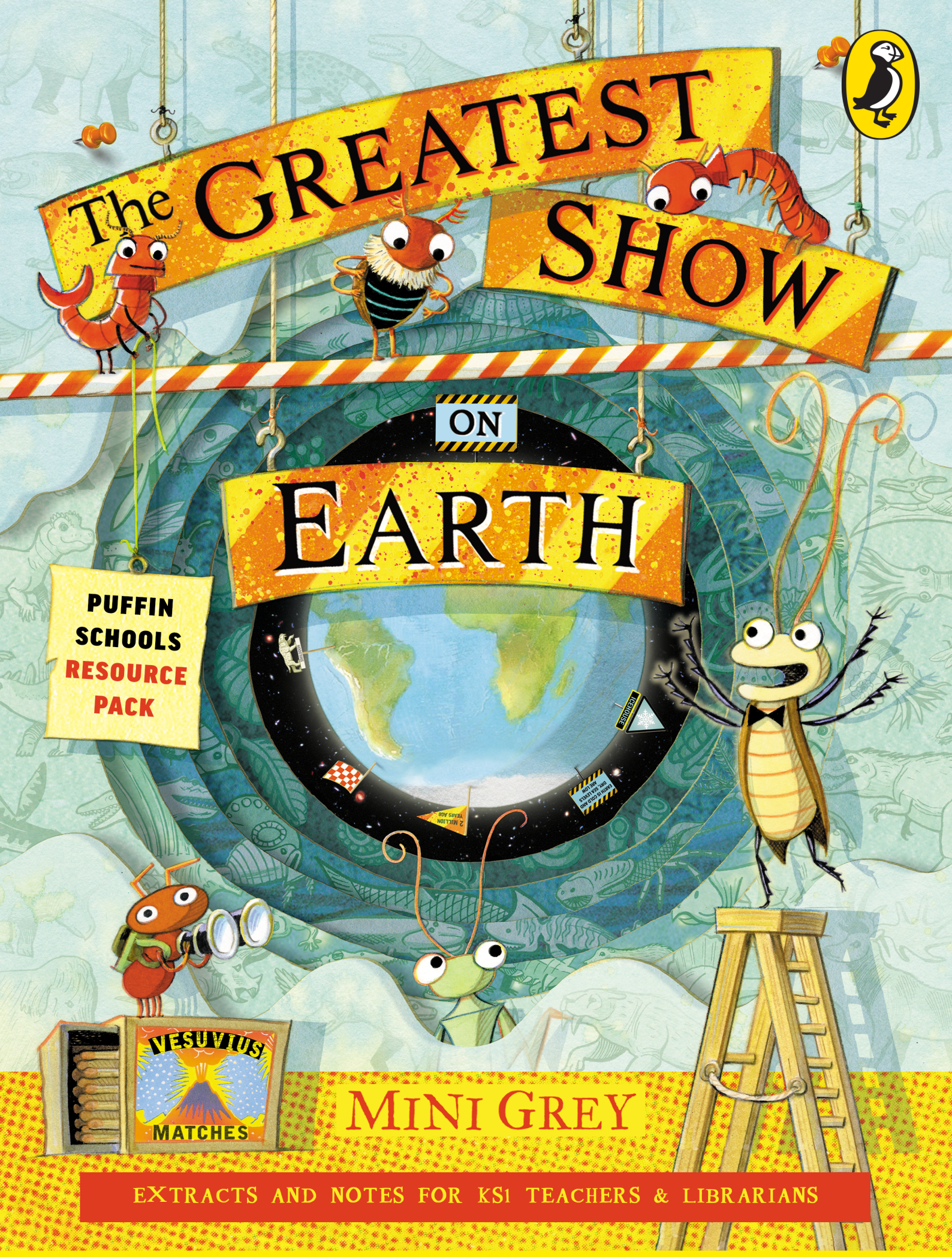
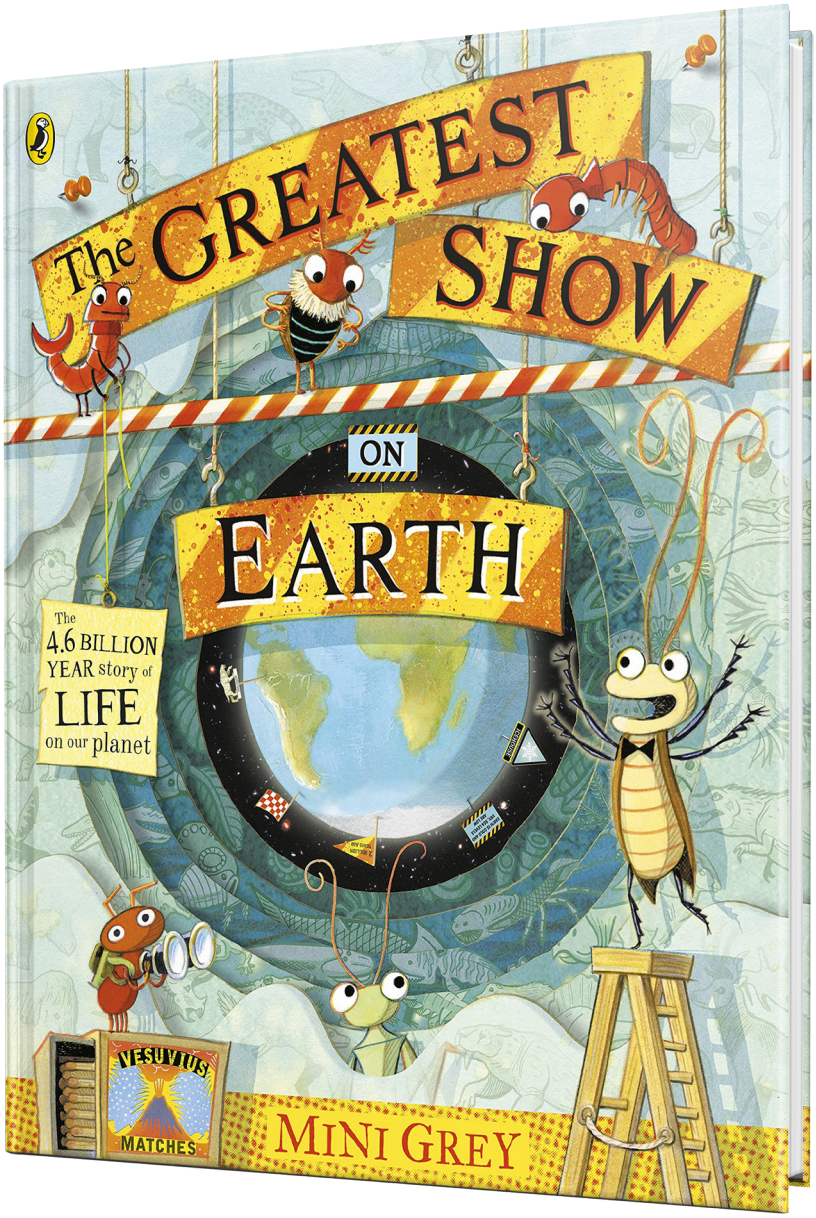


