

**AUSTRALIAN**

**AGE OF DINOSAURS**

**WINTON Q.**

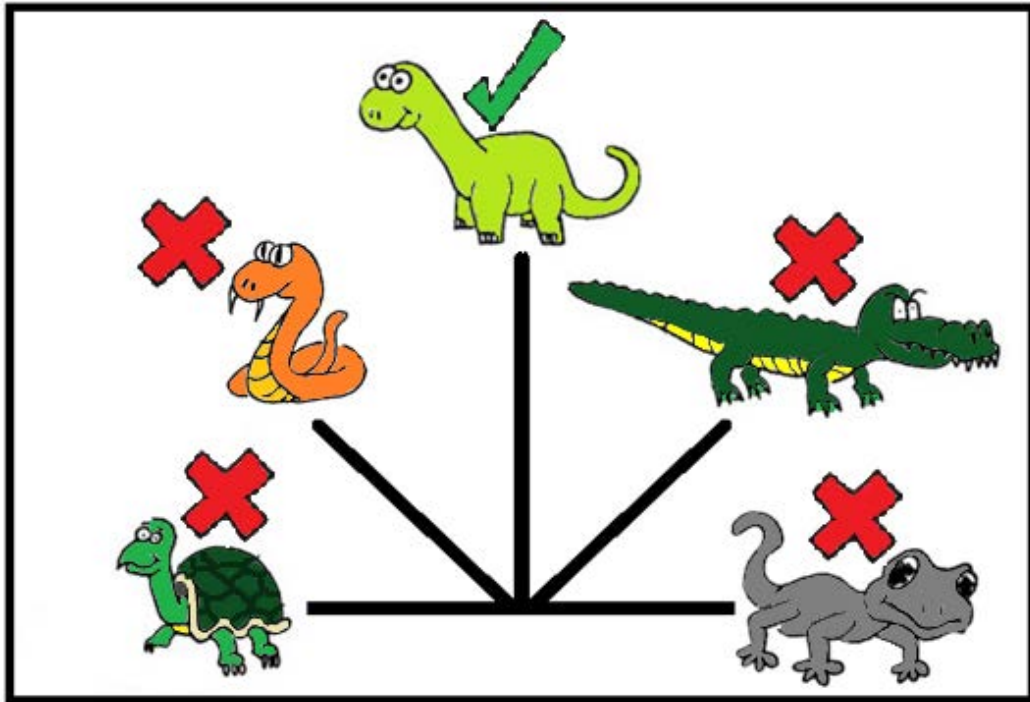
# **Primary Education Activities**

## **Years 6 and 7**

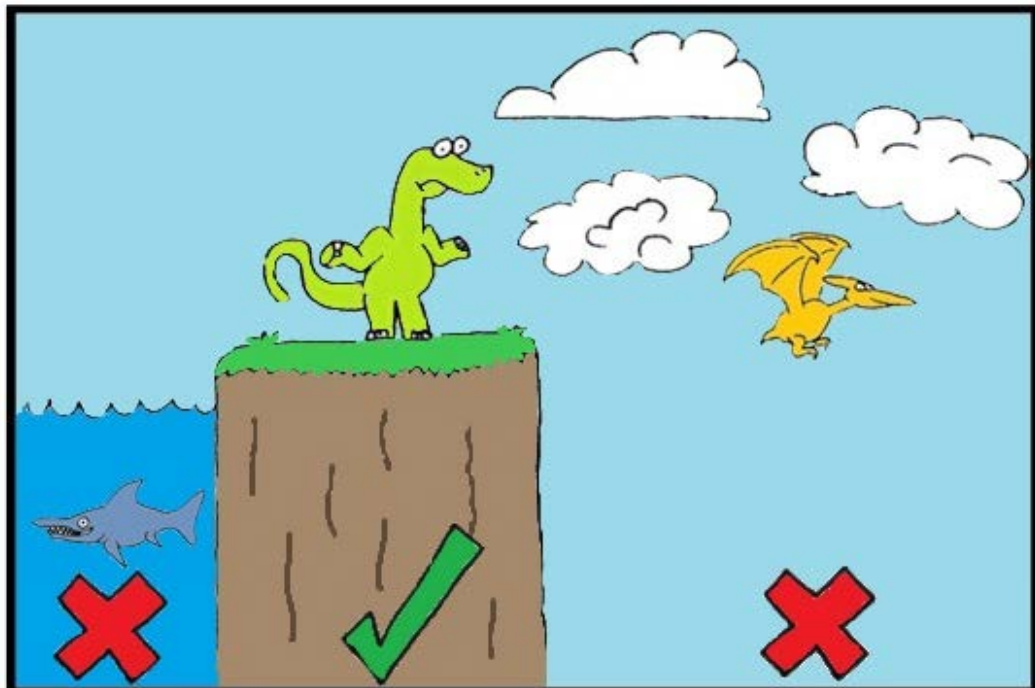
## Information Sheet 1: Think Dinosaur!

If a dinosaur is as **big** as a house or as **small** as a chicken, it still has four things in common with other dinosaurs.

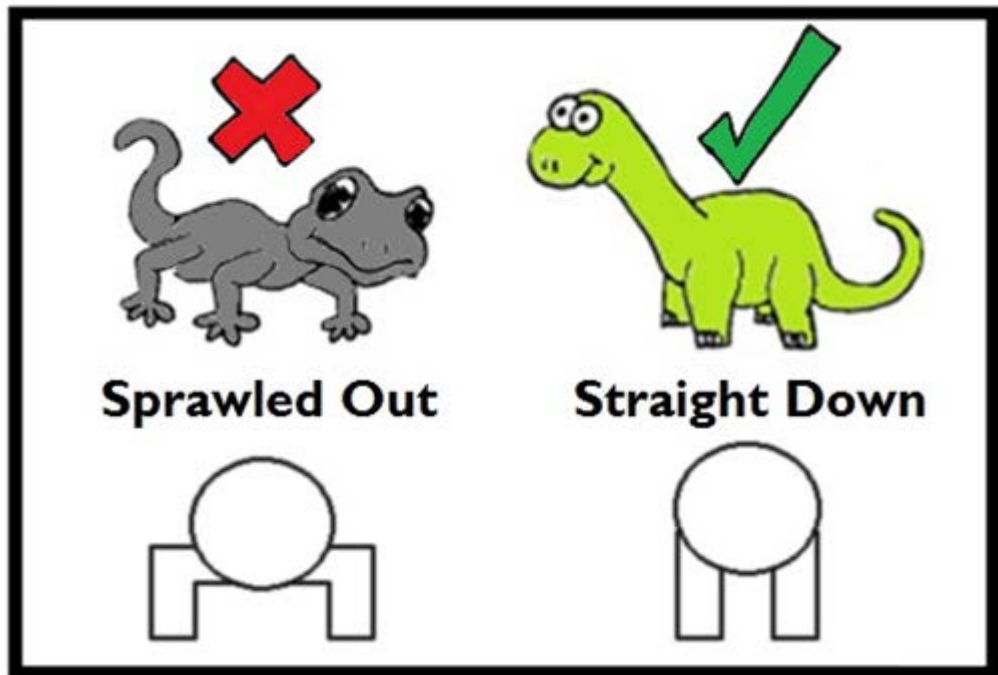
1. Dinosaurs are a specific type of reptile.



