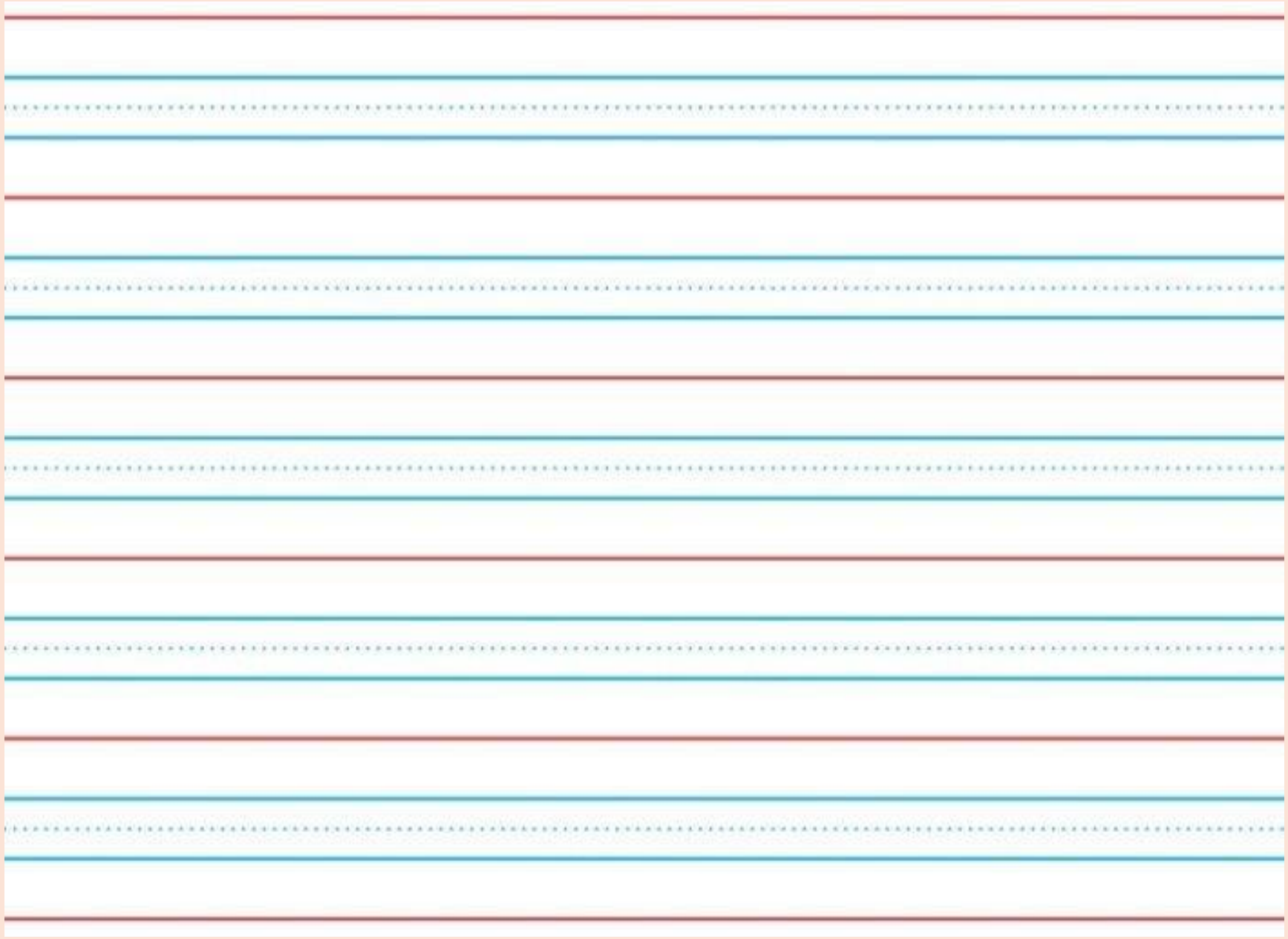
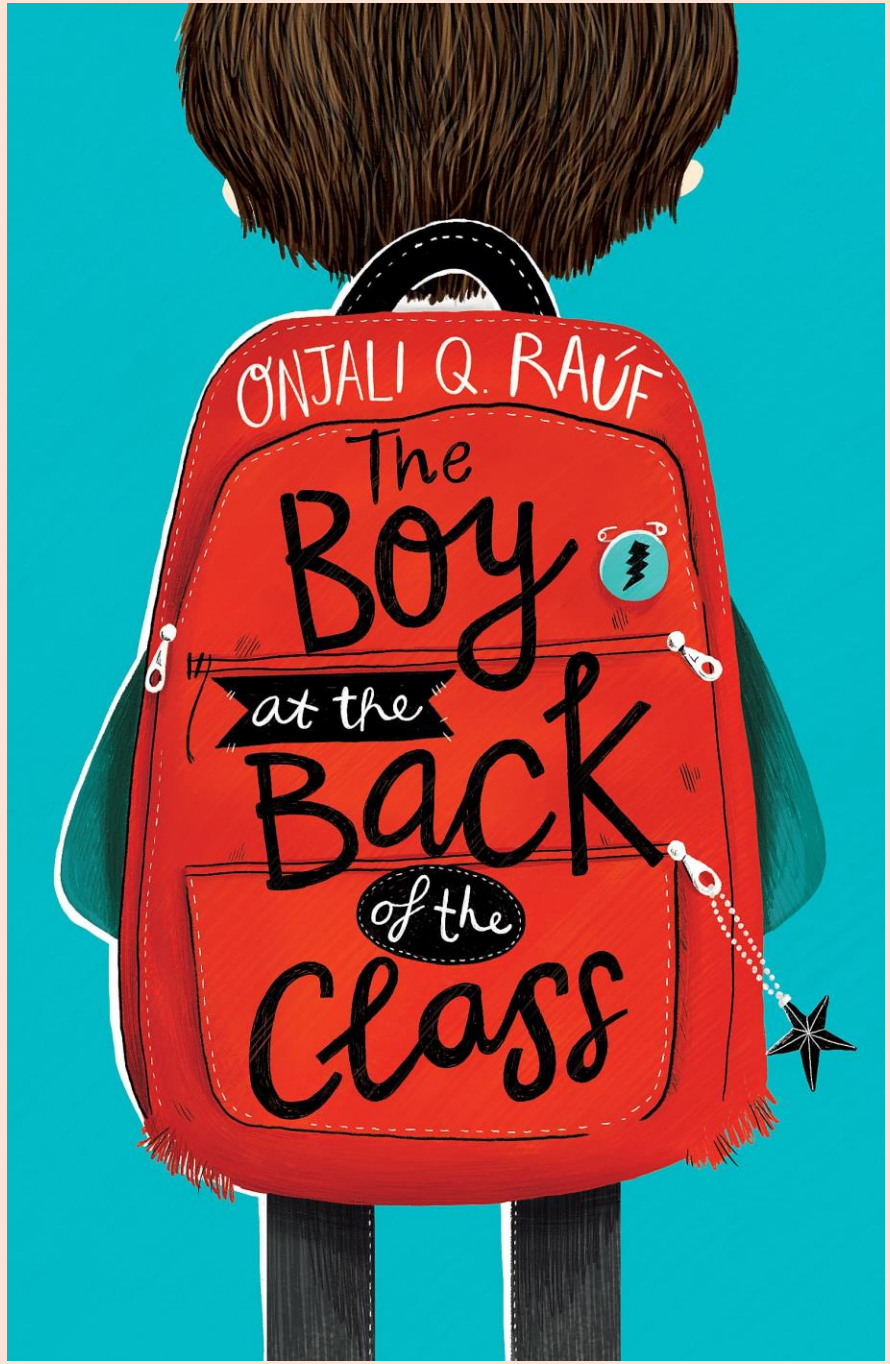
Monday 1st June
Morning Challenge

shoulder
smoulder
mould
poultry
soul



Challenge – Use each word in a sentence including a relative clause.