Puffin Schools

puffinschools.co.uk



Explore the themes of:

Natural History, Biological Diversity, STEM themes, Planet Earth, The Environment

Includes subject areas:

Science, History, Literacy, Art

Lesson 1: An introduction to the book

Objectives: Design the book cover based on exploring the title; name and categorize animals

Lesson 2: Ediacaran and Cambrian animals

Objectives: Identify differences between very early animals; create a fact file showing the differences; create and draw your own Ediacaran or Cambrian animal; write a postcard about time travel.

Lesson 3: Reptiles and amphibians

Objectives: Understand the differences between reptiles and amphibians; explore the differences between reptile eggs and amphibian eggs; identify the evolution of the fish to the tetrapod.

Lesson 4: The asteroid is coming!

Objectives: Consider the consequences of an asteroid impact; create a dialogue from the viewpoint of a dinosaur; identify the odd one out in a language task.

Lesson 5: The rise of the mammals

Objectives: Create a new animal; write a description of your new animal mash up; complete a profile card for your new mammal mash up

Lesson 6: The End

Objectives: Reflect on the book and complete a graphic organiser to show understanding; complete a book review; demonstrate understanding of the topics and key vocabulary from the book..

Lesson 1: Introduction

Objectives: An Introduction to the book.
Design the book cover based on exploring the title;
Name and categorize animals

The
4.6 BILLION
YEAR story of
LIFE
on our planet

1) What do you think Earth was like 4.6 billion years ago?

2) How do you think Earth began?

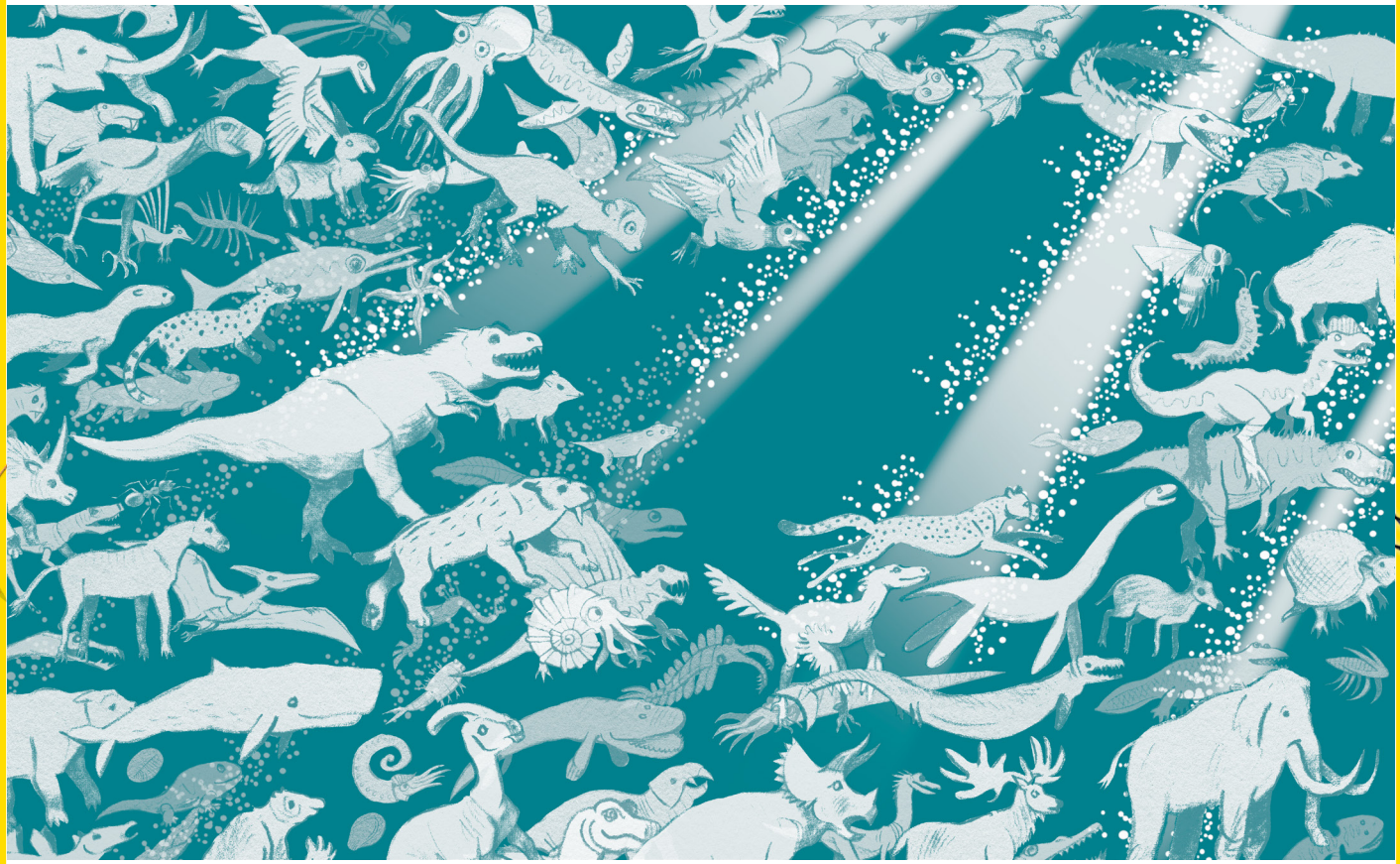
3) How do you think Earth is different now?

Activity 1: Design the Book Cover

Imagine all the things that have happened on Earth over 4.6 billion years, how can you show this on a book cover for this amazing story?

