



Medium Term Plan

Teeth



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P levels

Performance attainment targets (P scales) and performance descriptors are used for pupils aged 5 to 16 with special educational needs (SEN) who are working below the standard of the national curriculum tests and assessments. PSTT recognises that the national curriculum levels used in this document are no longer current. We have had so many requests to return these materials to the website that they remain in the documents as a guide for those who have used them in the past. The written statements may be useful to others as an indication of children's development. For further information about P levels see:

<https://www.gov.uk/government/publications/p-scales-attainment-targets-for-pupils-with-sen>

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Primary Science Teaching Trust recommends that a full risk assessment is carried out before undertaking in the classroom any of the practical investigations contained in the plans.

Safety Note

PSTT advises teachers to refer to either CLEAPSS website or SSERC website for up to date health and safety information when planning practical activities for children.

Big Questions

- Why do we have teeth?
- Are all teeth the same?
- Do all animals have teeth?
- Why do our teeth fall out?

Learning Objectives

Pupils will have opportunities:

- To explore different teeth and their jobs.
- To explore the process of tooth decay and how to prevent it.

Quick review activities

- Match pictures of animals to what they eat.
- Ask the pupils to split pictures of animals into 'teeth' or 'no teeth'.
- During a trip to the zoo, look at herbivores and carnivores and see if they have teeth.
- Visitor or a member of staff talk about teething, gaps in teeth, false teeth, etc.
- Compare different toothpastes.

Answers

- Teeth are needed for chewing and cutting food into small pieces to start the digestive process.
- Humans have 3 different types of teeth which each have different functions.
- A few animals do not have teeth: pangolins and anteaters (mammals), birds, some fish.
- Milk teeth (baby teeth) are supposed to fall out in childhood and are replaced with permanent adult teeth. Adult teeth may fall out because of trauma or gum disease.

Vocabulary relevant to this topic

- Incisor- flat front teeth
- Molar- thick flat back teeth used for grinding
- Pre-molar- small molar further forward in the jaw
- Canine- pointed (triangle) corner teeth
- Wisdom tooth- large molars which grow at the back of the jaw in late teens / adulthood.
- Milk teeth- baby teeth
- Erupted- the tooth has come out of the gum
- Decay-rot
- Fluoride- chemical added to toothpaste to make teeth stronger
- Plaque- build up of bacteria and food on the teeth, usually yellow
- Cavity- hole in the enamel of the tooth
- Abscess- infected cavity
- Herbivore- plant eater
- Carnivore- meat eater
- Omnivore- meat and plant eater
- Enamel- hard protective coating on the teeth
- Dentine- part of the tooth below the enamel
- Pulp- centre of the tooth where the nerve is
- Bacteria- germs
- Acid- chemical which rots teeth
- Pointed, Flat, Tear, Rip, Grind, Chew, Hygeine

Background information about this topic

- There are three main types of teeth. **Incisors** are the front teeth which are chisel shaped. They are designed for cutting and tearing through food. **Canines** are the pointed corner teeth. They are designed to clamp into food; they are prominent in carnivores which need to hold onto their prey. **Molars** are the flat back teeth, they are designed to grind food down and chew it; herbivores have small canines and large molars for grinding vegetation. Humans have pre-molars (smaller) and molars (larger). Each tooth has a hard outer coating called enamel; this protects the softer dentine and pulp underneath.
- Tooth decay occurs when bacteria 'feed' on the sugar in our food. The bacteria release acid which attacks the enamel of the teeth causing decay and cavities. Brushing teeth can reduce the amount of plaque (bacteria and food debris) and therefore the amount of acid decay. Fluoride helps prevent tooth decay by strengthening the enamel – sometimes it occurs naturally in water and sometimes it is added. It can also be found in toothpaste.
- Most mammals grow two sets of teeth. Children have milk teeth. Milk teeth are only temporary because they are weak and have a thin enamel layer. They would also be small in a fully grown adult jaw. When all of the teeth have erupted, an adult has 32 teeth.
- Milk teeth begin erupting at 3 months.
- Children have a full set of milk teeth at 3 years
- Milk teeth begin to be pushed out at 4 years
- Adults have a full set of adult teeth (except wisdom) at 14
- Wisdom teeth erupt at late teens- adult (or not at all).

