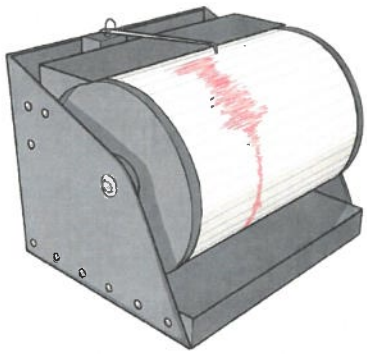
WILLIAM RUTHVEN
PRIMARY SCHOOL

English: Year 6

Earthquakes

The Earth's Crust

The Earth's crust and the top of the mantle have about twenty tectonic plates, which are like puzzle pieces covering the Earth. These plates are always moving and bumping into each other. We call the edges of the plates 'plate boundaries', which are made up of faults. These faults are where most of the world's earthquakes occur. As the plates move, the edges get stuck because they are not smooth, but the rest of the plate keeps moving. When the force is too much, it breaks free and that causes an earthquake.



Seismograph

A seismograph (say: size-mo-graf) is a special piece of equipment that records earthquakes. Seismometers are securely fastened to the Earth, so when the ground starts to shake, the instrument's case moves too. What doesn't move is a weight that hangs on a string inside the case. When there is an earthquake, the case shakes with the ground but the weight does not, and it draws a line to show how much the ground shook. Scientists use seismograms (graphs produced by the seismograph) to measure how big each earthquake is.

Interesting Fact

Six Italian scientists were convicted of manslaughter and sent to prison for failing to predict the 2009 L'Aquila earthquake in which 309 people died. They appealed their cases successfully and were eventually not sent to prison.

You could try to find out:

1. How earthquakes are measured.
2. How easy they are to predict.
3. About other cases where prison sentences have been handed out in unusual circumstances.
4. How the appeals process works.

Questions About Earthquakes

1. What do the tectonic plates float on and how many tectonic plates are there?

2. What can plate boundaries do when they are near each other?

3. What is a 'fault'?

4. Describe what causes earthquakes.

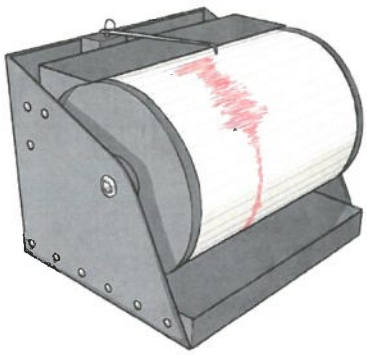
5. What is a seismograph?

6. How does a seismograph work?

Earthquakes

The Earth's Crust

The Earth's crust and the top of the mantle have about twenty tectonic plates, which are like jigsaw pieces covering the Earth. These plates are always moving and bumping into each other. The edges of the plates are called 'plate boundaries', which are made up of faults. These faults are where most of the world's earthquakes occur. As the plates move, the edges get stuck because they are not smooth, but the rest of the plate keeps moving. When the force is too much, it slips and bumps and that causes an earthquake. A bit like when you pull something which gets caught, you pull it some more until it comes free with a big force.



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Interesting Fact

In 2009, in a place called L'Aquila in Italy, there was an earthquake that killed 309 people. In relation to the earthquake, a case went to court and it was decided that it was the fault of six Italian scientists who should have known it was coming and warned people. They were sent to prison for manslaughter (killing someone without planning or being hateful) but argued their case and won, so they did not have to go to prison after all.

You could try to find out:

1. How earthquakes are measured.
2. How easy they are to predict.
3. About other cases where prison sentences have been handed out in unusual circumstances.
4. How you go about arguing a decision made by a court.

Questions About Earthquakes

1. How many tectonic plates are there?

There are...

2. What are plate boundaries?

Plate boundaries are...

3. What does it mean when we say 'predicting earthquakes'?

Predicting earthquakes means...

4. Describe what causes earthquakes.

Earthquakes are caused by...

5. What is a seismograph?

A seismograph is...

