

## Reading

### Unit 4 - Tuesday

All use the same text.

Choose some words and find their meaning.

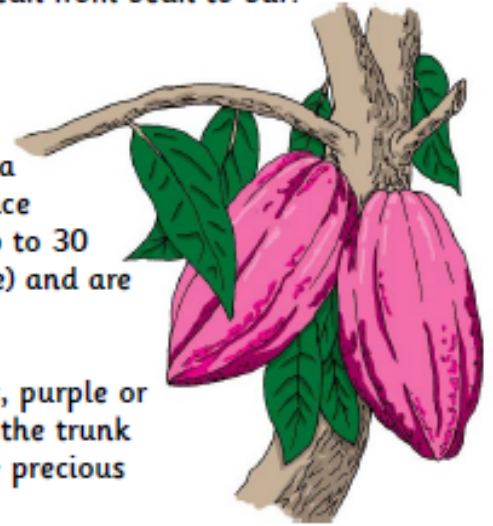
use the answers later to help you understand the words in the text.

## Chocolate – From Bean to Bar

Have you ever wondered where your favourite chocolate bar comes from? Well, it all begins with the **humble** cocoa bean. It must travel many miles and go through lots of complex processes before it starts to **resemble** the delicious chocolate bar you can buy from your local shop. Follow the eight different stages of production and track the journey of the cocoa bean from bean to bar.

### Stage 1 – The Trees:

The journey begins with the cacao tree or *Theobroma Cacao*, which is unsurprisingly translated as 'the food of the gods'. The trees grow in Countries with hot, damp climates, such as Ghana in Africa and Brazil in South America – in fact they can be grown in any place within 20 degrees latitude of the equator. Cocoa trees can grow up to 30 feet (this is actually quite short for trees which grow in this climate) and are usually about five years old before it begins to flower.



Cocoa pods can be a wide variety of colours, such as green, yellow, purple or orange. As well as growing on branches, the pods can sprout from the trunk of the tree itself, which looks quite **bizarre!** Inside each pod are the precious cocoa seeds – the source of that special chocolate taste.

With a great effort, cocoa farmers use hand tools to harvest ripened cocoa pods. They use a machete to slice ripe pods from the trees and tirelessly gather them into baskets. This type of work is time-consuming and physically **taxing**. As well as this, the trees are at risk from damage and disease. Life can be pretty tough for a cocoa farmer of which there are over 2 million in the world. Because of this, special Fairtrade Co-operatives have been set up to support cocoa farmers and their families. This ensures they get a better deal and a fair price for all of their hard work.

### Stage 2 – The Beans:

After the pods have grown to the appropriate size, the farmers begin the dangerous task of splitting open the pods with their machetes and scooping out the pulp-covered cocoa seeds **manually**. Cocoa pods have tough skins and it can take two or three blows with a machete to open one up. Each pod can contain between 30 and 40 cocoa beans. A skilled worker can hack up to 500 pods in one hour – now that sounds like hard work! Once collected, the farmers pile these seeds under banana leaves to ferment in the hot sun. This causes the seeds to heat up naturally, triggering chemical changes that alter the look and flavour of the seeds. Eventually, they turn a rich dark brown and begin to taste like bitter chocolate.



Farmers then need to dry the fermented cocoa seeds in the sun and do so on rooftops, tables or large mats. Drying cocoa seeds prevents them from becoming **compromised** during shipping. As the weather is so warm in equatorial countries, the seeds will be thoroughly dry in about ten days. To ensure they dry evenly, farmers spend time turning the seeds during the drying process.

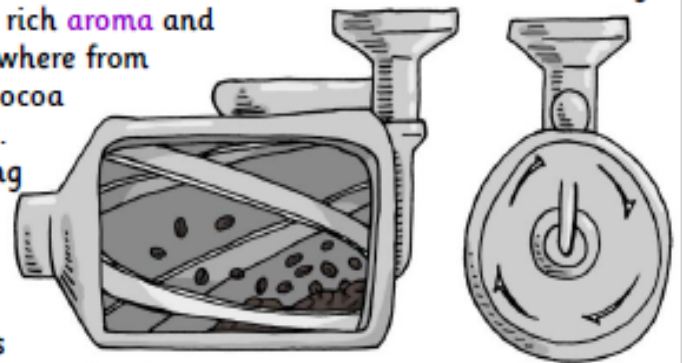
### Stage 3 – The Trade:

Once the seeds have dried, farmers transfer the seeds into sacks and then take them to be weighed and **scrutinised** by the buyers. When the purchase of their goods is complete, the beans are eventually loaded onto container ships. At this stage, farmers who belong to a Fairtrade Co-operative are guaranteed a fair price for their product. This means that these farming communities can cover their costs and plan for the future. Members of a Fairtrade Co-operative also have a say in how their product is produced and sold.