Teeth P1-3

Objective 1: To explore different teeth and their jobs.

Descriptions of intended outcomes at different levels of attainment

- Tolerates involvement in touching teeth (P1i)
- Shows an emerging awareness of the experience involving teeth (P1ii)
- Begins to show an interest in the teeth experiences (P2i)
- Shows sustained response to experience involving teeth (P2ii)
- Explores teeth in more complex ways or for longer (P3i)
- Begins to be proactive in interaction with teeth experiences (P3ii)

<p>Possible Activities:</p>	<p>Resources:</p>
<p>Experience feeling their own teeth e.g. rough surface of molars, pointed teeth, flat teeth</p> <p>Experience leaving teeth marks in different foods.</p>	<p>Foods to leave teeth /bite marks on e.g. chocolate, cheese</p>
<p>Optional activities you might like to try include:</p>	<p>Resources:</p>
<p>Experience looking at other peoples' teeth.</p> <p>Handle some different animal teeth. If clean press into dough and make 'teeth biscuits'.</p>	<p>Examples of sanitised animal teeth, biscuit dough</p>

Teeth P1-3

Objective 1: To explore different teeth and their jobs.

Experience looking at set of false teeth.	
Experience looking at teeth in a mirror.	

Points to Note:

Pupils may think all teeth are the same.

Safety awareness:

Sanitised hands.

Risk of biting.

Some pupils may be adverse to their own reflection.

Mirrors can smash if not safety mirrors.

Some pupils may be allergic to some foods.

Teeth P1-3

Objective 2: To explore the process of tooth decay and how to prevent it.

Descriptions of intended outcomes at different levels of attainment

- Encounters a range of teeth experiences (P1i)
- Shows random fleeting response to the teeth experiences (P1ii)
- Accepts and engages in coactive/ shared exploration of teeth (P2i)
- Recognises familiar objects e.g. toothbrush (P2ii)
- Observes results of own actions with interest (P3i)
- Chooses a favourite toothpaste or toothbrush (P3ii)

Teeth P1-3

Objective 2: To explore the process of tooth decay and how to prevent it.

<p>Possible Activities:</p>	<p>Resources:</p>
<p>Experience cleaning teeth and link to PSHE. Try some different toothbrushes. Make a pretend set of teeth using pop bottles and spray with foam. Give pupils brushes to try cleaning the ‘teeth’</p>	<p>Selection of tooth brushes and paste, Set of teeth made form plastic bottle, foam, toothbrushes</p>
<p>Optional activities you might like to try include:</p>	<p>Resources:</p>
<p>Experience brushing teeth with music. Experience finger painting with toothpaste.</p>	<p>Toothbrushes, internet access, IWB and speakers, Range of toothpastes, paper,</p>
<p>Experience an electric toothbrush. Experience cleaning teeth with different toothpastes.</p>	

Points to Note:

Some pupils may swallow toothpaste so use baby varieties.

To make ‘teeth’ cut the tops off plastic bottles and turn over. Use a hole punch and ties to secure about 10 together as set of ‘teeth’.

Teeth P4-6

Objective 1: To explore different teeth and their jobs.

Descriptions of intended outcomes at different levels of attainment

- Imitates adult in miming activity (P4i)
- Explores teeth and animal teeth using any sensory mode (P4ii)
- Moves to pictures to communicate awareness of a match (P5i)
- Responds to simple scientific questions e.g. Can you show me a biting tooth? (P5ii)
- Responds to simple instructions using some simple non-scientific verbal prompts (P6i)
- Matches animals to simple correct type of diet e.g. meat or vegetation (P6ii)

Teeth P4-6

Objective 1: To explore different teeth and their jobs.