Activity 2:

Can you name some of the animals in this picture?



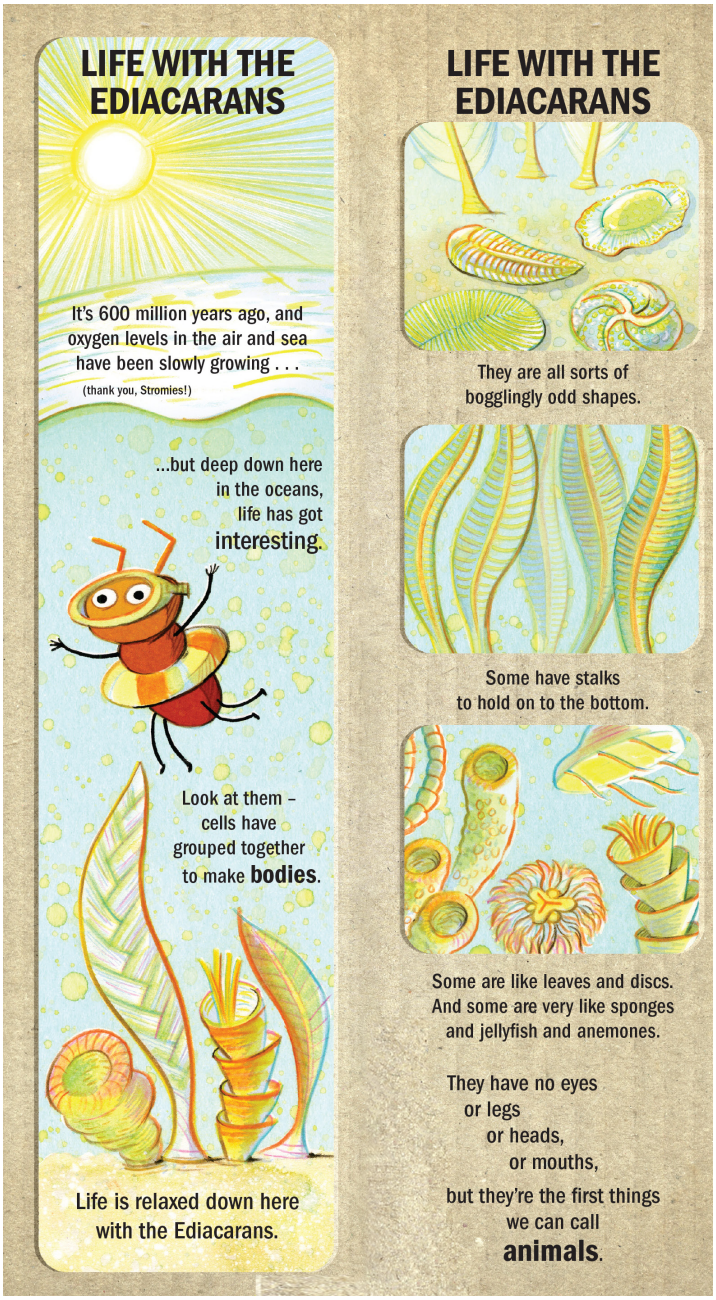
Can you put these animals into the correct category below:

Extinct	Alive on planet earth

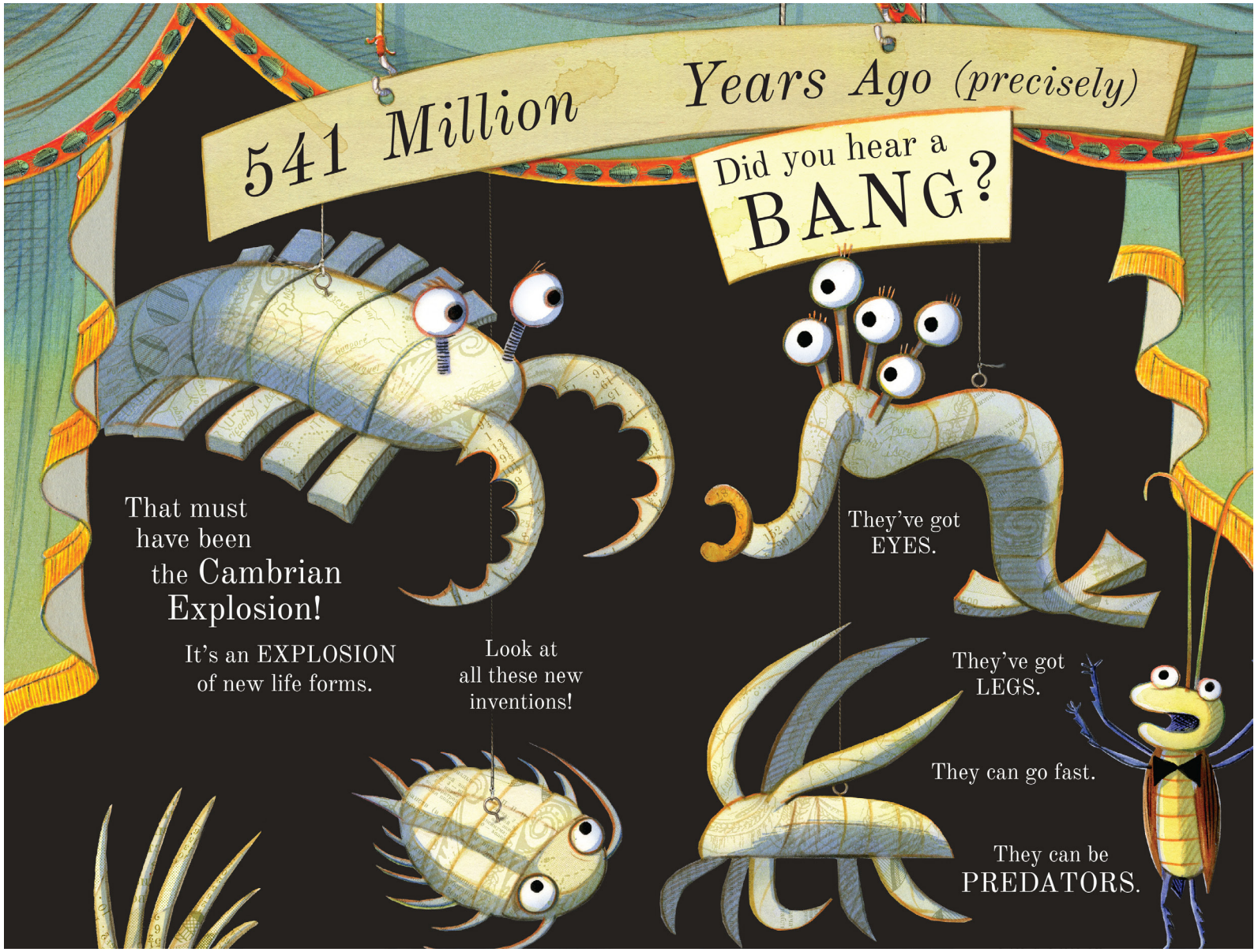
Lesson 2: Ediacaran and Cambrian animals