Toast and Class Novel



Monday 1st June

KQ: How do scientists group, identify and name new species of living things?

Knowledge Quiz

1 Scientists classify living things to help understand and learn more about them. What is classifying? (Tick **1** correct answer)

- ☐ naming things
- ☐ sorting things into groups
- ☐ researching things
- ☐ counting things

2 What does it mean to identify something? (Tick **1** correct answer)

- ☐ to compare it to other similar things
- ☐ to find out where something can be found
- ☐ to sort it into a group with other similar things
- ☐ to find out what something is and its name

3 What does a taxonomist do? (Tick **1** correct answer)

- ☐ names, describes and groups living things
- ☐ prevents living things from becoming endangered
- ☐ looks after the well being of living things

3 What does a taxonomist do? (Tick **1** correct answer)

- ☐ names, describes and groups living things
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- ☐ looks after the well being of living things

4 Which of these is not an organism? (Tick **1** correct answer)

- ☐ mushroom
- ☐ human
- ☐ fire
- ☐ bacteria
- ☐ apple tree

5 What is a species? (Tick **1** correct answer)

- ☐ a distinct type of living thing
- ☐ a unique type of animal
- ☐ a group of living things
- ☐ a habitat for living things

Keywords

A taxonomist is a type of scientist who identifies, classifies and describes living things.

To classify things is to sort them into groups.

To identify something is to be able to name it correctly.

A species is a group of animals or plants that are similar and can have babies together.

Latin is a language that comes from the ancient Roman empire and is still commonly used by scientists and other academics.

Laura is describing an animal she saw at the zoo to her friends.

It had brown fur and four legs with black feet. It moved by walking along the ground with its legs. It had a head with two eyes, two ears and a nose. It had a tail.

What animal do you think she is describing?

Laura

Jacob

Aisha

Laura was describing a capybara.

This is a giant rodent native to South America.

capybara

Laura

What characteristics could Laura have added to make her description clearer?

It had medium-length fur which was mostly brown but faded to black around its nose and paws. It had four legs with four toes on its front paws, and three toes on its back paws. The toes all had short, stumpy claws. Its eyes and nose were black. It had small, rounded ears that were dark brown. I saw it eating grass.

capybara

Laura

Can you describe any other observable characteristics?

Explanation

Taxonomists are scientists who describe, **classify** and name living things.

They have **identified** and named over 2 million different **species** of living things and thousands of new ones are discovered every year.

When a new animal or plant is discovered, it is important that taxonomists describe it in detail. This includes describing which characteristics make it similar and different to species that are close relatives.

Why do you think this is important?

Check

What is the name for a scientist who describes, classifies and names living things?

a classifier

b agronomist

c taxonomist ✓

d naturalist

Classifying new organisms

Explanation

The more detail there is in the description, the more likely others will be able to **identify** the **species** when it is seen again.

Descriptions could include the species' size, structure, colouring and other observable characteristics.

It can also include things the species has been observed doing, such as what it eats and how it reproduces.

Andeep is describing one of these animals to his friends.

animal 1

animal 2

animal 3

Andeep

It has black and white stripes and a face with two black eyes.

How could he improve his description to **identify** the animal?

This animal has a body structure that is similar to many other mammals. It has four legs with paws and sharp claws on the end of each. It has a face very similar to a tiger or a lion, with two eyes pointing forwards, a pink nose and many white whiskers. Its fur is short and much like a tiger's, only white and black instead of orange and black.

Andeep

Andeep's animal

Check

Why is it important for taxonomists to describe organisms in lots of detail?

a So they can practise their descriptive writing skills.

b So they will be recognised as the best taxonomist.

c So others can identify individuals of the same species accurately. ✓

Check

Can you identify which plant Izzy is describing?

This plant has bright yellow flowers with lots of petals, a tall, hollow green stem and long leaves with jagged edges.

Izzy

plant 1 ✓

plant 2

Task A

Classifying new organisms

Practice

Take on the role of a taxonomist and describe the three species on the next slides in detail.

Make sure you include lots of details that would allow someone who has never seen the organism to identify it.

You could also include similarities and differences to other living things that you know.

species 1

species 2

species 3

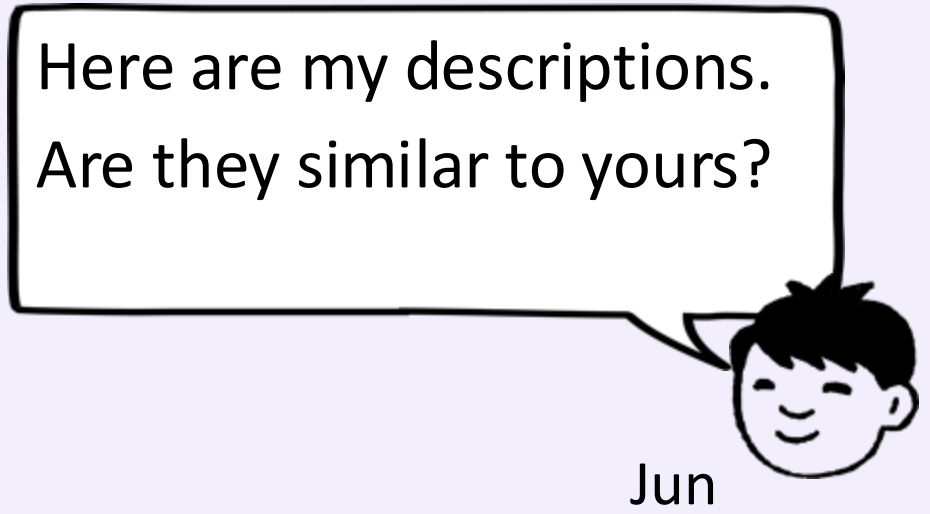
Task A

Classifying new organisms

Feedback

Take on the role of a taxonomist and describe these three species in detail.

This animal has a similar body shape to a lobster, with a tail covered in a segmented shell. It has at least eight legs and appears to have two pincer-like limbs at the front of its body. It has two purple eyes on the end of thick blue stalks, and what looks like long, thin antennae beneath its eyes, which each have two pointed branches. It lives under water.



Task A

Classifying new organisms

Feedback

Take on the role of a taxonomist and describe these three species in detail.

This plant has long, dark green leaves with rounded tips. The leaves have one thick, light green vein down the middle and many very thin veins branching off this. The flowers look like colourful birds with long beaks. They have a long, pointed red petal at the bottom and around five pointed yellow petals sticking up at the top. There is also a long, pointed purple part sticking out from the centre of the flower which may be another petal, or a stamen.

species 2

Take on the role of a taxonomist and describe these three species in detail.

This animal has six jointed legs and a pair of wings. The wings fold over its back like a moth's do. The wings are black with a lacy green pattern and white-ringed yellow spots. It has two black eyes, one on either side of its head. It has a long, curved horn-like appendage on the top of its head which is red with small white spots.

species 3

Laura is sharing her photographs of the animals she saw at the zoo.

Laura

This is a lesser panda.

Laura's photo

Jacob

I thought that animal was called a red panda.

It doesn't look much like a panda.

Aisha

What do you think this animal is called?

The animal in Laura's photograph is a **species** of small mammal native to the eastern Himalayas and southwestern China.

Laura checks her zoo guide and finds out that this animal can be called:

- Lesser panda
- Red panda
- Red cat-bear
- Fire fox
- Fox bear
- Himalayan racoon

Laura's photo

Sometimes, the same living thing is given different names in different places or in different languages.

This plant is called bergamot in some places and bee balm in others.

Why might this be a problem for **taxonomists**?

plant

The binomial naming system

Explanation

The names we commonly use for living things can be confusing.

Sometimes we use different names for the same organism.

Sometimes the same organism has more than one name.

This causes problems for **taxonomists** because it is important for them to **identify** the organism they are working with.

