on our teeth called the enamel.
3. Explain to the students that throughout the day, germs called bacteria can grow on teeth to form a sticky substance called plaque and when we eat sugary foods and drinks the bacteria uses the sugar to attack our teeth (especially the hard outer enamel layer). This is why it is important to brush our teeth to get rid of the bacteria.

## Discussion

The next day, have the student check on their eggs. What changes can they see? Why do they think that has happened?

Tell the students that the sugar in the drinks has damaged the eggshells and made the shell discolour – remind the students that the eggshell is like the enamel on their teeth, and a lot of sugar can cause damage to their teeth.

Ask the students what they think they should do to keep their teeth healthy? Answers should include:

- Have sugary food and drinks less often and in small amounts
- Brush your teeth twice a day (before school and before bed)
- Using a fluoride toothpaste
- Spit don't rinse
- Visit your dentist regularly.

## Activity: Egg Shell Experiment

1 Label each cup with a number from 1 to 3



2 Place each egg in a different cup



3 Pour one of the liquids in each cup (enough to cover the egg)

4 Wait at **LEAST** one day



1. Explain to the students you will be using the eggshells to show what sugar can do to our teeth.

2. Divide the class into groups of 3-4 and give them 3 cups labelled 1-3. Assist them placing one eggshell half into each cup and pouring the three drinks you've chosen into the cup.

1. Cola
2. Water (or milk)
3. Juice

3. To see the effects, you will need to wait one day. Now, ask the students: What will happen to the egg if you leave it in the drink for a long time? Which liquid will change the egg most? Which liquid will change the egg least? You can record their guesses for tomorrow.

After one day, students will notice a discoloured and partly dissolved eggshell from the cola, an unchanged eggshell from the water (or milk), and a slightly dissolved eggshell from the juice. This demonstrates that high sugar content foods and drinks can damage the enamel.

## Extension activity

### Tooth Brushing Chart

SW1 is a useful way to encourage routine tooth brushing. Provide one sheet per student. Ask students to mark or draw a picture every time they brush their teeth to keep track of how often they have brushed their teeth during one school week. This can be completed in the classroom or at home.

### Healthy food swaps

Begin by reminding students how the sugar in the cola effected the eggshell. Eating too much sugar is bad for you and can cause tooth decay. Around half the sugar we consume comes from unhealthy snacks and sugary drinks. That is why it is important to choose healthier snacks. Fruit and vegetables are a good snack choice; you can eat them on their own or with a healthy dip. Dried fruits have a high sugar content and they should be kept to mealtimes only.

Ask the class what their favourite fruit and vegetable snacks are.

Tell students that they can swap their unhealthier foods (e.g. sugary breakfast cereals) and drinks (e.g. sugary fizzy drinks, fruit juice and smoothies, full sugar squash) for lower sugar alternatives such as low sugar yoghurt with fruit, lower fat milks, plain waters, or no-added sugar/sugar free squash. We don't need to worry about the sugar in whole fruits and vegetable and plain milk and yoghurts because this isn't added sugar. Smoothies and fruit juices should consume a maximum of 150ml per day.

What other swaps can they think of?

Provide students with SH1 Healthy Food Choice Factsheet to help them complete SW2 and ask students to draw their favorite food swaps on SW2. Food items with the most green labels are considered the healthiest choices and the ideal swap.

### Oral Hygiene True or False Quiz

Hand out SH2 to groups of 3 or 4 students. Ask students to cut out the cards and hold them up to answer True or False quiz contained in TS1. Answers are provided on the sheet.

## Learning Consolidation

At the end of the lesson, ask the class the series of questions below as a fact checker.

- ☐ What is the sticky substance made up of bacteria that clump together on our teeth called?  
Answer: Plaque
- ☐ Complete the sentence; When we consume sugary foods and drinks, this leads to an attack on our teeth that can lead to....?  
Answer: Tooth decay
- ☐ How many times a day should brush your teeth with toothpaste.  
Answer: At least twice
- ☐ After brushing, should you; a) spit out the toothpaste and rinse; b) spit out the toothpaste and don't rinse?  
Answer: you should spit out the toothpaste but don't rinse (this will allow the fluoride to stay on the teeth for longer).





## Healthy Eating

# What do you remember?

Are these True or False?

Dried fruits should be eaten at mealtimes not as a snack

**True**

Chocolate biscuits are a healthier snack than plain yogurt and fruit

**False**

Biscuits contain a lot of added sugar.

Lower-fat milk is a healthier drink choice than a sports drink?

**True**

Sports drinks can contain lots of sugar. Water or lower-fat milk are better choices.

Eating too much sugar can cause tooth decay?

**True**

