

Lesson notes and answer keys

CC1: Australia – The Great Barrier Reef



The photos show:

An aerial shot of the reef; the world underwater, including starfish and (on the left) clown fish in anemone.

- **Polyps** /'pɒlɪps/ are animals which attach themselves to rocks (or other hard substances). They consist of a central mouth surrounded by tentacles. They are distantly related to medusae (such as jellyfish). Some polyps (but not coral polyps) spend the first part of their lives as free-swimming medusae, and then settle upside down to become polyps.
- There are many other **coral reefs** in tropical waters around the world (e.g. the Caribbean), but the Great Barrier Reef is the biggest. There are three main types of coral reefs: fringing reefs (which are usually directly attached to a shore), barrier reefs (which are separated from a mainland or island shore by a deep channel) and atoll reefs (which are formed by the sinking or erosion of a volcano, leaving a circular reef around a lagoon). The formation of reefs is a fascinating topic, which could be used as the basis for a class project.
- Coral reefs are at serious risk from human activity. The Great Barrier Reef is protected by the Australian government, but global warming remains a very serious threat. This could be an interesting topic to explore with the class.

Answers

● Reading

1 Billions of coral polyps 2 Coral polyps, tropical fish, shellfish, dolphins, whales, Green Sea Turtles 3 Learn to dive, go diving, relax on a beach, go for a balloon flight, go for a helicopter flight

● Vocabulary

1 silence 2 wonders, ancient 3 species 4 shells 5 experienced 6 spectacular 7 explore 8 flight

● Comprehension

1 It's 20,000 years old, 2,300 km long and 65 km wide.
2 Only one – the Great Barrier Reef (or billions, if you count all the coral polyps!) 3 Near the islands.
4 Tropical fish 5 You can see more islands and you can relax in silence. 6 Cairns

● Be bright

1 20,000 years ago, the sea level was lower, so the first corals were near the surface. As the sea levels got higher, new corals grew on top of the corals at the bottom. 2 Because they are deeper and less calm.
3 Probably not – it's only a few minutes away by helicopter, but it not so quick to walk. 4 There is no official list of the Seven Wonders of the Natural World, but one suggested list (from CNN) includes: The Grand Canyon (USA), the Great Barrier Reef (Australia), the Harbour of Rio de Janeiro (Brazil), Mount Everest (Nepal / Tibet, China), the Aurora (in the sky above the Arctic and Antarctic regions), the Parícutin volcano (Mexico) and Victoria Falls (Zambia / Zimbabwe).

CC2: The USA (East) – New York



The photos show (clockwise from left):

The Statue of Liberty (with Lower Manhattan in the background); the Brooklyn Bridge; yellow taxis; the Manhattan skyline, with the Empire State Building on the right.

- **New York** is the name of both a city and a state – hence the name of the song, *New York, New York* (i.e. New York City in New York State). Much of **New York State** is rural (including many forests and state parks), and extends up to the Great Lakes (Erie and Ontario) and the border with Canada (including the American side of the Niagara Falls – see CC5). **New York City** is contained within the state of New York, but the metropolitan area extends well into two other states, New Jersey and Connecticut.
- New York City has many nicknames, including *The Big Apple*, *Gotham*, *Center of the Universe*, *The City That Never Sleeps*, and *The Capital of the World*.
- New York was named after the Duke of York, who later became King James II of England and Ireland, and James VII of Scotland. James was the last Catholic monarch of England, Ireland and Scotland, and played an important part in the history of those countries. The rivalry between James and William III, who replaced him as king, is still a source of conflict in Northern Ireland.

Answers

● Reading

1 The Empire State Building, the Statue of Liberty, Times Square; Central Park 2 By taxi, by train, on foot

● Vocabulary

1 e 2 c 3 h 4 a 5 f 6 b 7 d 8 g

● Comprehension

1 Broadway 2 The Brooklyn Bridge 3 The Empire State Building 4 The number 7 train 5 Times Square 6 Wall Street 7 The Statue of Liberty 8 Central Park

● Be bright

1 Broadway; Central Park; the Brooklyn Bridge
2 Broadway; Central Park 3 The Empire State Building; the Brooklyn Bridge 4 Manhattan; Brooklyn; Queens

● Speaking

Other iconic places include the Eiffel Tower (Paris), Big Ben (London), the Great Wall of China, the Taj Mahal (India), etc.