Sometimes names for living things can even be misleading.

What do you observe about these animals?

silverfish

starfish

jellyfish

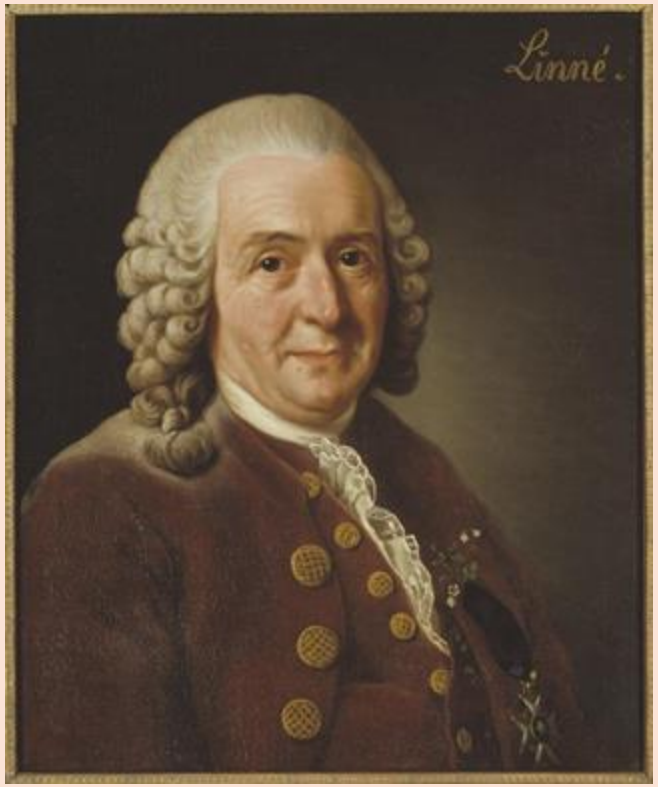
None of them are actually fish! Fish are vertebrates and these animals are all invertebrates.

The binomial naming system

Explanation

Carl Linnaeus, a Swedish scientist born in 1707, knew it was important for **taxonomists** to all use the same names for the same organisms.

He created a system for **identifying** and naming living things that was simple and helped to avoid any confusion.



Carl Linnaeus

Linnaeus' system involved giving all living things a name with two parts.

starfish = *Asterias rubens*

The first part is the small group, or genus, that the organism belongs to. This is always capitalised.

The second part of the name is the species.

This is called the binomial system, which means 'two names'.

Binomial names for organisms are always written in italics.

Check

What is the name for Linnaeus' system for naming organisms?

a monomial system

b binomial system ✓

c trinomial system

Check

Which of these binomial names is written correctly?

a Asterias Rubens

b asterias rubens

c *Asterias rubens* ✓

d *Asterias Rubens*

Explanation

Asterias rubens does not sound like English words to me. Did Carl Linnaeus name things using the Swedish language?

Aisha

In Linnaeus' time, academics and scientists often used **Latin**, because it was considered to be the language of intelligent people.

Because of this, binomial names are usually Latin, or they are based on words from other languages that have been Latinised (made to sound like a Latin word).

Sometimes taxonomists also use words from ancient Greek to name organisms.

starfish

Asterias rubens = Asterias from ancient Greek for ‘star’,

rubens from Latin ‘rubeo’ meaning red-coloured.

Check

Which language is commonly used for binomial names?

a English

b French

c Italian

d Latin ✓

starfish

So, the binomial classification for this organism means ‘red star’. That’s much less confusing than star fish because it isn’t actually a fish!

Alex

This system has been in use since Linnaeus introduced it because it’s clear and simple.

No matter what language scientists are using, they still refer to each organism by the same binomial name.

Explanation

Often, the binomial classification for organisms means something about the way they look or the things they do.

red panda

red panda = *Ailurus fulgens*

ancient Greek for ‘cat’

Latin for ‘shining bright’

Sometimes, organisms are named after people, with their names Latinised.

The binomial classification for this plant is *Monarda fistulosa*.

Monarda fistulosa

Linnaeus himself named this genus of plants after a Spanish scientist he admired called Nicolás Monardes.

‘Fistulosa’ is **Latin** for ‘hollow like a pipe’. This **species** name was chosen because the plant has hollow stems.

Explanation

There are lots of ways to Latinise words.

We can translate them directly into **Latin**. Online translation tools are helpful for this if you can't speak Latin.

We can add suffixes to words to make them sound more Latin, for example:

-as	-ius
-aurum	-osa
-itas	-um
-ium	-us

Imagine you are the first **taxonomist** to discover the duck billed platypus.

duck billed platypus

What could you name it using the binomial system?

I'd call it *Mammalus anataria*. 'Mammalus' because I know it's a mammal and 'anatinus' because it is Latin for duck- like because of its beak. What did you name the animal?

Sofia

Its real binomial name is *Ornithorhynchus anatinus*.

Ornithorhynchus = Greek for 'bird beak',

anatinus = Latin for 'duck-like'.

duck billed platypus

Check

When a new organism is discovered, who decides on the binomial name for that living thing?

a people at the nearest university

b the person who discovered it ✓

c the person who has the best idea

Imagine you are the first scientist to discover these organisms.
Create names for them using the binomial system.

species 1

species 2

species 3

species 4

species 5

species 6

Create names for these animals using the binomial system.

species 6

Viridisavis quiffius (Latin for ‘green bird’ and Latinised ‘quiff’ because it looks like the bird has a quiff hairstyle!)

Here are some of the names I chose. Can you see why I chose them? Are they similar to yours?

Sam

species 3

Insectum elephanti (Latin for ‘insect’ and ‘elephant’ because I can tell it’s an insect, but it has a trunk like an elephant.)

I was curious about the real names for these organisms, so I carried out some research using secondary sources to find out what they are. Are they anything like the ones you chose?

Sam

species 1

Odontodactylus scyllarus

Odontodactylus = Greek for ‘with teeth’ and ‘finger-toed’.

scyllarus = reference to mythical Greek monster Scylla.

species 2

Strelitzia reginae

Strelitzia after the Duchess of Mecklenburg-Strelitz who was the wife of King George III.

reginae = Latin for ‘queen’.

species 3

Pyrops candelaria

Pyrops = Latin for ‘pear shaped eyes’.

candelaria = Latin for ‘candle stick’.

species 4

Grapsus grapsus

Latinisation of Greek 'grapsaios' meaning 'crab'.

species 5

Trametes versicolor

Trametes = Latin for ‘one who is thin’.

versicolor = Latin for ‘many colours’.

species 6

Tauraco persa

Tauraco from an old West African colloquial name for these birds.

persa = Persian.

Summary

Discovering and naming new species

Taxonomists discover, describe and name thousands of new organisms every year.

Each new species is described in detail, including which features make it similar and different to other closely related organisms.

The binomial system is used to give organisms a name that is recognised by anyone studying living things to avoid confusion.

Often binomial names are Latin or are words from other languages that have been Latinised.

Monday 1st June

KQ: How do scientists group, identify and name new species of living things?

Exit Ticket

1 Approximately how many new species do taxonomists describe every year? (Tick **1** correct answer)

- ☐ none; they have already all been discovered.
- ☐ around 10-20
- ☐ around 500
- ☐ many thousands

2 Why is it important for taxonomists to describe newly discovered organisms in lots of detail, including which features make it similar and different to close relatives? (Tick **1** correct answer)

- ☐ so they can reunite animals with their families
- ☐ so others can identify organisms of the same species accurately
- ☐ so they can write lots of books about them

3 Which language is often used for the species names of living things? (Tick **1** correct answer)

- ☐ English
- ☐ Swedish
- ☐ Italian
- ☐ Latin

4 To avoid confusion and help taxonomists to make sure they are referring to the same organism, Carl Linnaeus created the _____ naming system. (Fill in the blank)

5 Which of these names is the correct binomial name for this organism? (Tick **1** correct answer)

- ☐ Crustacean oniscus asellus
- ☐ Oniscus asellus
- ☐ Asellus
- ☐ Common shiny woodlouse

6 Which two parts are used to create a name in the binomial system? (Tick **1** correct answer)

- ☐ genus and species
- ☐ family and species
- ☐ family and genus
- ☐ genus and family

Monday 1st June

KQ: How does food production, processing and distribution change over time?