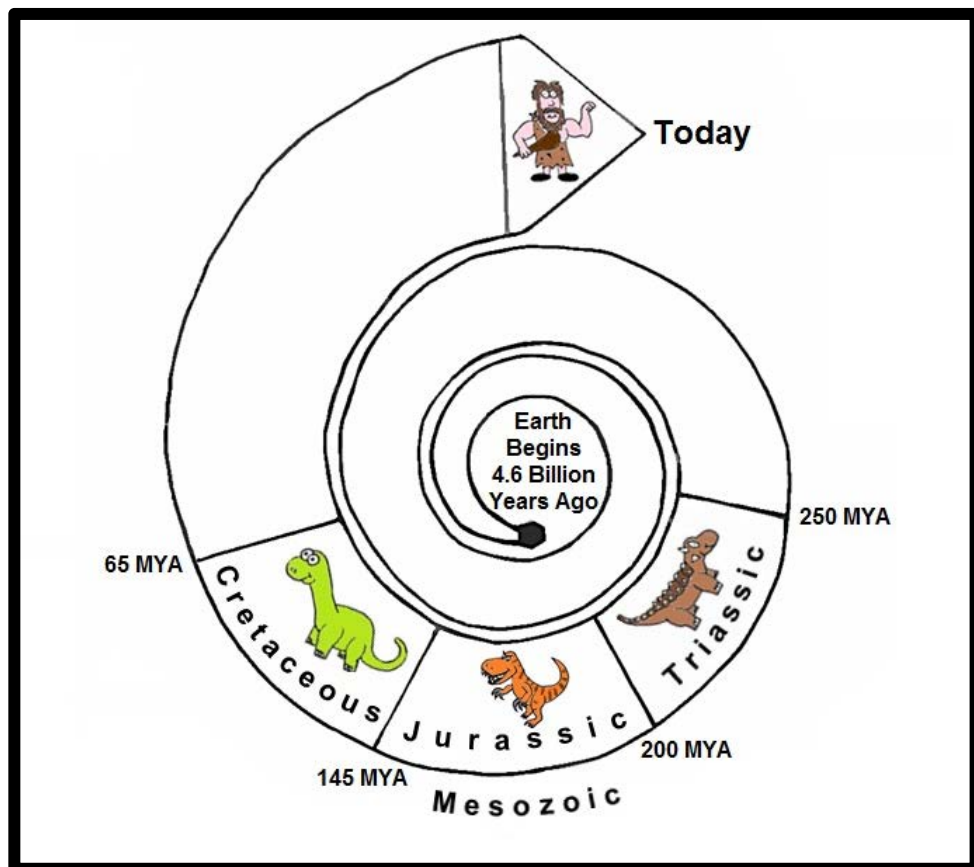
2. Dinosaurs lived on land, not underwater or in the air.



3. Dinosaur legs were always directly below their body, not out to the side like a lizard.



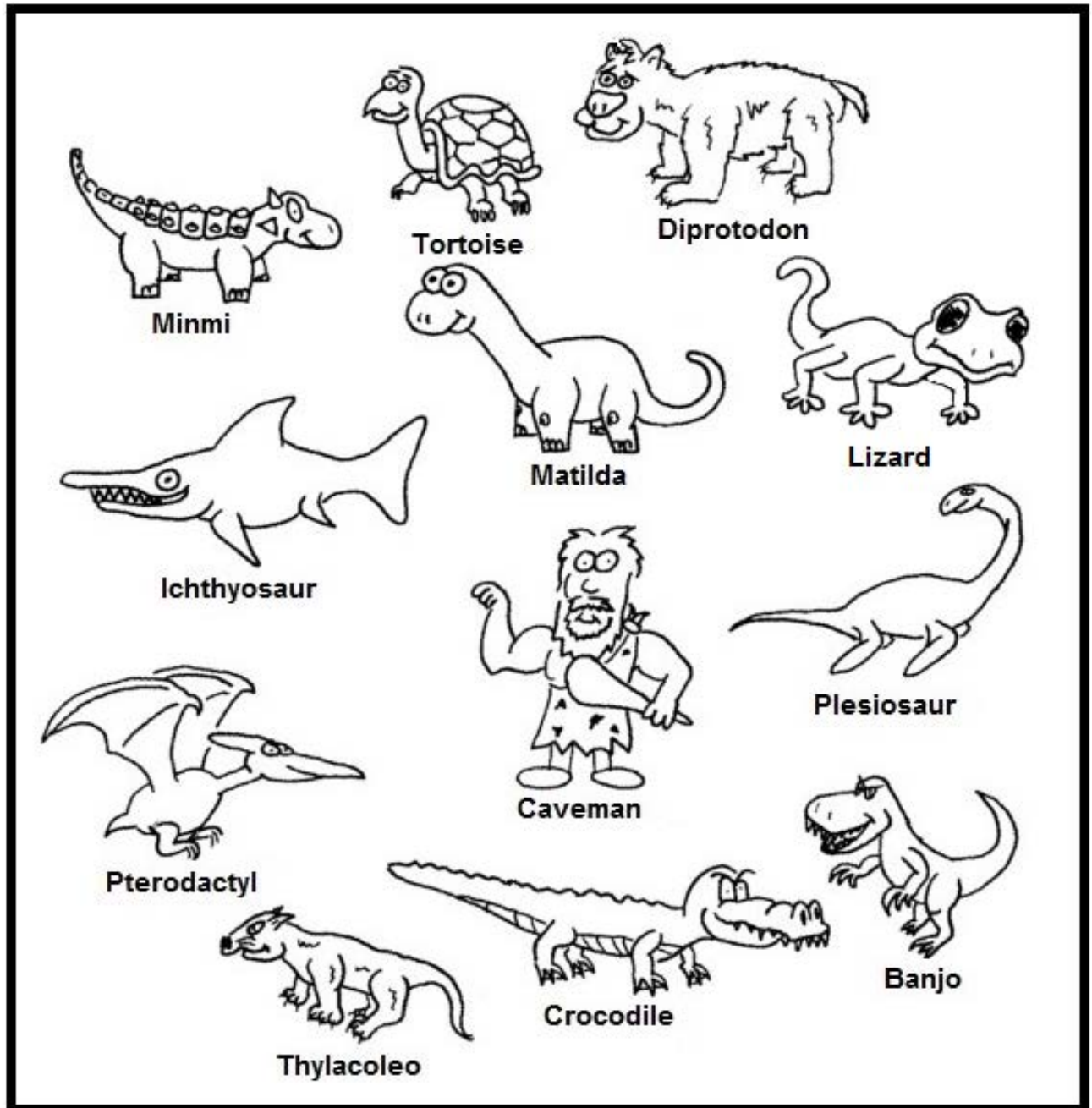
4. Dinosaurs lived during the Mesozoic time period i.e. Triassic, Jurassic, Cretaceous



## Activity 1: Think Dinosaur!

Now it's time to think like a scientist.

Find the dinosaurs in the picture below and colour them in.

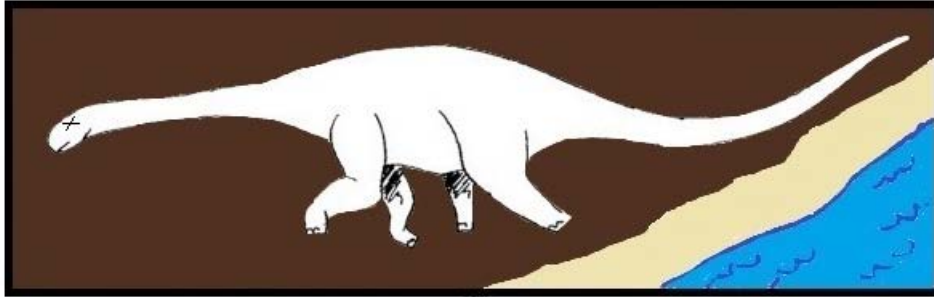




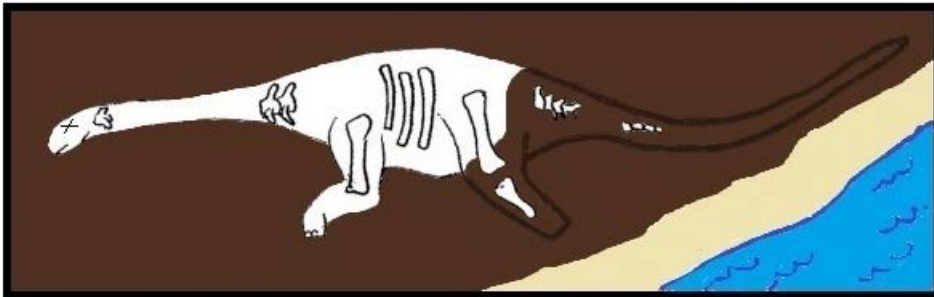
## Information Sheet 2: Fossilised Fun

### How do dinosaur bones fossilise?

Step 1: The dinosaur dies.