CC3: The Caribbean – Jamaica



The photos show (clockwise from left):

The beach; a Jamaican man next to his house; reggae music instruments; dolphins in Dolphin Cove.

- The text mentions the island's **sad and brutal history**, but it is impossible to do justice to such topics as colonisation (and extermination of the native population) and slavery in a short text. With more mature classes, you could encourage them to find out more about these events.
- The text presents Jamaica's two languages as separate, but in fact the picture is more complicated. Most Jamaicans are able to speak standard **Jamaican English** in formal situations and **Jamaican Patois** /'pæt wæ/ in more everyday conversations, as well as various intermediate forms between the two extremes. Jamaican Patois is rarely written down, so it is difficult to find examples of it, but it clearly has a grammar which is very different from English. Standard Jamaican English looks very similar to British English when written down. The pronunciation is very different, however. For example, the vowel sound in 'cow' is closer to /ɒ/ than /aʊ/, and the sound in 'run' is more like /ɒ/ than /ʌ/ (hence the spelling 'ron' in the text). Pairs of words like *fair* and *fear* often sound identical in Jamaican English.
- **Stingrays** (and other rays) are members of the cartilaginous fish family, where their closest relatives are sharks. Rays and sharks don't have bones, unlike all 'true' fish. As the name suggests, stingrays have a poisonous sting on the end of their tails.

Answers

• Reading

1 (Jamaican) English and Jamaican Patois
 2 Bob Marley (a reggae musician – because he introduced reggae to the world) and Usain Bolt (a sprinter - because he broke the world records for 100 m and 200 m) 3 Visit the Bob Marley museum; go dancing; swim with dolphins and stingrays; explore beaches, mountains and forests; visit a waterfall, a lagoon and shipwrecks.

• Vocabulary

1 roots (Answer: reggae, ragga, ska, hip hop, jungle, punk) 2 plantations (Answer: the slaves) 3 stingrays (Answer: because they aren't as fast) 4 shipwrecks (Answer: Port Royal) 5 brutal (Answer: because the Arawak Indians died, and the English enslaved people from Africa to do all the work) 6 sprinters (Answer: 100 m and 200 m) 7 impact (Answer: Yes, it has) 8 hold on tight (Answer: because they jump out of the water)

• Comprehension

1 True 2 False 3 False 4 False 5 True
 6 True 7 False 8 True 9 False

• Be bright

1 The ancestors of most people of Jamaica were African slaves, with many different African languages. They used English words to talk to each other, but kept their own grammar. 2 There are many small islands, so ships crashed into rocks; the Caribbean has many tropical storms; there were many pirates in the Caribbean, who attacked the ships; European powers fought for control of the islands.

CC4: Ireland – The Giant's Causeway



The photos show:

All the photos show the basalt columns from different angles. The tallest columns are called the Pipe Organ, and are several hundred metres away from the rest of the columns.

- The Giant's Causeway is made of **basalt**, a volcanic rock. There are many examples of basalt columns around the world.
- A **causeway** is like a bridge which is made by piling rocks on top of each other all the way up from the river- (or sea-) bed.
- **Northern Ireland** is that part of Ireland that remained British when the rest of Ireland became independent in 1922. At the time, partition (= the division of Ireland) was an attempt to keep both sides happy: the Catholic Irish nationalists in the south and west, and the Protestants of the north, who mainly saw themselves as British. The problem was that many nationalists remained in the north, and often suffered discrimination. This situation led to '**the troubles**' from the 1960s to the 1990s, a violent conflict involving terrorism on both sides. '**The troubles**' are largely over, after a successful peace process and reconciliation, but people still have strong feelings about the status of Northern Ireland. This explains why Northern Ireland's second city has two names: Londonderry is the official British name, but most Irish people (including many in the city) call it Derry.
- **Limericks** are a popular form of humorous poem. The most famous limericks were written by Edward Lear, but the one on the map of Ireland was written specially for these Culture Cards. You could ask your learners to try to write their own.
- Irish people are said to possess '**the gift of the gab**', i.e. the ability to tell great stories and jokes. There have indeed been many great Irish writers, such as Jonathan Swift (author of *Gulliver's Travels*), Bram Stoker (author of *Dracula*), Oscar Wilde, William Butler Yeats, James Joyce, George Bernard Shaw and Samuel Beckett. According to legend, the gift of the gab comes from **kissing the Blarney Stone**, at the top of Blarney Castle near Cork. This has become a very popular tourist attraction, but a terrifying one: kissing the stone involves hanging backwards over the edge of the castle, almost 30 metres above the ground.