Knowledge Quiz

1 The main ingredient of bread is often... Tick **1** correct answer

- ☐ wheat
- ☐ oats
- ☐ milk
- ☐ bananas

2 Which of these foods also contain wheat? Tick **3** correct answers

- ☐ cakes
- ☐ pasta
- ☐ crackers
- ☐ rice

3 Put these stages of food production in order. Use numbers to show the correct order

	Produce
	Package
	Process
	Grow crops
	Distribute
	Harvest crops

4 In addition to flour what else is needed to make bread? Tick **3** correct answers

- ☐ Yeast
- ☐ Water
- ☐ Salt
- ☐ Cheese

5 Why is bread made in factories? Tick **2** correct answers

- ☐ it can be made in large quantities
- ☐ it can be made quickly
- ☐ it smells delicious

6 How many loaves of bread are sold every day in the UK? Tick **1** correct answer

- ☐ 1100
- ☐ 11 000
- ☐ 11 million
- ☐ 11

Keywords

The place of origin is the place where something first comes from.

Goods that are imported are brought in from another country.

Greenhouse gas emissions are gases that are released and trap heat in Earth's atmosphere.

In season means the time of year when a food is naturally ready for harvesting.

Processing means making changes to a food's natural state. An example is cooking beans in a tomato sauce and preserving them in tins.

Where do different foods originate from?

Explanation

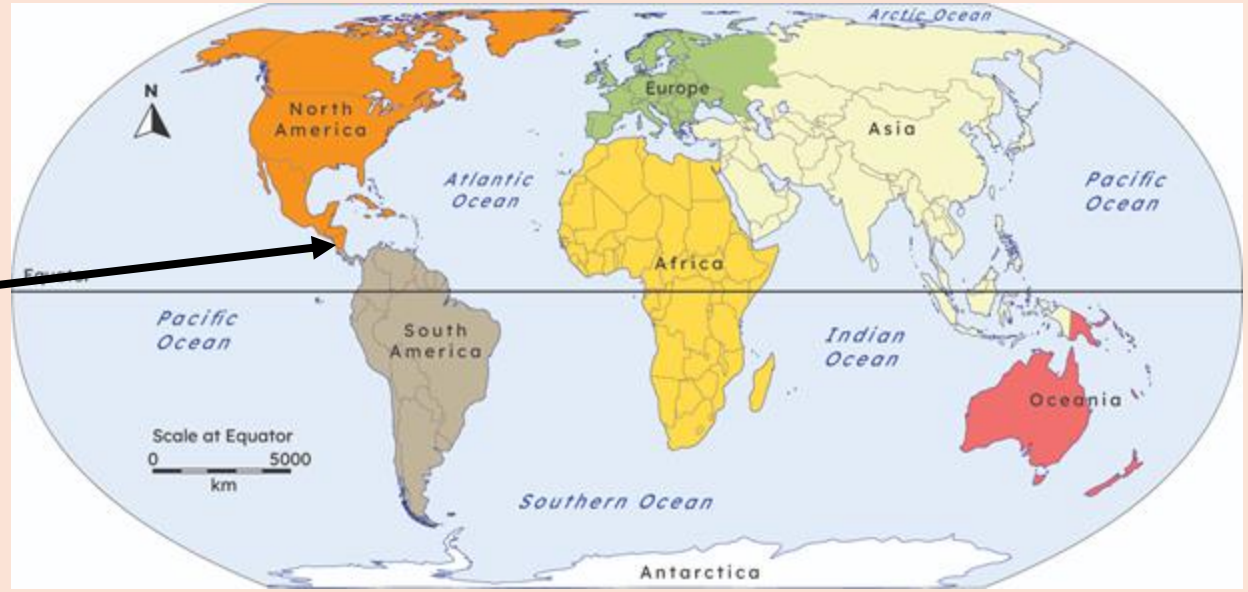
Many of the foods we eat today have been eaten for thousands of years. These foods have different **places of origin**.

Where do you think the **place of origin** is for these foods?

Chocolate is made from the beans (or rather the seeds) from the cacao tree. Cacao was first grown by the Aztecs and Maya people in Central America.

It's thought that the earliest consumption of cacao was over 5,000 years ago!

Central America



Data source: https://www.bbc.co.uk/programmes/articles/22xy6VCN16PD5VpTvqGCvm4/mmmm-a-history-of-chocolate-in-10-quick-facts

Wheat was first grown in West Asia more than 10,000 years ago. It was one of the earliest crops to be grown by humans and it's now grown in every continent except Antarctica.

Wheat is used in many products such as bread, cakes and biscuits.

West Asia

Apples originated in Central Asia and have been grown for thousands of years. More than 7,500 varieties of apples are grown around the world! They are mentioned in the Bible and Greek mythology.

It is thought that the sweeter-tasting apples we eat today were brought to the UK by the Romans.

Central Asia

Check

Where were cacao beans first grown and eaten?

