



Student
Selected
Subject

Loch Ness Monster Thematic Unit

Thank you for taking the time to check out this thematic unit for a rip-roarin' exploration of the mystery of the Loch Ness monster. It's a LOT of fun, and gives kids plenty of research practice, too!

Sandie Flynn

Language Arts ~ Science ~ Math
Grades 3-4 & Grades 5-6
Includes detailed Substitute Lesson Plans

Loch Ness Monster Overview of Materials

Just when you think the Loch Ness monster has been thoroughly debunked, up pops another "sighting" and another scientific expedition takes to the Loch. Students become passionate about their belief or disbelief in this mythical monster, and are willing to stand their ground in defending their thoughts! If you're looking for something for the first couple of days of school, an exciting subject for use when you need a substitute, or just a fun day or two to practice the research skills you've been teaching, this may be the unit for you! Here's what you'll find in the unit:



File 1: Materials list, Lesson Plan Suggestion, Standards, Preparation Checklist, Book List and References.



File 2: Student Readers
Grades 3-4
Grades 5-6
Students read about the first "Nessie Sighting" as well as other interesting facts about Loch Ness.



File 3: Vocabulary Bookmarks
Grades 3-4— red-lined
Grades 5-6— blue-lined
Coordinate with the Loch Ness Examiner (file 2). Students may use them as they read to decode new words.



File 4: Student Worksheets and Overheads:
Reading, Research, Writing, Math, Science, Geography



File 5: Research Cards
Anecdotal records of historical Nessie sightings which can be used as center material or to get students started on research when you can't use the internet.



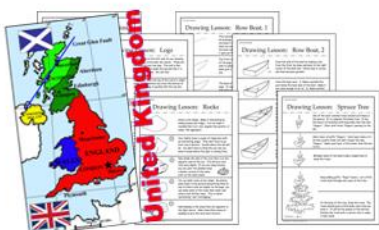
File 6: Photography in the Wild
Photography is a major aspect of scientific observation. These cards help students examine the difficulties scientific photographers face.



File 7: Vocabulary Study Cards
Double-sided cards which explain new vocabulary of the unit. Use with Tracking Nessie game board (file 8) or use at a center or mini word wall.

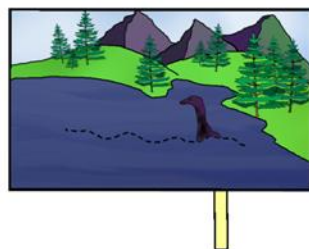


File 8: Tracking Nessie Game Board
game for students to play as they practice new vocabulary of the unit.



File 9: Map

File 10: Drawing Lessons
Students will learn how to draw mountains and trees which they may use on their final art project.



File 11: Art Project
Students will make a Nessie puppet and draw and color a background reflecting true information of Loch Ness.




File 12: Lesson Plans for Subs
Complete, detailed lesson plans you can leave for a substitute. This is an exciting unit for a special day.



File 13: Task Cards
Students can do further research independently using these task cards.

Substitute Lesson Plans



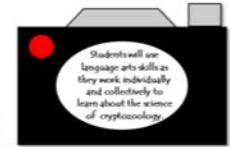
Student Selected Subject

Loch Ness Monster Thematic Unit

Detailed Substitute Lesson Plans

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Nessie, of the Loch Lesson Directions



Set Up:

- Prepare all materials and have them readily available
- Get some books from the school library about Scotland, Loch Ness, the Loch Ness Monster, and other cryptids
- Set up and cover the independent study center. Uncover it at the end of the unit for those who want to do some more research. (Optional)

Review:

Students are probably somewhat familiar with studies of animals in the wild. Talk briefly about animals they have studied in the wild, and what they know about these types of scientific studies, without mentioning the Loch Ness Monster. Make a brainstorm list of what the students already know about how scientists study animals in nature. Explain that today the students will be evaluating evidence collected from a wild animal study.

Photographic Studies

Begin today's unit by playing **Animal Hunt**. Don't tell the children they are looking for the Loch Ness Monster, but explain that they are going to act like scientists using photography to learn about animals in their natural habitat. You need to play the game inside or out, but you need an area where there are many obstacles for hiding (a classroom works very well). Use a paper towel tube or two toilet paper tubes taped together to form a sighting scope or binoculars. (If you have a classroom digital camera, use it instead!) Then you can later evaluate the quality of the images the students shoot during the game.) Set up the perimeter of the area where the game will be played. The larger and more crowded the space, the more difficult it will be to locate the "animals." Set up the lookout post, the place where the camera operator will be stationed. (S)he will need to stay in that one spot. The rest of the students will spread out over the area. Animals in the wild are afraid of humans, so the student "animals" should try to hide from the camera operator as they go about their daily tasks. The object is to make it as difficult as possible to get a good camera shot. Turn the lights on or off (or flash them) to simulate changes in weather. Talk about some of the conditions photographers face (ice, wind, rain, snow, slush, heat, fog, dirt, mud, etc.). We want to give the students a little taste of the reality of nature photography.

The whole class can play together or in small groups. Play until everyone has had a chance to be the camera operator. (If there are too many students to allow everyone a turn at this time, play the game throughout the day. A few rounds now will provide the necessary experiences.)

When you have finished the game, discuss the experience. Did anyone get a clear picture? What made it easy? What made it hard?

Photography as an important part of scientific documentation, and as the backbone of evidence for a claim.

Students will use language arts skills as they work individually and collectively to learn about the science of cryptology.

Photography
 Explain to the students that they will be studying an animal in Northern Scotland, known from folklore as a creature called Nessie. Show them a picture of the Loch Ness Monster. Explain to the students that they will be studying an animal in Northern Scotland, known from folklore as a creature called Nessie. Show them a picture of the Loch Ness Monster. Explain to the students that they will be studying an animal in Northern Scotland, known from folklore as a creature called Nessie. Show them a picture of the Loch Ness Monster.

Geography
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Exposition Preparation
 To give the students a taste of how scientists prepare to go on an expedition, have them read some of the articles about the Loch Ness Monster. Explain to the students that they will be studying an animal in Northern Scotland, known from folklore as a creature called Nessie. Show them a picture of the Loch Ness Monster.

Reading Nonfiction

Before Reading: Start a brainstorm list on butcher paper to find out what the students already know about the Loch Ness Monster. When the brainstorm list is complete, have the class generate at least five questions they want answered during their study. Write each question on a piece of chart or butcher paper and hang them on the wall where the students will be able to see them. Then an another group of chart or butcher paper write "Facts about the Loch Ness Monster" along on the wall where the students will be able to see it during the day, and will be used together in some groups.

During Reading: Show the students the book's backmatter. There are two different versions: the first is a simplified version for lower readers and the second is for stronger readers. Both versions present the same information, but the second is more detailed and includes more photos.

After Reading: Working as a whole class, have the students share articles they found in the class book.

Research

There have been hundreds of reported sightings during the almost 1300 years since the first written record was made. The Loch Ness Monster is a creature of mystery and legend. Explain to the students that they will be studying an animal in Northern Scotland, known from folklore as a creature called Nessie. Show them a picture of the Loch Ness Monster.

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Classification

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Writing: Newspaper Article

Depending on how much experience your class has had in writing newspaper articles, choose as many of the following activities as are appropriate to help prepare the students for writing.

Build a Database
 Explain to the students that they will be studying an animal in Northern Scotland, known from folklore as a creature called Nessie. Show them a picture of the Loch Ness Monster.