Step 2: The body starts to rot away. Whatever is left gets covered by sand and mud.



Step 3: The bones that are buried slowly turn into rock.



Step 4: Millions of years later someone might find them again.



## Activity 2: Fossil Imprint Fun

### Make your own fossil imprint

To prepare for this activity you need:

- plasticine or clay
- empty margarine/butter container or paper cups
- shells, leaves or small plastic dinosaur figurines
- toothpicks
- plaster casting
- water
- paint or coloured pencils.

### Your safety

You **MUST** wear eye protection and be supervised by an adult at all times. It is recommend that an adult mix the plaster until the power substance is well mixed in.

### What to do

1. Put a layer (about 2cm thick) of plasticine or clay in the bottom of a container (old margarine containers are ideal, paper cups are good, even a basic bowl of aluminium foil)
2. Use a range of objects (shells, leaves, small plastic toys etc) to make imprints neatly as you can into the plasticine/clay. You may need a toothpick to help remove the object.
3. Pour plaster into each container, making sure you give each a bit of a shake to help the air bubbles escape.
4. Leave to dry. It should be fine in a few hours but can leave overnight if you want to be sure.
5. Cut open the container to get the plaster and clay out, remove the clay and you will be left with your trace fossil. You can colour or paint the impressions to look like the real thing or leave them as they are.

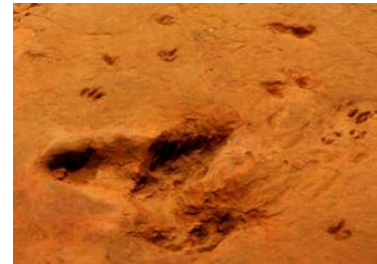


## Activity 2a: Fossil Fun

### Fine-tuning the fossils

Palaeontologists divide fossils into two groups:

1. **Body Fossils** are any hard part of something that once lived. Skeletons are body fossils, just like Matilda's arm bone on the right.
2. **Trace Fossils** are anything that has been left behind from day-to-day activities. A footprint is a trace fossil, just like the ones pictured on the right at the Dinosaur Stampede National Monument, Winton Qld.



Divide the list of fossils below into these two groups.

Petrified wood  
Pine Cone  
Insect Wing  
Tooth marks

Egg  
Footprint  
Shell  
Bone

Nest  
Branch  
Burrow  
Leaf

Teeth  
Feather  
Coprolites (droppings)

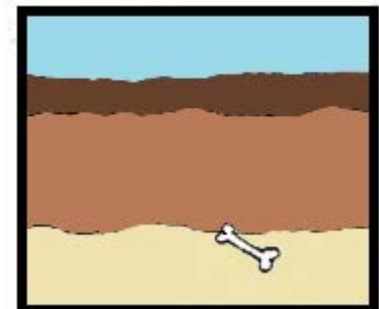
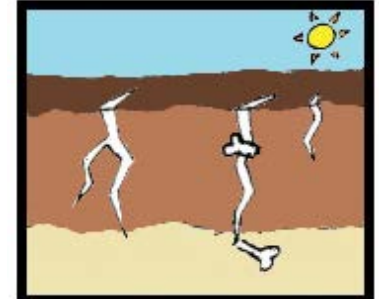
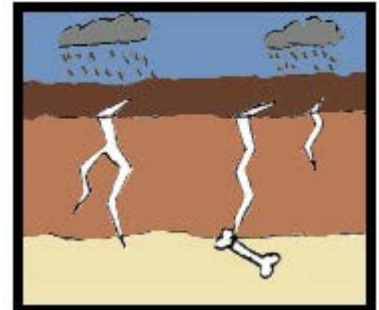
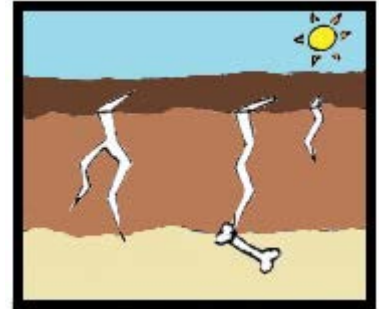
Body Fossils	Trace Fossils

### Activity 3: Beautiful Black Soil

Watch the [australianageofdinosaurs.com](http://australianageofdinosaurs.com) video on how dinosaur bones move through the soil.

In 1999 farmer David Elliott first started to find bones on his Winton property, and it's the characteristics of the area's black soil that brings them to the surface. Draw lines from each sentence to the image that matches the words, showing the steps that a dinosaur bone travels through the soil.

1. The dinosaur bones are trapped in rock below the black soil.
2. When it dries the soil forms big cracks and breaks the bones.
3. The next rainy season washes soil down into the cracks and under the bones.
4. Every year it happens again, for thousands of years, and the bones gets pushed up to the top.
5. Then, hopefully, someone finds a bit of bone on the surface and then we start to dig to uncover the rest.



## Activity 4: Dinosaur Dig

### Make your own dinosaur dig site

To prepare for this activity you need:

- empty margarine/butter container or paper cups
- small plastic dinosaur figurines
- plaster casting
- water
- digging tools (small screwdrivers, paint brushes)
- measuring cups (or use a plastic cup).

### Your safety

You must wear eye protection and be supervised by an adult at all times. It is recommend that an adult mix the plaster until the power substance is mixed well.

### What to do

1. Mix 1 cup of sand, 1 cup of plaster and 1 cup of water (if you want a stronger mixture use a ratio of 1 cup of sand, 2 cups of plaster and 1½ cups of water).
2. Pour a layer of the mixture into a tray (ice cream container or baking foil trays are good).
3. Put plastic dinosaur toys into the layer.
4. Use more of the plaster and sand mixture to cover up the toys.
5. Leave to dry, overnight at least.
6. Excavate the dinosaurs with eg screwdrivers, plastic cutlery and brushes. A magnifying glass can help you see the grains of sand and plaster to be removed.