a Central America ✓

b Central Africa

c Central Asia

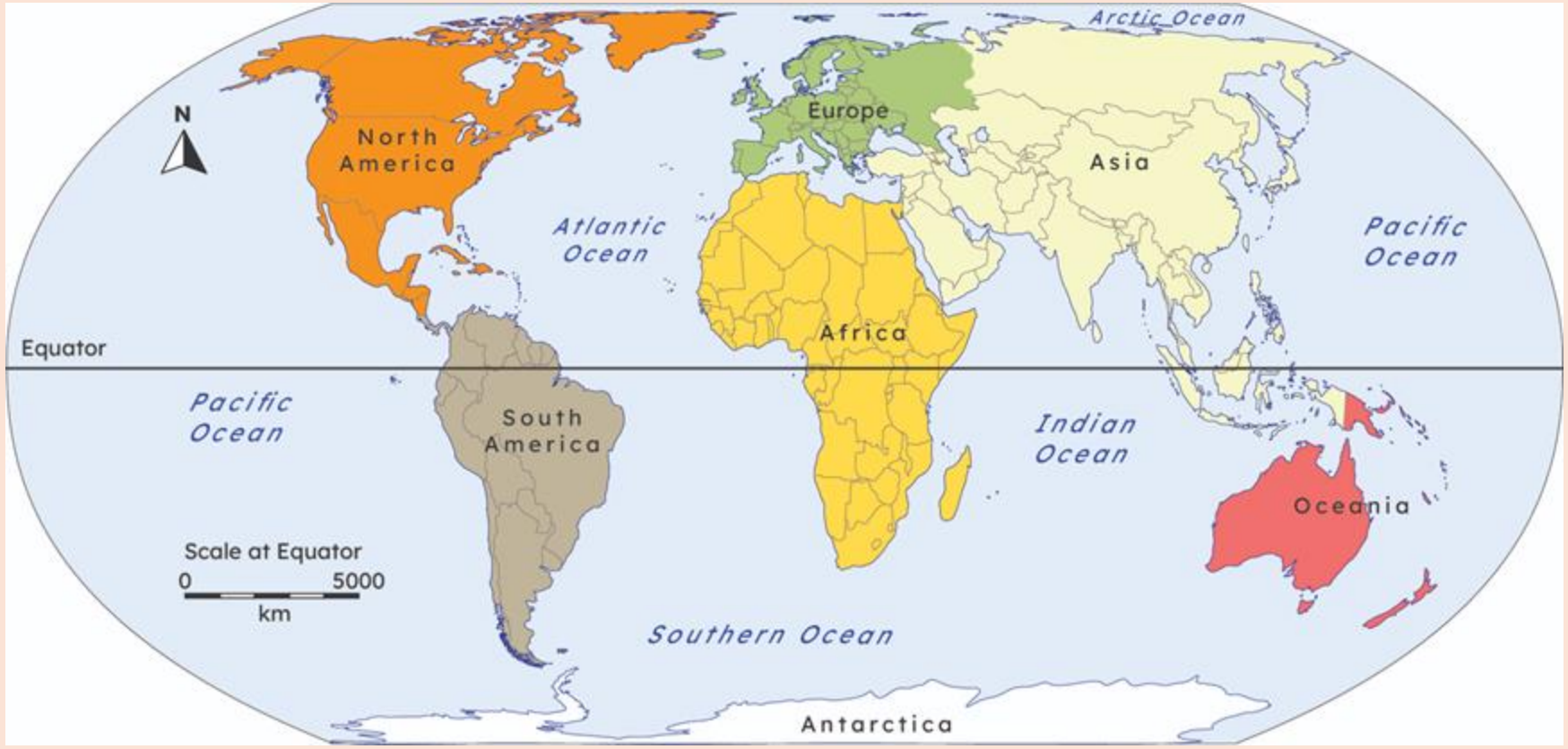
d Central Europe

Task A

Where do different foods originate from?

Practice

Draw an arrow to the **place of origin** for each of these foods.



apples

wheat

cacao

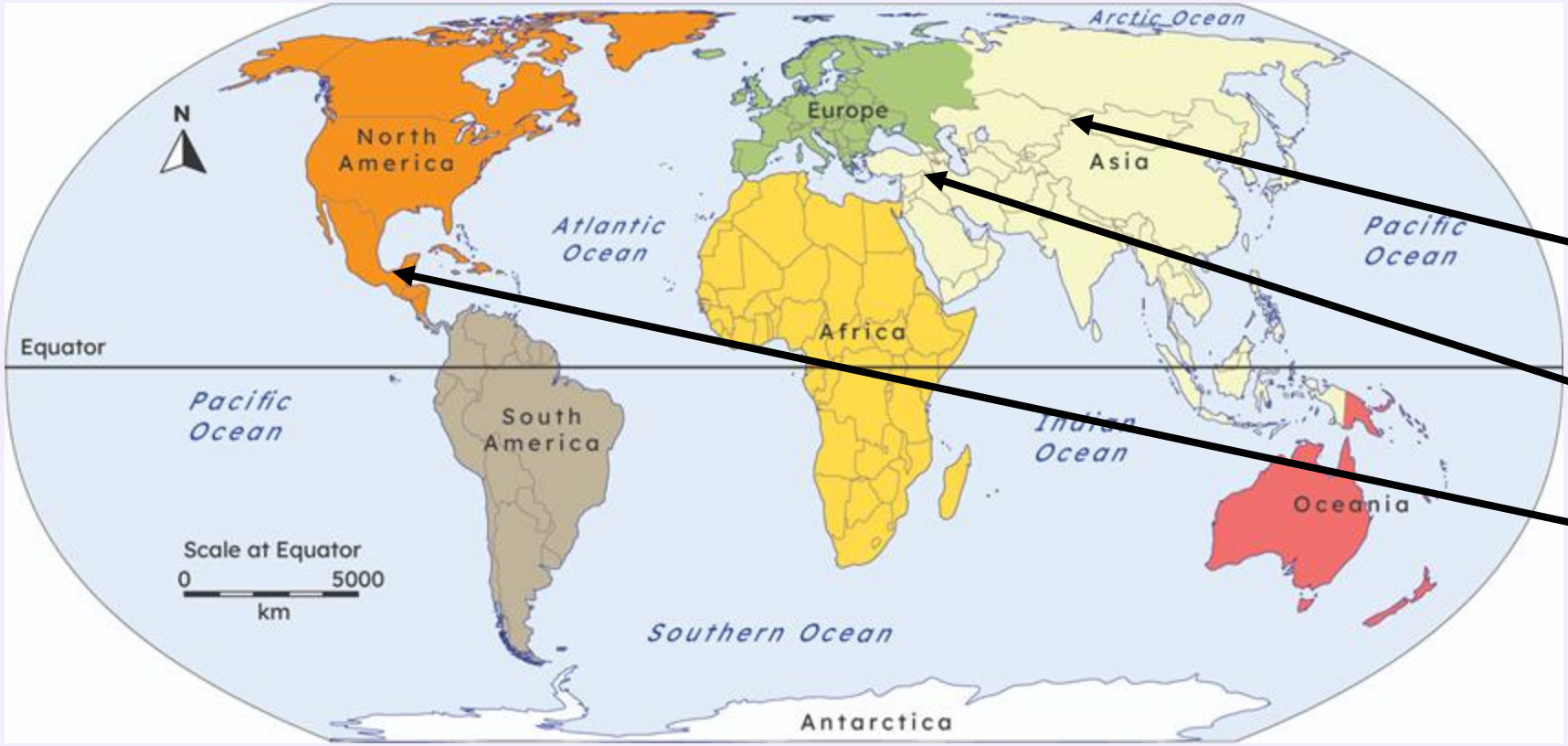
Can you add in the **place of origin** for any other foods?

Task A

Where do different foods originate from?

Feedback

Draw an arrow to the **place of origin** for each of these foods.



apples

wheat

cacao

Can you add in the **place of origin** for any other foods?

How has the food we eat changed over time?

Explanation

Although many of the foods we eat today have been eaten for thousands of years, people's diets have changed over time.

Did the Victorians eat microwave popcorn?

Did the Romans eat tinned baked beans?

It wasn’t until the late Stone Age that people started farming.

These early farmers kept animals such as sheep, pigs and cows.

Crops included wheat, barley, beans and peas.

How has the food we eat changed over time?

Explanation

Many foods have been distributed around the world by the migration of people.

When the Romans arrived in Britain around 2000 years ago they brought with them more than 50 new kinds of food plants: fruits such as apples and plums; vegetables such as cucumber and celery; nuts, seeds and pulses such as almonds and lentils.

Data source: https://www.english-heritage.org.uk/learn/story-of-england/romans/food-and-health/

Check

True or false?

People in the early Stone Age grew most of their food.

T True

F False ✓

Justify your answer

a People in the early Stone Age hunted and gathered their food. It wasn't until Tudor times that people started farming.

b People in the early Stone Age hunted and gathered their food. It wasn't until the late Stone Age that people started farming. ✓

In Tudor times, new foods started to arrive with increases in trade and exploration.

Many of the foods we eat today have been traded around the world for hundreds of years such as spices, coffee, tea and chocolate.

Advances in transport means that food today can be distributed much more easily and quickly than in the past.

A lot of the food we eat in the UK is **imported** from other parts of the world.

This means that most people have access to an even greater variety of foods.

What are the potential disadvantages of transporting all of this food around the world?

Transporting food from where it is produced to where it is eaten is a source of **greenhouse gas emissions**.

Greenhouse gas emissions from human activities are the major cause of climate change.

Check

True or false?

Many people now have access to a greater variety of foods than people did in the past.

T True ✓ F False

Justify your answer

a Advances in transport mean that food can be distributed around the world more easily and quickly. ✓

b Nearly all of the food we eat in the UK is grown in this country.

Food **processing** has also changed over time. Early humans cooked their food on a fire. Over time, more complex forms of food **processing** started to be used such as:

- baking bread
- making butter and cheese
- drying vegetables in the sun
- fermenting fruit
- preserving meat with salt or smoke

Preserving food made it last longer. This meant that people had food to eat when there was less fresh food available. This might have been when certain foods weren't **in season** or because of crop failures or conflict.

Sailors on long-distance journeys had to rely heavily on processed food.