Objectives: Identify the differences between the Ediacarans and the Cambrians.
Create a fact file showing the differences between the Ediacarans and the Cambrians.
Draw your very own Ediacaran and Cambrian.
Write a postcard from the age of the the Cambrians.

Take a look at these extracts from the book:



Extract 1


541 Million Years Ago (precisely)
Did you hear a BANG?
That must have been the Cambrian Explosion!
It's an EXPLOSION of new life forms.
Look at all these new inventions!
They've got EYES.
They've got LEGS.
They can go fast.
They can be PREDATORS.

Extract 2

Activity 1: Fact File

Fill in a fact file card on Ediacarans and Cambrians based on your understanding of the differences between them.

FACT FILE	
Ediacarans	**Cambrians**

Activity 2: Design Your Own

Design your own Ediacaran and then describe it using adjectives. Can you think of a name for your Ediacaran? Use the fact file from activity one to help you.

Draw your Ediacaran here

Describe your Ediacaran here

My name is _____

I'm an Ediacaran, I _____

_____

Describe your Cambrian here

My name is _____

I'm a Cambrian, I _____

_____

Draw your Cambrian here

Differentiation Task: Create and Make

How many different Cambrian animals can you make?

Choose a body, some legs and some eyes to make your very own Cambrian.
Once you have made your very own Cambrian, can you write some sentences describing it?

Activity 3: Postcard

Imagine that you have travelled back in time as a time traveller to the age of the Cambrians. Write a postcard home to your family describing everything you can see.

Lesson 2: Reptiles and Amphibians

Objectives: Complete a definition match up task.
Categorise the amphibians and reptiles to show understanding.
Identify differences between reptile eggs and amphibian eggs.
Complete a spot the difference task in the evolution from fish to tetrapod.

Activity 1: Match up task

Can you match the right word and definition together?

Reptiles are...	An amphibian is...

a group of cold-blooded animals that have skin covered with small hard scales and lay eggs.

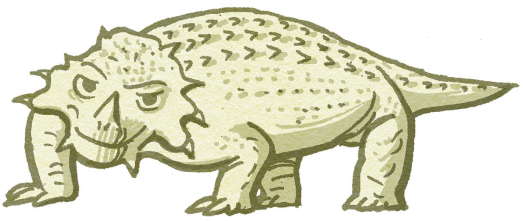
a (usually) four-legged animal that spends at least part of its life in water, where it lays its eggs.

Categorise

Can you sort the reptiles and amphibians into the correct columns below?

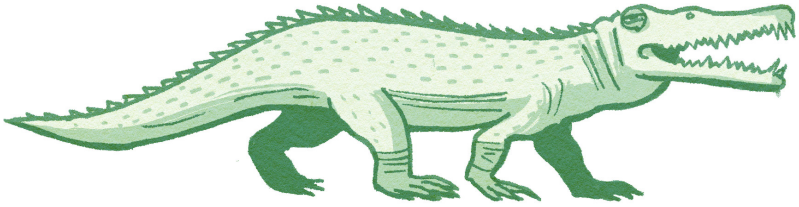
Reptiles	Amphibians

Snakes **Frogs** **Lizards** **Crocodiles** **Tadpoles**
Turtles **Newts** **Chameleons** **Iguanas** **Alligators**
Toads **Komodo dragons** **Geckos** **Tortoises**



Picture Task

Amphibamus, a type of extinct amphibian



Phytosaur, a type of extinct crocodile

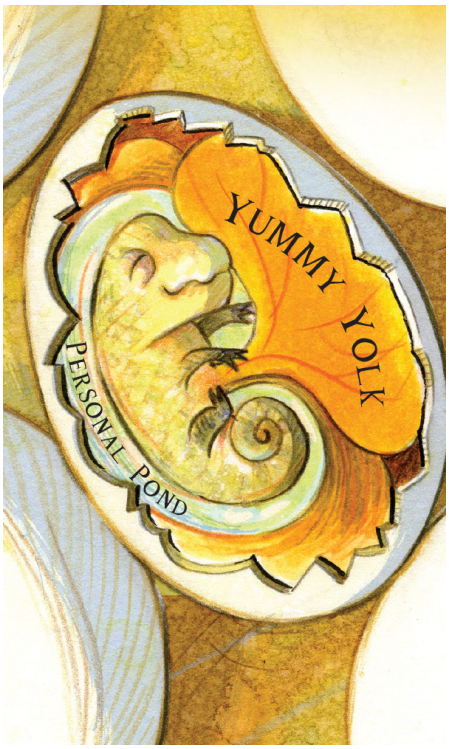
Look at the two pictures above, and imagine you are touching the reptile and amphibian, then discuss the below questions with a partner and write down your answers:

How do you think they may feel?

Can you describe each one to your partner?

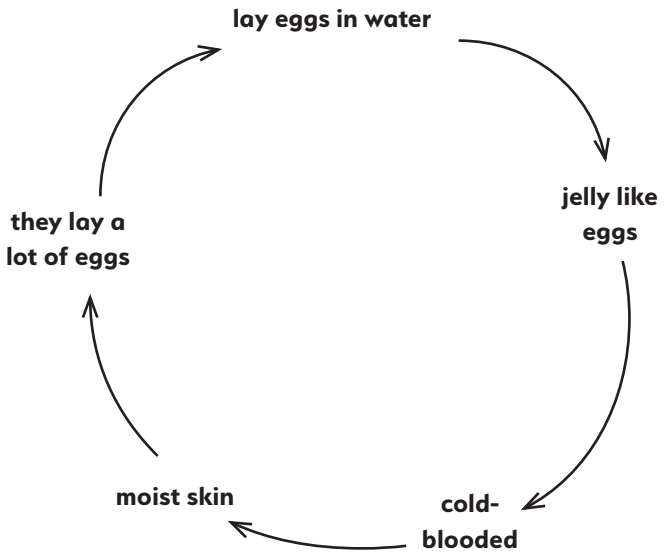
How are they different?