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Math: Units of Measure - Standard and Metric

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News Articles Presentations

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Nessie of the Loch: Answers

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Loch Ness Monster



climate: CLI muht
the usual weather patterns of an area;
weather over a long period of time

cryptid: CRIP tid
a creature whose life has been suggested, but has not been proven by science

cryptozoologist:
CRIP toe zoo ALL uh jist
a person who studies evidence that seems to support the existence of animals not yet proven to exist

emerge: ee MERJ
to rise above the surface of the water

evidence: EV uh duns
clues that tend to prove something;
a reason to believe in something



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Red-lined, Grades 3/4

Vocabulary Bookmarks

Loch Ness Monster



conspirator: cun SPEER uh ter
a group of people who work together,
usually to do something illegal

cryptid: CRIP tid
a creature whose life has been suggested, but has not been proven by science

cryptozoologist:
CRIP toe zoo ALL uh jist
a person who studies evidence that seems to support the existence of animals not yet proven to exist

document: DOCK you munt
1) a written piece of paper giving proof or evidence of something
2) writing something down as evidence or proof



elaborate: ee LAB rut
to work something out with great care, paying attention to details, and perfection

enigmatic: EN ig MAT ik
something that is mysterious, puzzling, hard to understand, or cryptic;
an enigma

evidence: EV uh duns
clues that tend to prove something;
a reason to believe in something

hoax: hohks
1) to deceive, defraud, or hoodwink
2) a fake

marathon: MARE uh thon
a long distance race usually measuring 26 miles

mock: mok
1) imitation or fake
2) make fun of something

naturalist: NATCH ur uhl ist
a person who studies nature or natural events

United Kingdom:
you NIGHT ud KING dum
a European kingdom made up of England, Scotland, Wales, and Northern Ireland

wake: waik
a wave given off by an object moving rapidly through water

zoologist: zoo ALL uh jist
a person who studies animals

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Blue-lined, Grades 5/6

Special points of interest:

- Most recent sighting of the Loch Ness monster
- Loch Ness is 600-725 feet deep
- The first written record of the LNPM was more than 1,400 years ago

Inside this issue:

- Cryptozoologists Study Loch Phenomenon 2
- School Children Frightened by Creature 2
- Loch Ness Monster: Real or Hoax? 3
- Just Another Swimming Elephant? 3
- Swimming in the Black 4
- Weather and Climate: LN 4

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Water Beast Turned Back by Holy Man

ADOMNAN 565 AD

Earlier this week, a village man was swimming in the River Ness, when he was grabbed and bitten by a water monster. Some men ran to rescue him in a wooden boat. They put out hooks and caught a hold of the man's clothes. They pulled him into the boat, but he was already dead. Today he was buried by the River Ness where he had lived his whole life.

up on the other side. His friend, Lugae Mocu-Mlu swam across right away. Taking off all but his loag shirt, he jumped into the water, but the monster, who was still hungry after just getting a bite, was still hiding in the deep waters of the river. The moving water from Lugae's swimming brought the monster up to the surface, and with his mouth wide open, and with a great roaring he rushed toward the man swimming in the middle of the river. Everyone watching was filled with fear, but the holy man, who was standing by the side of the river, raised his hand and made the sign of the cross in the air. He called out God and said, "You will come no closer. Do not touch this man. Turn around right now!"



"The Loch Ness Monster" by J. B. MacCallum, 1934

A man from the church named Columba, was walking by the funeral service and stopped to find out what had happened. When the villagers told him the sad story, Columba asked one of his friends to swim across the river and bring back a sailing boat that was tied

When the monster heard the order from the holy man, he swam away as if he had been pulled away with ropes, even though he had been so close to Lugae he could have touched him. When everyone saw that the beast had gone away and that Lugae was safe and sound, they were really amazed. They all praised the God of the Christian man, that no one was hurt by the monster of the loch. 1

Car Nearly Hits "Prehistoric" Monster

INVERNNESS July 22, 1923

Mr. and Mrs. George Spicer reported earlier today that they nearly hit a strange animal while driving on the road along Loch Ness. At first they said it was about six feet in length, but later they realized the animal was

wider than the road, and it must have been closer to thirty feet long. They described the animal as "prehistoric" with a long neck and a large grayish-black body. They said, "It shambled across the road, waddling like a seal, and dithered into some bushes before splashing into the dark waters of the lake."

They were about 150-200 yards away from the animal at the time. Mr. Spicer says he sped ahead in his car in order to catch the creature, but he wasn't able to reach it because it dithered into the bushes. The Spicers were returning from a vacation in northern Scotland.

er: Real or Hoax?

ing, he along with his father and step brother, attached the neck and head of a toy dinosaur to the coming tower of a toy submarine and took the picture themselves. They later showed the image to Dr. Wilson and convinced him to publish them as his own.

Not everyone believes this story. Mr. Spurling is more than 90 years old. Why did he wait 60 years until the other conspirators in the hoax were dead to make his confession? Many toy experts question whether toys of the 1930s would have been able to perform well enough to support the hoax. In spite of the hoax, the hunt goes on.

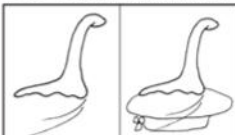
Just because it hasn't been documented doesn't mean it's not there. Back in 1925, British explorer, Andrew Battell, published this story about an amazing creature in Africa called a pongo.

This Pongo is in all proportion like a man, but he is more like a Giant in stature, than a man for he is very tall, fandi hath a man's face, his eye-hood, with long hair upon his brows. His face and ears are without hair, and his hands also. His body is full of hair, but not very thick, and it is a danish colour. He goeth always upon his legs, and carrieth his hands clasped on the nape of his neck, when he goeth upon the ground. They goe many together, and kill many Negroes that trauselle in the Woods. These Pongos are never taken alive, because they are so strong, that ten men cannot hold one of them.

Most Europeans believed such an animal did not exist. It was a hundred and fifty years before biologists identified this creature and gave him the name *Gorilla Gorilla*.

the "Loch Ness wonder" for hundreds of years, but not even one single bone has ever been found. Scientific expeditions, complete with elaborate camera rigs, manned with lookouts posted strategically around the lake have failed to take any good, clear pictures of the enigmatic creature. Now we learn that one of the most famous photographs may indeed be a fake.

Published in 1934 by Dr. R. Kenneth Wilson, the photograph, called the "Surgeon's Photograph," shows a long neck rising from the waters of the loch. Dr. Wilson was a distinguished London doctor, and no one imagined he would be part of a hoax, but he may well have been. Alastair Boyd, an English art teacher, and David Martin, a zoologist, were part of a scientific group looking for Nessie. During their research they uncovered the plot of the photographic fake. According to a confession by Christian Spurling,



The "Surgeon's Photograph" 1934. An Spurling claims to have taken this photo and was awarded a grant. Instead he took a toy submarine to create the image. Spurling, which was the first to "hoax" the existence of the monster of Loch Ness.

Just Another Swimming Elephant?

WASHINGTON, DC March 9, 2006

Neil Clark, of the National Geographic Society believes he has solved the mystery of the cryptid thought to be living in Loch Ness. He believes the sightings are of swimming elephants! Swimming elephants in northern Scotland?

comes to town, the elephant handlers let their charges take a little dip in the deep, cold lake. Swimming is good exercise for the huge land animals and the loch, 21 miles long and 1.5 miles wide, gives them plenty of room to stretch their muscles. Clark thinks it's the trunk and back of an elephant that viewers have seen in the many recorded sightings. "Hmm... Really?