Answers

• Reading

1 You can walk on the stones or just sit and relax.
 2 Lava from volcanoes cooled and cracked in hexagonal shapes. 3 Because there is a legend that a giant built it.

• Vocabulary

1 reaction 2 breathe 3 vertically 4 cool
 5 formed 6 pile 7 cross

• Comprehension

1 It's in Northern Ireland. 2 Most of the columns are hexagonal. 3 People can walk on the stones.
 4 It cracked in two different ways. 5 They are all the different heights. 6 Finn built the causeway because he wanted to fight with Benandonner. 7 Finn bit off Benandonner's finger. 8 He was scared of Finn.

• Be bright

1 It's similar because the mud cracks in straight lines, and sometimes makes interesting patterns. It's different because the mud cracks as it gets hotter and drier, but the lava cooled down. 2 They fought real battles with each other, and they told stories so they would look strong, intelligent and brave.

CC5: Canada – Toronto



The photos show (clockwise from left):

The CN Tower and Toronto waterfront; Rogers Centre Stadium; Toronto City Hall.

- The term **the world's tallest building** is much more complicated than it sounds. The CN Tower was the world's tallest *free-standing structure* and world's tallest *tower*, but not the world's tallest *structure*. This record was held by the Warsaw Radio Tower, built in 1974, which was not a free-standing structure because it was supported by wires from the ground. The Warsaw Radio Tower collapsed in 1991. There is also an important distinction between tall buildings (like the Empire State Building in New York), which contain a large proportion of floor space, and towers (like the CN Tower), which have much more limited floor space.
- Technically, you cannot actually see the **Niagara Falls** from the CN Tower, but you can see the mist clouds rising above them.
- The alphabet used on the map is called **Canadian Aboriginal Syllabic**, and is used for all of Canada's Aboriginal languages (including those from the Algonquian and Inuit language families). As the name suggests, each symbol represents a syllable, such as [ke] (ᑕ). The term **aboriginal** here refers to the original inhabitants of a country before European settlers arrived (such as the Aborigines of Australia and the Maoris of New Zealand).
- The aboriginal peoples of Canada fall into three main groups: the **Inuit**, **First Nations** and **Métis**. The term Eskimo is no longer widely used (especially in Canada and Greenland), and some see it as insulting. The preferred term in Canada, Inuit (/ˈɪn juɪt/), excludes many peoples in Alaska and Siberia who were covered by the term Eskimo. Similarly, the term American Indian has fallen out of favour, not least because it is based on Columbus's mistaken impression that he had found India. The term First Nations (usually plural) is used for those aboriginal Canadians who are not Inuit. A third group, the Métis /meɪ 'tiː/ people, trace their ancestry to the children born of First Nations mothers and European fathers, of whom there were very many in the early days of colonialism.

Answers

- **Reading**
1 Ontario 3 Lakes Ontario and Erie
4 The US–Canada border 5 The Niagara Falls
- **Vocabulary**
1 diverse 2 break-in 3 observation deck
4 dozens 5 natural environment 6 rollercoaster
7 skyline 8 decorate
- **Comprehension**
1 It is Canada's largest city; it is one of the world's most ethnically diverse cities; it is North America's safest large city; Lake Ontario is the smallest of the Great Lakes; the CN Tower was the world's tallest building; the record for climbing the steps is less than 8 minutes; Eaton Centre is Toronto's most popular attraction 2 Because it is very ethnically diverse; there are shopping areas from many countries; the zoo has features from around the world. 3 The CN Tower (the glass-floored observation deck or the restaurant) and Centre Island (to see the skyline) 4 (a) visit Canada's Wonderland; (b) go to Centre Island; (c) visit Niagara Falls

CC6: England – Stonehenge and Avebury



The photos show:

The top two photos show Stonehenge at sunrise and sunset. The bottom two photos show some of the stones at Avebury.

