

LESSON PLAN: 2nd year – 18th Lesson/May'19

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| <p>TITLE</p>           | <p>How do electric kettles work?</p> <div data-bbox="355 464 761 974" data-label="Diagram"> <p>The diagram illustrates the thermos-kettle concept. It shows a kettle with a lid. An upward arrow labeled 'Heat' points from the 'Element' at the bottom towards the water. An upward arrow labeled 'Steam' points from the water surface towards the 'Lid'. A double-headed vertical arrow between the lid and the body is labeled 'Body insulation would prevent heat from escaping'.</p> </div> <div data-bbox="764 653 1276 978" data-label="Image"> <p>A photograph showing three electric kettles on a yellow surface. From left to right: a black kettle, a glass kettle with water inside, and a silver kettle. All three kettles have steam rising from their spouts, indicating they are boiling water.</p> </div> |
| <p>THEME</p>           | <p>Science/Engineering</p>  |
| <p>GRADES</p>          | <p>5<sup>th</sup> and 6<sup>th</sup> Grades</p>   |
| <p>DURATION</p>        | <p>45'</p>  |
| <p>REALIA-MATERIAS</p> | <ul style="list-style-type: none"> <li>● <b>Electric kettle</b></li> <li>● <b>Interactive board</b></li> <li>● <b>Note pads</b></li> <li>● <b>How do electric kettles work? - Kitchen Appliance Explained</b> <ul style="list-style-type: none"> <li>○ <a href="https://www.youtube.com/watch?v=wyYoE4fXKbE">https://www.youtube.com/watch?v=wyYoE4fXKbE</a></li> </ul> </li> <li>● <b>Heat Transfer in Electric Kettle</b> <ul style="list-style-type: none"> <li>○ <a href="https://www.youtube.com/watch?v=-nq5imM4EiE">https://www.youtube.com/watch?v=-nq5imM4EiE</a></li> </ul> </li> </ul>   |
| <p>OBJECTIVES</p>      | <p>Through the lesson, pupils will be able:</p> <ol style="list-style-type: none"> <li>1. To notice that the boiling procedure happens because of the coil which is at the bottom of the kettle.</li> </ol>   |

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|             | <ol style="list-style-type: none"><li>2. Also, to find out that some kettles have a plate at their bottom but the principle is the same.</li><li>3. Pupils will notice that the coil and the heating element is connected to the electricity and when plugged the kettle will start working.</li><li>4. Pupils will find out that the water next to the heating element is hotter, rises while the cold water falls down to take its place.</li></ol> |
| DESCRIPTION | Pupils will be shown two videos showing the function of the kettle. They will also be told - while watching – about the molecules motion.   |
| EVALUATION  | <p>At the end of this one-hour presentation, pupils should be able to describe the way that kettles work.</p> <p>They will also be able to explain why we have this particular motion of the molecules.</p>   |