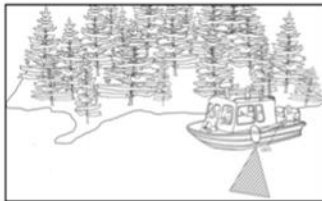
Neil Clark, of the National Geographic Society, believes Nessie is a swimming elephant.

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Cryptozoologists Study Loch Phenomenon

LOCH NESS, 2003

Cryptozoologists sponsored by the BBC spent their summer on Loch Ness, searching for evidence of the Loch Ness Monster. The television company paid more than 1 million £ for a complete search of the loch using 600 separate sonar beams along with satellite tracking. "We went from side to side, top to bottom on this one, we have covered everything in this loch and we saw no signs of any large animal living in the loch," said Ian Florence, one of the specialists who worked for the BBC. The show, called Searching For The Loch Ness Monster, was made for BBC One.



Loch Ness has been scanned to look for any real evidence of the monster's existence, although they have shown evidence of large otter-like fish in the loch.

Adrian Shrine, a naturalist who has been studying Loch Ness for years, was the project leader. He told the BBC, "We found something large over near Urquhart Castle, but we believe it was a school of salmon, or perhaps a very large seal. We would all be happy to find something, even if it is just a really large fish. Then all the sightings over the last 1500 years would be convincing?"

Sonar (sound navigation and ranging) is a method that uses

sound for finding and identifying objects. Sound waves at a steady speed through a material such as air or water, so by measuring how long it takes a sound wave to reach an object, distance can be measured. The type of sound made when the sound wave hits an object tells what the object is made of. Using sonar, scientists are able to "see" even when they can't see their eyes.

A 1968 sonar expedition to Loch Ness found evidence of large bodies, up to 20 feet long, moving through the loch in a pattern not like that of fish movement. These

large objects never emerged on the surface, however. A number of sonar searches have been completed on the loch but none of them have provided proof that the Loch Ness monster really exists.

An expedition in the 1970s used a submarine to search for the creature nicknamed "Nessie". The lake waters are very deep and darkly stained by the deep water. Sonar is probably the best way to explore the dark and cloudy waters of the deep Scottish lake.

School Children Frightened by Mysterious Creature

DRUMNADROCHIT, 1990s

A group of school children playing near Urquhart Bay were terrified

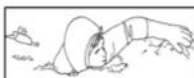
"It had a small, eel-like head with large eyes on a long

A few weeks later, Veterinary student, Mr. Arthur Grant said this about the creature he saw. "It had a small, eel-like head with large

Swimming in the Black

INVERNNESS, August 12, 1989

It seems elephants aren't the only ones swimming in the 42° water of Loch Ness these days. Tammy Van Wase, a long distance marathon swimmer from Melbourne, Australia, set a speed record today when she swam the length of the loch. "I have to say this is one of the scariest swims I've ever done. Loch, I'm not a great believer in monsters and what have you, but to actually get in that water... it's completely BLACK! It's almost like when you have a fear of heights and you're looking down on something - you're going into this great, black abyss. And of course I've read how deep it is and how they can't even find the bottom in places. It really does send a shiver down my spine. The first time I got in I got a real fright. I can understand how the legend has lived on, what with all that mist, and those HUGE mountains." Tammy agreed to swim the loch when a Scotman told her, "You're not a real marathon swimmer unless you've swam the loch." Her time of 9 hours and 4 minutes is a new world record and beats the old one by 15 minutes for completion of the 23 mile swim.



Australian marathon swimmer Tammy Van Wase sets a new world record when she swam the length of Loch Ness.

Weather and Climate: LN

The weather outlook is good at Loch Ness, as it usually is throughout the year. Although located at a relatively high latitude, (56° N) temperatures are kept warmer than you might expect because of the Gulf Stream winds which blow in daily from the southwest. Winters are not too severe and snow and ice rarely block the roads. The lake, the largest body of fresh water in Great Britain, remains 42° F year round. Regardless of when you come to Loch Ness you will always need a raincoat and umbrella. Although the climate is mild, the daily weather changes radically. In the summer months are plentiful, so don't forget your insect repellent.

Loch Ness Area Average Monthly Temperature and Precipitation

| Month | Average Low | Average High | Avg. Precip. |
|-----------|-------------|--------------|--------------|
| January | 35°F | 42°F | 2" |
| February | 34°F | 43°F | 1.6" |
| March | 37°F | 47°F | 1.5" |
| April | 39°F | 50°F | 1.5" |
| May | 44°F | 56°F | 1.8" |
| June | 49°F | 62°F | 1.9" |
| July | 53°F | 64°F | 2.6" |
| August | 52°F | 63°F | 2.8" |
| September | 48°F | 58°F | 2.3" |
| October | 44°F | 53°F | 2.6" |
| November | 39°F | 46°F | 2.4" |
| December | 36°F | 43°F | 2.1" |

* Data from Integreat! Thematic Units Weather averages in the United Kingdom. www.thematicteacher.com

The LNM Digital, Waterproof Camera

If you're looking for a scientific camera that absolutely has to be ready when you're not, this is the one for you.

- Automatic or Manual
- Self adjusting light settings
- Motion detecting
- Wide angle telescopic lens
- Wake up alarms



Don't go to the Loch without it!

References

- 1. Anderson, A.D. and P.O. Anderson (eds. and eds.) 2004, Loch Ness, The Loch Ness Monster. New York: Basic Books, 2004.
- 2. Anderson, P.O. "Nessie: The Loch Ness Monster." *Searchlight*, 1986, August 27, 2003.
- 3. "Loch Ness." *Wikipedia*. The Free Encyclopedia. New York: New York: Encyclopædia Britannica, 2007. Web. August 12, 2010.
- 4. "Loch Ness." *Wikipedia*. The Free Encyclopedia. New York: New York: Encyclopædia Britannica, 2007. Web. August 12, 2010.
- 5. "Loch Ness." *Wikipedia*. The Free Encyclopedia. New York: New York: Encyclopædia Britannica, 2007. Web. August 12, 2010.
- 6. "Loch Ness." *Wikipedia*. The Free Encyclopedia. New York: New York: Encyclopædia Britannica, 2007. Web. August 12, 2010.
- 7. "Loch Ness." *Wikipedia*. The Free Encyclopedia. New York: New York: Encyclopædia Britannica, 2007. Web. August 12, 2010.
- 8. "Loch Ness." *Wikipedia*. The Free Encyclopedia. New York: New York: Encyclopædia Britannica, 2007. Web. August 12, 2010.
- 9. "Loch Ness." *Wikipedia*. The Free Encyclopedia. New York: New York: Encyclopædia Britannica, 2007. Web. August 12, 2010.
- 10. "Loch Ness." *Wikipedia*. The Free Encyclopedia. New York: New York: Encyclopædia Britannica, 2007. Web. August 12, 2010.

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Student Newspaper

Grades 3/4, & Grades 5/6

4 pages (2 pieces of letter sized paper, 2 sided)

EXAMINER

Volume 1, Issue 56

Water Beast Turned Back by Holy Man

Special points of interest:

- Most recent sighting of the Loch Ness Monster:

- Loch Ness is 600-725 feet deep
- The first written record of the LNM was more than 1,400 years ago

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ADOMNAN 565 AD

Earlier this week, while swimming in the River Ness, a village man was seized and most savagely bitten by a water beast. Some men quickly came to his rescue in a wooden boat. They were able to put out hooks and caught hold of the man, dragging him into the boat, only to find he was already dead. This morning he was buried alongside the river he had lived on his whole life.

