

## **AFRICAN INSTITUTE FOR MATHEMATICAL SCIENCES**

### SCHOOLS ENRICHMENT CENTRE (AIMSSEC)

#### TEACHER NETWORK

# **CHOCOLATE**



Your Granny bought a bar of chocolate marked into 32 pieces and weighing 180 grams.

How many pieces make half the chocolate bar?

How many pieces make one quarter?

What fraction of the bar is one piece of chocolate?

She gave you and your sister 2 pieces each to eat. What fraction have you and your sister eaten?

How many pieces are left? What fraction of the bar is that?

Granny needs 90 grams of chocolate to make a birthday cake for you. How many pieces of chocolate will she use and how many pieces will be left over? What fraction of the bar is left?

Will there be enough chocolate left for the six members of your family each to eat 2 pieces of chocolate and if so will there be any chocolate left after that?

Now make up your own story about the chocolate in which you ask some questions about fractions and the masses of some of the pieces.

Help								

Use this diagram for counting the pieces and marking in the fractions.

#### **Ingredients for 15 cupcakes**

3 eggs caster sugar margarine or unsalted butter self raising flour 55g cocoa powder

## **Extension**

Here is a recipe for chocolate cupcakes for 15 people. Read the instructions. What ingredients would you need to make enough cakes for your whole class? You will need to weigh your eggs to find out how much sugar, margarine and flour to use.



- 1. Weigh your three eggs with their shells. Take that weight and measure the same amount each for the sugar, margarine and flour. Weigh the flour last. (For example, if the eggs weigh 200g, then the flour should weigh 200g, the sugar 200g and the same for the margarine.)
- 2. For the flour, remove 55g from the weight you measured to match the weight of the 3 eggs. Instead of the flour add 55g of cocoa powder. Combine the flour and cocoa.
- 3. Preheat the oven to 170 C / Gas 3. Put paper cases into a patty pan or grease the pan so the cupcakes will come out easily.
- 4. Put all of the margarine and sugar into a large mixing bowl. Cream together until pale, creamy and fluffy.
- 5. Crack the eggs into a bowl and add to the margarine/sugar mixture and stir to mix in.
- 6. Sieve a couple of tablespoons of flour-cocoa mixture at a time into the mixing bowl with the other ingredients and beat to get air into the mixture to make the sponge lighter.
- 7. Divide the mixture evenly between the cupcake cases.
- 8. Bake in the preheated oven for 10 minutes. To make sure the cakes are cooked, use your fingers to very lightly press on the top of a cupcake. It should feel spongy and spring back up. If not the cup cakes may need a few more minutes in the oven.