## **PLASTIC OCEAN** - Part 1 - Science



Objectives	What Are Germs?	Extra Information
L.O: To Understand What Germs Are And How Washing Hands Can Prevent Their Spread.	<ul> <li>GUIDANCE – This lesson is part of an ongoing class project, in which the class can monitor results of the experiment over time. This lesson is also best done after a break period, when most of the students' hands may be dirty.</li> <li>STARTING ACTIVITY - (10 minutes)</li> <li>GROUP DISCUSSION - Begin the lesson by asking the class if they know why they're supposed to wash their hands after going to the bathroom or before handling food. Acknowledge any mention of Germs or Bacteria/Viruses and explain that we wash our hands to avoid getting sick from harmful Germs. Ask the class if they know what Germs, Bacteria or Viruses are.</li> <li>Explain to the class that Germs are most commonly Bacteria or Viruses which themselves are Microscopic Organisms (Microorganisms), or Organisms so small that they are too small to see with the Naked Eye (without the use of a microscope or other magnifying device). Tell the class that Germs live on almost every surface and come in many varieties, some are harmful, some are helpful and most are completely harmless.</li> <li>MAIN TEACHING - Germs Loafing About (45 minutes)</li> <li>Explain to the class that they will be performing a simple experiment to see why washing their hands is important.</li> <li>Take a slice of bread and rub the palm of your hand all over the surface.</li> <li>Place this slice in a ziplock bag and label it "Unwashed".</li> <li>Wash your hands for 10 seconds using just water and rub your hand on another slice of bread.</li> <li>Place this slice in a ziplock bag and label it "Water only".</li> <li>Wash your hands again, this time for 30 seconds and use hand soap.</li> <li>Place this slice in a ziplock bag and label it "Soap".</li> </ul>	<ul> <li>Materials Required:</li> <li>Sliced Bread</li> <li>Ziplock Bags</li> <li>Marker Pens</li> <li>Running Water</li> <li>Hand soap</li> <li>Gloves</li> <li>Key Words:</li> <li>Germs</li> <li>Bacteria</li> <li>Viruses</li> <li>Microscopic</li> <li>Organism</li> <li>Microorganism</li> <li>Naked Eye</li> <li>Control</li> <li>Fungi</li> <li>Success Criteria:</li> <li>I can perform a simple experiment to demonstrate germs.</li> <li>I understand the importance of controls in experiments.</li> <li>I understand that there are good and bad germs, but understand the importance of washing my hands regularly.</li> </ul>

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	<ul> <li>Take a slice of bread (if possible whilst wearing gloves) and put it straight into a ziplock bag, labelling it "Control".</li> <li>(optional) Take a slice of bread and rub it on a surface (e.g. table, keyboard etc.) and put it in an appropriately labelled ziplock bag.</li> <li>(optional) repeat step 8 as many times as you wish.</li> <li>(optional) repeat step 8 as many times as you wish.</li> <li>Insure all ziplock bags are sealed and labelled, then display them somewhere in the class and monitor them daily for changes.</li> <li>Explain to the class that the bread they have used acts as food for any Germs that stick to it, the more Germs that have stuck to the bread, the mouldier we can expect the bread to get over time.</li> <li>GROUP DISCUSSION – Ask the class why they think it is necessary to have the Control bread. Explain that when performing any experiment it is important to get a baseline result to compare against, that without having a Control to compare with, there is no way of knowing whether our results are abnormal or not.</li> <li>PLENARY – (6 minutes)</li> <li>GROUP DISCUSSION – Ask the class if they can think of any good Germs. Explain that yeast is a naturally occurring Fungi (some of which can be considered Germs), that helps us make many things such as bread. There are also a number of good Bacteria that live inside us and help us stay healthy.</li> <li>GUIDANCE – For some students, the topic of germs and their presence around us may cause anxiety, which in some cases can manifest in OCD and similar disorders. Where possible reassure the class that most cases can manifest in OCD and similar disorders. Where possible reassure the class that most germs are absolutely harmless. If symptoms of anxiety persist, refer to your SENCe for advice.</li> </ul>	