
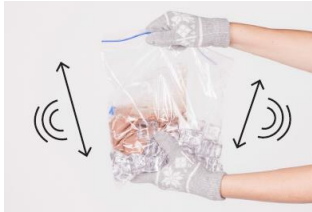


<p><b>Example topic:</b> Changing materials</p>	<p>Primary 3/4 Age 6-8 years</p>	<p>Activity title: Making ice cream</p>
<p><b>Science skill focus</b> Observation</p>	<p><b>Curriculum link: Change over time</b> Cooling (or mixing) materials can be used to bring about change (CoT1)</p> 	
<p><b>Progression Focus</b></p> <ul style="list-style-type: none"> <li>• Can children describe and explain their observations?</li> <li>• Can children compare the properties of materials over time?</li> </ul>		
<p><b>Activity</b></p> <p>Briefly discuss the difference between the properties of milk and ice cream. How could liquid milk be made into more of a solid like ice cream? Not going to use a freezer today, using salt and ice (salt lowers freezing point, the melting ice takes energy from the milk, causing the ice crystals to form in the milk). Follow instructions to make ice cream using ice and salt to cool the milk/shake (large ziplock bag of ice and salt, put small ziplock bag of milkshake inside, shake/manipulate for 5mins. See: <a href="https://learning-resources.sciencemuseum.org.uk/resources/instant-ice-cream/">https://learning-resources.sciencemuseum.org.uk/resources/instant-ice-cream/</a> ). NB. Wear gloves when shaking and manipulating bag. Ask the children to use their senses to describe and explain how the milk/shake has changed.</p> <p><b>Adapting the activity</b></p> <p><b>Support:</b> Photograph before /after. Scribe descriptive words in vocabulary bank. <b>Extension:</b> Take temperature of milkshake and record. Label properties of materials at each stage. <b>Other ideas:</b> Create picture steps or recipe for ice cream (recording and communicating follow up). Compare to shop-bought ice cream.</p> <p><b>Questions to support discussion</b></p> <ul style="list-style-type: none"> <li>• How would you describe the milk at the beginning? What are its properties?</li> <li>• What do you think will happen to the milk?</li> <li>• What can you see happening to the milkshake?</li> <li>• What does the ice cream feel, taste, smell, look like?</li> <li>• How is the milk different?</li> <li>• How has the temperature changed?</li> <li>• Did everyone's mixture change at the same time?</li> <li>• Is the change reversible?</li> </ul> 		
<p><b>Pupil learning indicators</b></p> <p><b>Not fully achieved:</b> Pupils describe simply how the milk/ice cream looks/tastes e.g. <i>hard, cold, lumpy</i>. They do not yet use many scientific or comparative terms and find it difficult to explain how the milk is different.</p> <p><b>Achieved:</b> Pupils observe closely and describe using scientific language such as: solid, liquid, solidify, melt. They compare the materials over time and explain how the materials have changed e.g. <i>the milk turned into a solid when it got cold enough; the ice is really melting now so we might need to put it back in the freezer to turn it back again</i>.</p> <p><b>Exceeded:</b> Pupils may consider how their observations link to real life e.g. the effect of salt on icy paths. Pupils may try to link their observations to explanations in terms of reversible, irreversible, ice crystals or particles. Pupils may predict the effect of altering the amount of salt/ice/milk used.</p>		