Dinosaur Maths Challenge
Jump right in to the world of the dinosaur with this fun mathematical challenge!

These 3 activities can be completed in groups in a carousel system.

Footprints!

Investigate the size of the footprints of two types of dinosaur using the foot casts in the museum.

On The Move

Investigate the step of a *Brachiosaur*.

Compare your step to that of a large dinosaur!

Your investigation will include:
Comparisons
Calculations

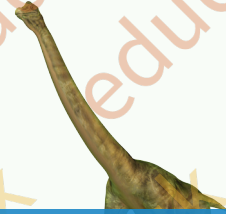You will also travel back in time by constructing a timeline!

Dinosaur Data

Find out how long a large *Brachiosaur* was!

Compare, measure and calculate!

Estimate the height of the *Brachiosaur* and compare this to everyday objects.

Student name: _____

ON THE MOVE

Footsteps

Let's investigate!

Let's find out how far a *Brachiosaur* can step.

Firstly, measure your own walking step.
Measure from heel to heel.

My step measures _____ centimetres.

An adult Brachiosaur step would have been about 3 metres long.

Measure out the step of a *Brachiosaur* on the ground.

► How many cm is 3 metres? _____ centimetres.

► How many of your steps fit into one *Brachiosaur* step? _____

► **How much longer** than your step is the *Brachiosaur* step?

_____

My step   *Difference*

Brachiosaur Step

Now investigate a running stride.

My running stride:

How many of your walking steps would fit into one of your running strides?

If the *Brachiosaur* step is 3m, estimate what their running stride might be:

_____m

= _____cm

Give a reason for your answer:

DINOSAUR EXPEDITIONS

Time Travel

Let's find out how long ago dinosaurs roamed the Earth!

Task 1

Cut out the picture cards and follow the instructions to make a picture time line.

Task 2

If you have time you could try measuring out a timeline.

- ▶ Use base ten blocks or a ruler to make a line 230cm long

- ▶ At the start write a label '***First dinosaurs appeared***'

- ▶ Now count 165 cm along the line and make a label saying '***Dinosaurs became extinct***'

- ▶ Count 3 cm from the end of your timeline and make a label saying '***First man appears***'

- ▶ Ask your teacher to photograph the timeline you have made.

✓ **If practical to do so, you could go out on to the beach with your class and measure out a timeline where 1 metre represents 1 million years.**

Q: If dinosaurs became extinct 230 million years ago, how long will this timeline be?

ON THE MOVE

DINOSAUR EXPEDITIONS
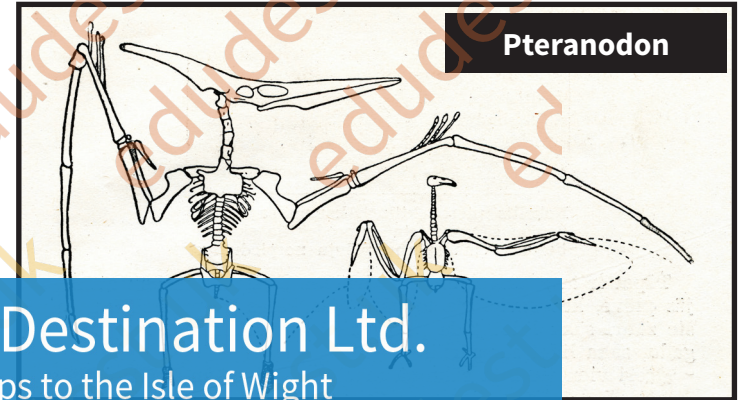
Time Travel!

Cut out these 8 cards and arrange them in rough time line order.

Ask if you need help.

Now stick them onto a long strip of paper.

1. **Which skeletons have been around longest?**

2. **Why did humans never kill dinosaurs?**

Tyrannosaurus Rex

Pteranodon

Pheasant

Gorilla
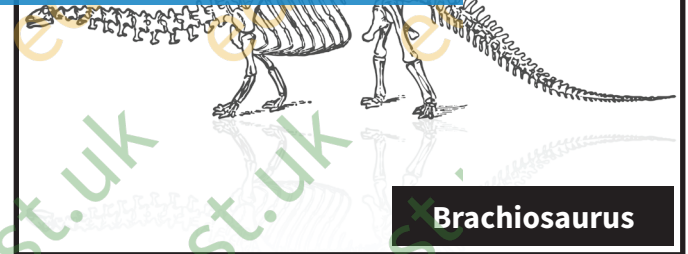
Brachiosaurus
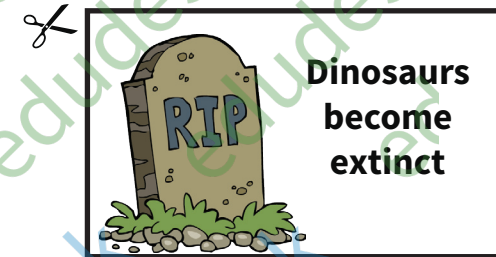
Dinosaurs become extinct

RIP

Homo sapiens

Sauropodomorph

DINOSAUR DATA!

DINOSAUR EXPEDITIONS

1

Measuring a Brachiosaur!

Length

A large *Brachiosaur* was ~~_____~~ ... high.

▶ Use a metre stick to measure out 26 metres on the ground.

How many of your strides is this? _____

Using squared paper, imagine each square is one metre long.

▶ Draw a picture of a *Brachiosaur* 26 squares long and 18 squares high.

2

Comparing

Draw and cut out a double decker bus that is 10 squares long and 4 squares high.

▶ How many buses can you fit along the length of the *Brachiosaur* in your drawing? _____

Using the lengths in the information box (below), work out how many cars and how many beds would fit from the tail tip to nose tip of the *Brachiosaur*.

▶ The *Brachiosaur* is _____buses long.

▶ The *Brachiosaur* is _____cars long.

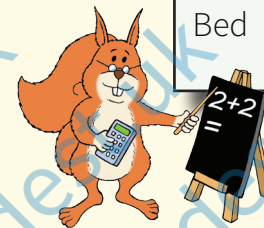▶ The *Brachiosaur* is the same length as _____beds.

3

Extra
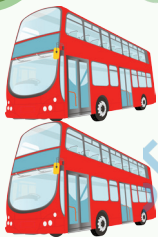
▶ How many double decker buses high is the *Brachiosaur*? _____

▶ *Brachiosaur* is _____ times taller than a double decker bus.

Lengths

Bus	10 metres
Car	4 metres
Bed	2 metres

FOOTPRINTS!

Find the two casts of dinosaur footprints.

One is from a *Brachiosaur*, the other is from an *Iguanodon*.

Measure and compare

Working in a group, use one of the card templates to measure the area.

How many of your footprints fit inside your chosen dinosaur footprint?

- ✓ Draw around
- ✓ Cut it out
- ✓ How many feet fit inside the lines without overlapping?

▶ What else could you use to compare the size? _____

Use squared paper to measure the area of the footprints.

▶ How many squares does one of your feet cover? _____

▶ How could you use this to estimate the number of squares the dinosaur footprint would cover?

_____
_____
_____
_____

DINOSAUR EXPEDITIONS

Write a sentence or two about the dinosaur footprint you have measured. Use the words *greater than*.

_____
_____
_____

Front

These are the shapes of the front and back footprints of a *Brachiosaur.*

Which do you think the foot cast in the museum is?

Back   _____