Columba, a leader of the church and a blessed and holy man, came upon the funeral services as he was walking along the river. When the villagers told him of the tragic event, Columba ordered one of his companions to swim across the river and bring back a sail boat that was on the other side. Lugne

Mocu-Min obeyed without delay. Throwing off all his clothing but his tunic, he plunged into the water, but the monster, whose appetite had not been satisfied by biting alone, still lurked in the depths of the river. Feeling the disturbance in the water caused by Lugne's swimming, it suddenly swam up to the surface, and with gaping mouth and great roaring, rushed towards the man swimming in the middle of the stream. All the watchers were struck down with extreme terror, but the blessed man, who was watching, raised his holy hand and drew the saving sign of the cross in the empty air. Calling on God he said, "You will go no further. Do not touch this man; turn back speedily!" Then, hearing this command of the saint, the



"Preacher" Painted in 1754, shows Saint Columba with the Picts of Scotland.

beast, as if pulled back with ropes, fled terrified in swift retreat, although it had before approached so close to Lugne as he swam that there was no more than the length of one short pole between the man and beast. Seeing that the beast had withdrawn and Lugne had returned unharmed and safe, everyone with great amazement praised the God of the Christians. ¹

Car Nearly Hits "Prehistoric" Monster

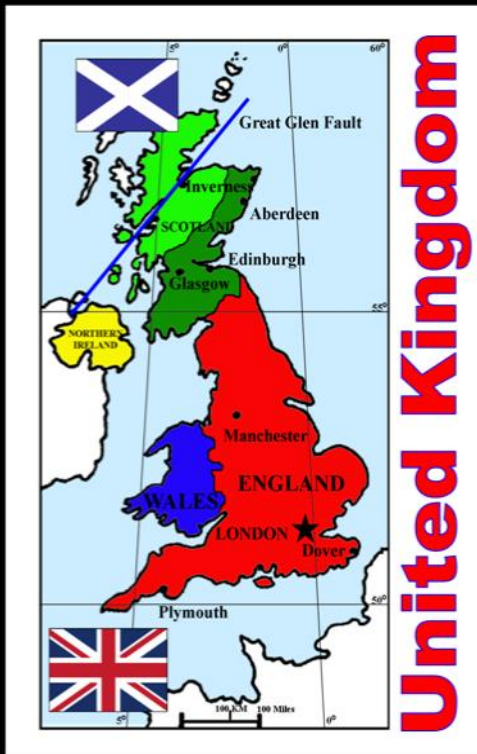
**INVERNESS
July 22, 1933**

Mr. and Mrs. George Spicer reported earlier today that they nearly struck a strange animal while driving on the road along Loch Ness. At first they claimed it was about six feet in length, but later, realizing the animal

was wider than the road, decided it must have been closer to thirty feet long. They described the animal as "prehistoric" with a long neck and a large grayish-black body. They said, "It shambled across the road, waddling like a seal, and slithered into some bushes before splashing into the dark waters of the lake."²

They were about 150-200 yards away from the animal, they say.

Mr. Spicer says he accelerated in order to catch up to the creature, but he wasn't able to reach it before it slithered into the bushes. The Spicers were returning from a vacation in northern Scotland.



United Kingdom

Name _____ Date _____

Scottish Highlands

Today you are going on a scientific expedition to the highlands of Scotland. Complete the worksheet to help you learn more about the area.

Scotland is a part of the United Kingdom, which is made up of four regions: England, Wales, Scotland, and Northern Ireland. Use your social studies textbook or an atlas to help you complete the map.

Place these cities in the correct place:

| | |
|------------------|-----------------|
| _____ LONDON | _____ Inverness |
| _____ Plymouth | _____ Edinburgh |
| _____ Manchester | _____ Dover |
| _____ Aberdeen | _____ Glasgow |

Locate each of the regions on the map and color them a different color:

| | |
|------------------------|----------------|
| _____ Wales | _____ England |
| _____ Northern Ireland | _____ Scotland |

Scotland is divided into two regions: the highlands and the lowlands. Darken the lowland section on the map so it stands out from the highlands.

Loch Ness is located in the highland region of Scotland, which is cut in half by the **Great Glen Fault**, a deep break in the earth's crust that extends across Scotland and on into Ireland. Use a ruler to draw a line through the fault with a blue marker.

Loch Ness is located in the Great Glen Fault. The River Ness runs from the sea to the start of the loch, which is about 10 miles upstream from Inverness. Use the map scale to draw the length of the river and then outline the loch. It will be a little hard in the small space!

Name _____ Date _____

Diving Deeper

Into Loch Ness

The highlands of Scotland have been formed by glacial carving. They contain deep valleys, bedrock shaped by ice, caves, and rock steps. Deposits in the rock layers include fossils of plants and animals living there long ago. The highland region is cut in half by the **Great Glen Fault**, a deep break in the earth's crust that extends across Scotland and on into Ireland. You can see it clearly by looking at a map. It is this fault region that you will be visiting today as you journey to Loch Ness in search of Nessie, the Loch Ness monster.

Directions: Use the Internet or encyclopedias and books from your school's library to find out some of the information you'll need as you prepare for your scientific expedition. Record your information on the next page, using words, pictures, and graphs or tables. Here are some ideas to get you on your way:

Take a trip to Loch Ness via an internet mapping website. You can fly right above the lake while viewing a satellite image. Find the town of Inverness, the capital of the highland region. Follow the Ness River to the west until you reach the loch. Cruise along the shores to gather as much information about the area as you can. Look at the landforms, plants, and buildings located around the lake. Don't forget to examine the water—one scientist thought he saw the monster on a satellite image!

Plants and Animals: Find out what the common plants and animals are in the Scottish Highlands, especially around Loch Ness. How would this affect your scientific expedition to the area?

Accommodations: Many scientific groups set up a base camp on the lake, with lookout stations set up strategically around the lake. Other groups, especially now that sonar is the primary method of investigation, stay in local hotels. Decide which you think would be the best idea and then collect information you would need to arrange your visit. List all the items you'd need to purchase for a camp site (include prices of each item, and where you could buy supplies), or find a hotel to stay in (include the price, places to eat, location, and directions on how to get there).

Climate and Weather: Find out some climate data for the area, and then look at current weather forecasts. Is this the best time of year for a scientific expedition to Loch Ness? When is the best? What type of clothing should you pack for the trip? Are there any other special items you will need?

Historic Locations: Urquhart Castle is one of the favorite "Nessie-spotting" sites on the loch. Learn more about it, or other historic locations that catch your interest.

Scientific Expeditions: Find out some of the methods used by scientists in the past. How successful have they been? What new ideas do you have for locating this illusive animal?

Plants & Animals

Climate & Weather

Historical Locations

Accommodations

Scientific Investigations

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Geography, Social Studies

Name _____

Date _____



Nessie Sightings

Build a Database

There have been hundreds of "Nessie sightings" over the 1,500 years since the first encounter was reported. In 1933, Mr. and Mrs. George Spicer were returning from their vacation in northern Scotland. As they were driving along the side of Loch Ness they encountered a large, "prehistoric monster" crawling across the road. Their report of the experience sparked a new interest in the fabled beast, all around the world. Since then, rarely has a year gone by without someone reporting a new one. Together our class is going to build a data base of sightings.

