|  |
| --- |
| **Activity title** |
| **Edible snowmen** |
| **Stay safe** |
| Whether you are a scientist researching a new medicine or an engineer solving climate change, safety always comes first. An adult must always be around and supervising when doing this activity. You are responsible for:    • ensuring that any equipment used for this activity is in good working condition  • behaving sensibly and following any safety instructions so as not to hurt or injure yourself or others    Please note that in the absence of any negligence or other breach of duty by us, this activity is carried out at your own risk. It is important to take extra care at the stages marked with this symbol:⚠ |
| **Time required** |
| 30 minutes to 1 hour |
| **Activity summary** |
| We might not always get snow at Christmas but that doesn’t have to mean you can’t build a snowman! In this super easy challenge, we are going to make and decorate some delicious rice crispy snowmen. |
| **What equipment will you need?** |
| * 90g puffed rice cereal * 150g mini marshmallows * 22g butter * Chocolate buttons, chocolate chips, sprinkles and fruit rolls to decorate * Kitchen scales * Saucepan or microwave * A tub of readymade butter icing   And have an adult to help. |
| **How to do it** |
| **Step 1**  We need to **measure** our **ingredients** carefully to make sure that our recipe works! Our first job is to use **kitchen scales** to weigh out 150g of mini marshmallows. You can use normal sized marshmallows - but they’ll just take a bit longer to melt.  **Step 2**  Now measure 22g of butter.  **Step 3**  Measure 90g of puffed rice cereal and place it to one side.  **Step 4**  Melt the butter in the saucepan on a medium heat and add the marshmallows – keep stirring so the mixture does not burn until the marshmallows have all melted. You can also use the microwave to heat the butter and marshmallows.  **Step 5**  Turn off the heat and stir in the puffed rice cereal. Mix it all together so the cereal is well coated.  **Step 6**  Leave the mixture for around 30 minutes until it has cooled down but is still sticky.  **Step 7**  Lightly grease your hands (using the left-over paper from your butter is a good way to do this) and scoop some of the mixture into your hands and roll it into balls.  **Step 8**  You can now construct your snowmen by placing two balls together. The mixture should be sticky enough to hold them, if not a dab of butter icing can help.  **Step 9**  You can make a scarf for your snowman with lengths of the fruit loop, and decorate with the chocolate chips and sprinkles and anything else you like – and get ready to enjoy!  **Well done – you’ve cracked the Christmas challenge!** |
|  |
| Recipes like the one we’ve just tackled often specify exact amounts of **ingredients** – but do you ever wonder why? And does it really matter at all? |
| **Here’s the science** |
| For some recipes like soup, the exact amount of **ingredients** might not matter too much. You might prefer a vegetable soup with lots of lentils, but someone else might prefer plenty of peas – the ingredients for recipes like these depend on preferences.  But with other recipes such as cakes and bread it’s very important to get the amounts right. That’s because to create a fluffy sponge or a risen loaf a **chemical change** has to take place and the change depends on there being the right amounts of each ingredient.   * Too much butter in a cake and it will be flat instead of fluffy. * Too much flour and your cookies will be too crumbly. * Not enough yeast in bread will mean it just won’t rise. * In our challenge if we had used too much butter or not enough sticky marshmallows the rice crispies wouldn’t stick together and so we wouldn’t be able to mould the mixture into balls. |
| **How to measure ingredients** |
| Part of our challenge was to **measure** out the butter, marshmallows and puffed rice. Sometimes we can look at the packet to see the ingredient’s weight but more often than not we use kitchen scales. These come in two types:  **Mechanical scales** – these have a plate for the weights and a removable bowl for the ingredients. You have to make sure the needle in the centre is level before you start and you have the correct amount of ingredient when the needle is level again.  **Electronic scales** – these are powered by batteries and usually have just one flat plate or removable bowl to place your ingredients on. The weight is shown on a digital display.  There are also a number of other ways to measure out ingredients. Measuring jugs have a scale on the side to help you add the right amount of liquids and measuring spoons can help with smaller amounts.  **How many objects can you see in your kitchen that are used for measuring?** |