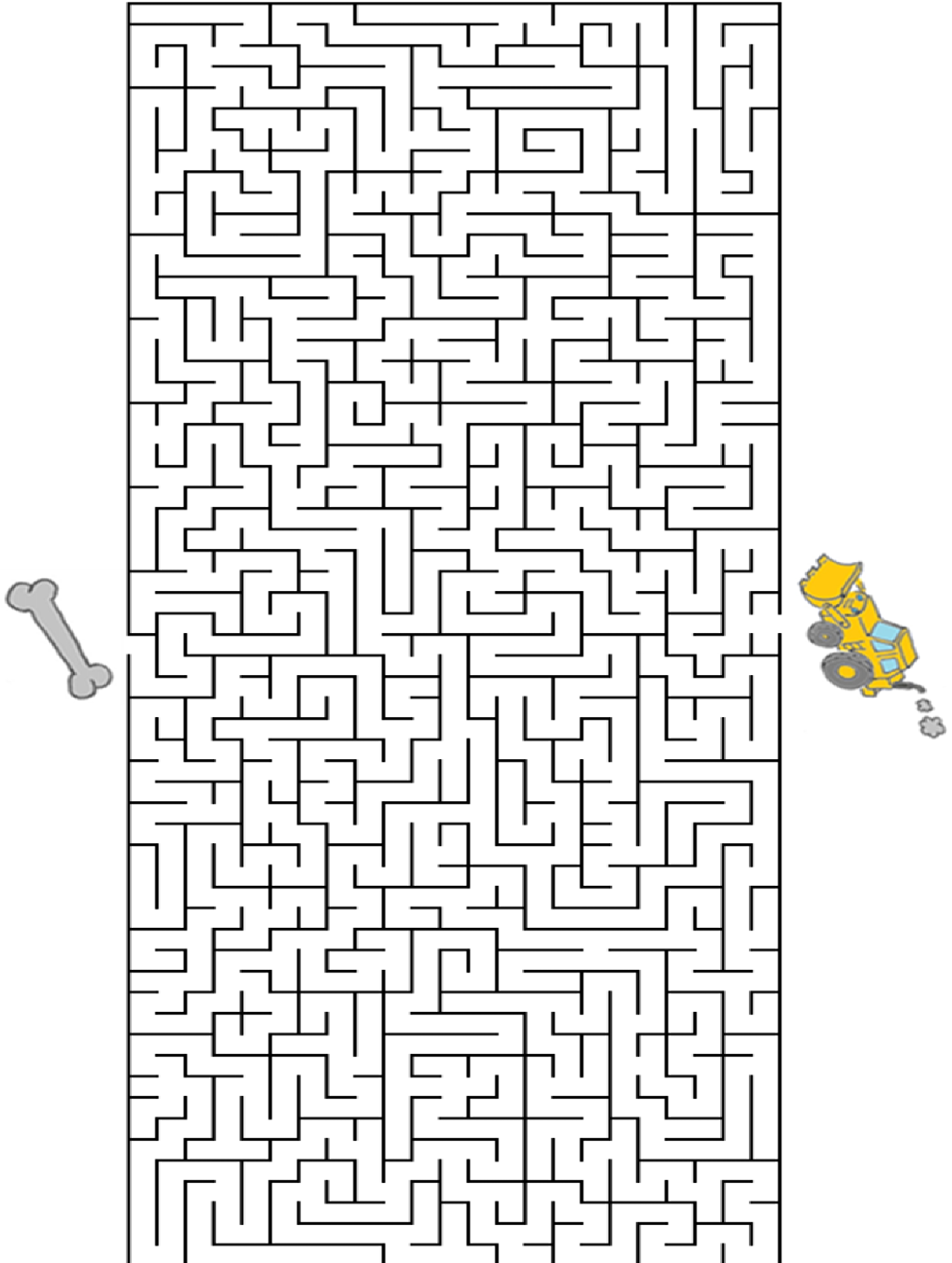




## Activity 5: Searching for Bone

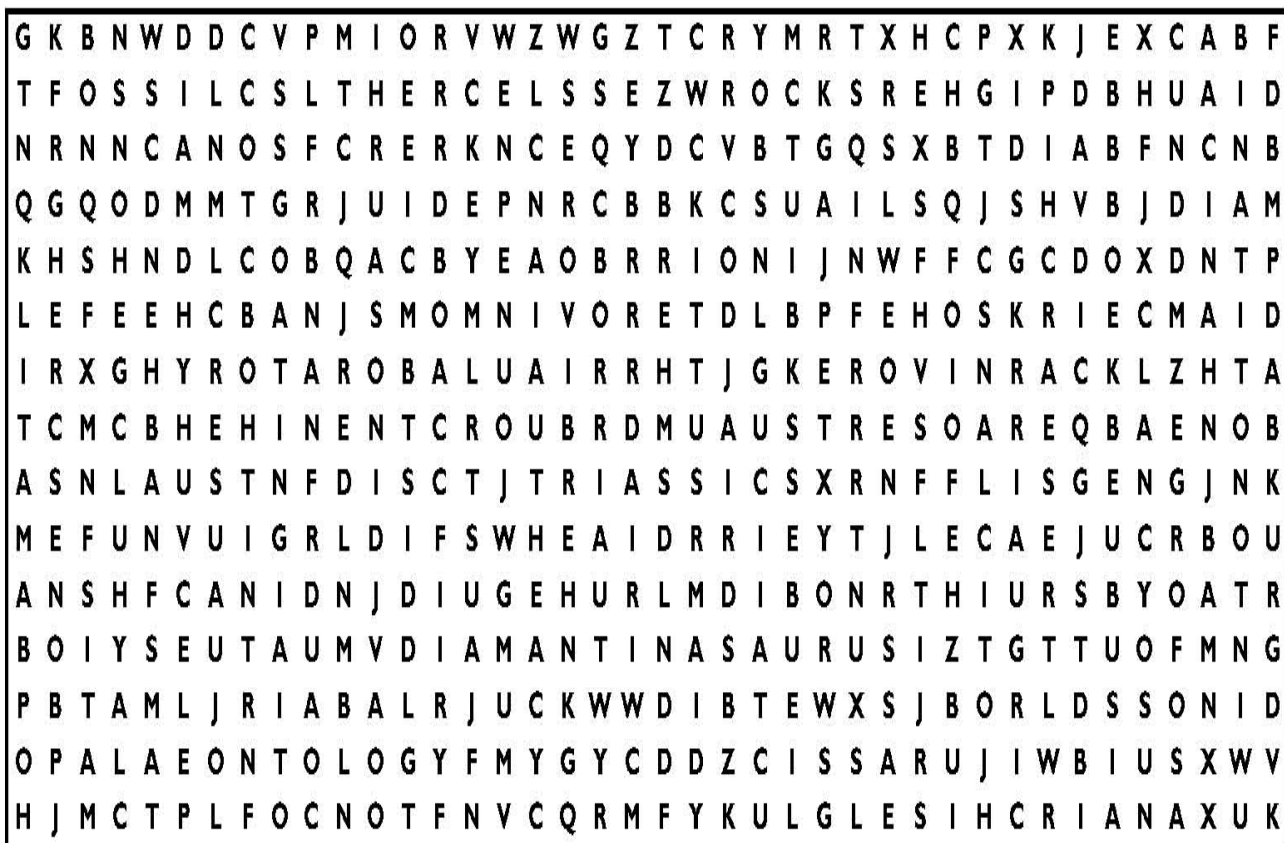
### The Museum needs help!

David Elliott has lost his way to the fossil site. Can you help him get the loader back to where the fossils are?



## Activity 6: Laboratory Fun

**Oh no!** Museum staff and volunteers have so many things in the Laboratory that we seem to have lost some of them. Can you help us find them?