Directions:

- Look over the sample below.
- Do an internet search of "Loch Ness Monster Sightings." Skim over the many that are available and select one that interests you.
- Tell me which sighting you will cover so I can make sure no one else studies that one. We want each person to cover a different sighting so we can get as much information as possible.
- Make sure you can verify the sighting by locating it on three different websites.
- Fill in the information on the "Sighting Card."

Official, Verified Sighting: Loch Ness Monster

Person Making the Sighting: Mr. and Mrs. George Spicer

Date of the Sighting: July 22, 1933

Location: Between the villages of Dores and Inverfargie

Circumstance: Driving on road along the loch. About 150-200 yards away. Accelerated to try to catch up to the animal, but it walked across the road and into the bushes before they got there. The animal went into the lake waters.

Reported Appearance of Animal: "Prehistoric animal." They thought it was 6-8 feet long until they realized it was bigger than the road; then they said it was 30 feet long. Thick body, long neck, grayish, something flapping near where neck joined body (it's tail?), moved along with jerky movements

| Author of Article | Article Title | Website Title | Website Organization | Date of Information |
|-------------------|-----------------------|------------------|-----------------------|---------------------|
| | The Evidence | Legend of Nessie | | August 30, 2010 |
| | The Loch Ness Monster | Cahill Web | Scholastic | August 30, 2010 |
| | Sightings on Land | It's Out There | Official LNM Fan Club | August 30, 2010 |

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Official, Verified Sighting: Loch Ness Monster

Person Making the Sighting: _____

Date of the Sighting: _____

Location: _____

Circumstance: _____

Reported Appearance of Animal: _____

References:

| Author of Article | Article Title | Website Title | Website Organization | Date of Information |
|-------------------|---------------|---------------|----------------------|---------------------|
| | | | | |
| | | | | |
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Data Base Collection

Name _____

Date _____



Nessie Sightings

Sort the Database

One of the important jobs of science is to classify and sort items. Nessie sightings have been organized into these categories (there are other categories, as well):

- land sightings _____
- water sightings _____
- single hump sightings _____
- multiple humps sightings _____
- head and neck sightings _____

With 5-6 other people, sort your database cards into these categories. Write down how many you found for each category. Then finish the rest of this page.

Sort your cards into three more categories. Write the categories here:

Look at the physical characteristics on each card. Fill in the diagram (on the back) to show ways in which the animals sighted at different times are alike and different. Put all the characteristics that ALL animals share in the circle. Put the characteristics that are NOT shared in the rectangles (one rectangle for each of the sightings reported by your group). Draw arrows to connect sightings that share SOME characteristics.

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Name _____

Date _____



Nessie Sightings

Sort the Database, cont.

| Characteristics in Common | | |
|---------------------------|--|----------------------|
| Sighting Date: _____ | | Sighting Date: _____ |
| Sighting Date: _____ | | Sighting Date: _____ |
| Sighting Date: _____ | | Sighting Date: _____ |

Conclusion: What conclusions can you draw by looking at the information in your database?

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Loch Ness Monster: Photo by Jennifer O'Neil, via iPhoto.com

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Data Base Work-Internet

Students write a newsCast based on a historical sighting of Nessie they have researched.

Official, Verified Sighting: Loch Ness Monster

Person Making the Sighting: Roderick Matheson

Date of the Sighting: 1885

Location: in the water, no other information

Circumstance: the animal was moving forward in the water

Reported Appearance of Animal: He said, "It was the biggest thing I ever saw in my life." It had a neck like a horse with a mane.

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32 Research Cards

Mr. and Mrs. George Mackay were driving along a newly constructed road, General Wade's Military Road, on the shores of Loch Ness on April 14, 1933. The water was as still as glass, when suddenly Mrs. Mackay saw violent splashing as if two enormous ducks were fighting. When the thrashing stopped, a large wake developed, caused by something huge moving through the water. Then she saw two huge black humps appear above the water. The back hump was larger than the one in front of it. The distance from one hump to the other was approximately 20 feet. Mrs. Mackay watched the humps move along for a while, turn left, and then submerge, leaving behind a big disturbance in the water.

Source: Dinsdale, Tim. *The Story of the Loch Ness Monster*. London: Wyndham Publications, 1973.

Confirmation: 5



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Name _____ Date _____

Loch Ness Monster NewsCast Rubric—Score:

| CATEGORY | 4 | 3 | 2 | 1 |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Organization | The newscast is very well organized. The facts are clear and presented in a good sequence. | The newscast is clearly organized. The facts are clear, but not always in the correct sequence. | The newscast is a little hard to follow. The facts are jumbled up. | The newscast doesn't make sense. It's hard to understand. |
| NewsCast Style | All of the newscast is focused on one sighting of Nessie. It answered all of the who, what, where, when, and how questions. | Most of the newscast is focused on one sighting of Nessie. It answered most of the who, what, where, when, and how questions. | Some of the newscast is focused on one sighting of Nessie. Some of the questions were not answered, or were confusing. | The newscast mixed up multiple sightings of Nessie. It did not attempt to answer any important questions. |
| Accuracy | All facts presented in the newscast were accurate and documented. | Most facts presented in the newscast were accurate and documented. | Some of the facts presented in the newscast were accurate, but no documentation was given. | Many of the facts presented in the newscast were not true. |
| Presentation | The newscast was presented in an interesting and entertaining way. The words were clear and easy to hear. | Most of the newscast was presented in an interesting and entertaining way. Most of the time the words were clear and easy to hear. | The newscast was not very interesting. Sometimes the words were unclear and hard to hear. | The newscast was hard to hear and the words were unclear. It was hard to follow and understand. |
| Media Support | There were a lot of helpful images, maps, and material to help explain the information. | There were some helpful images, maps, and material to explain the information. | There was not enough helpful images, maps, and materials to make the information clear. | There were not any images, maps, or other materials in the presentation, or they were very confusing. |

Name _____ Date _____

Writing a Newscast

Name _____

Date _____

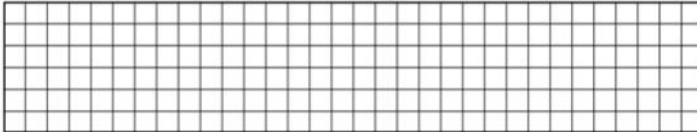
Monster Math



Follow the directions given in each problem.

1. Adomnan wrote that the first encounter with a strange animal in the River Ness occurred in 565 AD. How many years ago was that?

2. Mr. and Mrs. Spicer at first claimed the creature they saw was six feet long. When they realized it was wider than the road they changed their estimate to thirty feet in length. Using a scale of 1:4 (1/4 of an inch=1 foot) draw a line that represents 6 feet on the graph paper below. Underneath it draw another line that represents 30 feet. Label each line.
Does the Spicer's mistake seem reasonable? Why or why not? _____



3. In 2003, the British Broadcasting Company (BBC) spent more than 1 million £ (pounds) to pay for a complete search of Loch Ness. In June of 2003, the exchange rate for changing US dollars for UK pounds was 1.638999. To find out how much the project cost in US dollars:

A. Divide 1 (US dollar) by 1.638999 (UK pound). (You may use a calculator.) _____

B. Multiply that number by 1,000,000. (You may use a calculator.) _____
That's what the cost of the expedition was in US dollars!

4. In 1994, Christian Spurling confessed to creating a photograph of Nessie that was a hoax. He was 93 at the time. In what year was he born? _____

The photographic hoax was published in 1934. How old was he when he created the photograph?

