



YORK COCOA WORKS

The Chocolate Making Process from Cocoa Bean to Chocolate Bar

The chocolate making process is a long journey that connects from cocoa farming communities in the tropics through to chocolate factories and consumers that are often in very different parts of the world.

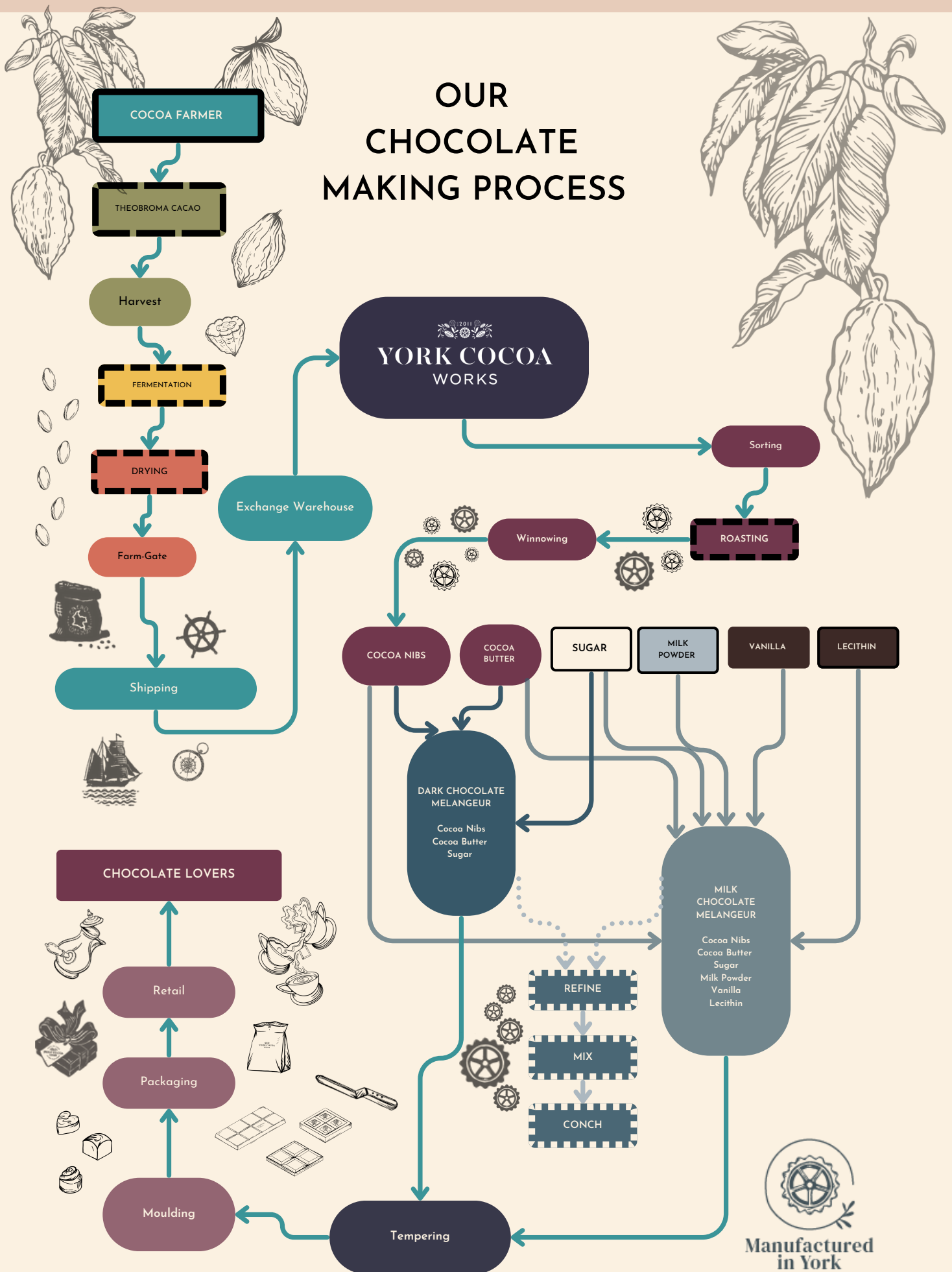
Cocoa Beans originated deep in the Amazon Rainforest with 2 varieties, today there are more than 33,000 varieties of cocoa that are cultivated in more than 50 countries around the world.