<p>Possible Activities:</p>	<p>Resources:</p>
<p>Mime shapes of different teeth and their jobs/actions.</p> <p>Get pupils to copy as adult points to the tongue, incisors, canines, premolars, molars.</p> <p>Stick pictures of teeth in different parts of the classroom. Ask pupils to move to pictures of teeth when they are being pointed at by an adult on a set of false teeth.</p> <p>Look at different animal teeth using images from internet and try to match to what they eat (use symbols or pictures of meat, grass, fish).</p> <p>Using a rolled up red sock, use a white polystyrene cup for a milk tooth and a porcelain cup for adult tooth. Visually show the adult tooth pushing out the milk tooth.</p>	<p>Pictures of teeth stuck on the wall. set of false teeth, animal teeth pictures e.g. lion, crocodile, sheep, cows, horses, fish etc and of foods they eat, Big red sock, small paper/ polystyrene cup, large porcelain white cup.</p>
<p>Optional activities you might like to try include:</p>	<p>Resources:</p>
<p>Stick pictures of teeth in different parts of the classroom. Ask pupils to move to pictures of teeth by their description (sharp, pointy, flat etc.).</p> <p>Ask pupils to touch their own teeth when given descriptions by an adult.</p> <p>Point to teeth on false teeth and say what they do....e.g. chew; bite.</p> <p>Look at some animal skulls and feel the different teeth.</p>	<p>Pictures of teeth stuck on the wall, animal skulls (borrow from local secondary school or museum) set of false teeth.</p>

Teeth P4-6

Objective 1: To explore different teeth and their jobs.

Read a tooth fairy story.

Ask pupils to draw teeth on mini white boards when given descriptions by an adult.

Look at some pictures of dinosaurs' teeth and decide if they ate plants or animals

Points to Note:

Pupils may think that all teeth have the same job.

Teeth P4-6

Objective 2: To explore the process of tooth decay and how to prevent it.

Descriptions of intended outcomes at different levels of attainment

- Communicates awareness of some obvious changes after using disclosing tablets and brushing teeth (P4i)
- Follows a simple step-by- step procedure when investigating cleaning teeth (P4ii)
- Responds to and follows instructions involving more than one step (P5i)
- Identifies where changes have taken place (P5ii)
- Recalls the stages in a simple procedure as it is carried out e.g. testing for plaque (P6i)
- Detects and indicates where sensory information differs (P6ii)

Possible Activities:	Resources:
<p>Suck on a disclosing tablet or use cotton buds pre soaked in food colouring and see results in a mirror.</p> <p>Attempt to remove disclosing tablet residue with toothbrush and toothpaste. Use a video clip about tooth decay and how to stop it: https://www.youtube.com/watch?v=hDZXSMU2IAk</p> <p>Show pupils how easily teeth stain by placing one boiled egg in water, one if in cold tea and one in cola and leave overnight. Compare the next day and then try to remove the stain by brushing with toothpaste and a toothbrush. https://www.bbc.com/bitesize/clips/znr4wx</p>	<p>Disclosing tablets, mirrors toothbrushes, toothpaste, Internet access, IWB, speakers, hard boiled eggs in shells, cola, tea bags and hot water, jars, water, toothbrush and toothpaste Toothbrushes, toothpaste, timer, mirrors</p>

Teeth P4-6

Objective 2: To explore the process of tooth decay and how to prevent it.

Optional activities you might like to try include:	Resources:
<p>Look at each others disclosed teeth. Then show pupils how to brush correctly. Pupils guess how long they think they should brush for. Finally attempt to remove disclosing tablet residue with toothbrush and toothpaste and time how long it takes.</p> <p>Ask pupils to eat a biscuit or similar and then stain teeth with disclosing tablet. Try eating an apple to see if the stain is removed.</p>	<p>Disclosing tablets, tooth brushes and paste, egg timers,</p>
<p>Watch a video of Dentastix advert for animals for healthy teeth. http://www.youtube.com/watch?v=9VhYa1uERw</p> <p>Look at Dentastix and use them to try to remove dried food off a plate.</p> <p>Try different brushing techniques to remove all of the disclosing tablet or model with a plate, brush and dried food residue.</p>	

Points to Note:

Pupils often think that brushing hard and often is better for your teeth.

Pupils may think kissing boys makes teeth fall out!

Be aware that some pupils may have tooth problems and use sensitivity when talking about decay.

Cotton buds dipped in natural food colourings and left to dry provide a cheaper alternative to disclosing tablets.

Safety awareness:

Mirrors can crack.

Disclosure tablets should be sucked and not swallowed.