Check

Which of these types of food **processing** were used during the Stone Age? Select two answers.

a canning

b cooking on a fire ✓

c freezing

d making cheese ✓

During the Industrial Revolution in the 18th and 19th centuries, food started to be produced in larger amounts and food **processing** became more complex.

New forms of food **processing** such as canning and pasteurisation made it easier to package and preserve food.

Refrigeration meant that food could be chilled and frozen.

In the 20th century, other types of food **processing** started to be used such as freeze drying and the use of preservatives.

- artificial colours and sweeteners were added to try and improve the taste of processed foods
- more food was mass-produced in factories
- domestic appliances such as microwave ovens and blenders meant that food could be prepared more quickly

Check

Which of these types of food **processing** were first used in the 18th century? Select two answers.

a canning ✓

b fermenting

c pasteurising ✓

d microwaving

Food **processing** methods have continued to develop and are still very important in food production today.

Food **processing** can help to:

- make food safe and free of bacteria
- make food last longer which helps to reduce food waste
- decrease food preparation times

Adding vitamins and minerals to processed food can help to provide the nutrients people need to stay healthy.

There are many potential positive impacts of modern food **processing** methods but there are also potential negative impacts.

Laura

What do you think these negative impacts might be?

Ultra-processed foods are foods that have had a lot of processing. These foods usually contain lots of ingredients that you wouldn't add if you were making foods at home such as chemicals, colouring, sweeteners and preservatives. Some people have concerns about the effects of these substances on our health.

Ultra-processed foods are often cheaper to buy, but may have fewer nutrients and high levels of sugar, salt and fat, which aren't good for our health.

Check

What is a potential positive impact of modern food **processing** methods?

- make food safe and free of bacteria
- make food last longer which helps to reduce food waste
- decrease food preparation time
- provide vitamins and minerals

Task B

How has the food we eat changed over time?

Practice

1. Describe three ways in which food production, **processing** and distribution have changed over time.
2. List one potential positive impact and one potential negative impact of modern food production, **processing** and distribution systems.

Here is an example answer.

1. Three ways in which food production, processing and distribution have changed over time are:

- advances in transport means that many people now have access to a greater variety of food
- a lot of food is now mass-produced
- food processing methods have become more complex

Here is an example answer.

2. A possible advantage of modern food processing methods is that they can make food last longer and help to reduce food waste. A possible disadvantage of modern food processing methods is that ultra-processed foods may contain high levels of fat, sugar and salt.

Exit Quiz

1 Match the key term with the correct definition. Write the correct letter in each box

a	place of origin
b	in season
c	imported

	the place where something first comes from
	the time of year when a food is naturally ready for harvesting
	goods brought in from another country

2 Match the food to its place of origin. Write the correct letter in each box

a	chocolate
b	wheat
c	apples

	Central America
	West Asia
	Central Asia

3 When did humans first start farming? Tick **1** correct answer

- ☐ the Stone Age
- ☐ the Bronze Age
- ☐ in Tudor times

4 What types of food processing were used first? Tick **2** correct answers

- ☐ canning
- ☐ refrigeration
- ☐ fermentation
- ☐ pasteurisation

5 What are the positives to food processing? Tick **2** correct answers

- ☐ makes the food last longer
- ☐ provides vitamins and minerals
- ☐ makes it more expensive

6 What are the negatives to food processing? Tick **2** correct answers

- ☐ it has fewer nutrients
- ☐ it has higher levels of sugar and salt
- ☐ it contains bright colours
- ☐ it is cheaper

Monday 1st June

TBAT: collect data and organise it in a spreadsheet.

data	facts and figures in their raw form
row	a line of data in a table that runs horizontally
column	a group of data in a table that runs vertically
spreadsheet	an electronic document that stores data arranged in rows and columns

Laura has been tasked with collecting some **data**.

I went outside every hour to record the temperature on the school field at each hour of the school day.

Laura

Laura has collected raw **data** on the temperature at certain times of the day. The **data** she has collected is the temperature in degrees.

Here is the raw **data** she has collected:

09:00 — 12 degrees, 10:00 — 13 degrees, 11:00 — 17 degrees
12:00 — 21 degrees, 13:00 — 22 degrees, 14:00 — 22 degrees
15:00 — 20 degrees

Laura

Collect data

Explanation

Data is facts and figures in their raw form. Raw form means that the facts and figures haven't been changed or organised in any way.

The **data** Laura has collected is in raw form and not very useful yet.

Check

Data is …

a needed for computers to work

b facts and figures in their raw form ✓

c just numbers

Examples of **data** that can be collected could be:

- your attendance at school
- your score in a video game
- the numbers you roll on a dice
- what you buy at the supermarket
- your eye colour

What other examples of **data** can you think of?

Collect data

Check

Which of the following are examples of **data** you could collect?

a the number of vegetables you eat in a week ✓

b your score in a game ✓

c your classmates' hair colour ✓

Task A Collect data

Practice

Jun needs to explain to Izzy what **data** is and some types of **data** he could collect. Using the prompts, discuss what Jun should say to Izzy.

Jun

Izzy

Data is …

We use computers to …

Some examples of **data** I could collect are …

Collect data

You may have said:

Jun

Izzy

Data is facts and figures in their raw form.

We use computers to collect, store and organise **data**.

Some examples of **data** I could collect are the names of my classmates, my score in a game and the number of vegetables I eat in a week.

We can use computers to collect, store and organise **data**.

I wrote down the temperatures I collected. Now, I am going to use a computer to store and organise this **data**.

Laura

Organise data

Explanation

When **data** is recorded it is important for it to be organised, so it can be understood easily by everyone.

Laura

I have recorded my **data** in a table so it can be more easily understood.

time	temperature (degrees)
09:00	12
10:00	13
11:00	17
12:00	21
13:00	22
14:00	22
15:00	20

After **data** has been organised and given meaning, we call it information.

Laura

This information tells me that it was coldest at 09:00.

time	temperature (degrees)
09:00	12
10:00	13
11:00	17
12:00	21
13:00	22
14:00	22
15:00	20

Organise data

Check

Why is it important to organise **data**?

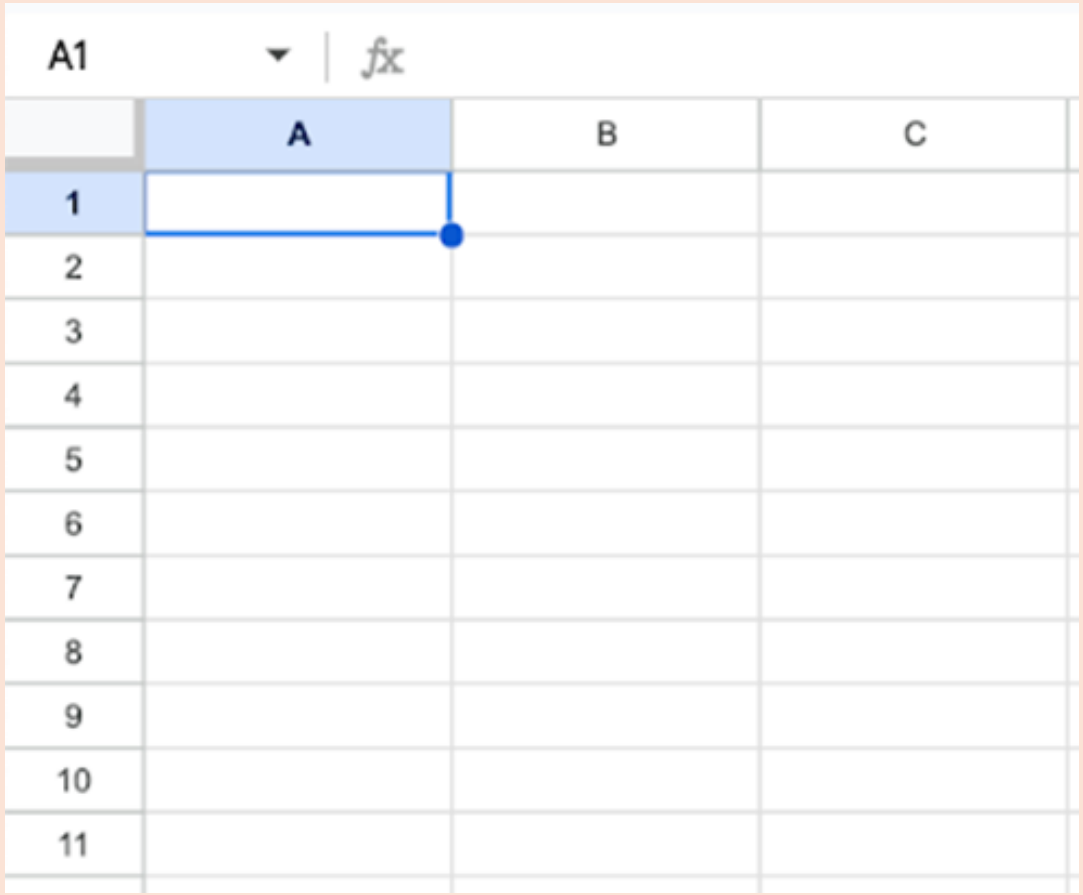
a so it can be easily understood by only one person