At York Cocoa Works we explore the different qualities, flavours and communities that grow cocoa through the chocolate that we make.



The Chocolate Making Process from Cocoa Bean to Chocolate Bar

OUR CHOCOLATE MAKING PROCESS



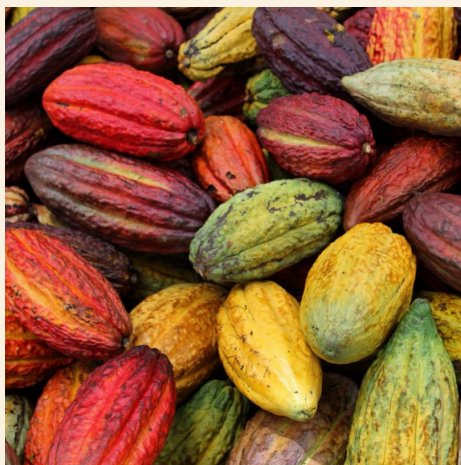
The Chocolate Making Process from Cocoa Bean to Chocolate Bar

The chocolate industry has historically been made up of lots of participants that move the cocoa and help with the transformation. York Cocoa Works has built shorter supply chains, often sourcing cocoa beans directly from farming communities so that farmers can be paid better and develop more sustainable farming practices.



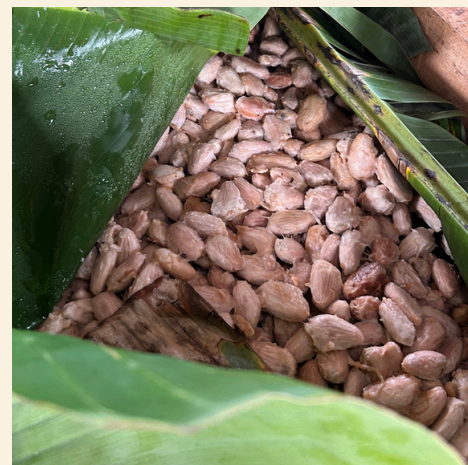
GROWING COCOA

Cocoa trees grow in tropical environments underneath the main canopy of the Rainforest so they can enjoy the right balance of sunshine, shade and rainfall.



HARVESTING COCOA

Ripe cocoa pods are carefully cut from the trees by hand. The pods are cracked open, and the beans, surrounded by juicy, sweet white pulp, are scooped out.



FERMENTATION

Beans and pulp are heaped in wooden boxes for 5-8 days. Heat and bacteria break down the pulp, killing the bean and developing crucial chocolate flavour precursors.



DRYING COCOA

Fermented beans are spread thinly, often under the sun, for up to two weeks. This stops fermentation, reduces moisture, and preserves the developed flavour.



ROASTING COCOA

Beans are heated in ovens to sterilise them and dramatically deepen the flavour profile, converting flavour precursors into the aroma we recognise as chocolate.



WINNOWING

Roasted cocoa beans are cracked, and the winnowing machine separates the light, brittle outer husk (shell) from the heavy, inner pieces known as cocoa nibs.

The Chocolate Making Process from Cocoa Bean to Chocolate Bar



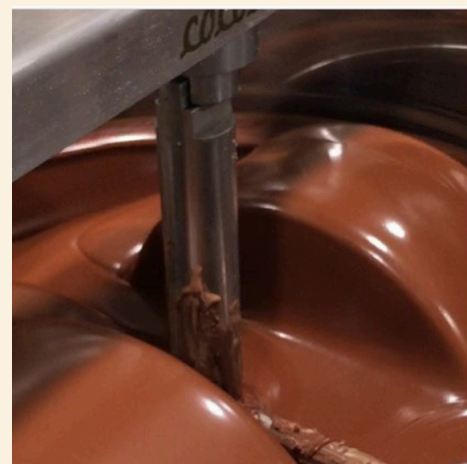
GRINDING & REFINING

The cocoa nibs are ground continuously, causing the natural cocoa butter to melt and create a smooth, thick liquid paste called cocoa liquor or mass.