Name _____ Date _____

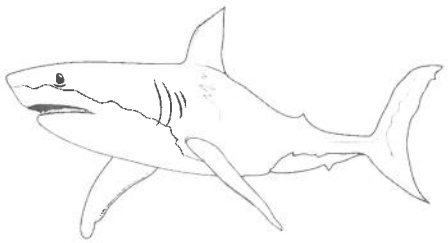
Research Skills – Ideas and Vocabulary

Read the text about sharks.

- Write the main idea of the text in the box below.
  Hint: To find the main idea, look for words that are repeated in the text.
- Underline any subject-specific words and write them in the box below.
  Hint: Subject-specific words are words that are related to the main idea.

Sharks

What are sharks?



Sharks are a type of fish. There are over 450 species of shark on the planet. Most sharks live for approximately 20-30 years in the wild.

What do sharks look like?

Sharks have a stream-lined body which is covered in tiny scales. They have five different types of fins which help to support their bodies as they move through the water. Sharks also have gills which allow them to breathe in oxygen.

Where do sharks live?

Sharks are found all around the world. Most sharks are ocean dwellers, though some live in freshwater. Sharks live together in large groups known as schools.

What do sharks eat?

Sharks are carnivores, which means they are meat-eaters. Most sharks eat smaller fish or small invertebrates, such as crabs, squid and turtles. They prey on the weakest animals in order to make hunting easier.

Main idea	Subject-specific vocabulary

Name _____ Date _____

Research Skills – Note Taking

Read each paragraph from the text about sharks.

- Highlight the key information in each paragraph.
  Hint: Look for key words which inform the reader about the subject.
- Next to each paragraph, write notes about the key information.
  Hint: Dot point notes should be a few words only, not full sentences.

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Name _____ Date _____

Research Skills – Ideas and Vocabulary

Read the text about astronauts.

- Write the main idea of the text in the box below.
  Hint: To find the main idea, look for words that are repeated in the text.
- Underline any subject-specific words and write them in the box below.
  Hint: Subject-specific words are words that are related to the main idea.

Astronauts

Who are astronauts?

Astronauts are a special type of pilot. They are qualified to travel into space in space shuttles. Both men and women can be astronauts, as long as they have completed their training.

What do astronauts do?

Astronauts conduct missions into space. While they are in space, they often deploy satellites that orbit Earth. Astronauts must also know how to repair their space craft if something goes wrong during a mission.

What equipment do astronauts need?

Astronauts wear highly-protective space suits. These contain oxygen so the astronaut can breathe. Astronauts use heat-resistant safety tethers to stop them floating away. They also use tools built especially for doing repairs in space.

What skills do astronauts have?

Astronauts need to have a great amount of knowledge about space. They must be able to cope with zero gravity, which can be very demanding on the body. Astronauts must also be able to work in a team with other people.

Main idea	Subject-specific vocabulary

Name _____ Date _____

Research Skills – Note Taking

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- Highlight the key information in each paragraph.
  Hint: Look for key words which inform the reader about the subject.
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To the Editor

Dear Editor,

I am writing to share how worried I am about the increasing number of children under the age of thirteen who use social media. School children these days are being pressured by peers who are allowed to use social media. More and more parents are trusting that their children are responsible and mature enough to use social media. What they might not realise is that children's health and wellbeing are at risk by introducing social media too soon.

Firstly, there are now so many types of social media people can join. This variety is becoming addictive. With access to messaging, posting, likes, friend requests and photo filters, there is so much for children to love that many children get irritable or grumpy when their device runs out of battery or is taken away. Children should not rely on social platforms for entertainment or to socialise with friends.

Secondly, children are unsafe when they have direct access to the outside world at home or on social media. A lot of children have handheld devices, such as phones and tablets. When kids are left on their own without parental supervision, who will protect them if they face online bullying? Writing hurtful comments is easy for bullies when they are safe behind a screen. Even adults have trouble handling cruel feedback online, so how do we expect children to react?

Finally, it is important for children to hold on to their childhood. Children are far too eager to act like adults. Often, I see kids worrying about their hair, clothes, friend requests and 'selfies'. These photos are not just inappropriate for children, they are also being uploaded to a place where they will remain forever. When did online popularity become such a contest?