Clean drinking water available?

Do not swallow toothpaste.

Teeth P7-8

Objective 1: To explore different teeth and their jobs.

Descriptions of intended outcomes at different levels of attainment

- Uses skills learnt in a different context by sticking teeth onto large mouth (P7i)
- Makes simple records of their work and findings (P7ii)
- Names the jobs that different teeth do (P8i)
- Begins to ask some of their own questions (P8ii)

Possible Activities:	Resources:
<p>Look at each other’s teeth or adults’ teeth using a dentist’s mirror. Count how many teeth pupils/ adults have. If appropriate pupils could survey another class and make a simple tally chart.</p> <p>Give pupils a large picture of a mouth and all the teeth to stick in the right places. Label with symbols or actual word.</p> <p>Match pictures of different processes to the correct tooth, e.g. chewing, biting, predator holding onto prey, etc.</p> <p>Look at different animal teeth using images from internet and talk about what they might eat based on the teeth.</p> <p>Play the ‘Crocodile Dentist’ board game.</p>	<p>Dentists mirrors, A3 picture of an open mouth, lots of four different types of teeth cut out, glue, labels/ symbols, Crocodile Dentist board game – available off internet</p>

Teeth P7-8

Objective 1: To explore different teeth and their jobs.

Optional activities you might like to try include:	Resources:
<p>Large diagram of a mouth sketched on the floor with chalk. Pupils draw on teeth and use body movements to mimic the jobs of the different teeth. Photograph / video to evidence.</p> <p>Get pupils to make an impression of their teeth – upper or lower set or both using clean plasticine and with adult help. Curve up the sides of the plasticine without disturbing the impression and fill with plaster of Paris or other modelling medium.</p> <p>Look at the clip of different animal teeth http://www.youtube.com/watch?v=HdOj1-GiEfK or http://www.youtube.com/watch?v=VejLXTsJrJc And talk about herbivores, carnivores and omnivores.</p>	<p>Chalk, clear floor area, camera, clean plasticine or similar, plaster of Paris or other modelling medium</p>
<p>Make a large model mouth using play dough or other modelling media. Attach labels or symbols to different teeth.</p> <p>Use a picture of a child’s mouth and give children 32 adult teeth to fit in the mouth. Children will discover there are too many to fit in. Give 20 milk teeth to place in the correct position in the mouth.</p> <p>Pupils eat various types of food and the rest of the class describes the tooth type used and the action. E.g. apple, incisor, bite.</p> <p>Look at different skulls of animals and record how many of each type of teeth they have. Reinforce the use of herbivore, carnivore and omnivore – with or without symbols.</p> <p>Play the 'Pearly Whites' board game.</p>	

Teeth P7-8

Objective 1: To explore different teeth and their jobs.

Points to Note:

Pupils may think that animal and human teeth are exactly the same.

Safety awareness:

Sanitise hands prior to eating and before touching other pupils' teeth.

Be aware of student allergies to foods.

Be sensitive to pupils who are wearing dental braces or have problems with teeth.

Be careful when making tooth impressions that pupils don't swallow plasticine .

Safety when using Plaster of Paris- refer to CLEAPSS website for guidance.

Teeth P7-8

Objective 2: To explore the process of tooth decay and how to prevent it.

Descriptions of intended outcomes at different levels of attainment

- Shows an awareness of treating things in the same way e.g. brushing eggs for same amount of time and using same amount of toothpaste (P7i)
- Begins to respond to encouragement to repeat or modify the task e.g. using more or less toothpaste when brushing teeth (P7ii)
- Recognises the effect of plaque and bacteria on teeth (P8i)
- Brings basic order to results (P8ii)

Teeth P7-8

Objective 2: To explore the process of tooth decay and how to prevent it.