Activity 2

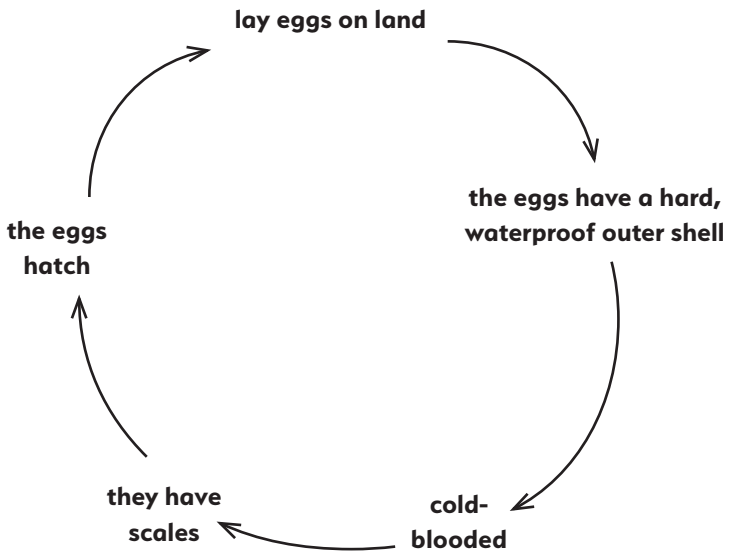


Have a look at the two above pictures. What differences can you see in the eggs?
Can you write a sentence about the differences below?

Use the words below to write about or talk about amphibians and their eggs.
What is your favourite amphibian?

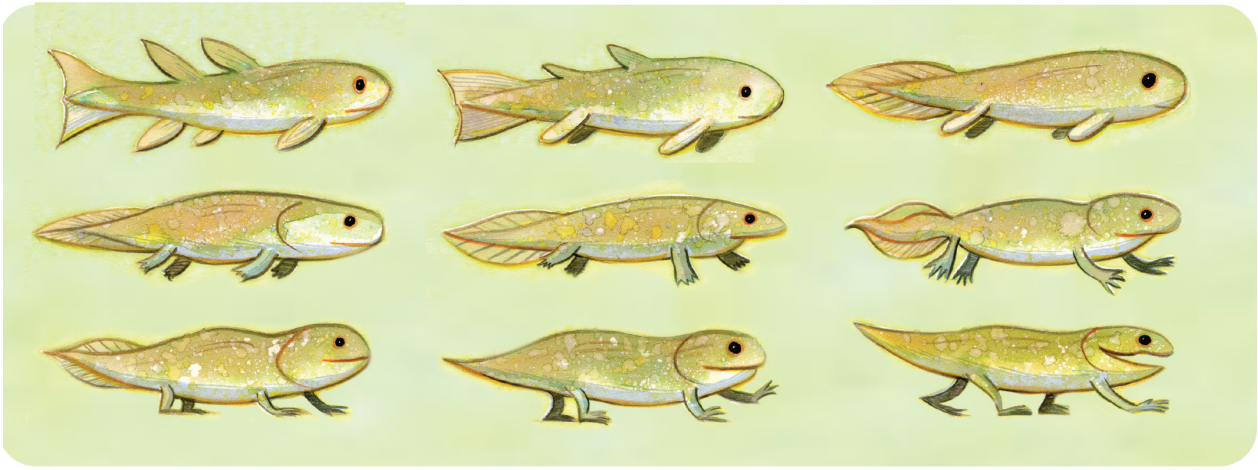


Use the words to write about or talk about reptiles and their eggs. What is your favourite reptile?



Activity 3: Spot the Difference

Look at the below image, which shows "the long journey from Fish to Pod." Can you notice the changes in each picture?



Now compare the very first picture and the last one, how many difference can you note down?

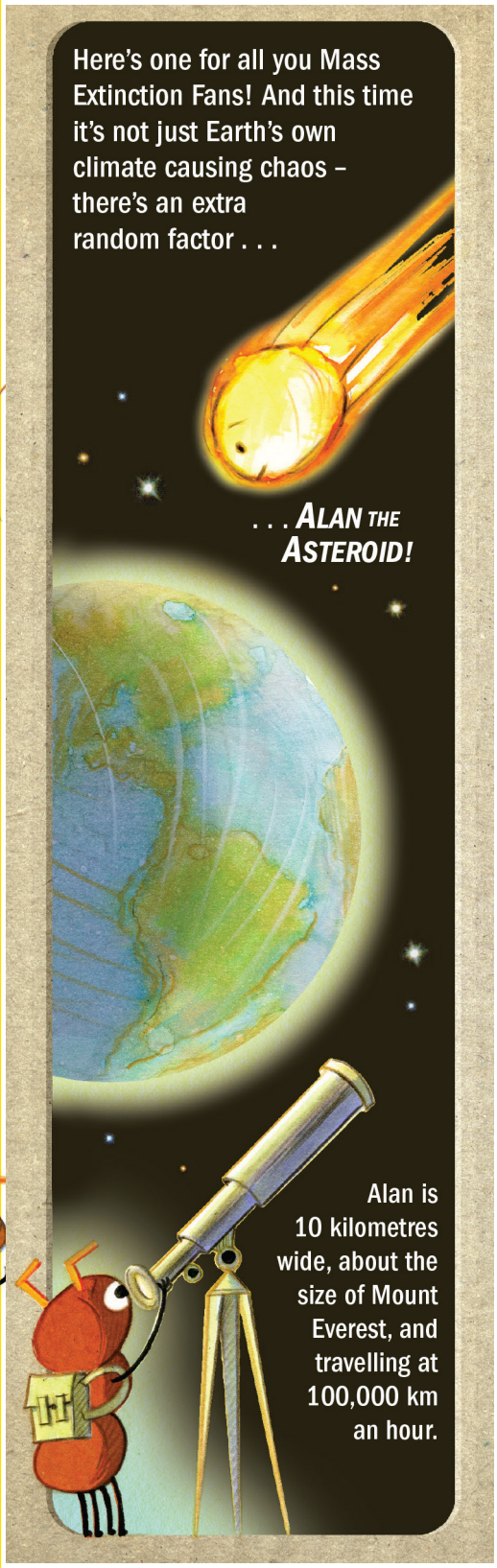
30 Second Countdown Quiz

Answer the questions below by ticking the relevant box

Question	Reptiles	Amphibians
They lay their eggs in water		
Lizards, crocodiles and snakes are...		
Frogs and toads are examples of...		
They have scaly skin...		
They lay their eggs in a nest or on the ground		
They have moist skin		
Their eggs are jelly like		
Their eggs hatch from a hard outer layer		

Lesson 4: Alan the Asteroid!