b so it can be easily understood by everyone ✓

c so it can be easily copied

Organise data

Explanation



A **spreadsheet** is an electronic document that stores **data**.

Using **spreadsheets** makes organising **data** easier.

This is because a **spreadsheet** helps to organise **data** into a table.

The **data** I collected is now organised in a **spreadsheet**.

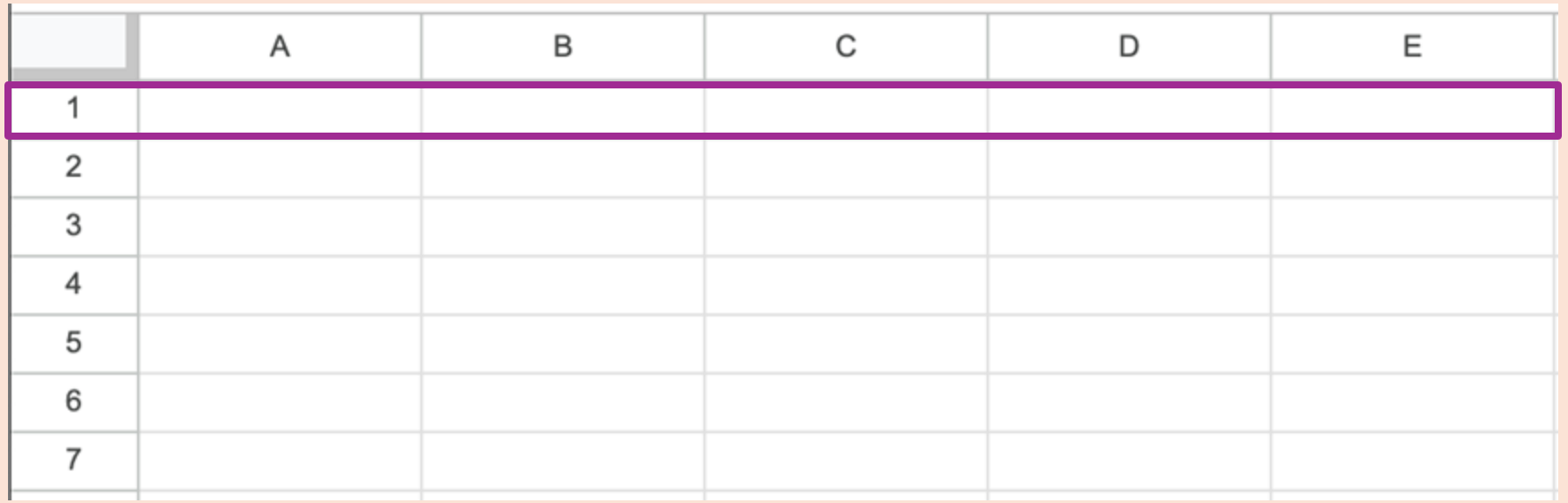
It's easier for me and others to understand.

Laura

	A	B	C
1	time	temperature (degrees)	
2	09:00	12	
3	10:00	13	
4	11:00	17	
5	12:00	21	
6	13:00	22	
7	14:00	22	
8	15:00	20	
9			

A **row** is a line of **data** in a table that runs horizontally from left to right.

row 1



True or false?

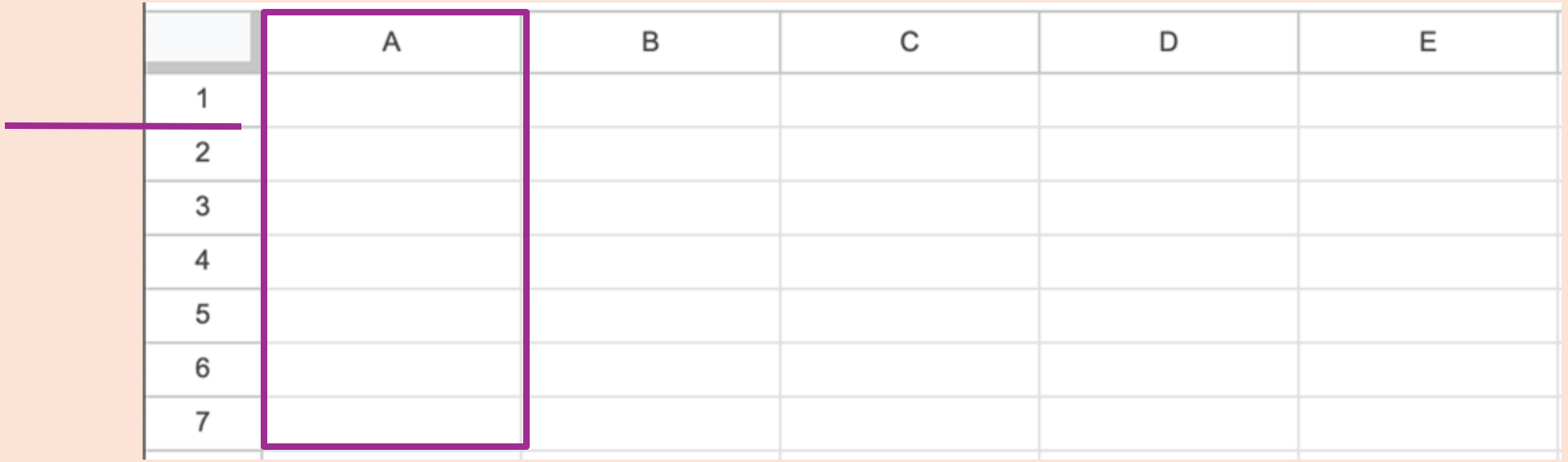
A **row** is a line of **data** in a table that runs horizontally from left to right.

T True ✓

F False

A **column** is a group of **data** in a table that runs vertically from top to bottom.

column A



	A	B	C	D	E
1					
2					
3					
4					
5					
6					
7					

Check

Which answer correctly describes what a **column** is in a table?