In conclusion, children are not ready for the responsibilities of social media. You need to be careful in the online world, and social media makes children more accessible to people and ideas they should be protected from. The age limit for social media is there for a reason. I urge parents to let their children hold on to their childhood for longer. There will be plenty of time for friend requests and duck-faced selfies when children grow up.

Sincerely,

Tiffany Robson

Name: _____ Date: _____

Letter to the Editor: Social Media

Questions

1. Name three types of social media.

2. What risks are involved with using social media?

3. What ways can people protect themselves from these risks?

4. Do you think children under the age of 13 should be using social media? Why?

5. What safer options could children use instead of social media?

Rainforests

What is a Rainforest?

Rainforests are huge forests that have a large amount of precipitation. They are found in all continents of the world apart from Antarctica (due to the temperature). There are two types of rainforest: tropical (in the tropical, warm zone near the Equator) and temperate (in the temperate zone further away from the Equator). Most rainforests are tropical, with tall trees, warm climates and lots of rain. It can rain one inch of rain per day in some! The largest rainforest is the Amazon Rainforest in South America.

Fact File in Numbers

- 2% of the Earth's surface is covered in rainforest.
- 50% of the plants and animals of the world live in rainforests.
- $\frac{1}{5}$ of our fresh water is found in a rainforest in the Amazon Basin.
- $\frac{1}{4}$ of natural medicines have been found in rainforests.
- 70% + of the plants that are used to treat cancer are found **only** in the tropical rainforests.

The Canopy

The rainforest trees are in such close proximity, that the branches and leaves at the top of the trees touch each other and form what is referred to as 'The Canopy', which acts a bit like a roof for the forest. The canopy can be approximately 30m above the ground. The canopy is hotter and drier during the day than other parts of the rainforest so animals that live there have adapted. Some have loud calls in order to communicate in the thick foliage and some are able to jump from tree to tree.

The Forest Floor

This is dark and humid because of the canopy, but still is a very important part of the ecosystem. The floor is where dead animals and plants decompose and all of the nutrients and materials are recycled. Also, the larger animals are found here including tapirs, elephants, tigers and jaguars.

Why are they so important?

Rainforests do a few things that are critical to our life on Earth. One important thing that rainforests do is they use photosynthesis to take in carbon dioxide and make oxygen which we need to breathe and survive. This is why they are called 'The Lungs of The Earth'.

They also help keep our weather system stable by absorbing carbon dioxide, creating rainfall and keeping temperature stable. They also affect the water cycle as they hold so much water which condenses into the atmosphere.

So, how can we manage without them?

Questions about Rainforests

1. Name the two types of rainforest.

2. In the fact file the author mentions 'fresh water', what is the difference between fresh water and sea water?

3. Near the end of the text, why does the author say rainforests are like the 'Lungs of the Earth'?

4. In 'The Canopy' section, what does the author mean by 'close proximity'?

5. A rainforest is an 'ecosystem'. What is an ecosystem?

6. It is very crowded and leafy in the canopy. How do some animals communicate because of this when they cannot see each other?

7. Why is the forest floor dark?

8. Name one way that the rainforests affect our life on Earth.

9. In the fact file, why has the author emphasised the word 'only'.

10. Read the last line...what is your opinion and why?

Question Marks

Question marks are used to indicate direct questions. A question mark is used at the end of a question.

Direct Questions

A question mark replaces a full stop at the end of a direct question.

How are you feeling today?

A question mark is also used at the end of a statement that is turned into a question.

There are too many bugs here, aren't there?

1. **Add question marks, full stops, commas and capital letters where necessary.**

   a. The circus is in town isn't it

   b. Is it time to go home yet

   c. Who was saying it was going to rain today

   d. Don't go too far away will you

   e. Who wants pizza for dinner I was thinking of getting pepperoni

   f. What time does class start is it the same as usual

   g. Don't forget to come over on sunday morning

   h. Is it really going to be that cold tomorrow night I will have to rug up

Questions in Direct Speech

Questions will often be asked in direct speech. Remember to always put a question mark at the end of the question, but before the quotation marks.