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Urquhart Castle, Loch Ness: Photo by Pippinheim, via Wikimedia Commons.

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Monster Math, cont.

5. Andrew Battel reported in 1625 that "Pongos are never taken alive because they are so strong, that ten men cannot hold one of them." If an average African man in 1625 weighed 160 pounds, how much would 10 of them weigh? _____

How heavy do you estimate a pongo would have to be, to be stronger than 10 men?
_____ Why? _____

6. Loch Ness is 23 miles long and 1.5 miles wide. These measurements are given in standard units, which is the primary measurement system of the United States. Great Britain (the United Kingdom) uses the metric system as their primary unit of measure.

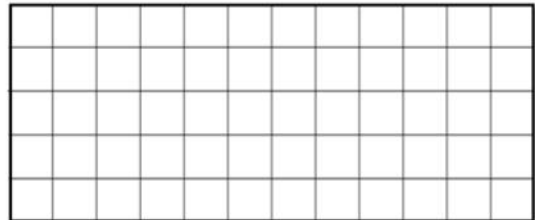
1 mile=1.609 kilometers

To change miles into kilometers, use this formula: miles X 1.609=KM

Use a calculator to help you figure out the size of Loch Ness: Length _____

Width _____

7. Use the Weather Chart on page 4 of *The Loch Ness Examiner* to graph the low and high average temperature OR the rain in the area of Loch Ness. Label your graph and the X and Y axes.



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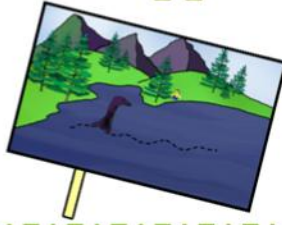


Math-Measurement

Loch Ness Monster Puppets

Materials:

- 1 piece 12X18 inch white drawing paper
- 1 piece 6X9 inch tag board
- crayons, markers, or water color paints
- popsicle stick
- scissors
- glue



Directions:

To make the puppet background:

1. On a piece of large white drawing paper, using a pencil, lightly draw the setting for the Nessie sighting you are reporting. Add any landforms, plants, animals, roads, rocks, etc. that will help your audience learn more about the sighting.
2. Draw the person who made the sighting.
3. Make any changes you want and then color your background using either crayons, markers, or water color paints. Set it aside to dry, if necessary.

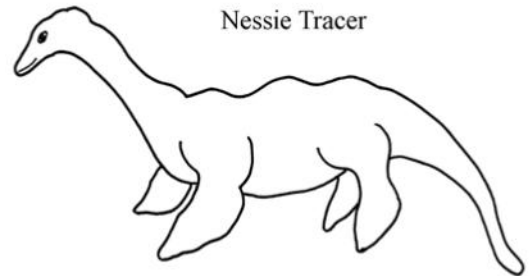
To make the Nessie puppet:

1. With a pencil, lightly trace or draw an image of Nessie that accurately represents the animal of your sighting. Make any changes needed.
2. Color the puppet using crayons, markers, or water color paints. Let it dry, if necessary.
3. With a pencil, lightly draw a line across the background of your drawing—wherever Nessie is. Cut along the line with your scissors.
4. When the puppet is dry, cut it out and glue it to the background.
5. When you are ready to read your newspaper report, hold up your puppet scene as if you were a television reporter reporting on your sighting while you read the newsflash.

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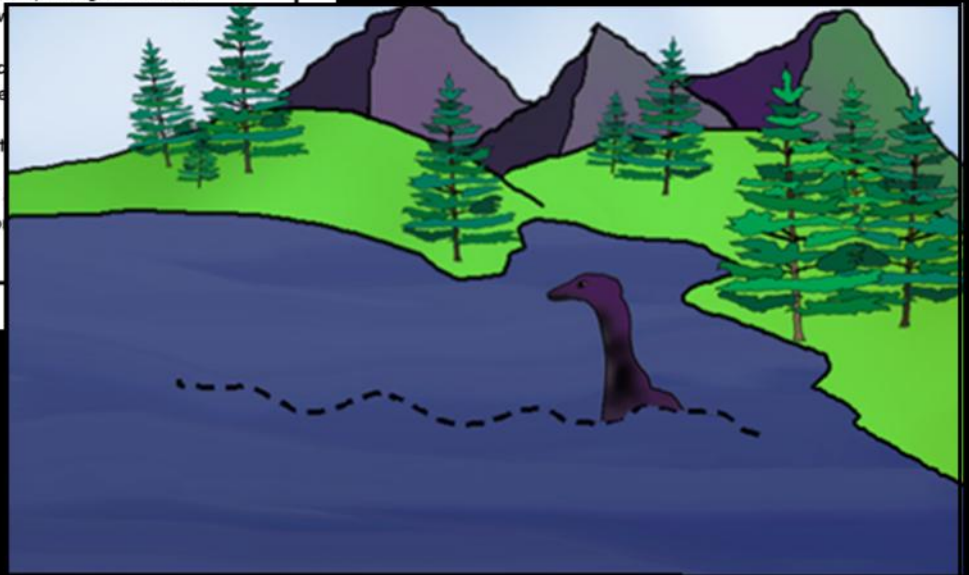
You do not have to use these tracers as the children can draw their own version of the Loch Ness monster on a piece of tag board. If you wish, you can run this off on tag board and let the children color them for their puppets. OR You can run several on tag board, cut them out yourself, and use them as tracers.

Nessie Tracer



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Art Project


Students read and follow directions to complete a project for their newscast

Loch Ness Monitor


Drawing Lesson: Mountains




Draw a mountain shape. Make it interesting by adding bumps and ridges.



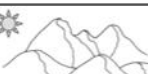

From the top of the mountain, draw a contour line with an interesting shape down to the bottom. Decide where the sun will be. You don't have to draw the sun, but you need to know where the light is coming from.



Now shade the side of the mountain that is on the opposite side of the sun. This will give your mountain more depth. If you are using crayons, you can color the shaded side a darker version of the same color as the sunny side.




You can add foothills to the base of the mountains. Make them more rounded and overlap them in front of the mountains. Add the contour lines and shade them to give more depth.


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Loch Ness Monitor


Drawing Lesson: Rocks




Draw a rock shape. Make it interesting by adding bumps and ridges. You can make it rounded like river rock, angular like granite, or lumpy, like aggregate.




Very lightly draw a couple of ridge lines with an interesting shape. They don't have to go from top to bottom. Decide where the sun will be. You don't have to draw the sun, but you need to know where the light is coming from.



Now shade the side of the rock that is on the opposite side of the sun. This will give your rock more depth. If you are using crayons, you can color the shaded areas a darker version of the same color as the sunny areas.



You can make rocks of any shape. By placing some lower in the picture and putting them on top of others that are higher on the page, you can make some of the rocks look closer and others look farther away. This is called "positioning" and "overlapping."




Add shading in the areas that are opposite to the light source. Add a few other areas of shading to give the rock more texture.


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Loch Ness Monitor


Drawing Lesson: Spruce Tree




One of the most common trees around Loch Ness is the spruce. It is a popular Christmas tree. It has flat layers of branches with long limbs that look like "fingers." Start with three "fingers" pointing to the sky.




Add a layer of puffy "fingers." Each layer looks a little like a puffy cloud, but don't forget the long "fingers." Make each layer a little wider than the one before.



Between some of the layers add a couple lines to show the trunk.



Keep adding puffy, "finger" layers. Let a little trunk show through only some of the time.