Objectives: The Asteroid is coming!
Explore the theme of asteroids and make predictions using the pictures;
Create a dialogue between two dinosaurs; Complete the asteroid themed language task.

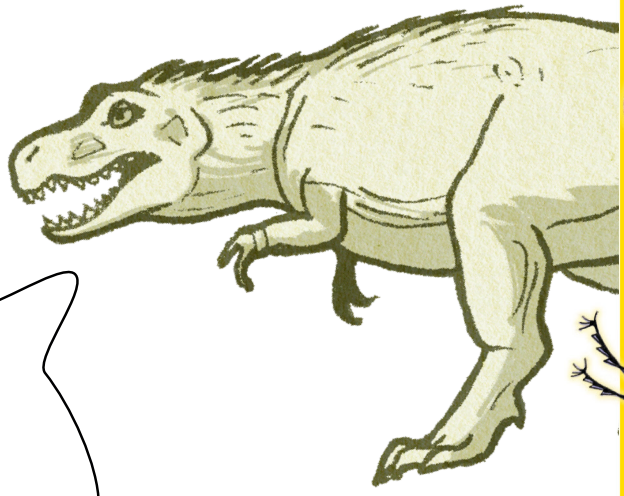


Activity 1:

Alan the Asteroid is approaching Earth.
What do you think will happen when Alan the Asteroid hits Earth?

Activity 2:

The dinosaurs are looking up to the sky and can see Alan the Asteroid approaching.
Can you think of a conversation between the two dinosaurs based on what they can see?



Activity 3: Language Task

Which of these words could describe Alan the asteroid, and which word is the odd one out?

enormous **big** **huge** **giant**

gigantic **humongous** **tiny**

Alan the asteroid is going to wipe out the dinosaurs.
Which of these words means the same as wipe out, and which word is the odd one out?

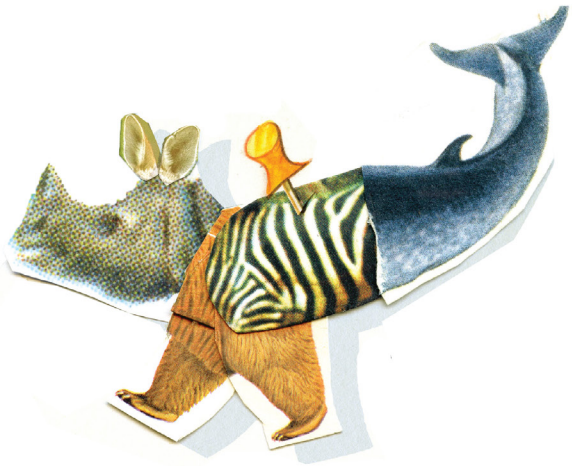
Eliminate **Destroy** **Create** **Erase**

Can you write a sentence using the words above?

Lesson 5

Objectives: The Rise of the Mammals
Design a new animal; write a description of your mammal mash up; complete a profile card for your new mammal mash up.

Look at the mammal mash ups below.
Can you write a recipe for what animals each mammal mash-up is made from?



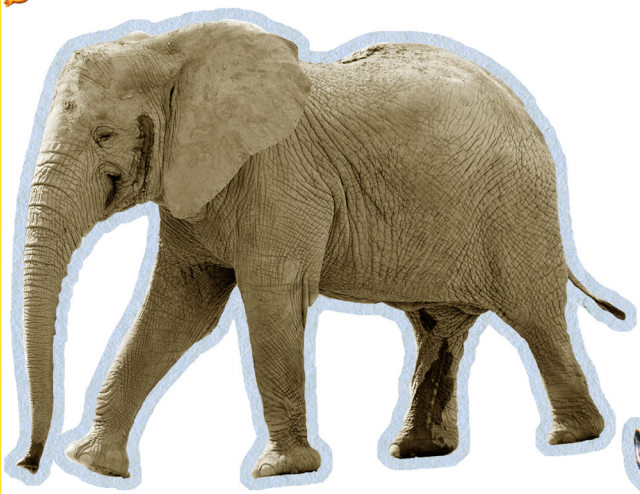
Activity 1: Mammal mash up

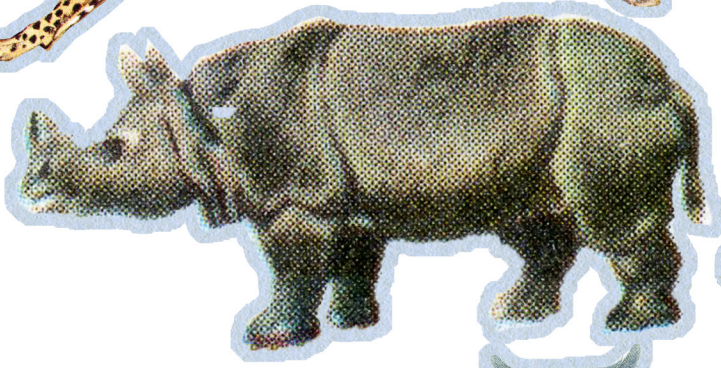
Use the pictures on the next page to create a mammal mash up similar to the examples we have. Give your animal mash up a special name.

