Aim: Investigates the effects of different conditions on yeast fermentation.

Equipment
- 5 test tubes (or small plastic bottles)
- 5 balloons
- 5 beakers (or glasses)
- 5 x 5ml spoons fresh or dried yeast
- Kettle
- Sugar
- Ice cubes
- 5 labels

Method
1. Label the 5 test tubes, e.g. A, B, C, D and E.
2. Stand each test tube into a beaker.
3. Add the following to each test tube and beaker:

<table>
<thead>
<tr>
<th>Sample</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>In tube</td>
<td>1 x 5ml spoon yeast</td>
<td>1 x 5ml spoon yeast</td>
<td>1 x 5ml spoon yeast</td>
<td>1 x 5ml spoon yeast</td>
<td>1 x 5ml spoon yeast</td>
</tr>
<tr>
<td></td>
<td>1 x 15ml spoon boiling water</td>
<td>1 x 5ml spoon sugar</td>
<td>1 x 15ml spoon ice cold water</td>
<td>1 x 5ml spoon sugar</td>
<td>1 x 15ml spoon warm water</td>
</tr>
<tr>
<td></td>
<td>1 x 5ml spoon sugar</td>
<td></td>
<td>1 x 5ml spoon sugar</td>
<td></td>
<td>1 x 5ml spoon sugar</td>
</tr>
<tr>
<td>In beaker</td>
<td>Boiling water</td>
<td>Warm water</td>
<td>Ice cold water</td>
<td>Warm water</td>
<td>Warm water</td>
</tr>
</tbody>
</table>

4. Place a balloon over the end of each test tube.
5. Sample E is the control – it has water, heat and food.
6. Leave the samples for 10-15 minutes – watch the samples in this period, noting any changes.
7. What happened to each sample, compared to the control (sample E)?
8. What conclusions can be drawn from this experiment?