FAMILY ACTIVITIES

Learning *with* DINOSAURS

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science odyssey PRESENTS
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Welcome

From the wondrously long-necked *Diplodocus* to the iconically ferocious *Tyrannosaurus*, dinosaurs spark curiosity amongst learners of all ages. While childhood trends may come and go, dinosaurs have stood the test of time as an intense interest which transcends cultural and linguistic boundaries. These astonishing creatures help us learn about our planet and the natural world, encouraging scientific thinking and exploration. With this in mind, it only makes sense to bring this topic of wonder into our homes.

This booklet contains activities for children and adults to enjoy together.
The main activities were created with learners in Grades 4 to 6 in mind.
A small collection of activities for younger learners can be found on Page 5. Happy exploring!

Adaptations

An **adaptation** is an animal's physical or behavioural characteristics that help it survive in an environment. These characteristics come about slowly over long periods of time through the process of evolution. For example, the webbed hind feet of the beaver were not an instantaneous coincidence—over many generations, beavers adapted to their environment. Being semi-aquatic rodents, beavers with webbed hind legs were faster, more efficient swimmers and therefore better equipped for escaping predators and conserving energy. Having this adaptation would have helped a beaver to survive longer, and therefore have more opportunities to reproduce and create offspring with similar qualities. This slow process of change over time leads to animals having adaptations. Look at the adaptations Canada geese have below! Can you think of adaptations other Canadian animals have to help them survive?

CANADA GOOSE

serrated bill for straining water

different sounds to communicate

fluffy down to protect from the cold

'V' flight formation to save energy

oil glands for waterproofing feathers

webbed feet for swimming

Dinosaur Adaptations Activity

Cut out the six flashcards on the final page of this booklet. Be careful not to flip them over—the answers are on the back! As you explore each of the six dinosaur specimens, use this page to make notes on what you observe. See if you can answer the following questions:

- *What do you think this is?*
- *How might this help a dinosaur survive?*
- *What type of dinosaur might this have belonged to?*

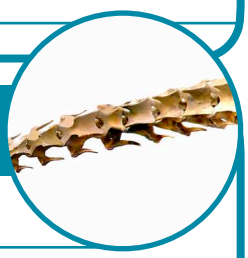
Specimen A Notes

Specimen B Notes

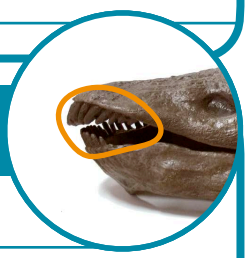
Specimen C Notes

Specimen D Notes

Specimen E Notes



Specimen F Notes



How **big** is a *Diplodocus*?

Diplodocus is a genus of long necked dinosaurs that is one of the longest known dinosaurs. First discovered in 1877, these animals had four powerful legs and a great long tail. Researchers believe *Diplodocus* was a herbivore that fed by stripping branches. With a centre of mass close to the hip socket, it likely could rear up onto two legs to increase its feeding height. Dippy, a composite skeleton of a *Diplodocus carnegii*, is considered one the most famous single dinosaur skeletons in the world!

1

Diplodocus was one long dinosaur! Some individuals are believed to have been up to 3 How many people lying down end-to-end would that be? You can find out!

First, have an adult help measure your height in centimetres. Next, divide 3,000 cm (30 The answer will be the number of people your height it would take, stacked end-to-end length as a large *Diplodocus*!

For example:

3,000 ÷ **96** = **31.25**

Diplodocus length in centimetres

Your "length" in centimetres

It would take just ove to be the same length a

2

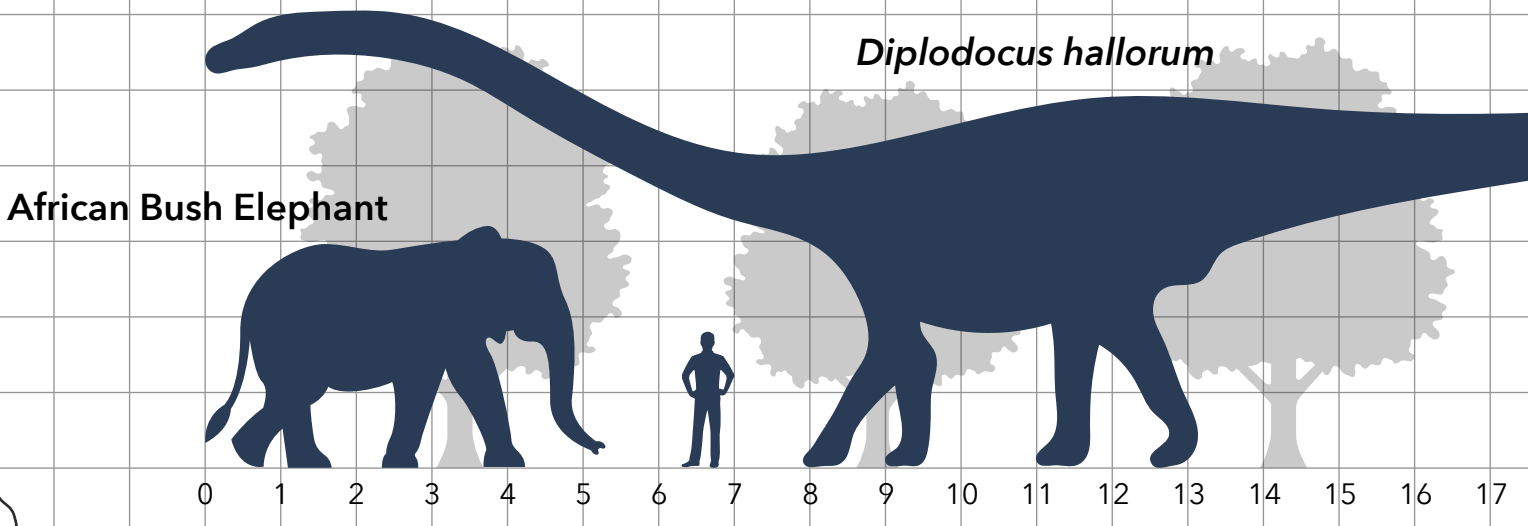
Big tha are

Co ho *Dip* the

3

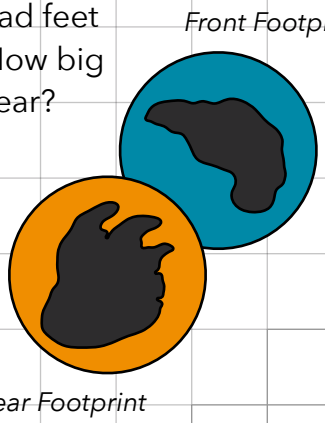
Ea on lon

Co livi *Dip*



g feet need big shoes! *Diplodocus* likely had feet
at were around 68 centimetres in length. How big
e your own feet? What size shoe do you wear?

mpare any adult-sized shoes in your
me. What size shoe do you estimate
plodocus would need? The answer is on
e righthand side of this page!



ch square on this page represents one metre by
e metre. About how tall is *Diplodocus*? About how
ng?