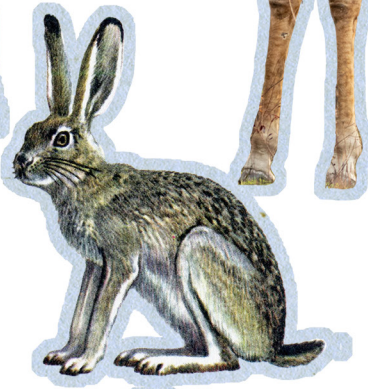
My very own mammal mash up

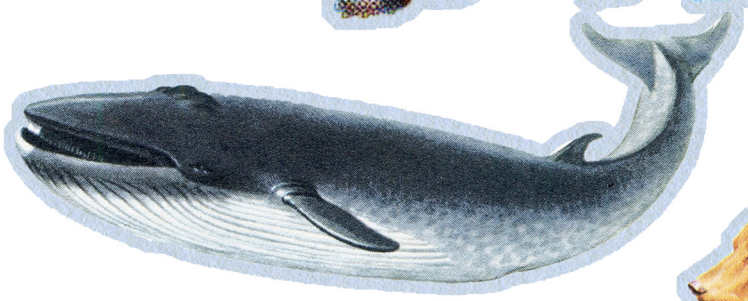
Create your new mammal here

Write about your new mammal here









Activity 2: Profile Card

Complete the mammal profile card below.

My Mammal Mash Up Profile Card

Name of mammal:

Habitat:

Size:

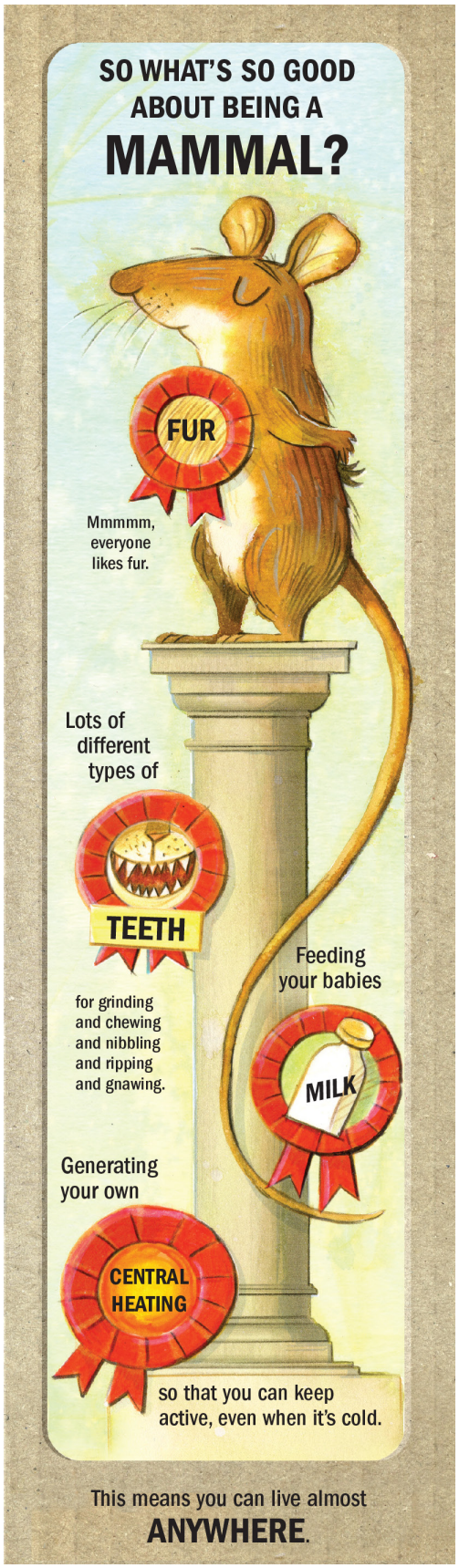
Special Features:

Strengths:

Weaknesses:

Diet:

Activity 3



Use the picture to help you answer the two questions below:

1) What's so good about being a mammal?

2) Why can mammals almost live anywhere?

Lesson 6 Post Reading

What can you remember about the book?

Activity 1: The Graphic Organiser

Have a look at the graphic organiser below, there are some pictures from the book.
Can you add information to each part to retell the story? How much information can you write in each space next to the picture?

Activity 2: The Book Review

Complete the book review with your honest opinions about the book.

1. How would you rate this book?

☆ ☆ ☆ ☆ ☆

2. What is the book about?

3. Talk about your favourite part from the book

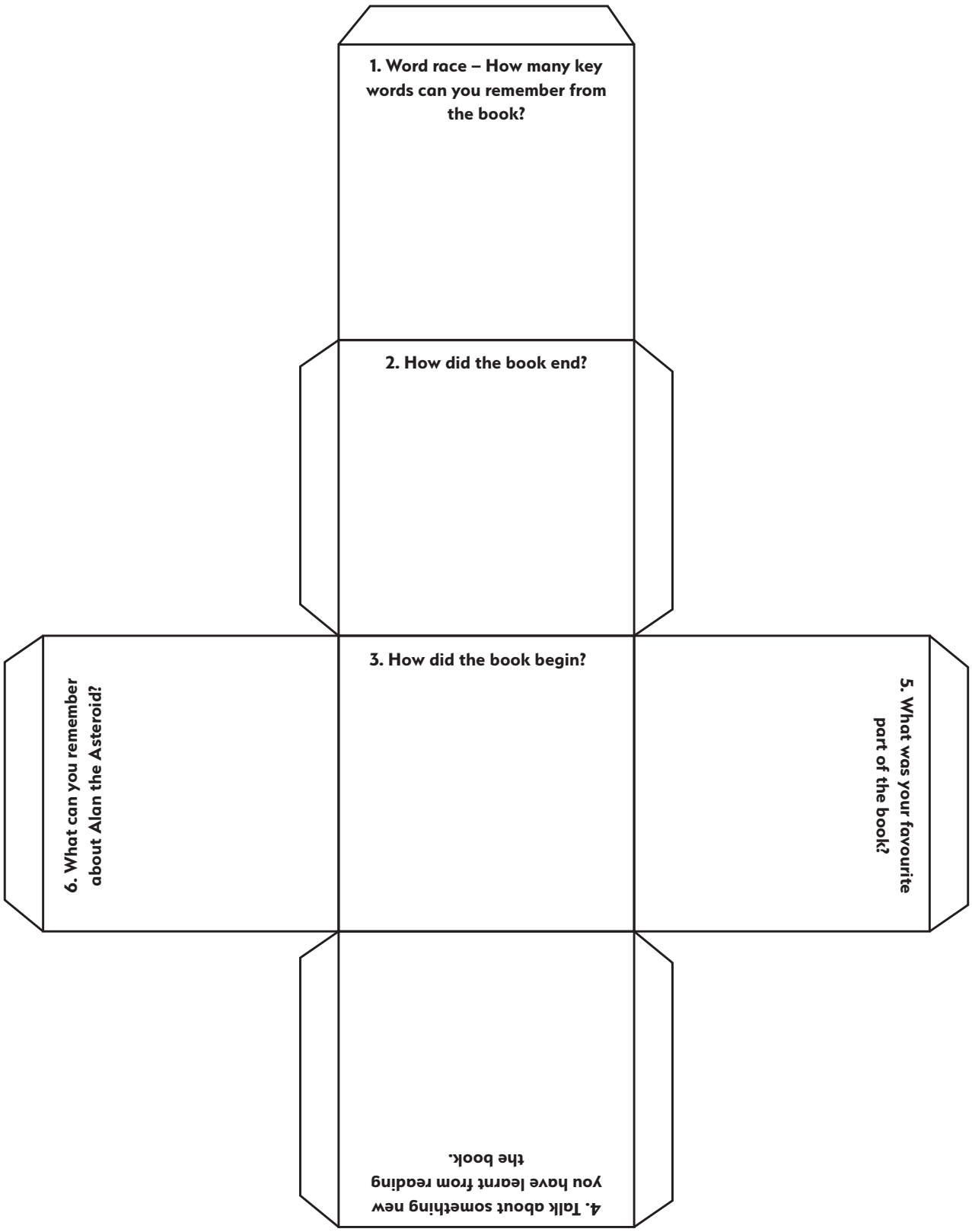
4. Can you predict what will happen in the next book of the next 4.6 billion years on planet Earth?