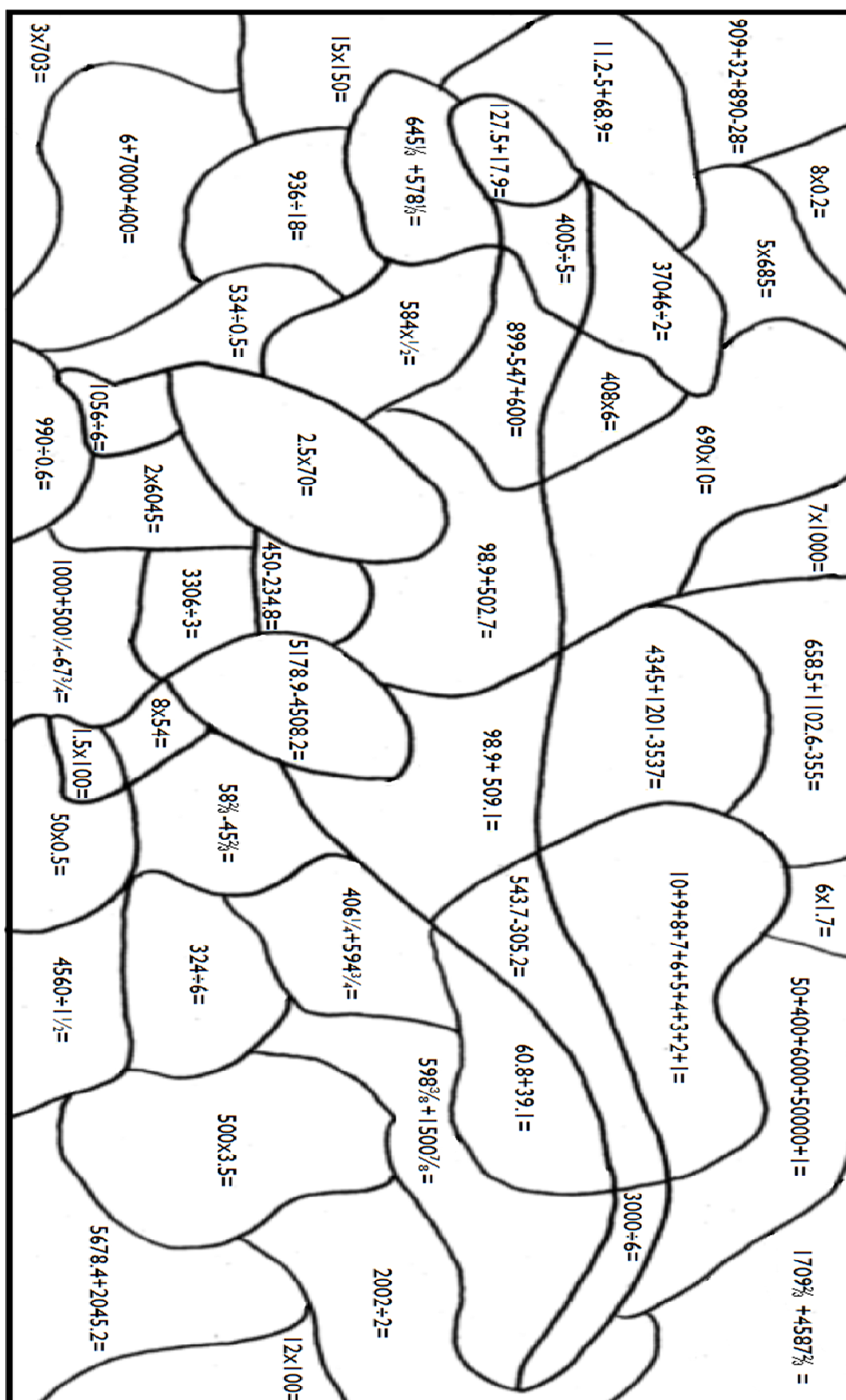


Fossil	Excavation	Omnivore	Wen-Pen
Clancy	Rocks	Discovery	Banjo
Triassic	Bones	Diamantinasaurus	Research
Jurassic	Palaeontology	Carnivore	Matilda
Herbivore	Cretaceous	Wintonotitan	Dinosaur
Laboratory	Australovenator	Air-Chisel	Winton

Sometimes it's challenging to find dinosaur bones in the rock. Can you help us find Matilda?

Palaeontologists have to take lots of measurements and do lots of maths to study dinosaur bones.

Solve all the sums and colour in any areas that equal anywhere between **100-1000**.

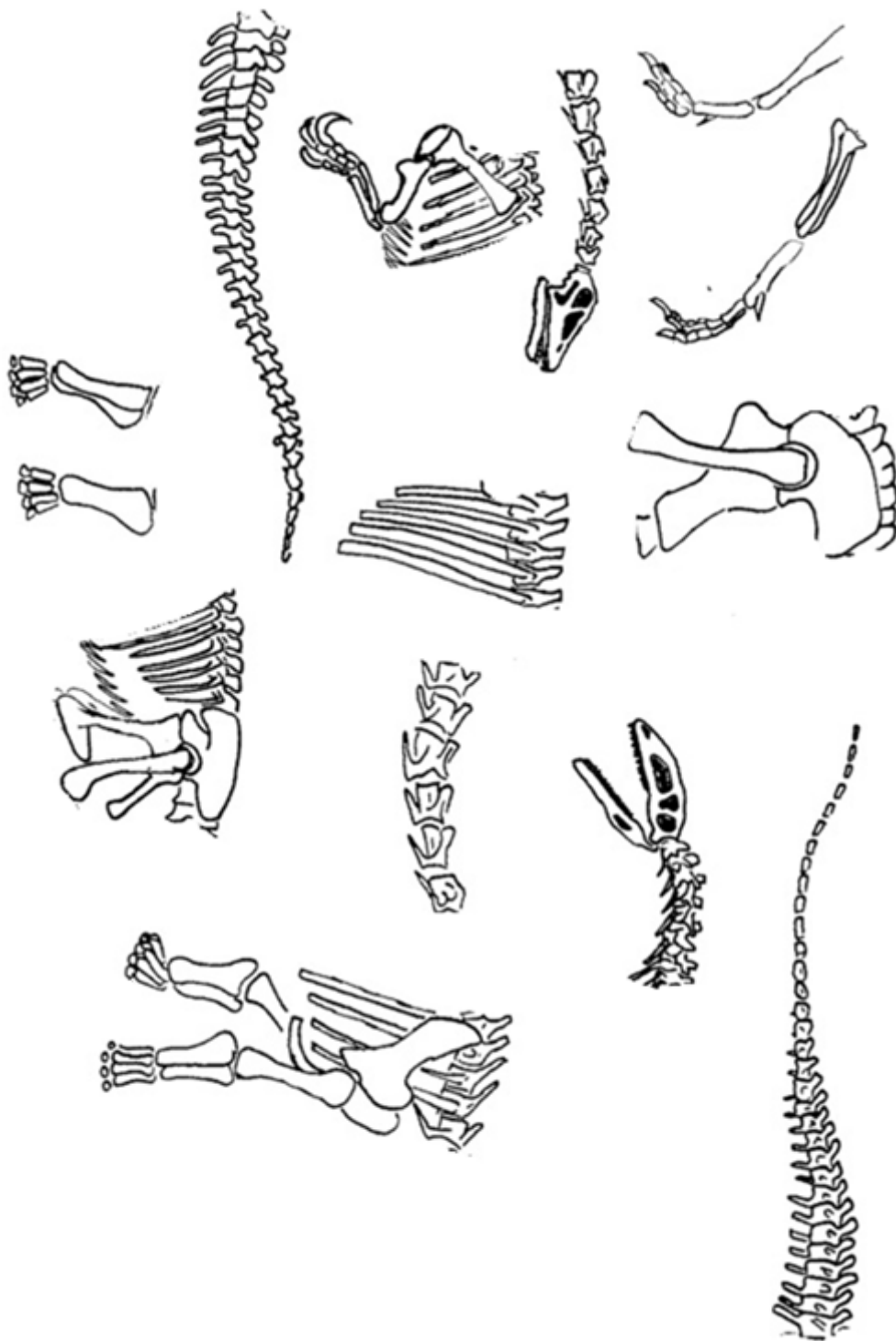


## Activity 8: Pieces of the Puzzle

When we finish taking off all the rock from around the fossils, we need to puzzle the pieces of bone back to their original positions. Can you help us? Cut out the pieces of the dinosaur and see if you can puzzle them back together. What do you think you will find?