- The origins of the word **henge** are unclear. One theory is that it's related to *hinge*, i.e. a device for attaching a door to its frame – the idea is that the stones balanced on top of the standing stones form a kind of hinge. The other explanation is that it's related to the verb to *hang*, in the sense of *kill somebody by hanging them*. Here, the idea is that the shape of the stones resembles a device for hanging people – and this may have been one of their uses.
- Although Stonehenge is usually closed to the public, people are allowed to touch the stones to celebrate the summer and winter solstices /'sɒl stɪsɪz/ (i.e. the longest and shortest days of the year, usually June 21st and December 21st) as well as the spring and autumn equinox (i.e. the days when the day is as long as the night, usually around March 21st and September 21st). These events are popular with believers of new age religions such as Druids.
- There have been several recent attempts to move and lift heavy stones using only those tools that were available at the time Stonehenge and Avebury were built. These attempts proved that it is indeed possible, but takes a huge amount of manpower, time, skill and planning.

Answers

- **Reading**
1 Stonehenge is between 3,500 and 5,000 years old; Avebury is a similar age (the biggest stone has stood for 4,500 years). 2 The Ancient Britons built them; they used simple tools and lots of men; we don't know why they built them. 3 Between 4,000 kg and 65,000 kg.
- **Vocabulary**
a a healing centre b burial site c template
b raft, sledge
- **Comprehension**
a (5,000 years ago) e (4,500) d (4,400)
c (4,200) b (3,500) b a (4,000 kg) b (50,000 kg)
c (65,000 kg) c Stonehenge is more important and there is an excellent visitor's centre; Avebury is bigger and more impressive, and you can touch the stones.
- **Be bright**
1 The ancient Britons could see exactly where the sun came up and went down, relative to the stones. The sun's positions are repeated once a year, so it was possible to work out the date. 2 The English (or Anglo-Saxons) came from northern Germany and Denmark about 1,500 years ago. When the Anglo-Saxons took over much of England, the ancient Britons stayed in other parts of Britain, such as Wales, Cornwall and the south of Scotland.

- **Be bright**
1 Toronto is on the other side of Lake Ontario from Niagara Falls. It is not far from one side to the other, but you have to drive around the lake. 2 About six days: a day at the CN Tower, a day shopping, a day at the zoo, a day at Canada's Wonderland, a day on a boat trip around the islands, and a day at Niagara Falls.

CC7: New Zealand – Fiordland



The photos show (from left to right):

Doubtful sound, Milford Sound, The Chasm in Fiordland, New Zealand's South Island

- **New Zealand English** shares many features with Australian English (and both generally use British English spelling). The most striking difference between New Zealand English and other varieties is the use of a schwa (/ə/) where other accents use an /ɪ/ sound, especially in unstressed syllables (e.g. the second syllable of *mountain*, word endings like *-ed* and *-ing*).
- For a full list of **Lord of the Rings** destinations all over New Zealand, see <http://www.newzealand.com/int/article/lord-of-the-rings/>. The director of the films, Peter Jackson, is from New Zealand.

Answers

• Reading

1 A narrow finger of the ocean which cuts deep into the land, between steep mountains on either side 2 Milford Sound, Milford Track, Lake Te Anau, Doubtful Sound, Browne Falls, Sutherland Falls. You can walk, go fishing, boating, sailing and kayaking, or go on a *Lord of the Rings* tour. 3 Fiordland is the setting of the films.

• Vocabulary

1 deep 2 narrow 3 steep 4 a landscape
5 a coast 6 a travel destination 7 an alpine pass
8 a setting

• Comprehension

1 ... it was the setting of the *Lord of the Rings* films 2 ... the fiords look like Norwegian fjords. 3 ... a fiord, a walk and a lake 4 ... Captain Cook wasn't sure he could get in and out safely 5 ... they are some of the world's tallest waterfalls. 6 ... the *Lord of the Rings*.

• Be bright

1 They are cut by glaciers. The glaciers move slowly between the mountains, and take a lot of rocks with them. As they move, they cut deep into the ground. 2 Fjord – Norwegian spelling. Fiord – British spelling. 3 Captain James Cook was a British sailor and explorer. He made some of the first maps of Canada, New Zealand and Hawaii. 4 Sometimes they used the natural landscapes; sometimes they used computers to add buildings, etc.

CC8: Wales – Cardiff



The photos show (clockwise from top-left):

The Millennium Stadium; the Millennium Centre sports complex, View over Cardiff Castle from Bute Park, Pierhead and Millennium Centre buildings in Cardiff Bay, a red dragon on the Welsh flag.