At the base of the tree, draw the trunk. The trunk should grow a little wider each time you draw it. It will be the widest at the bottom. Enclose the trunk with a contour line to make it look round.

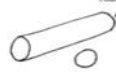
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Loch Ness Monitor


Drawing Lesson: Logs




Draw an oval on the left side of your drawing space and a circle near the center. These are the ends of your two logs. The oval is flattened in order to make the log look like it is turned at an angle. We call that "foreshortening."




Draw a line from the top of the oval at a slight angle. Draw another one from the bottom of the oval, making it parallel with the top line.




Draw a contour line (see how rounded it is) to connect the two lines at the end.



Do the same thing in the opposite direction, drawing a line from the top of the circle, away to the left. Stop the line where it meets the first log and then continue on to finish it. Do the same thing from the bottom of the circle. Close it in with a contour line.



Because logs are round, you will start with very dark shading on the bottom of the log and gradually make it lighter until you are about half way up the side of the log. Do the same thing on the second log.




Draw contour lines on the ends of the logs to show the growth rings. Add a shadow on the ground by shading along the bottom edge of the bottom log. Add a shadow under the top log where it leans up on the bottom log.


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Loch Ness Monitor

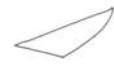
Drawing Lesson: Row Boat, 1




This row boat is a pretty tricky drawing. Like all drawings, you are not drawing it the way you know it is, but rather the way it looks when you see it from afar. Start by drawing the back side of the boat. Angle it slightly as it goes up the page.




The front side curves down toward the bottom of the page. It will be shorter than the back side to make it look closer to you. It hangs down just a little below the end of the first line.



The back of the boat is almost flat on the page. It slopes just a little from the back side edge to the front side. It's a little tricky.



Inside the outline you just finished, draw another set of parallel lines. This will make the rim of the boat.




Draw a short line from each outside corner of the back of the boat. Each line will slant toward the center of the boat just a little.


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Loch Ness Monitor


Drawing Lesson: Row Boat, 2




Draw the side of the boat by making a line from the front tip down and back to the right corner of the back end. Notice how it curves, and then becomes parallel.




Draw the back seat. 1) Make a parallel line just below the back side of the boat. Make it just wide enough to sit on. 2) Make another line that is parallel with the back side of the boat. Stop it when it reaches the front rim.



Draw the front seat. 1) Make a parallel line just below the back side of the boat. Make it narrower than your last seat so it will look farther away. 2) Make another line that is parallel with the back edge of the boat. Stop it at the rim. 3) Draw two more parallel lines to form the edge of the seat. 4) Join those two lines together with a straight line to show the seat's edge.



Draw the bottom of the boat. It is a line that runs parallel with the back side of the boat.



If you want to, you can add shading on the back side of the boat and on the rim of the front seat. Add any other details you want.

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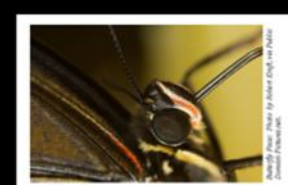
Drawing Lessons
 Students listen, watch, and follow directions to learn basic drawing principles, which they can use in their art project.

Photography in the Wild

Photography in the Wild

Science Study Cards

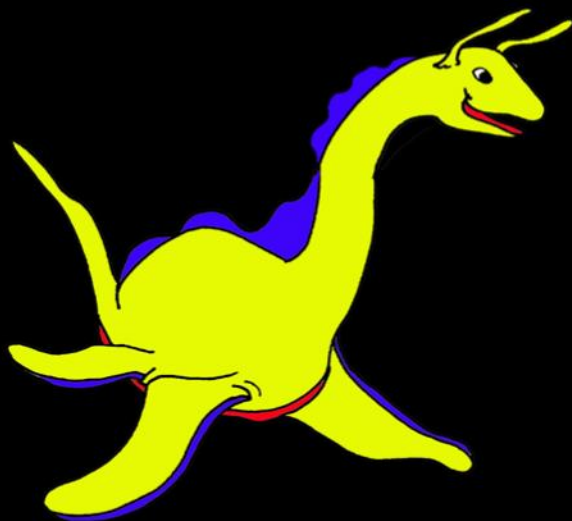
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There are so many amazing nature photographs available today that it is very easy to take them for granted. Unless you stop to think about it, you may not imagine the difficulty the photographer faced in capturing a shot. Look at these images and list items that would make the shots easy or hard to capture. Think about location, weather, and type of creature. Think about what you would feel, hear, see, smell, and think as you are waiting for the perfect setup. How would you prepare for the shot? What would you hope for? What would you expect? How long would you have to wait?

Students explore the role of a photographer in scientific studies.

Vocabulary Practice



sonar
SONAR: SOH nar
a method for finding objects submerged in water using echolocation

cryptozoologist
cryptozoologist: KRIP to see ALL oh just a person who studies evidence that seems to support the existence of animals not yet proven to exist

Loch Ness Monster
Vocabulary Study Cards

marathon
marathon: MARE uh THON
a long distance race usually measuring 26 miles

cryptid
cryptid: KRYPT id
a creature whose existence has been suggested but has not been proven by science

prehistoric
prehistoric: PREJ hu YORE ik
the period of earth's time during which events were not written down, before people could record events in writing

weather
weather: WETH ur
the daily state of the atmosphere regarding wind, moisture, cloudiness, temperature, etc.

climate
climate: CLAY me
the yearly weather patterns of a region

Students practice new vocabulary words with the "Tracking Nessie" game board and the Vocabulary Study Cards.

zoologist



enigma



conspirators



elaborate



hoax



pongo



mock



document



enigma: uh NIG muh

something that is mysterious, puzzling, not understood; cryptic, enigmatic



What?: Image by geralt, via Pixabay.com.

zoologist: zoo ALL uh jist

a scientist who studies animals



Scientists Tag Turtles at Diego Garcia: Photo by U.S. Navy photo by Mass Communication Specialist Seaman Eric A. Pastor, via Wikimedia Commons.

elaborate: ee LAB rut

to work something out with great care, and attention to details and perfection



Elaborate Ceiling: Photo by orangem, via Pixabay.com.

conspirators: cun SPEER uh ters

a group of people who work together to do something, usually something that is illegal



Conspiring: Image by geralt, via Pixabay.com.

pongo: PONG goh

a type of ape, usually associated with orangutans



Orangutan: Photo by Mick Lissone, via Public Domain Photos.net.

hoax: hohx

to deceive, defraud, or hoodwink; a fake



Loch Ness Monster: Photo by Immanuel Giel, via Wikimedia Commons.

document: DOCK you ment

- 1) a written piece of paper providing proof or evidence of something
- 2) writing something down to prove its fact