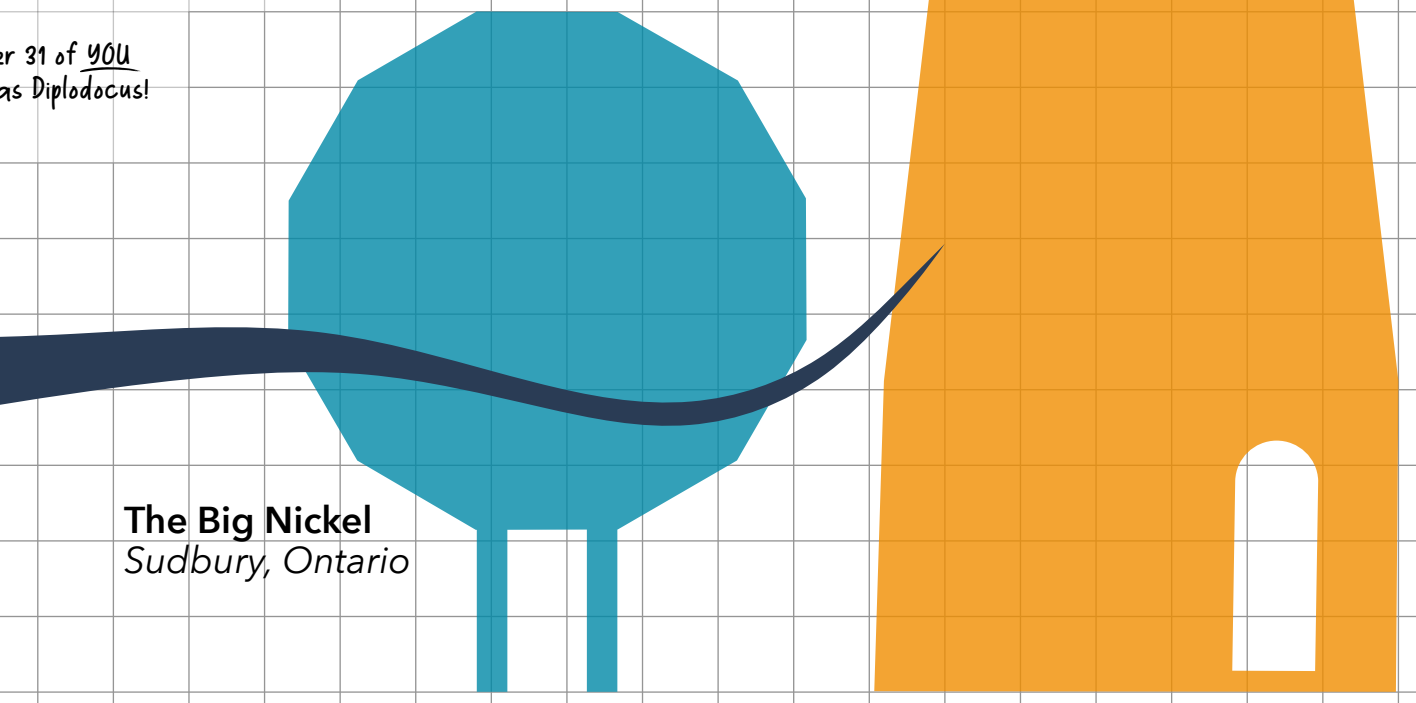
mpare *Diplodocus*' size to the other objects and
ng things on this page. How much taller is
plodocus than an adult man? An elephant?

30 metres in length.

m) by your height.
d, to equal the same

er 31 of YOU
as Diplodocus!

Gibraltar Point Lighthouse
Toronto Islands, Ontario



The Big Nickel
Sudbury, Ontario

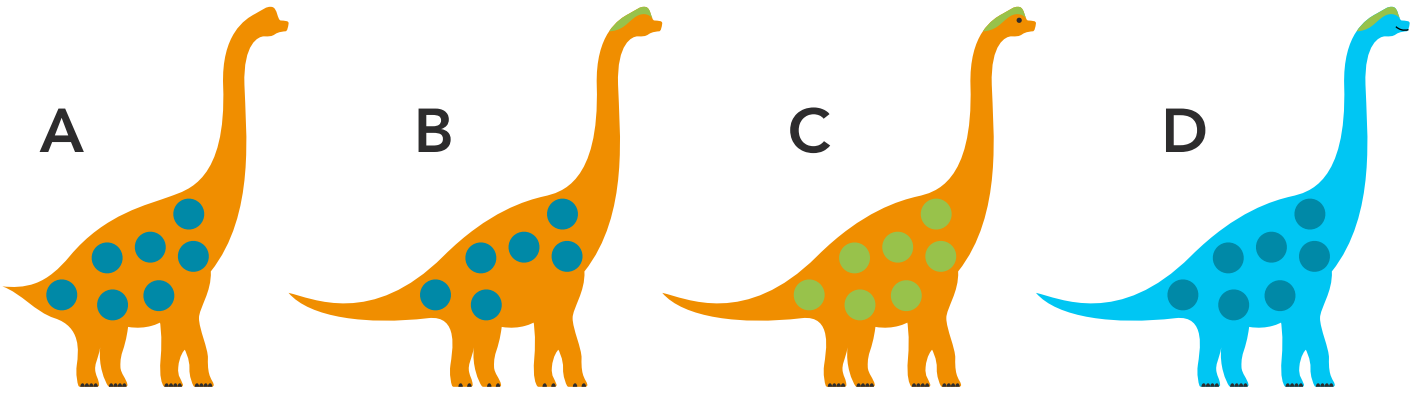
18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36

