Task 2: Experiment to investigate gluten content of different types of flour.

**Range of flours e.g.**
- Strong plain white flour
- Self-raising flour (all-purpose white)
- Plain flour
- Corn flour
- Wholemeal flour

**Method**
1. Weigh 125 g of each of the flours into small bowl/beaker, mix each sample with water to make a stiff dough/paste ball.
2. Knead for a few minutes
3. Put each ball into a muslin or J cloth, tie with small rubber band/tie. Wash carefully under a slow stream of running water (at first the water draining away will be milk covered), whilst kneading between your hands
4. Collect some water draining away and test with a few drops of iodine solution. If the purple drops of iodine turn black, starch is still present. If so continue washing dough until no dark colouration appears.
5. Squeeze excess water out of the remaining gluten ball.
6. In a table record the size and weights of the gluten balls.
7. Place the balls on a greased baking tray and bake in a hot oven (200°C) for approximately 15 mins until golden brown. Take some photos of each sample.
8. Write the methods, results in the form of a chart with sizes and conclusions that you have drawn from the results.
9. What does this tell you about the different flours?
10. Compare your results with a bought starch reduced roll.

**Extension activity:** Weigh each sample.

Calculate the % of gluten in each sample:

Sample of flour, the original weight = 125 g
Gluten ball weight after baking = \( X \) g

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\text{% gluten in flour} = \frac{X}{125} \times 100
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Good link for further information:
http://www.exploratorium.edu/cooking/bread/bread_science.html