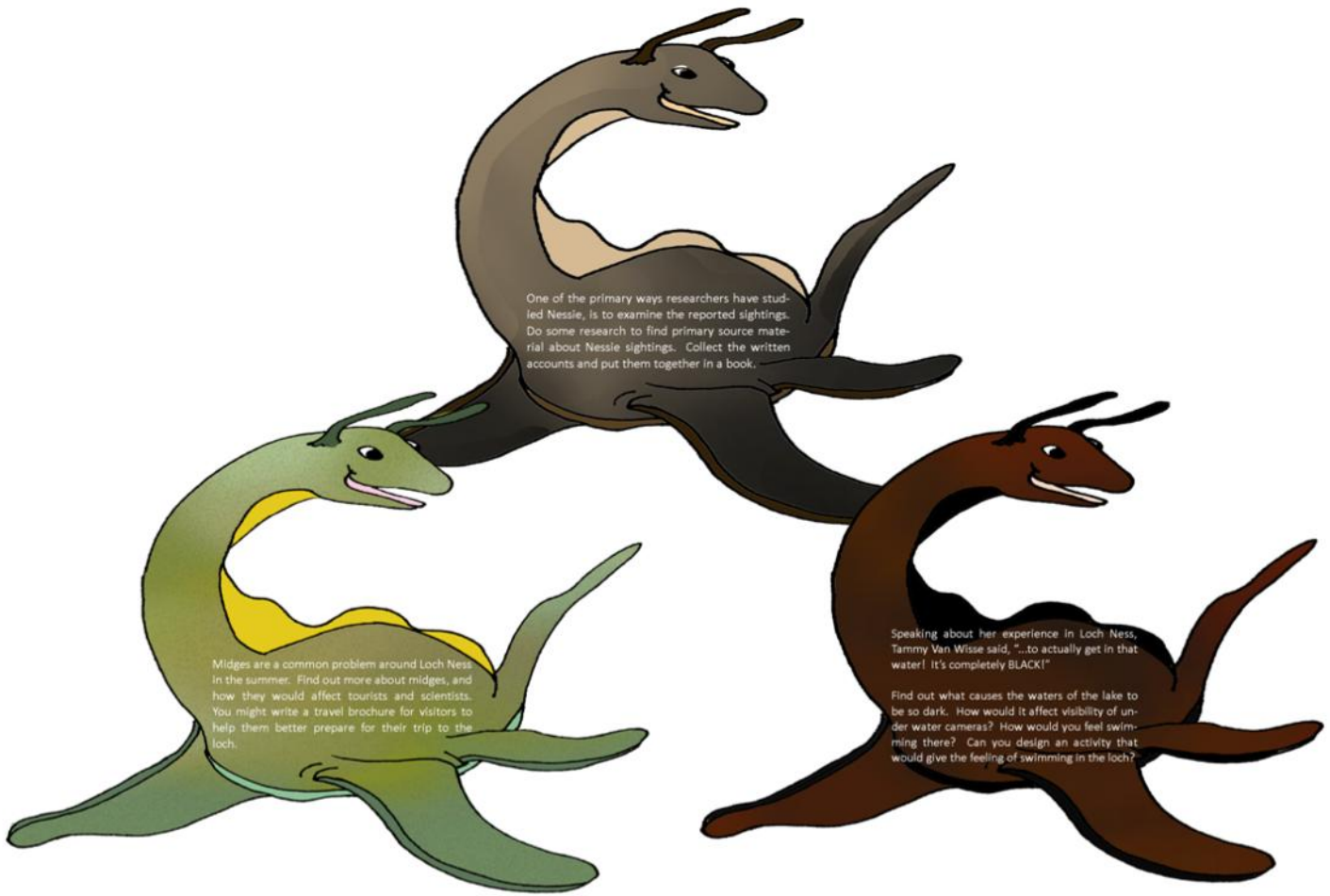
Archeology Dig: Photo by James DeMers, via Pixabay.com.

mock: mok

- 1) imitation or fake
- 2) make fun of something



Loch Ness Monster: Photo by Immanuel Giel, via Wikimedia Commons.

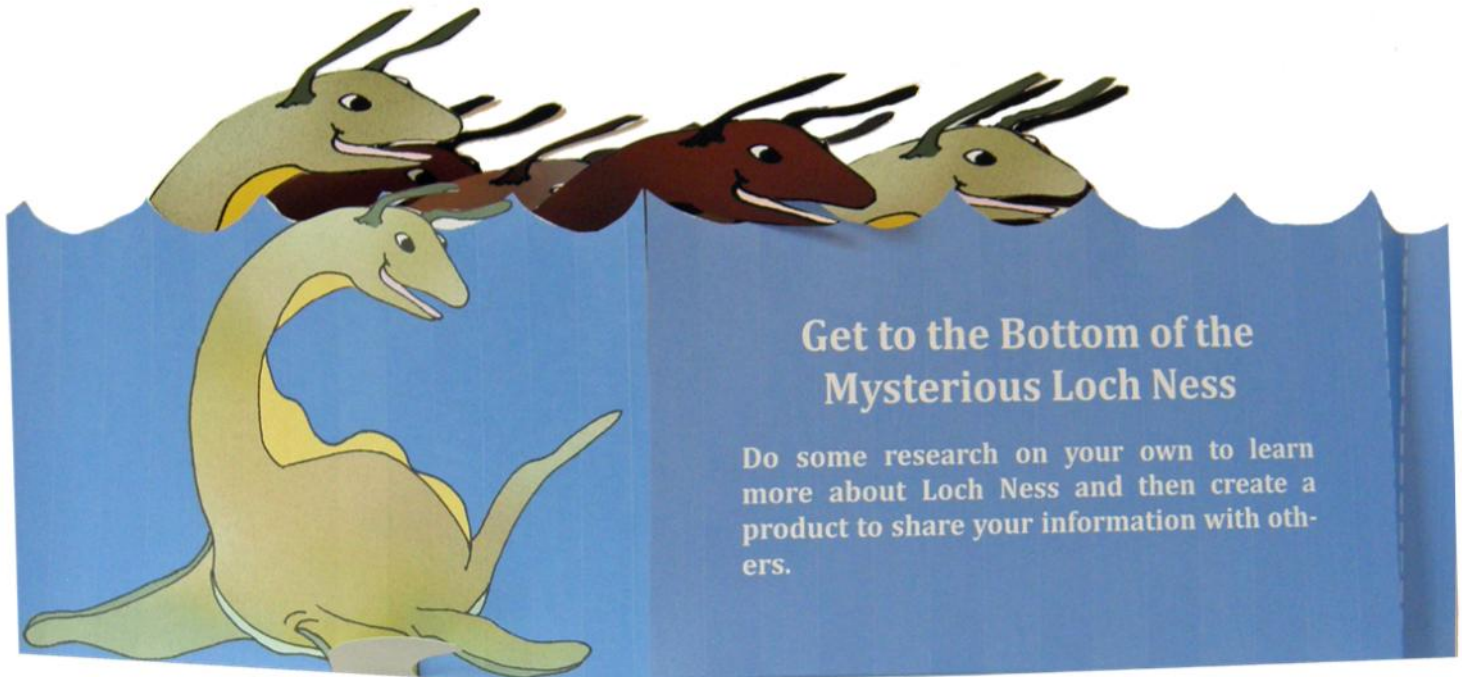


One of the primary ways researchers have studied Nessie, is to examine the reported sightings. Do some research to find primary source material about Nessie sightings. Collect the written accounts and put them together in a book.

Midges are a common problem around Loch Ness in the summer. Find out more about midges, and how they would affect tourists and scientists. You might write a travel brochure for visitors to help them better prepare for their trip to the loch.

Speaking about her experience in Loch Ness, Tammy Van Wisse said, "...to actually get in that water! It's completely BLACK!"

Find out what causes the waters of the lake to be so dark. How would it affect visibility of under water cameras? How would you feel swimming there? Can you design an activity that would give the feeling of swimming in the loch?



Get to the Bottom of the Mysterious Loch Ness

Do some research on your own to learn more about Loch Ness and then create a product to share your information with others.

12 Task Cards with Template



Midges are a common problem around Loch Ness in the summer. Find out more about midges, and how they would affect tourists and scientists. You might write a travel brochure for visitors to help them better prepare for their trip to the loch.