#### Stage 4 – The Factory:

After they have been packed on to the ships, the beans are sent all over the world to places including the USA and UK. On arrival, the beans are then sorted and cleaned and eventually pasteurised to ensure that all of the **impurities** are removed. The beans are then roasted in revolving gas-fired ovens which is when the seeds release their rich **aroma** and wonderful flavour! The roasting process can last anywhere from thirty minutes up to two hours. When finished, the cocoa shells are rather **brittle** and then need to be removed. The beans are passed over vibrating trays whilst being hit with a breaker arm in a machine called a kibbler.

Next, they are put through the winnower where the giant fans blow them away. What remains are the cocoa nibs: these are the tasty centres of cocoa seeds that eventually become chocolate. Now the nibs are ready for the mill. Heavy metal discs do the work, grinding the nibs into a thick paste that will eventually become chocolate. The grinder needs to generate enough friction and heat to **liquefy** the nibs into the thick paste called chocolate liquor (non-alcoholic of course). Some chocolate liquor is then pressed to remove the cocoa butter and further processing turns it into cocoa powder.



#### Stage 5 – The Mixer:

To make chocolate, manufacturers then blend the unpressed chocolate liquor with condensed milk, sugar, and extra cocoa butter. Special mixers churn the liquor and mix the ingredients together after they have been combined. These are all mixed for a few hours until it becomes a coarse brown dough called chocolate crumb. When this crumb has been created, it then needs to be refined. Giant steel rollers do the job of smoothing out the gritty mixture. The rollers break down the tiny **particles** of milk, cocoa and sugar so it has a smooth and creamy texture.

#### Stage 6 – The Shape:

Once the chocolate has been made, what happens next depends on the type of chocolate that is being created. The creamy chocolate can be poured into moulds of various shapes and sizes, from bars to buttons or even covering a delicious centre. Quality checks are then completed before packaging: **ingenious** pieces of machinery can check each chocolate for its appearance, shape and weight. Any products which do not meet the standards are **discarded**.



#### Stage 7 – The Packaging:

Each chocolate is then wrapped, packed and sent to shops all around the world. The packaging of a particular product is of **vital** importance: some brands can be instantly recognised by their packaging. Can you think of any examples? And don't forget that any products made using Fairtrade cocoa beans will be able to display the Fairtrade symbol. Remember to use your power as a **consumer** when purchasing products in the future: Fairtrade products ensure that the farmers get a fair deal.

#### Stage 8 – Eat!:

The final stage is you! Happy eating!

So next time you tuck in to your favourite chocolate bar, just think about the many process it has gone through to turn it from bean to bar.

Chocolate – From Bean to Bar – Vocab 1

Write the meaning of each of these words.

humble \_\_\_\_\_

resemble \_\_\_\_\_

bizarre \_\_\_\_\_

taxing \_\_\_\_\_

manually \_\_\_\_\_

compromised \_\_\_\_\_

scrutinised \_\_\_\_\_

impurities \_\_\_\_\_

aroma \_\_\_\_\_

brittle \_\_\_\_\_

liquefy \_\_\_\_\_

particles \_\_\_\_\_

ingenious \_\_\_\_\_

discarded \_\_\_\_\_

vital \_\_\_\_\_

consumer \_\_\_\_\_

# Answers

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Write the meaning of each of these words.

humble – modest; low in rank; insignificant

resemble – to be like or similar to something else

bizarre – unusual in appearance or style

taxing – tiring

manually – completed by hand

compromised – flawed; having imperfections

scrutinised – to examine in detail

impurities – something that causes a product to be flawed or imperfect

aroma – a smell

brittle – easily damaged or destroyed; breaking easily

liquefy – to make or become a liquid

particles – a very small fragment

ingenious – clever

discarded – thrown away; not used; got rid of

vital – important

consumer – a person who uses or eats a product