- The **Millennium Stadium** and the **Senedd** are both important pieces of modern architecture. The stadium is the second-largest in the world with a fully-automatic retractable roof. The Senedd /'senedd/ has a highly original design, and the virtual tour (http://senedd.nafw-server.org/en/index_standalone.html) is well worth a visit. A third building, the Millennium Centre (not mentioned in the text) is also a very striking piece of modern architecture.
- The **International Sports Village** is not yet fully open at the time of writing, but some features, such as the white water rafting centre, have been open for some years.
- The **Third Marquess of Bute** /'mɑ: kwɪs əv 'bjʊ:t/, who restored Cardiff Castle, has an interesting history. For example, he became the President of the Cardiff Savings Bank when he was only six months old. He later became the richest man in the world. *Marquess* is a noble title, between *duke* and *earl*.

Answers

• Reading

The Millennium Stadium; Cardiff Castle; the Senedd; the Waterfront area; the fire dragon

• Vocabulary

1 a dome, to cheer, a biker, a dressing room, a pitch, speedway, a trophy, white water rafting. (In the email, to lift, a tunnel and a venue are also connected with sports)
2 a dome, a dressing room, a roof. (We can also include a pitch and a tunnel if we talk about sports stadiums).
3 brand new and traditional. (They are not always opposites, as in the design of the Senedd, which is both brand new and traditional.) 4 to cheer, a roar. (Pitch can also describe musical sounds, but this is a different meaning of the word.)

• Comprehension

1 Cardiff Castle 2 The International Sports Village
3 The Millennium Stadium 4 The International Sports Village
5 The Brecon Beacons National Park
6 The International Sports Village 7 The Millennium Stadium 8 The Senedd

• Be bright

1 Miguel is probably from Spain (because of his name), but Kim probably isn't (because the email is in English). Kim might be a Korean boy or a British girl, for example. Michał is young and loves excitement, especially sports. It is his first time in Wales. Kim knows more about Wales, and has probably visited it before, but doesn't know Cardiff. Kim prefers beautiful countryside and castles/palaces. 2 Probably about a week. He had his tour of the stadium 'a few days ago', and has plans to 'start exploring' tomorrow, so he is probably in the middle of a week-long trip. 3 We can guess that the Millennium Stadium was built around the time of the millennium (1999/2000). In fact it was finished in 1999. The International Sports Village is brand new. The Senedd is also very modern and environmentally-friendly.

CC9: The USA (West) – Yellowstone



The photos show (clockwise from top left):

Yellowstone Falls, part of the Yellowstone Grand Canyon; a bison, erupting Old Faithful Geyser; the Morning Glory pool (a hot spring).

- A **caldera** /kæl 'de rə/ a huge flat area that is created when a volcano collapses.
- There are four main types of **hydrothermal features** in Yellowstone: geysers, hot springs, mud pots and fumaroles. **Geysers** (BrE /'gi: zəz/, AmE /'gæi zərz/) are characterised by sudden and intermittent surges of hot water or steam coming out of the ground. These surges happen when ground water seeps through the earth and reaches the hot rock below, where it boils. Around half of the world's geysers are in Yellowstone. **Hot springs** are simply springs (= places where water comes out of the ground) caused by heat (because hot water expands and therefore needs to go somewhere). Because hot water can contain a lot of dissolved minerals, these minerals often accumulate around hot springs, making the landscape colourful and striking. **Mud pots** are places where very muddy water boils, to create an effect like heating chocolate. Again, mud pots can be very colourful, if they contain dissolved minerals. Finally, **fumaroles** /'fju: mə rəʊlz/ are holes in the earth's surface through which steam and gases pour.
- **Black bears** are the smallest common species of North American bears, and are less dangerous to humans than larger species such as brown bears, grizzly bears and polar bears. When they attack humans (very occasionally), they rarely kill or cause serious injuries. **Grizzly bears**, which usually have brown fur, are larger and more dangerous and aggressive than black bears. Female grizzlies are very protective of their cubs (babies), and will attack if they perceive any danger to them. They almost never attack humans in order to eat them. **Mountain lions** are also called cougars, panthers or pumas. They rarely attack and kill adult humans, but attacks on children, especially when unaccompanied by adults, are more common. **Wolves** also rarely attack humans, but they may fight when they feel threatened. **Bison** (also called American Buffalo) and **elk** are both dangerous because they are so heavy, and they attack with their horns when they feel threatened. They can also kill humans by kicking them with their back legs. They don't eat meat, so they never kill for food.