Possible Activities:	Resources:
<p>Class make large model tooth- play dough for the dentine and pulp cavity, string for nerves, red wool for blood vessels and card for the enamel. Use felt pens to show the build up of plaque. Use a blunt knife/ scissors to represent the bacteria and acid attacking the enamel to reveal cavities.</p> <p>Suck on a disclosing tablet or use cotton buds pre-soaked in food colouring and see results in a mirror. Attempt to remove disclosing tablet residue with toothbrush and toothpaste. Time how long it takes and collect class times.</p> <p>Use a video clip about tooth decay and how to stop it.</p> <p>Show pupils how easily teeth stain by placing one boiled egg in water, one if in cold tea and one in cola and leave overnight. Compare the next day and then try to remove the stain by brushing with toothpaste and a toothbrush. Different pupils try different toothpastes and compare results. Which was the best?</p>	<p>2 colours of play dough, string, red wool, card, felt tips, blunt knife. Scissors, disclosing tablets, timer, hard boiled eggs in shells, cola, tea bags and hot water, jars, water, toothbrush and range of toothpastes</p>

Teeth P7-8

Objective 2: To explore the process of tooth decay and how to prevent it.

Optional activities you might like to try include:	Resources:
<p>Pupils make individual model tooth and make a short video clip pointing to , and describing, the different parts of a tooth.</p> <p>Invite a dentist / dental hygienist to speak to the pupils. Try http://www.healthyteeth.org/ if you need a virtual visit.</p> <p>Show pupils images of rotten teeth and healthy teeth to compare. Use pieces of egg shell as model of tooth and put into undiluted squash, plain water and cola. Leave for a week and compare.</p>	<p>Model tooth and video cameras. Local dentist or dental nurse, pictures of rotten teeth (Google images) Internet access, egg shells, undiluted squash, cola , jars</p>
<p>Pupils play snakes and ladders and say “brush your teeth, brush your teeth” when they go up a ladder; and “Decay! Decay!” when they go down a snake. Puppet show about toothpaste, acid and plaque.</p> <p>Read the poem, 'I wish I'd looked after me teeth.' http://www.pamayres.com/index.php/2011/08/oh-i-wish-id-looked-after-me-teeth/</p> <p>Ask pupils to clean teeth and then to stain them with disclosing tablets to see if they have removed all the plaque.</p>	

Teeth P7-8

Objective 2: To explore the process of tooth decay and how to prevent it.

Points to Note:

Pupils might think:

Teeth are solid all of the way through.

Milk teeth fall out because they are rotten.

Safety awareness:

Mirrors can crack.

Disclosure tablets should be sucked and not swallowed.

Clean drinking water available?

Do not swallow toothpaste.

Cotton buds dipped in natural food colourings and left to dry provide a cheaper alternative to disclosing tablets.

Teeth L1-3

Objective 1: To explore different teeth and their jobs.

Descriptions of intended outcomes at different levels of attainment

- Recognises the basic features of different teeth (L1i)
- Use everyday words to describe teeth e.g. flat, pointed, rough (L1ii)
- Communicates simple observations (L1iii)
- Matches the shapes of teeth to their jobs (L2i)
- Presents their findings in an ordered way (L2ii)
- Makes comparison between basic features of teeth in different animals (L2iii)
- Recognises the differences between teeth and links this to the job of the tooth and diet (L3i)
- Uses scientific vocabulary when reporting on what they found out (L3ii)
- Names different types of teeth correctly and explains the difference between milk and permanent teeth (L3iii)

Teeth L1-3

Objective 1: To explore different teeth and their jobs.

<p>Possible Activities:</p>	<p>Resources:</p>
<p>Sort pictures of different processes to the correct tooth, e.g. chewing, biting, predator holding onto prey etc.</p> <p>Look at x rays of teeth and diagrams to see internal structure and different parts of a tooth</p> <p>Use pictures of various animals showing their teeth and ask student to sort into groups based on the type of food which they eat. Introduce terms like carnivore, herbivore.</p>	<p>Pictures of different teeth types and cards with processes, X ray images, range of animal pictures showing teeth</p>
<p>Optional activities you might like to try include:</p>	<p>Resources:</p>
<p>Use colour coded stickers on an animal skull / model human skull to show the types of teeth and their actions.</p> <p>Shout out carnivore / herbivore to video clips from a nature documentary.</p> <p>Look at three x-rays of baby, child and adult teeth. Pupils to place in correct order on a timeline. In baby/ children's teeth x rays the adult teeth can be seen in the jaw</p>	<p>Model human skull / animal skull (try local secondary school or local museum) felt pens and stickers, 3 x-rays (Google images or form local dentist) and blank timeline</p> <p>Nature documentary video.</p>

Teeth L1-3

Objective 1: To explore different teeth and their jobs.