MIXING

Cocoa liquor is combined with other ingredients like sugar, extra cocoa butter, and sometimes milk powder. This creates the initial chocolate formula.



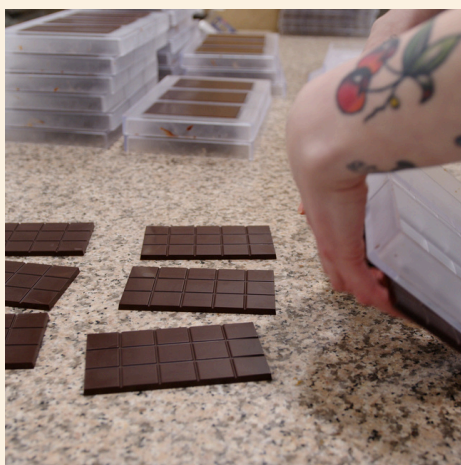
CONCHING

The chocolate is stirred and heated for hours in the conching process. This refines the texture, removes volatile acids, and improves the melt and final flavour profile.



TEMPERING

The finished liquid chocolate is precisely heated, cooled, and reheated to stabilise the cocoa butter crystals, resulting in a shiny look and a perfect snap.



MOULDING

Perfectly tempered chocolate is poured into moulds, vibrated to eliminate air bubbles, and allowed to cool and solidify into the beautiful finished bars.



PACKAGING

Our chocolate is packed in biodegradable, air-tight packets to protect flavour of the chocolate from picking up other flavours and being as sustainable as possible.

At York Cocoa Works we are proud bean-to-bar chocolate makers to ensure quality and transparency. We work with our farmers and traders to source high quality cocoa from around the world, to craft our chocolate with care and attention. We're passionate about sharing our chocolate making process, honouring York's chocolate legacy and celebrating outstanding cocoa.

Activities

1 - Learn more about the chocolate making process at York Cocoa Works. Watch online:
<https://youtu.be/vnPko7T1zcQ?si=UbPsxFTyX7Q4SvVe>



2 - Map the chocolate making process with the attached activity sheet - **Activity Sheet A**

3 - Explore the Chocolate Making Process with all of the senses with our Group Cocoa Learning Pack.

Purchase online:

www.yorkcocoahouse.co.uk/products/group-cocoa-learning-pack

4 - Conduct your own chocolate tasting using chocolate bars from different makers and countries and explore the flavour of the chocolate using the attached tasting process and flavour map. - **Activity Sheet B**

5 - Explore the flavours of cocoa with different chocolate samples with our Group Chocolate Tasting Pack.

Purchase online:

www.yorkcocoahouse.co.uk/products/group-cocoa-learning-pack

6 - Craft your own chocolate lollipop with a choice of toppings. Watch online:
<https://youtu.be/vnPko7T1zcQ?si=UbPsxFTyX7Q4SvVe>



7 - Learn how to craft your own chocolate treats with our Group Chocolate Making Kit.

Purchase online:

www.yorkcocoahouse.co.uk/products/group-chocolate-making-kit

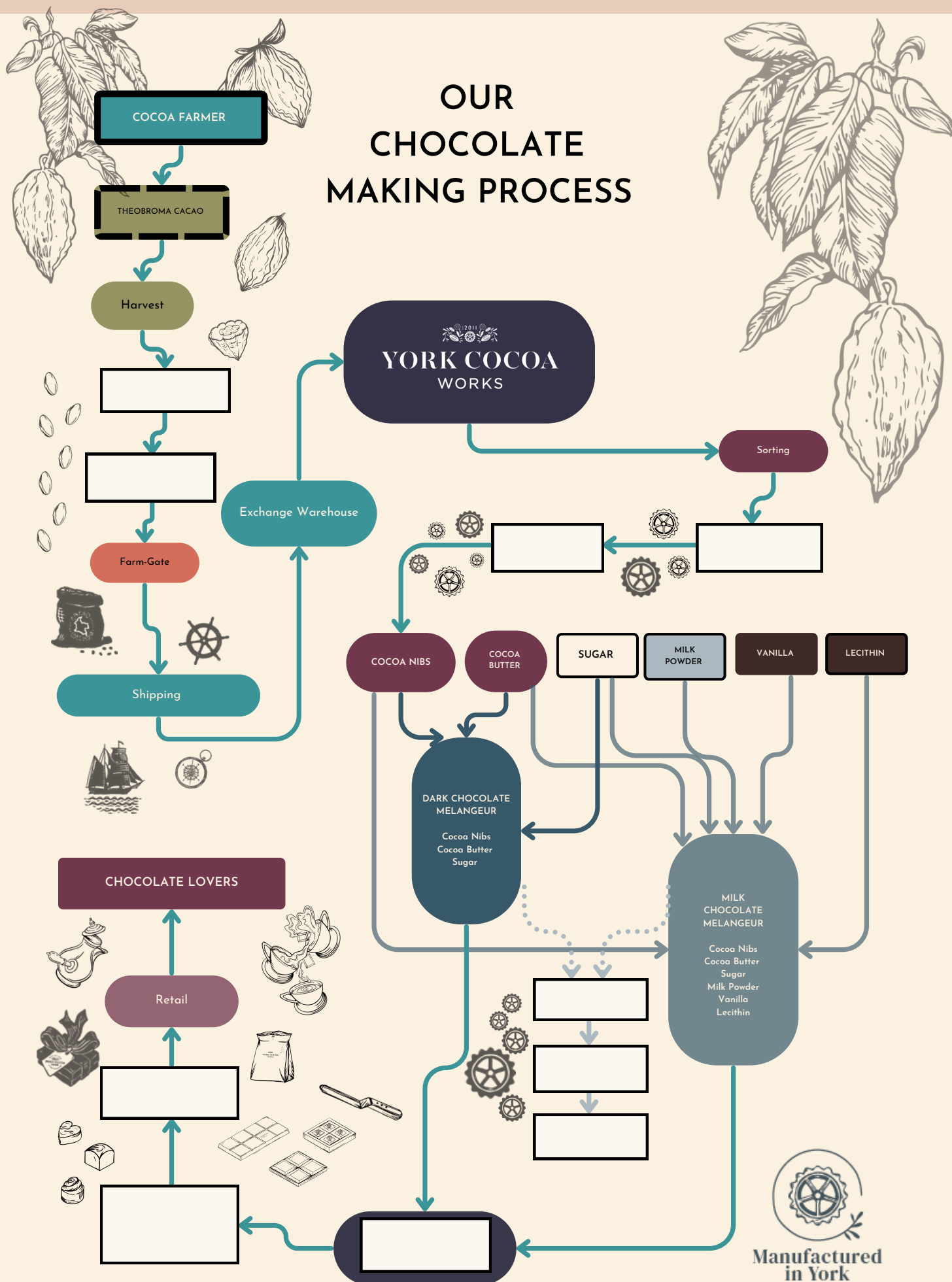
8 - Test your Chocolate Making Knowledge with our Bean to Bar Chocolate Making Quiz - **Activity Sheet C**

The Chocolate Making Process from Cocoa Bean to Chocolate Bar

Fill in the stages of the chocolate making process in the right order

ACTIVITY SHEET A

OUR CHOCOLATE MAKING PROCESS



TASTING CHOCOLATE

ACTIVITY SHEET B

LOOK

A good quality chocolate should be consistent in colour. Lighter shades may mean lower roasting or white Criollo varieties used. If the crystal structure has been stabilised, the chocolate should have a smooth and shiny finish.

SMELL

Smell plays a critical part in how we taste our food. Cup the chocolate in your hands and bring to your nose to deeply inhale the aromas of your chocolate. These initial flavours are called volatiles. As you eat your chocolate hold your nose and breath in through your mouth and explore how your sense of smell changes the experience.

LISTEN

Take the chocolate to next to your ear and break the chocolate in half. A stable structure should give the chocolate a clear snapping noise. Fine chocolate shouldn't be hard and brittle nor soft and crumbly.

FEEL

As you eat your chocolate consider how it feels. Does it make your mouth feel sharp with astringency like drinking strewed tea? Or is the chocolate silky smooth or have some coarse texture?