"Who ate my banana?" asked Dad.

2. **Add question marks, full stops, commas, quotation marks and capital letters where necessary.**

   a. What you are playing on your computer questioned dad

b. I have been thinking that you spend too long on your computer said Mum how long have you been on there today

c. I think I spend the perfect amount of time on the computer replied Tyson

d. Let's go out to dinner said Sally where do you want to go

e. Who is making all of that noise demanded the teacher

f. My class will finish all of their work in time won't they queried Miss pham

g. mum asked me to bring the washing in off the line but I forgot will she be mad at me I asked my brother

h. how long does it take she questioned to drive from your house to mine

3. Add in any necessary punctuation to complete this passage.

Do you know how much time you spend listening to music on your MP3 device do you turn it up so loud you can't hear any outside noise Well you may be doing more harm than good

MP3 players are a great source of entertainment but they are also the cause of serious hearing problems for young people today research has found that young people are more likely to play their music to loud which can result in hearing loss later in life

did you know that he ear pieces are designed to fit firmly in your ear canal allowing outside noise to be eliminated. this means that the music is pumped directly into your ear potentially causing permanent damage. thirteen year jessica long questions her knowledge on the dangers of MP3 players how was I supposed to know they were bad for me No-one has ever told me they were dangerous

The length of time that young people spend listening to music on their MP3 players is also contributing to hearing damage. Research prof darren blake claims that the long battery life and ability to load such a large number of songs, means young people are spending too long listening to music that is being streamed directly into their ear drums. We need to do something about this problem or how can we ever forgive ourselves in the future

You need to ask others around you if they can hear your music while you have it on and the headphones in your ears. You also need to ask yourself am I causing permanent damage to my hearing right now just by having my music up too loud

4. **Write a question and use the correct punctuation for each of the follow events.**

a. A birthday party: _____

_____

b. A fancy dress party: _____

_____

c. A night at the cinema: _____

_____

d. Christmas: _____

_____

e. A fireworks show: _____

_____

Name: _____ Date: _____

Giant Squid

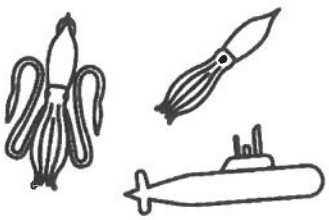
Lurking in the deep, dark depths of the ocean, lives a creature that can either fascinate you or send chills down your spine! Once thought to be a myth, the _____ of giant squid has recently been proven, with researchers _____ and capturing these intriguing creatures on film. As recently as 2004, Japanese researchers took the first images of a live _____ squid. In 2012, a live adult was filmed in its natural _____ off the coast of Japan. Before that, the only hard evidence of the existence of giant squid was the _____ of dead squid that had been washed ashore.

The giant squid is the largest of all known squid and the largest _____ on the planet. The giant squid can grow to a _____ size, with some being estimated to measure 13 metres (43 ft) for females and 10 metres (33 ft) for males. Although some people have claimed to have sighted giant squid measuring up to 20 metres (66 ft), these claims have not been _____ documented.

A giant squid has a mantle (torso), eight arms and two longer _____ which are lined with hundreds of suction cups. These suction cups are lined with sharp, finely serrated rings that _____ the squid to its prey. Giant squid also have beaks, like the beak found on a parrot. It is incredibly hard and is thought to be used to _____ and maybe even paralyse its prey, although this is just speculation (as no one has ever seen a giant squid feeding). Interestingly, a giant squid's eyes are in some cases as _____ as a basketball. Their large eyes help them to see in the _____ depths of the ocean.

The only _____ to giant squid is the sperm whale. Although the giant squid is prey for sperm whales, the giant squid does not go down without a fight! Remains of giant squid have been found inside the _____ of sperm whales, particularly the beaks of the giant squid, as they do not get broken down. Sucker marks and bite marks from the giant squid are often found on sperm whales, leading scientists to believe that the battles between the two species are particularly vicious.