<p>Eat different foods and say what teeth they use e.g. Haribo- chewing; molar. Pizza-biting; carnivore. Garlic bread/ curly whirly- tearing; canine.</p>	<p>Watch an information clip about milk and adult teeth. http://www.youtube.com/watch?v=9EME5fbSML0</p>
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Points to Note:

Pupils may think all teeth look the same and do the same job.

Pupils may have no awareness of what animals eat and may never have watched an animal eat.

Teeth L1-3

Objective 2: To explore the process of tooth decay and how to prevent it.

Descriptions of intended outcomes at different levels of attainment

- Responds to prompts by making simple suggestions on how to find out the worst drinks for teeth or to see if apples help clean teeth (L1i)
- Presents evidence in simple provided templates e.g. table (L1ii)
- Makes suggestions in response to evaluation questions e.g. Could you do it a different way? (L1iii)
- Identifies things to observe or measure that are relevant to the question (L2i)
- Works together on an investigation and pool results e.g. for survey on toothpaste (L2ii)
- Describes how science can help people e.g. developing toothpaste and brushes to remove plaque or adding fluoride to water (L2iii)
- Says what they are keeping the same or changing to make a fair test (L3i)
- Identifies straightforward patterns in observations (L3ii)
- Suggests improvements to their working methods e.g. using piece of egg shell from same egg or using a more accurate timer (L3iii)

Teeth L1-3

Objective 2: To explore the process of tooth decay and how to prevent it.

<p>Possible Activities:</p>	<p>Resources:</p>
<p>Investigate which is the worst drink for teeth. Pupils can plan a fair test. (Use egg shells as teeth and put into various everyday drinks such as milk, apple juice, cordial, coca cola for a week. Carbonated drinks are worse than fruit juice.) Pupils then record their observations and evaluate which drink is the ‘worst’ in terms of decay with justification linking to decay of teeth.</p> <p>Make own toothpaste using recipes from: http://www.google.co.uk/url?sa=t&rct=j&q=&esrc=s&frm=1&source=web&cd=3&ved=0CD4QFjAC&url=http%3A%2F%2Fwww.virtualquarry.co.uk%2Funits%2Funitsci5%2FLesson_2.doc&ei=6DdwUvy5Oc_b7Aa52IHwDw&usg=AFQjCNG0f3IcNiJF545owz_nY5PdheDyRuA&sig2=-ERH30K7Vt8qH_yJRof-Gg</p> <p>Find out what fluoride is added to water/ toothpaste.</p>	<p>Carbonated drinks, squash and fruit juices, egg shells, jars, baking soda, coconut oil, peppermint oil, salt, glycerine, teaspoons, cup to mix in, simple evidence for and against adding fluoride to water e.g. YouTube clips</p>
<p>Optional activities you might like to try include:</p>	<p>Resources:</p>
<p>Plan and carry out a test to compare the effect of different brands of coca cola on egg shell teeth. Is diet cola better for teeth? Vary the ingredients in home made toothpastes and undertake taste trials in other classes. Use throw away tooth brushes or pupils rub over teeth with clean finger. Collect results and present findings about the best toothpaste.</p>	<p>Coca cola – various brands, eggs shells, jars, baking soda, coconut oil, peppermint oil, salt, glycerine, teaspoons, cup to mix in.</p>

Teeth L1-3

Objective 2: To explore the process of tooth decay and how to prevent it.

<p>Ask pupils to clean teeth and then to stain them with disclosing tablets to see if they have removed all the plaque Investigate whether an apple or carrot or chewing gum cleans teeth well Play game on looking after teeth at http://www.childrensuniversity.manchester.ac.uk/learning-activities/science/teeth-and-eating/introduction/</p>	
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Points to Note:

Pupils may think:

That fruit juice is better for our teeth than fizzy drinks.

Acid is only strong and will burn us.

Swallowing hazard of coins, etc.

Raw eggs should not be consumed. Sanitise hands after handling eggs.

Be aware of allergies to ingredients in toothpaste.