Answers

- **Reading**
 - 1 You can visit hydrothermal features and take photos; you can go boating, fishing and walking; you can see lots of animals.
 - 2 They are what we see when natural water (underground or on the surface) gets very hot. Examples include geysers, hot springs, mudpots and fumaroles.
 - 3 Because of the hydrothermal features (you may be too close to an eruption or you may fall in); because there are high mountains and deep canyons, so you may fall; and because there are many dangerous animals
- **Vocabulary**
 - 1 f 2 d 3 a 4 e 5 b 6 c
- **Comprehension**
 - 1 three 2 4,000 3 nowhere 4 16 5 smaller than 6 walk backwards
- **Be bright**
 - 1 Because it is the hard surface, but it is quite thin compared to the rest. 2 Grizzly bears, black bears, mountain lions, wolves, bison and elk. They are all dangerous, but perhaps bears are the most dangerous. 3 Because if you run, they will see you are scared and chase you. If you look strong and calm, they may decide not to attack. Bears don't eat people – they only attack because they think you might attack them or their babies. If a bear thinks you are dead, it has no reason to attack.

CC10: Scotland – Loch Ness



The photos show:

The photos both show Urquhart Castle on the shores of Loch Ness. The left image shows how people sometimes imagine the Loch Ness monster.

- The word **loch** /lɒx/ comes from the Gaelic languages of Scotland and Ireland. In Ireland, the spelling is lough (as in Lough Neagh /lɒx 'neɪ/, the large lake in the centre of the map of Northern Ireland). The phonemic symbol /x/ represents a very rare sound in English. The four main lochs that make up the Great Glen are, from northeast to southwest, Loch Ness, Loch Oich /ɒx/, Loch Lochy /'lɒxi/ and Loch Linnhe /'lɪni/. The Great Glen marks a long, straight fault across Scotland, with high mountain ranges on either side. It a natural travelling route across Scotland.
- The name **plesiosaur** refers to a whole order of Mesozoic marine reptiles, of which there were many species, not all of which had long necks. Some had large heads and with long, sharp teeth looked more like crocodiles. Technically they were not dinosaurs, although they lived around the same time.
- **Nessie** almost certainly doesn't exist. The photos can generally be explained as either mistakes (e.g. an elephant's trunk being mistaken for a long neck) or hoaxes. Of course, the story is very good for marketing for the whole of Scotland, so many people have an interest in keeping the mystery alive.
- The language situation in Scotland is similar to that in Jamaica. There is a continuum between Standard English at one end and Scots at the other. (Scottish Gaelic is a very different language from both English and Scots, with a radically different vocabulary, grammar and pronunciation system.) Most Scottish people can speak Standard English (with a distinctive Scottish accent) in formal situations and Scots in more informal situations. Scots is rarely written down, and many Scottish people see it as a dialect of English. However, because it developed alongside English (from shared Anglo-Saxon roots), it can be seen as a sister language rather than a daughter language/dialect (like American English). It had a more official status when Scotland was independent, and may regain some of that status if Scotland becomes independent again. A good place to see an example of Scots written down is a cartoon strip called *The Broons* (http://en.wikipedia.org/wiki/The_Broons).

Answers

- **Reading**
 - 1 The image shows how people imagine Nessie; in the photos there is the Loch Ness and Urquhart Castle.
 - 2 You can walk and relax in the countryside; you can go canoeing, sailing, mountain biking, windsurfing, paragliding and skiing; you can visit Ben Nevis, Inverness and the rest of the Scottish Highlands; you can try to see Nessie.
 - 3 37 km long, 1.6 km wide and very deep
- **Vocabulary**
 - 1 paragliding 2 exists 3 failed 4 proof 5 doubt 6 underwater
- **Comprehension**
 - 1 True 2 False 3 True 4 False 5 False 6 False 7 True 8 False
- **Be bright**
 - 1 Some people think it could show the elephant's trunk.
 - 2 Possibly a photo or film, but these may be tricks, so they would have to catch the monster! It is almost impossible to prove that something doesn't exist: even if scientists checked every millimetre of the loch, people might still believe there is a monster in there.