

# Animals Including Humans: Tooth Decay Enquiry Part 1

<p><b>Aim:</b> To ask relevant questions and use different types of scientific enquiries to answer them by distinguishing between scientific and non-scientific questions and choosing between types of scientific enquiry.</p> <p>I can ask scientific questions and choose a scientific enquiry to answer them.</p> <p>To set up simple practical enquiries, comparative and fair tests by setting up an enquiry or test to understand what causes tooth decay.</p> <p>I can create an enquiry or test.</p>	<p><b>Success Criteria:</b></p> <p>I can generate questions.</p> <p>I can generate relevant scientific questions.</p> <p>I can suggest an appropriate type of scientific enquiry to answer my question.</p> <p>I can set up a simple enquiry with support.</p> <p>I can make predictions and suggest equipment.</p> <p>I can give clear instructions explaining how to perform a test.</p>	<p><b>Resources:</b> <a href="#">Lesson Pack</a></p> <p>Strips of paper</p> <p>Sticky notes</p> <p>Felt tips or markers</p> <p>Examples of equipment such as jars, toothpaste, types of drinks to be used to support the LA group to write instructions.</p>
	<p><b>Key/New Words:</b> Tooth, decay, questions, scientific, nonscientific, practical enquiries, comparative tests, fair tests, variables.</p>	<p><b>Preparation:</b> <a href="#">Tooth Decay Scientific Enquiry Activity Sheet</a> - per child.</p>

**Prior Learning:** It will be helpful if children have previous experience of asking simple questions and recognising that they can be answered in different ways.

## Learning Sequence

	<p><b>Tooth Decay:</b> Children discuss tooth decay with their partner and what they think causes tooth decay before feeding back to the class. Explore how the children know what causes tooth decay and highlight any answers that link to tests or research.</p>	
	<p><b>Questions!</b> Discuss scientific enquiry. <b>Why do scientists ask questions? Why do they carry out enquiries and tests?</b> Address any misconceptions and encourage children to elaborate on vague ideas (e.g. it's their job, they want to find things out). Explain the difference between scientific and non-scientific questions and demonstrate by supporting the children as they classify questions into categories and justify their reasons. Encourage children to generate questions to test tooth decay. Support the refining of questions by asking children to be specific.</p>	
	<p><b>Types of Enquiries:</b> <b>What types of scientific enquiries are there? Can you give examples of scientific enquiries or tests you have done?</b> Children discuss with partners and feedback to the whole class. Scribe ideas on the board.</p>	
	<p><b>Practical Enquiries:</b> Read the explanation and example of a practical enquiry. Children identify any questions they generated that could be best investigated using a practical enquiry.</p> <p><b>Variables:</b> Using the <a href="#">Lesson Presentation</a>, explain that when carrying out fair and comparative tests, children need to change one variable, while keeping all the other variables the same. There is also a variable which will be measured or observed.</p> <p><b>Carrying Out Fair and Comparative Tests:</b> Using the <a href="#">Lesson Presentation</a>, discuss an example of this kind of scientific enquiry and how it might be planned.</p>	
	<p><b>Testing Tooth Decay:</b> Sort children into ability groups and state that instead of teeth they will be using boiled eggs with shells on as this is similar to enamel on a tooth (alternatively if children have an allergy to eggs then chicken bones or marble chips can be used). Children decide on the question and the type of enquiry or test they will be using before selecting one of the differentiated <a href="#">Tooth Decay Scientific Enquiry Activity Sheets</a>. (You will need to make sure that the correct version is given as there are differentiated sheets for the different types of enquiry).</p> <div style="display: flex; justify-content: space-around;"> <div>  <p>Children select one of the scientific questions generated. Support the children to choose an enquiry, make a prediction, list equipment and write simple instructions to carry out their enquiry or test.</p> </div> <div>  <p>Children select one of the scientific questions generated, make predictions and list equipment. Children write simple instructions for their enquiry.</p> </div> <div>  <p>Children can either choose one of the questions generated or create their own. Children make predictions, list equipment, select the type of test they are going to conduct and write instructions explaining how to carry it out.</p> </div> </div>	



**Testing Tooth Decay Feedback:** Children swap their Tooth Decay Scientific Enquiry Activity Sheets with another group. Using sticky notes, children give two positives and a next step to their partner group. Children revise their enquiry based on the feedback.



#### Taskit

**Diagramit:** Create a diagram explaining what you predict will happen when the boiled egg is placed in different types of liquid, using the [Tooth Decay Prediction Diagram Activity Sheet](#).

**Researchit:** Research the main causes of tooth decay in humans.