





## Where is chocolate made?

The main manufacturers of chocolate in the world are the UK, USA, Switzerland, The Netherlands, Malaysia, Germany and Belgium.

Use your map from last week to find these countries and colour them in.

What do you notice about where these countries are?

Are they far away from where the cocoa farms are?

How do you think the cocoa beans are transported to these countries?

## How is chocolate made?

Use these links to research the steps involved in making chocolate.

<https://www.rainforest-alliance.org/pictures/chocolate-from-bean-to-bar>

[https://www.youtube.com/watch?v=4vXb8Tt\\_VCU](https://www.youtube.com/watch?v=4vXb8Tt_VCU)

<https://www.youtube.com/watch?v=fiMjr3Rwdjs>

<https://www.youtube.com/watch?v=xVyobAM-MFE>

Using the information you have learned, try to write a sentence to describe what is happening in each of the pictures on the next page.

Then complete the flowchart to show the steps involved in making chocolate.

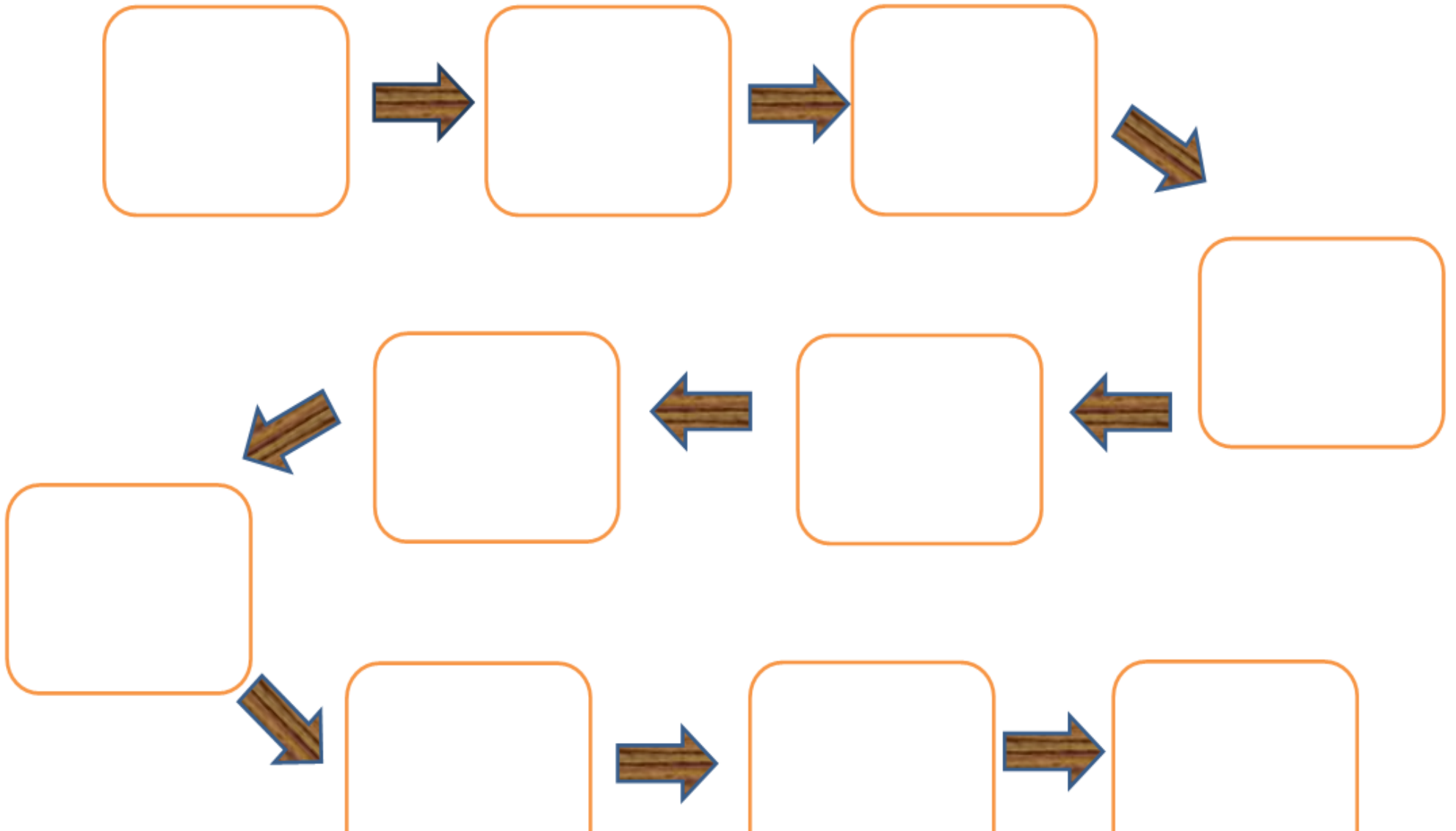
I can explain how chocolate is made



I can explain how chocolate is made

How chocolate is made

*Can you put the events in order and write a short explanation for each?*



# Science Task



What is chocolate made of?

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Is it good or bad for us? Explain your thoughts.

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Look at the nutritional information on a chocolate bar wrapper.