TASTE

Our tastebuds are equipped to detect bitter, sweet, salty, sour and umami flavours. When tasting chocolate it's important that all of your tastebuds get to experience the chocolate and can get to work.



EXPLORE MORE

MAPPING FLAVOUR

ACTIVITY SHEET B

By using our senses we build a picture of how the foods we eat taste. We store these experiences and allocate flavour memories to them. When we experience those sensations from a certain food time and again in a certain way we come to expect how it makes us feel and we develop a preference for some tastes over others. Flavours help us recognise the experiences we anticipate and help us define and share what we experience with others.

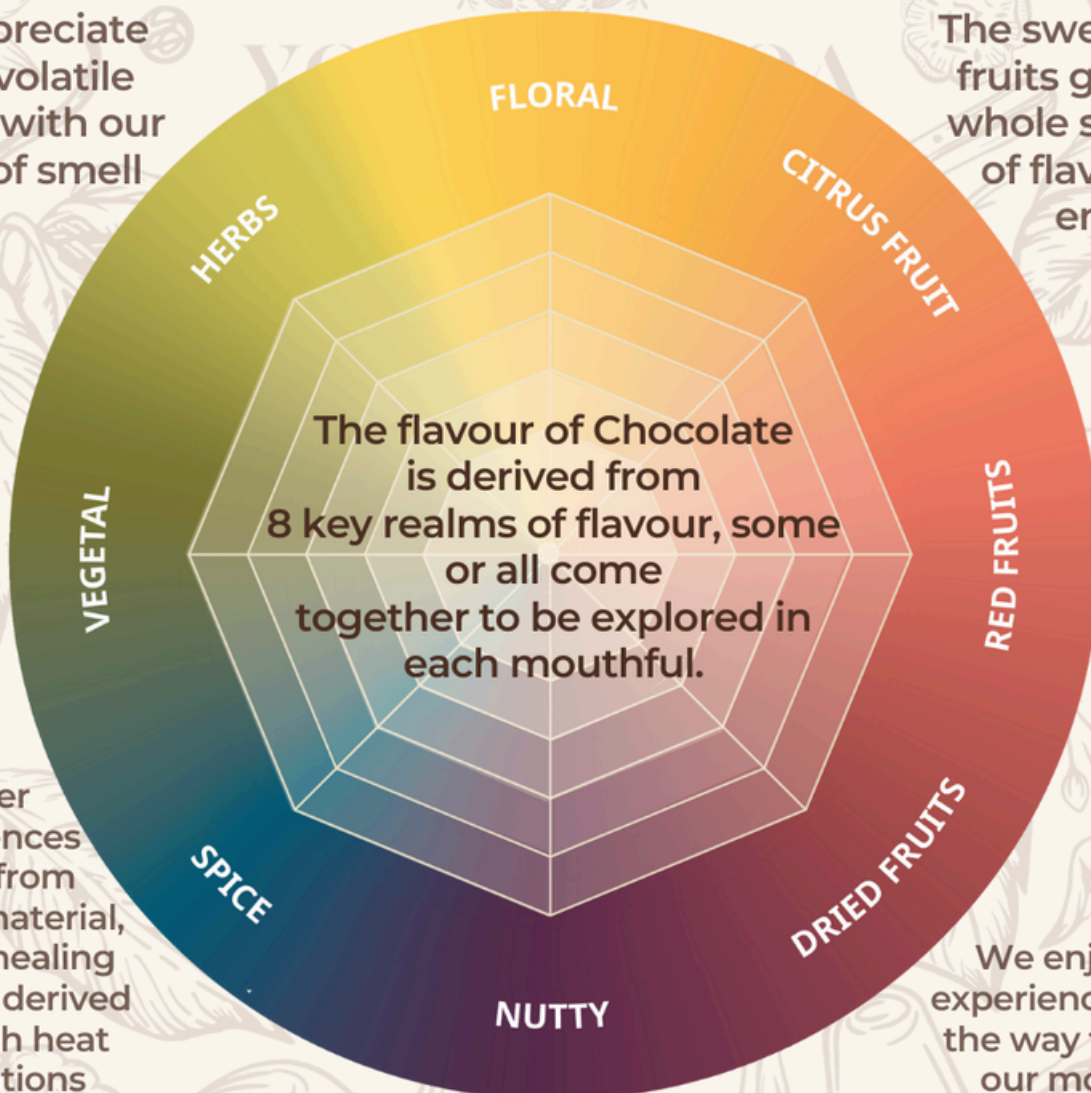
Chocolate is unique because it draws together sour, sweet and bitter taste sensations while also sharing a range of flavour experiences that we can explore to find the ones we enjoy most. Chocolate is a complex food with so many layers there is something for us all to enjoy!