5. Draw something from the book that you liked.

Activity 3: Roll the dice

Let's get talking!

Cut out the dice template and fold and stick to create a six sided dice. In pairs or small groups, take it in turns to roll the dice and answer the questions.



Activity Four: Bingo Race Glossary

How many words can you tick off from the bingo grid. You get a point for each word you can use in a sentence. Work with a partner, how many words can you use and tick off?
Differentiation Task – choose a bingo grid suitable for the learners.

Amphibian	Asteroids	Microbes	Climate
Ice Age	Mammals	Predator	Tetrapod

Microbes	Lava	Carbon
Mammals	Ice Age	Oxygen
Encyclopedia	Photosynthesis	Predator

Predator	Climate
Atmosphere	Asteroids

Final Activity

Mingling Task

Cut out the words and definitions from the glossary page. Give half of the learners the words and half of the learners the definitions. They must mingle and match the correct word and definition together.

Amphibian	Arthropods	Asteroids
Blue-Green Algae	Carbon	Carbon dioxide
Condense	Continent	Deccan Traps
Element	Encyclopedia	Evaporate
Himalayas	Ice Age	Lava
Magma	Magnetic field	Mammals
Mass extinction	Megafauna	Microbes
Orchestra pit	Oxygen	Photosynthesis
Predator	Red Giant	Reptiles
Solar wind	Supercontinent	Tetrapod
Atmosphere	Climate	Digit
Excretion	Limb	Mantle
Molecule	Plate tectonics	Shockwave

A (usually) four-legged animal that spends at least part of its life in water, where it lays its eggs.

The layer of gases that surrounds Earth and contain the air we breathe. Nowadays it is made mostly of nitrogen and oxygen.

A gas that is present in small amounts in the air. Plants need it in order to breathe. It is one of the greenhouse gases, which trap heat from the Sun and make the planet warmer.

The huge land masses on Earth that are separated by the waters of the oceans.

This is a substance made up of only one type of atom. Oxygen, carbon, iron and gold are all elements.

This is when a liquid gets enough energy to turn into a gas, for example, hot water turning into steam.

How a body passes out waste stuff it doesn't need. Usually out of a special hole.

This important element is found in all living things, and combines with other elements very easily.

This is when a gas turns into a liquid. When warm steam in the air meets a cold surface it condenses, turning back into water.

Animals that have a hard outside covering called an exoskeleton. Insects, scorpions, crabs and spiders are all examples.

A type of microbe that makes its food by using the sun's energy and carbon dioxide from the air, releasing oxygen.

The average weather for somewhere over a long period of time described by measurements of things like temperature, rainfall and sunshine.

This is a huge area in India where volcanic activity made vast outpourings of lava around 66 million years ago.

A book containing information about EVERYTHING, in alphabetical order.

Hot, liquid rock that flows from a volcano or other opening in the surface of the Earth. When the liquid rock is still underground it is called magma.

Rocky objects, much smaller than planets, that orbit the Sun.

This is a time when thick ice sheets called glaciers cover large areas of the Earth.

A finger, thumb or toe.

These form when two or more atoms (the basic building blocks for everything in the universe) join together to make new substances.

An element that makes up 21% of the Earth's air and is essential for animal and plant life.

A group of cold-blooded animals that have skin covered with small hard scales and lay eggs. Examples include snakes, lizards and crocodiles

Mammals with long, sharp front teeth that they use for gnawing.

A large area of land that has more than one continental core, or craton. They are formed by continental plates coming together.

This is the area around a magnet that is affected by its magnetic force.

This is when a large number of species of creatures over a vast area all die out in a short period of time.

A dying star that has expanded and cooled.

Tiny living things – so small that they can't be seen by people without a microscope.

A stream of fast-travelling charged particles that pour out from the Sun and travel throughout the solar system.

A huge mountain range in the north of India.

An arm, leg or wing.

This is the area in front of the stage at a theatre where the musicians usually play their instruments.

This is where living things, especially plants, use energy from sunlight, combined with water, to turn carbon dioxide gas in the air into sugar that they eat to survive. The process produces oxygen, which is released into the air.

A wave of energy that starts with an explosion or earthquake and moves through the air or ground with intense force.

An animal with four limbs (arms, legs or wings). Examples include reptiles, amphibians, birds and mammals

Warm-blooded, usually furry animals that make milk to feed their young.

The largest animals existing (usually on land) in a particular time. Includes elephants, giraffes and rhinos.

The process that moves continental land masses round the Earth, powered by volcanic activity from inside the Earth.

This is the thick layer of the Earth that lies between the crust and the core. The continents float on the mantle like massive icebergs.

An animal that hunts other animals for food.

This is lava that is still underground.