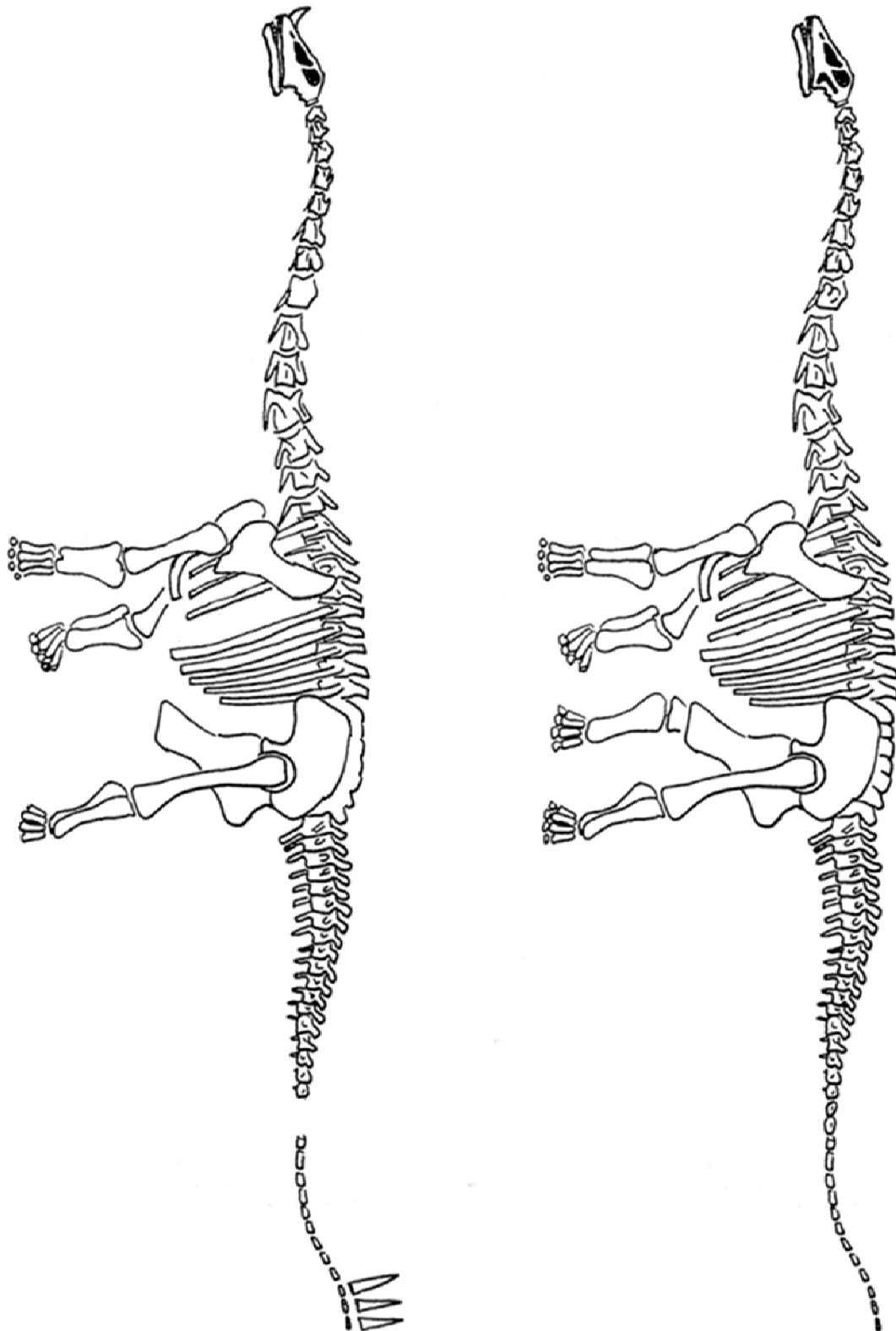
### Hints

*Use sticky tape*



### Activity 9: Researching the Bones

When palaeontologists study a dinosaur skeleton they need to look for differences in the bones. See if you can find all **10** differences in this Sauropod skeleton.





## Information Sheet: How are Dinosaurs Different?

When all the preparation work on the fossilised dinosaur bones is finished, a palaeontologist (pay-lee-on-toll-o-gest) visits the Museum and to research all the fossils. They compare our fossils with all the other dinosaur fossils found around the world. This is done to see if our dinosaurs are different from, or similar to, what has been found already.

The Australian Age of Dinosaurs, along with other organisations and people in the region, is really fortunate to have found some pretty amazing dinosaurs.

Check out five of the newest dinosaur species found in the Winton, Hughenden and Richmond areas.

### Matilda

**Nickname:** Matilda  
**Scientific name:** *Diamantinasaurus matildae*  
**Pronunciation:** di-man-tina-sore-us mah-til-day  
**Meaning:** Matilda's Diamantina [river]  
Lizard  
**Location:** Winton Qld  
**Type:** Sauropod  
**Diet:** Herbivore  
**Size:** 15–18m long, 2.5–3m high, 15–20 tonnes



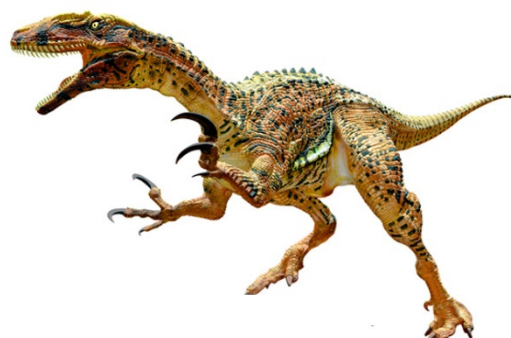
### Clancy

**Nickname:** Clancy  
**Scientific name:** *Wintonotitan wattsi*  
**Pronunciation:** win-ton-o-tie-ton wots-i  
**Meaning:** Watt's Winton Titan  
**Location:** Winton Qld  
**Type:** Sauropod  
**Diet:** Herbivore  
**Size:** 15–16m long, 3m high, 15–20 tonnes



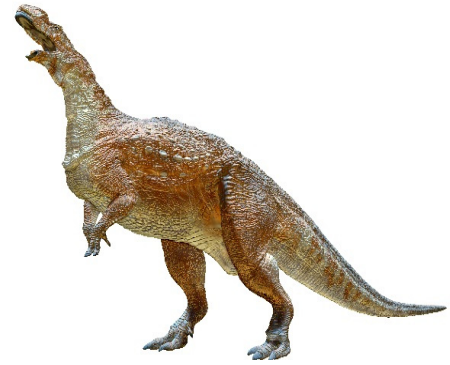
### Banjo

**Nickname:** Banjo  
**Scientific name:** *Australovenator wintonensis*  
**Pronunciation:** oss-tra-low-ven-a-tor win-ton-en-sis  
**Meaning:** Winton's Southern Hunter  
**Location:** Winton Qld  
**Type:** Theropod  
**Diet:** Carnivore  
**Size:** 5m long, 1.6m high, ½ tonne



## Molly

**Nickname:** Molly  
**Scientific name:** *Muttaburrasaurus langdoni*  
**Pronunciation:** mutt-ah-burra-sore-us + lang-don-ii  
**Meaning:** Langdon's Muttaburra Lizard  
**Location:** Muttaburra Qld  
**Type:** Ornithopod  
**Diet:** Herbivore  
**Size:** 7–8m long, 2.5m high, 4 tonnes



## Buster

**Nickname:** Buster  
**Scientific name:** *Minmi paravertebra*  
**Pronunciation:** min-mee+ para-vert-ee-bra  
**Meaning:** Having paravertebrae, from Minmi Crossing (where it was found)  
**Location:** Roma Qld  
**Type:** Thyreophoran (primitive ankylosaur)  
**Diet:** Herbivore  
**Size:** 2–3m long, 1m tall, 500kg