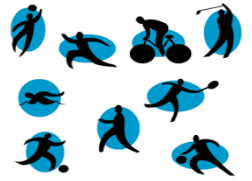
Typical values per 100 grams	
Energy	525 kilocalories
Protein	5.4g
Carbohydrate	60g
of which Sugar	59g
Fat	29g
of which Saturated Fat	17.5g
Fibre	2.2g
Sodium (salt)	0.06g

Complete this table to show the nutritional value of your bar.

Name of chocolate bar \_\_\_\_\_ Weight \_\_\_\_\_ g


The main ingredients are **sugar** and fat but how much sugar and fat do we need every day? Explore what you need here:

[www.bbc.co.uk/northernireland/schools/4\\_11/uptoyou/healthy/nutrientfacts5.shtml](http://www.bbc.co.uk/northernireland/schools/4_11/uptoyou/healthy/nutrientfacts5.shtml)



## **Burning off Energy**

A chocolate bar provides you with a lot of energy. If your body released this energy instantly, you would explode like a stick of dynamite. But this doesn't happen because your body burns the energy off slowly, doing all the things it needs to do to keep you alive and working properly.

The amount of energy you need depends on many things including how much exercise you do. Your body is using energy all the time – even when you are asleep.

Watch this clip to find out how long it takes to burn off the energy from a chocolate bar:

[https://www.youtube.com/watch?v=cF4\\_hEsva8Y](https://www.youtube.com/watch?v=cF4_hEsva8Y)

Time taken to eat a chocolate bar: 1 minute

Time taken to burn off  
the energy from a  
chocolate bar:

Running – 14 minutes

Walking – 52 minutes

Skipping – 25 minutes

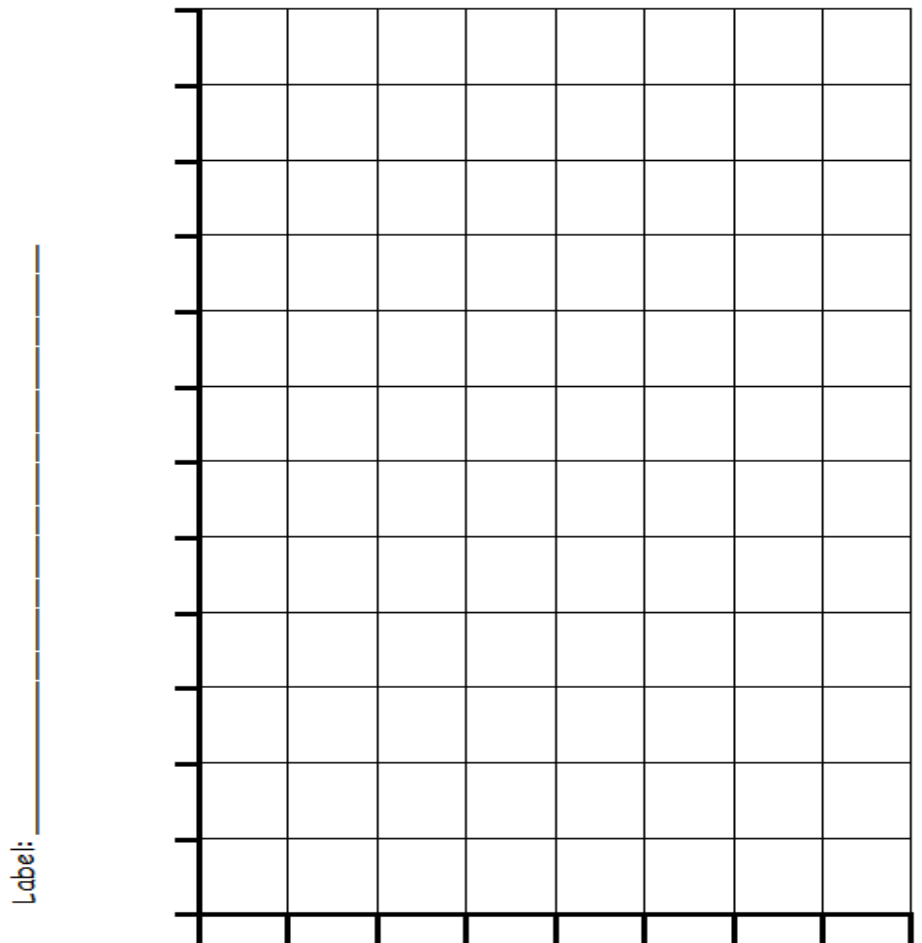
Swimming – 24 minutes

Football – 30 mins

Sleeping – 5 hours

Can you show this  
information on the  
bar chart?

A bar graph to show \_\_\_\_\_



Label: \_\_\_\_\_

Now, if you are allowed to eat the chocolate bar choose an activity (not sleeping!) and work off the energy in that bar using the data given. E.g. choose to play football for 30 minutes or do 25 minutes skipping.

**Then answer the following questions:**

1. If you had to do amount of exercise every time you ate a chocolate bar would you think more carefully about eating a chocolate bar? Explain why.

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2. If you were going to run a marathon, would it be better to eat a chocolate bar before or after you ran the marathon?

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3. Why is it important to balance chocolate-eating with activity?

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4. What happens to the energy you don't burn off?

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5. Is it a good idea to eat chocolate at bedtime? Why?

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6. How can we enjoy chocolate as part of a healthy diet?

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