tres

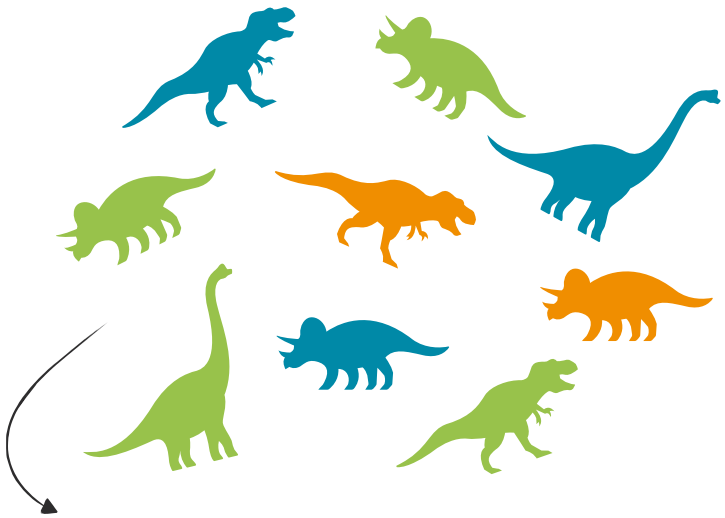
Based on the length of the feet, *Diplodocus* would have likely required men's size 58 or women's size 60 shoes!

Activities for Younger Learners

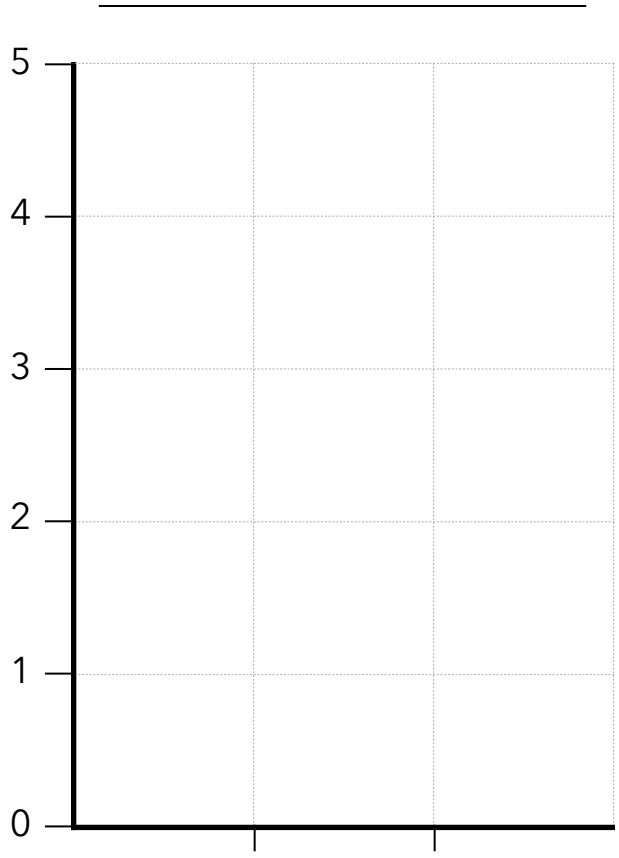
Which of these pretend dinosaurs does not belong? Why? *There is more than one correct answer.*



Look at the group of dinosaurs below.
How can you sort the dinosaurs in different ways? (e.g. by colour or by shape)
Create a tally chart to compare the number of dinosaurs.
How can you display this data in a bar graph?



Total:	Total:	Total:



B

Parasaurolophus could have used its crest as a resonating chamber for communication.

peh·ruh·saw·RAA·luh·fuhs

A

Triceratops had postorbital horns to defend itself from predators.

tri·SEH·ruh·taaps

D

Velociraptor had sickle claws for ripping flesh.

ve·LOS·i·RAP·tor

C

Tyrannosaurus had large, wide, pointed teeth for both ripping flesh and crushing bone.

tr·a·nuh·SAW·ruhs

F

Diplodocus had peg-like teeth, only at the front of its jaws, for stripping leaves from trees.

duh·PLAA·duh·kuhs

E

Apatosaurus had a long neck that increased its feeding area.

uh·paa·tuh·SAW·ruhs

Specimen A

Postorbital Horn

Specimen B

Crest

Specimen C

Tooth

Specimen D

Sickle Claw

Specimen E

Neck

Specimen F

Teeth