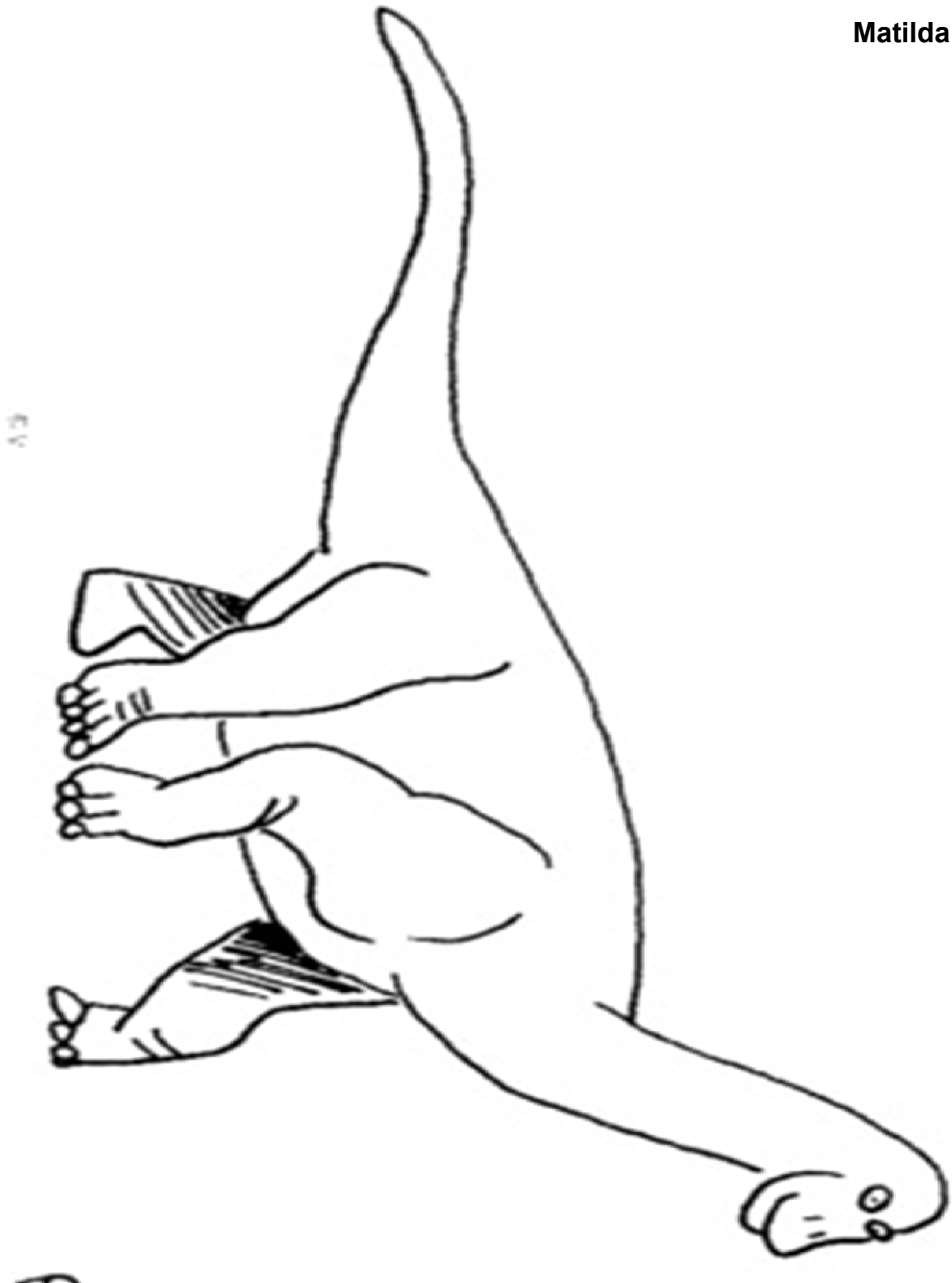


## Extra Activity A: Dinosaur Skin

Imagine what dinosaurs might have looked like and try to give these dinosaur some skin. Did they have feathers or scales? Was the skin pink with purple stripes?

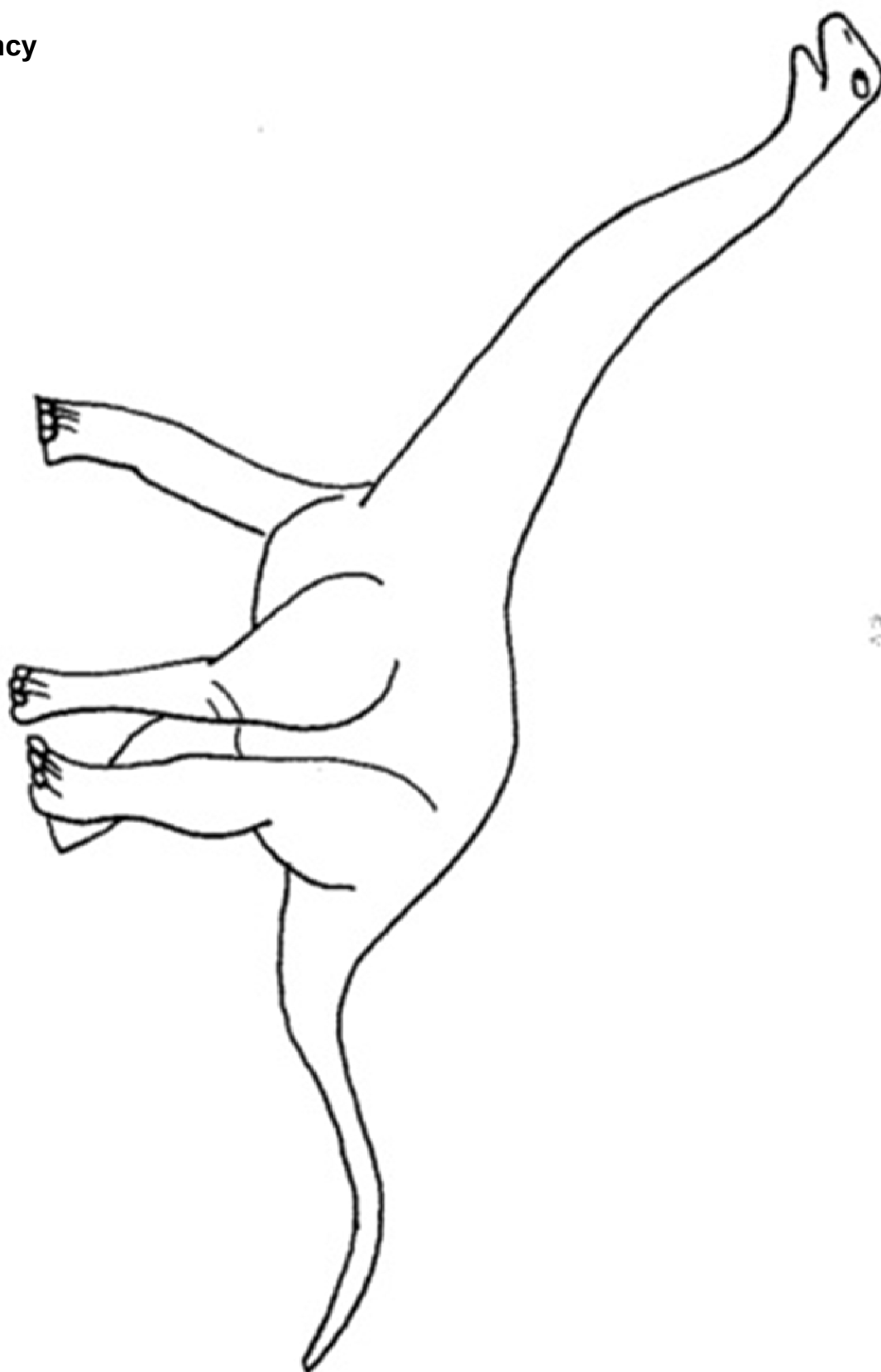
*Diamantinasaurus*  
*matildae*

**Matilda**



*Wintonotitan watsii*

**Clancy**



*Australovenator*  
*wintonensis*

**Banjo**





## Extra Activity B: Design a Dinosaur

Imagine that you find your very own dinosaur. What would it look like? What would you call it? Fill in the details of your dinosaur and draw it below.