We appreciate these volatile aromas with our sense of smell

The sweetness of fruits gives us a whole spectrum of flavours to enjoy

Bitter experiences come from vegetal material, nature's healing agents or derived from high heat applications

We enjoy these experiences most by the way they make our mouth feel





YORK COCOA WORKS

CHOCOLATE TASTING NOTES

Name of Chocolate _____

Type of Chocolate _____ % of Cocoa Solids _____

Origin of Cocoa _____

SENSES

Look: _____

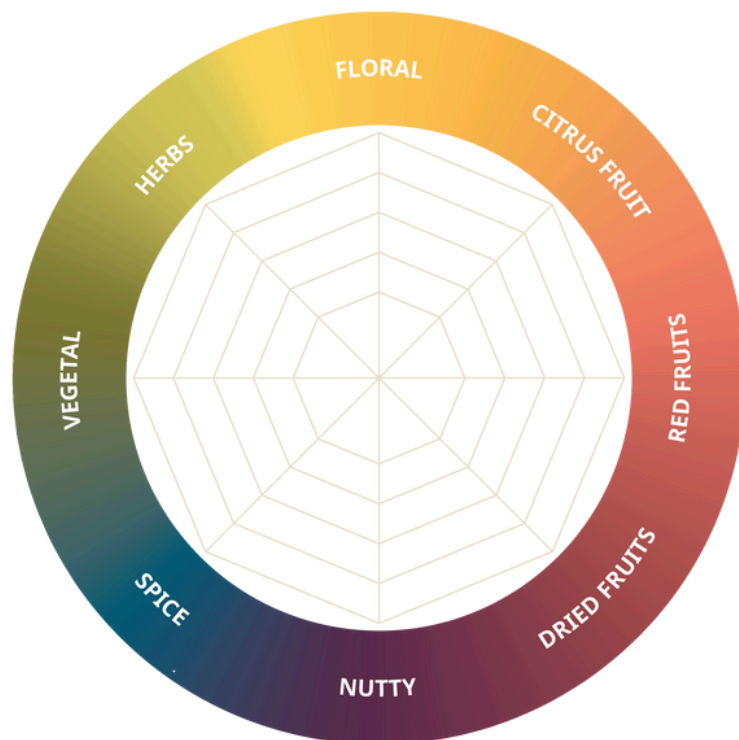
Aroma: _____

Sound: _____

Feel: _____

Taste: _____

FLAVOUR



TASTE

Acidity:

Bitter:

Cocoa:

Flavours _____

Overall Preference Score _____

QUIZ

ROUND 1:

The Cocoa Bean & Ingredients

1. What do cocoa beans grow inside?
2. Cocoa beans grow in more than 50 countries around the Equator. - Name three cocoa-producing countries
3. What is the main purpose of fermenting the cocoa beans after they are harvested?
4. Besides cocoa mass, cocoa butter, and sugar, what common dairy ingredient is often added to make chocolate?
5. What is the ingredient inside the cocoa bean that holds all the chocolate together?

ROUND 2:

The Chocolate Making Process

1. In a factory like York Cocoa Works, what is the process called where the cocoa nibs are ground down into a thick, liquid paste?
2. The final stage of melting, heating, and cooling chocolate to make it shiny and 'snappy' is known as...?
3. Which part of the cocoa bean is removed after roasting and cracking?
4. What is the function of the conching process in chocolate making?
5. What percentage of cocoa solids is generally the minimum for a chocolate bar to be legally classified as chocolate in the UK?