Giant squid live in very deep, cold water, making it difficult for scientists and divers to access them. Although they are large creatures that are thought to _____ all oceans of the world, they are very difficult to find and to this day remain elusive.



existence	studying	invertebrate	tremendous
dark	tentacles	attach	remains
habitat	dismember	giant	scientifically
predator	stomachs	big	inhabit

Name: _____ Date: _____

What are Adaptations?

Read the passage about adaptations, then answer the questions below.

Adaptation is the process which enables organisms to adjust to their environment in order to ensure their survival. This process is sometimes referred to as the evolution of species.

Adaptations often occur because of a genetic mutation. A genetic mutation is an alteration an organism is born with. For example, a bird may be born with a slightly longer beak; a shark may be born with slightly stronger fins or a frog may be born with slightly longer legs. If these mutations are successful, and help the animal to thrive in their environment, the animal may pass the same characteristic on to their offspring. As time passes, the mutation may eventually be found in all members of that species. However, this process is very slow.

There are three types of adaptations; structural, behavioural and physiological. Most animals and plants will have a combination of these three types of adaptations.

Structural adaptations are the physical features of an organism that enable them to survive in their environment. For example, a penguin has thick blubber to protect itself from the freezing Antarctic temperatures. Camels can close their nostrils, to prevent desert sand from entering their noses. Rainforest trees have wide, waxy leaves so the rain runs off them easily.

Behavioural adaptations are the actions of an organism that enable them to survive in their environment. For example, bears hibernate in winter to escape the cold temperatures and preserve energy. Lizards seek out the morning sun to warm up their cold-blooded bodies more quickly. Fish swim together in groups (or schools) to protect themselves from predators.

Physiological adaptations are internal or cellular features of an organism that enable them to survive in their environment. For example, snakes produce poisonous venom to ward off predators and to capture prey. Some plants contain toxins to prevent them from being eaten by herbivorous animals. The Australian koala has a slow metabolism which keeps their food in their digestive system for longer, giving them as much energy as possible from their limited diet.

Name: _____ Date: _____

Questions

1) In your own words, describe the adaptation process.

_____

_____

_____

2) What is a genetic mutation? Provide one example.

_____

_____

_____

3) What might happen if a genetic mutation proves to be successful?

_____

_____

_____

4) What are the three types of adaptations? Provide an example of each.

_____

_____

_____

_____

_____

_____

5) Decide whether the following statements are true or false.

a) Evolution is a very speedy process. True / False

b) An animal may pass a genetic mutation on to its offspring. True / False

c) Plants do not have structural adaptations. True / False

d) Animals can change their behaviour to better suit their environment. True / False

e) Physiological adaptations can be difficult to see from the outside. True / False

Informative Structure - Sorting Task

1. Cut out and read each paragraph of the informative text.
2. Decide which part of informative structure each paragraph belongs to.
3. Glue the paragraph into the correct row of the table on the next page.
4. Read through the entire text in the correct order.

Modern iPads have many useful features. The iPad has internal speakers, allowing the user watch movies and listen to music. When connected to the internet, iPads are able to download a variety of applications. Newer iPads also contain a camera, enabling the user to shoot video and capture photos.

The iPad was the first popular mobile tablet of its kind. It was designed specifically for people who required a mobile device that was bigger than a smartphone, but smaller than a laptop.

The iPad has been adapted many times since it was first released in 2010. The first iPad had a 9.7-inch screen and wi-fi capabilities, but no camera. It came only in black and had a battery life of ten hours. Newer versions of the device are thinner, have greater storage capacity and additional features.

The Apple iPad

So far, there have been six versions of the iPad. It is likely that the device will continue to adapt with new advances in technology in the future.

The iPad looks similar to other hand-held tablet devices. It is approximately the size of a sheet of paper and weighs around 500 grams (1.5 pounds). The touchscreen display is high resolution and is made from scratch-resistant glass. People often purchase a cover for their iPad to protect it from damage.

Informative Structure - Sorting Task

Name _____ **Date** _____

Title	
Introduction	
Description (appearance)	
Description (features)	
Description (adaptations)	
Conclusion	