**Dinosaur nick name** \_\_\_\_\_

**Dinosaur scientific name** \_\_\_\_\_

**Discovery location** \_\_\_\_\_

**Diet** \_\_\_\_\_

**Weight** \_\_\_\_\_

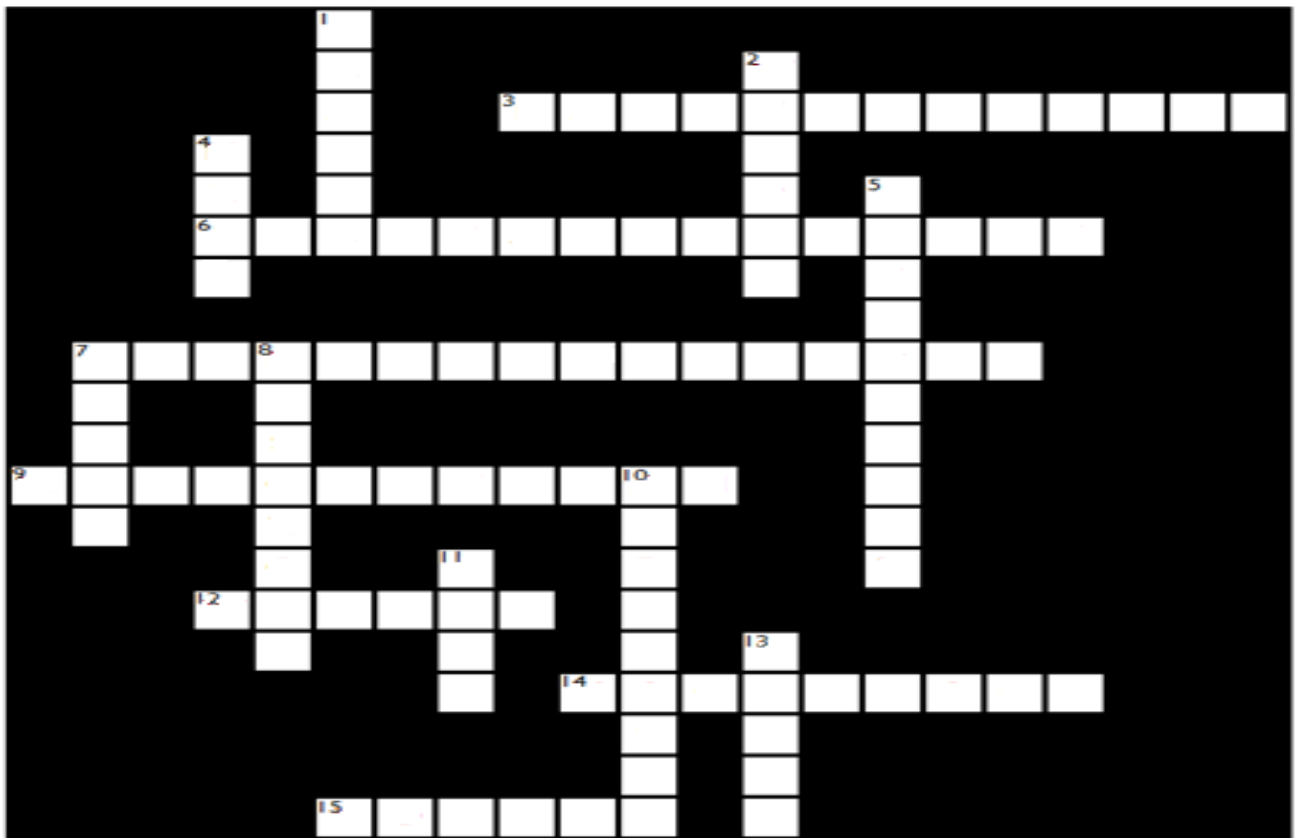
**Size** (length, height) \_\_\_\_\_

**Special features** \_\_\_\_\_



## Extra Activity C: Dino-crossword

Test your new dinosaur knowledge and fill out this crossword.



### ACROSS

3. A scientist who studies dinosaurs
6. Banjo's scientific name
7. Matilda's scientific name
9. Clancy's scientific name
12. Our favourite dinosaurs are found in \_\_\_\_\_ Qld
14. The name of the small detailing tool used in the Laboratory
15. What a bone that turns into rock it becomes

### DOWN

1. What Clancy and Matilda would have eaten
2. The most common tool in the Laboratory
4. What Banjo would have eaten
5. Where Dinosaur bones are prepared
7. In 1999 D \_\_\_\_\_ Elliott found dinosaurs outside of Winton Qld
8. The Triassic, Jurassic and Cretaceous were part of the M \_\_\_\_\_ era
10. The largest air-tool we use in the Laboratory
11. A bone is a \_\_\_\_\_ fossil
13. A footprint is a \_\_\_\_\_ fossil

## Extra Activity D: Scrambled Dinosaurs

A research assistant has dropped all the paperwork! See if you can unscramble all the words and fix up the paperwork before the palaeontologist comes back to the Laboratory!

NOAUDRISS = D \_\_\_\_\_

FSISLO = F \_\_\_\_\_

JONBA = B \_\_\_\_\_

NWONTI = W \_\_\_\_\_

OBKSIALCL = B \_\_\_\_\_

YCALNC = C \_\_\_\_\_

TMDLIAA = M \_\_\_\_\_

OGALPONSTIEA = P \_\_\_\_\_

ETLNOSEK = S \_\_\_\_\_

EOSOZIMC = M \_\_\_\_\_

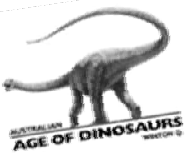
These clues may help you unscramble the words:

- ✦ Australia's most complete carnivorous dinosaur is B \_\_\_\_\_
- ✦ Three of the most important dinosaurs in Australia were found in W \_\_\_\_\_
- ✦ Dinosaurs are all found from the M \_\_\_\_\_ Era
- ✦ Two sauropods found in Winton are named M \_\_\_\_\_ and C \_\_\_\_\_
- ✦ D \_\_\_\_\_ were a specific type of reptile
- ✦ The topsoil around Winton is called B \_\_\_\_\_
- ✦ The S \_\_\_\_\_ of the dinosaur has turned into a F \_\_\_\_\_, which are studied by scientist called a P \_\_\_\_\_

## Extra Activity E: Dinosaur Research

Select your favourite Australian dinosaur and write a report or design a poster with all the information you can find about it. Make sure you include its scientific name, the meaning of its scientific name, how to pronounce it, where and when it was discovered, what type of dinosaur it is, what food it ate and how big it was. Can you find out which main bones, or parts of them, have been discovered and where they were located in the dinosaur's body?

For additional research, also try to find out as much as you can about the habitat at the time your dinosaur lived and what other dinosaurs, or other creatures, may have been alive at the same time in Australia or in other parts of the world.



**AUSTRALIAN AGE OF DINOSAURS MUSEUM  
PREPARATION / CONSERVATION RECORD SHEET**

Date Prep commenced: \_\_\_\_\_ Site Name: \_\_\_\_\_  
 Field no: \_\_\_\_\_ AODF: \_\_\_\_\_ AODL: \_\_\_\_\_ Locality Info: \_\_\_\_\_  
 Preparator/s: \_\_\_\_\_  
 Supervisor/s: \_\_\_\_\_  
 Tools used: \_\_\_\_\_  
 Glues & Consolidates used: (please circle) superglue araldite paraloid B72 PEG wax  
 Other (please specify): \_\_\_\_\_

**INITIAL DESCRIPTION NOTES:** (include joining material and fossil graffiti along with assoc. material)

Description: \_\_\_\_\_  
 Measurement: \_\_\_\_\_ x \_\_\_\_\_ x \_\_\_\_\_ mm  
 Associated Material: \_\_\_\_\_  
 Other: \_\_\_\_\_

**FOR COLLECTION REGISTER RECORDS ONLY:**

Final stability of specimen: (please circle) 1 2 3 4 5  
 I.D. after prep: \_\_\_\_\_  
 Date prep completed: \_\_\_\_\_  
 Recorded on register: \_\_\_\_\_  
 Final Photos taken: \_\_\_\_\_  
 Manager Signature: \_\_\_\_\_

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