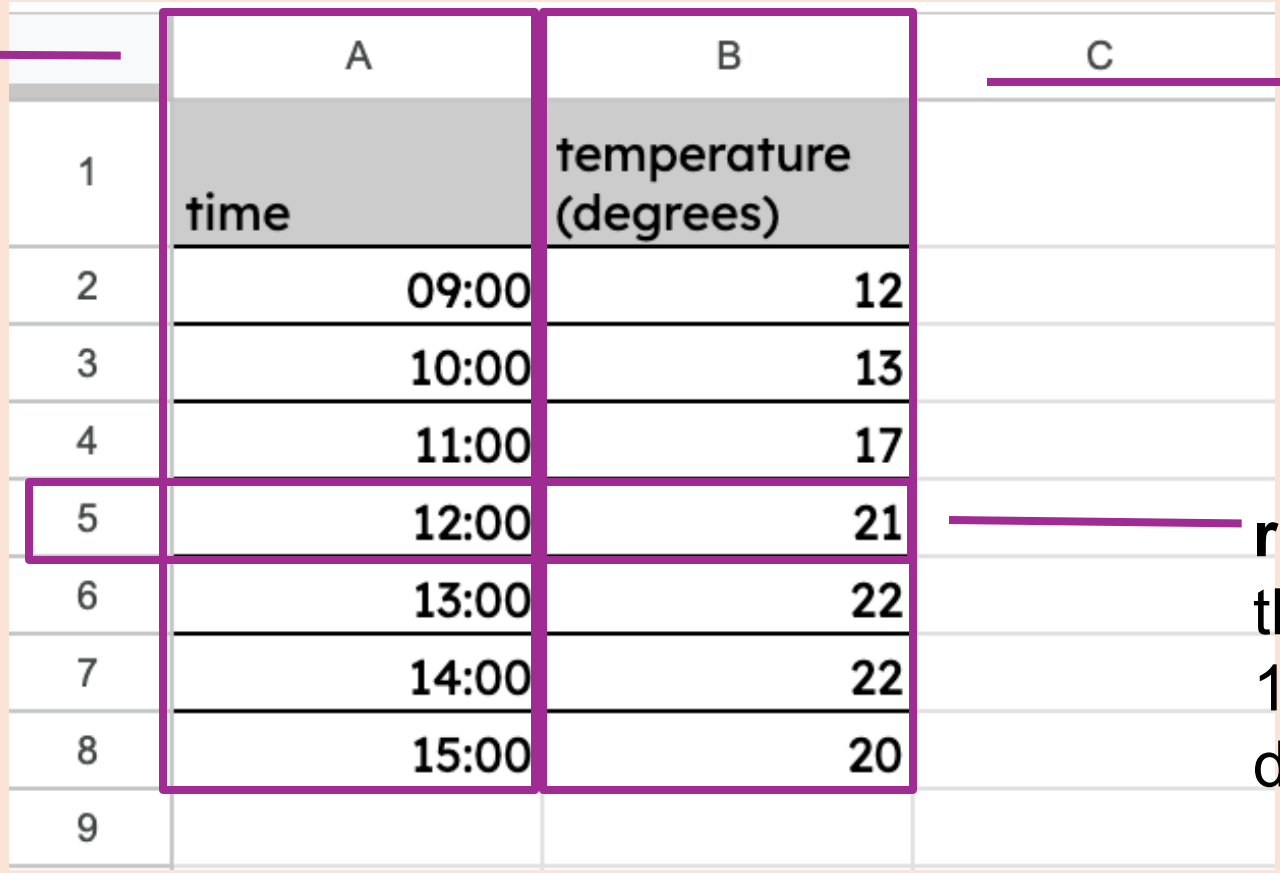
a a group of **data** in a table that runs diagonally

b a group of **data** in a table that runs horizontally

c a group of **data** in a table that runs vertically ✓

Here is a **spreadsheet** showing the temperature **data** that Laura collected at school.

column A shows the times



	A	B	C
1	time	temperature (degrees)	
2	09:00	12	
3	10:00	13	
4	11:00	17	
5	12:00	21	
6	13:00	22	
7	14:00	22	
8	15:00	20	
9			

column B shows the temperatures

row 5 shows that the temperature at 12:00 was 21 degrees

Sofia has collected and recorded **data** on the temperatures for another day at school up until 1.00pm. Record Sofia's **data** in a **spreadsheet**.

09:00 — 10 degrees, 10:00 — 14 degrees,
11:00 — 18 degrees,
12:00 — 21 degrees, 13:00 — 22 degrees

time	temperature (degrees)

Sofia has collected and recorded **data** on the temperatures for another day at school up until 1.00pm. Record Sofia's **data** in a **spreadsheet**.

time	temperature (degrees)
09:00	10
10:00	14
11:00	18
12:00	21
13:00	22

I used **rows** and **columns** in a **spreadsheet** to help organise my **data.**

Sofia

Collect and organise data in a spreadsheet

Explanation

Before organising **data** in a **spreadsheet**, the **data** needs to be collected. Sofia explains how she is going to collect some **data**.

Sofia

I am going to play a dice game with my classmates and collect **data** to see who scores the most points. Each player will roll a dice five times. I will collect the number rolled and the total score to see who scored the highest.

Collect and organise data in a spreadsheet

Explanation

Sofia asks Alex, Izzy, Aisha, Jacob and Jun to each take a turn to roll a dice five times whilst she collects the **data**.

Sofia might collect her **data** on paper.

Alex

Izzy

Aisha

Jacob

Jun

Sofia

Check

True or false?

In Sofia's game, the number each player rolls on the dice is **data**.

T **True** ✓ F **False**

Why?

Data is facts or figures in its raw form. Each number a player rolls in Sofia's game is a piece of **data**.

Collect and organise data in a spreadsheet

Explanation

Sofia has organised her **data** in a **spreadsheet**, but she has forgotten to add something.

Sofia

	2	3	1	3	3	12
	5	4	5	3	1	18
	5	4	4	6	1	20
	4	1	2	2	6	15
	6	1	4	5	5	21

What does Sofia need to add to make her **data** easier to understand?

Collect and organise data in a spreadsheet

Explanation

I have now added headings to my **data**, so it makes sense for everyone.

Sofia

	roll 1	roll 2	roll 3	roll 4	roll 5	total
Alex	2	3	1	3	3	12
Izzy	5	4	5	3	1	18
Jun	5	4	4	6	1	20
Jacob	4	1	2	2	6	15
Aisha	6	1	4	5	5	21

Check

By adding headings to her **spreadsheet** what has Sofia done?

a made her **data** more difficult to understand

b made her **data** neither easier nor more difficult to understand

c made her **data** easier to understand ✓

Collect and organise data in a spreadsheet

Explanation

What do I need to remember when collecting and organising **data** in a **spreadsheet**?

Jacob

You need to collect your **data**, use a table and add headings to your **rows** and **columns**.

Izzy

1) Think of a type of **data** you want to collect. You could collect **data** on:
   - eye colour
   - favourite fruit or vegetable
   - shoe size
   - the number you roll on a dice

2) Identify the headings for what needs to be collected.

3) Collect and record your **data** in a **spreadsheet**. You might want to collect your **data** on paper first then organise it in a **spreadsheet**.

Here is an example from Jacob.

Jacob

name	favourite fruit
Alex	strawberries
Izzy	apple
Jun	strawberries
Sofia	coconut
Aisha	lychees
Alex	pear
Lucas	dragonfruit

columns have headings

each classmate has a new **row**

Summary

We can collect **data** about different things.

Organising **data** makes it easier for everyone to understand.

Tables help to organise **data**, especially when they have labelled **rows** and **columns**.

A **spreadsheet** is a tool on a computer that can be used to organise and record **data**.

Exit Quiz

1 What can we collect data about? (Tick **1** correct answer)

- ☐ only numbers
- ☐ just letters
- ☐ only colours
- ☐ the world around us

2 What is a spreadsheet used for? (Tick **1** correct answer)

- ☐ organising data
- ☐ drawing pictures
- ☐ writing stories
- ☐ playing games

3 What is a column in a table? (Tick **1** correct answer)

- ☐ a line of text
- ☐ a horizontal line of data
- ☐ a vertical group of data
- ☐ a picture

4 What is a line of data running horizontally called?

_____

5 Why are column labels important in a table? (Tick **1** correct answer)

- ☐ They make the table look pretty.
- ☐ They help everyone understand the data.
- ☐ They are not important.
- ☐ They are used to store data.

6 Put these actions in the order they should be done: (Use numbers to show the correct order)

	display data
	organise data
	collect data