QUIZ

ROUND 3: History & Culture

1. What famous city in Yorkshire is often called the 'Chocolate City' due to its chocolate-making heritage, and is home to York Cocoa Works?
2. Historically, chocolate was first consumed as a drink. Name an ancient civilisation in Mesoamerica that enjoyed chocolate in their traditions.
3. Which part of the world does cocoa originate from?
4. When was chocolate first made into an eating bar?
5. York was home to famous chocolate companies such as Terry's and Rowntree, name a product that one of these companies created.

ROUND 4: Fun Facts

1. What term is used to describe a chocolate maker who controls the entire process, from sourcing the raw cocoa beans to the final chocolate bar?
2. What is the approximate melting temperature of chocolate (in degrees Celsius)?
3. Which part of the world consumes the most chocolate?
4. Name a use for cocoa beans that is not chocolate.
5. How many cocoa beans are needed to make a 40g bar of dark chocolate?

QUIZ - ANSWER SHEET

ROUND 1:

The Cocoa Bean & Ingredients

1. What do cocoa beans grow inside? - **Cocoa Pod**
2. Cocoa beans grow in more than 50 countries around the Equator. - Name three cocoa-producing countries

Possible Answers: Ivory Coast, Ghana, Nigeria, Uganda, Madagascar, Tanzania, Cameroon, Colombia, Ecuador, Peru, Mexico, Honduras, Guatemala, Brazil, Indonesia, Papua New Guinea, Solomon Islands, Australia, China, Spain

3. What is the main purpose of fermenting the cocoa beans after they are harvested?

To prevent the cocoa bean from germinating, to preserve the cocoa bean and to break down the fabric and bitterness of the bean.

4. Besides cocoa mass, cocoa butter, and sugar, what common dairy ingredient is often added to make chocolate? - **Milk Powder**
5. What is the ingredient inside the cocoa bean that holds all the chocolate together? - **Cocoa Butter**

ROUND 2:

The Chocolate Making Process

1. In a factory like York Cocoa Works, what is the process called where the cocoa nibs are ground down into a thick, liquid paste? - **Refining**
2. The final stage of melting, heating, and cooling chocolate to make it shiny and 'snappy' is known as...? - **Tempering**
3. Which part of the cocoa bean is removed after roasting and cracking? - **The shell or husk**
4. What is the function of the conching process in chocolate making? - **To blend the flavours of the chocolate together and drive off unwanted volatiles.**
5. What percentage of cocoa solids is generally the minimum for a chocolate bar to be legally classified as chocolate in the UK?

A minimum of 50% Cocoa Solids

QUIZ - ANSWER SHEET

ROUND 3: History & Culture

1. What famous city in Yorkshire is often called the 'Chocolate City' due to its chocolate-making heritage, and is home to York Cocoa Works? - **York**
2. Historically, chocolate was first consumed as a drink. Name an ancient civilisation in Mesoamerica that enjoyed chocolate in their traditions. - **Olmec, Maya or Aztec**
3. Which part of the world does cocoa originate from?
Peru/South America
4. When was chocolate first made into an eating bar?
1847 by Joseph Fry
5. York was home to famous chocolate companies such as Terry's and Rowntree, name a product that one of these companies created.
Chocolate Orange, All Gold, Kit Kat, Smarties, Aero, Black Magic, After Eight

ROUND 4: Fun Facts

1. What term is used to describe a chocolate maker who controls the entire process, from sourcing the raw cocoa beans to the final chocolate bar?
Bean to Bar Chocolate Maker
2. What is the approximate melting temperature of chocolate (in degrees Celsius)? - **Around 30°C to 34°C (or 86°F to 93°F)**
3. Which part of the world consumes the most chocolate? - **Europe**
4. Name a use for cocoa beans that is not chocolate.
- **Possible answers: Cocoa Powder, Bio-fuel, Moisturiser, Lip stick, the Aztecs even used it as money**
5. How many cocoa beans are needed to make a 40g bar of dark chocolate?
1 bean is usually 1g, the roasting and winnowing stage removes 25% of the weight of the bean. To make a 70% dark chocolate bar 35 cocoa beans will be needed for the flavour plus 12 cocoa beans for the cocoa butter = 47 beans needed.