

Galapagos Islands Fact Sheet

Location and Fast Facts

The Galapagos Islands, officially known as the Archipelago de Colon, are located 600 miles west of the nation of Ecuador in the Pacific Ocean. They are on the equator at 1 degree south latitude, 91 degrees west longitude. They are a province of the country of Ecuador, and consist of 13 main islands, 6 small islands, and 107 islets. Only five of the islands are inhabited, with a population of around 30,000 people.

Approximately 97% of the land is part of the Ecuadorean National Park system. The other 3% is used for human settlement and farming. The ocean surrounding them was declared a Marine Reserve in 1986. UNESCO has also made them a World Heritage Site.

In 1992, many of the islands were given Spanish names to honor Columbus's first voyage to the New World. Hence, the islands have both English and Spanish names. For example, Santa Cruz is also known as Indefatigable. Most go by their Spanish names on maps.

History

The islands were accidentally discovered by the Bishop of Panama on his way to Peru in 1535. In his report to Spain, he said they were a miserable and worthless place. They remained uninhabited until the early 1800's as a result. They were, however, used by whalers and pirates as a base of operations, food and water source, and a hideout.

In 1832, Ecuador annexed the islands and created a prison colony there. Settlers were slow in coming as the land was not well-suited to farming. Salt processing and ranching also proved short lived ventures. Sadly, settlers introduced many invasive species to the islands, such as goats, pigs, dogs, cats, and rats, which destroyed much of the plant and animal life. In 1959, the Charles Darwin Research Station was established to study and preserve native species and help remove introduced ones. One of their most successful preservation programs brought the Galapagos tortoise back from near extinction, and another successful program removed all the feral goats from Santiago Island.

Today, the islands are slowly returning to the state that Charles Darwin found them in 1835. However, new threats have arisen from illegal fishing, tourism, and a growing population. In 2007, UNESCO placed the islands on their World Heritage Site in Danger List. Today, programs are in place to restrict tourism, prevent new immigration to the islands, and teach the residents occupations that will have less impact on the environment.

Geology

The Galapagos Islands are volcanic islands that began forming 5 million years ago. Each island was formed by a volcano as it passed over a hot spot in the Earth's crust. A hot spot is a weak area in the crust where magma breaks through to form a volcano. Isabela Island is unique in that it was formed by a string of six volcanoes, making it the largest island. In fact, Isabela and Fernandina Islands are the youngest of the islands with the last eruption on Fernandina occurring in 2005. Espanola Island is the oldest.

The islands are on the Nazca Plate which moves about 3 inches per year to the southeast. They say that at that rate, in a million years, the Galapagos Islands will be off the coast of Peru rather than Ecuador.

Climate

Being on the Equator, you would expect the Galapagos Islands to be tropical, but they are not. They are actually considered desert islands. There are two distinct seasons, and temperatures and precipitation are determined by location. The dry and misty (Garua) season is from May to December, while the wet season is from December to May. Temperatures range from seventy to ninety degrees year round and rainfall is from five inches to twenty-four inches. Higher elevations are cooler and wetter while coastal areas are warmer and drier. This, too, depends on the wind patterns and which side of the island you are on.

Perhaps the biggest factor on the Galapagos climate is the ocean currents that converge here. Three main currents influence both the climate and marine food supply. Coming up from the south and Antarctica is the Humboldt Current. It is a cold current that brings in nutrients and keep the air above it cooler. The Cromwell Current comes in from the west along the Equator and is also a cold, nutrient rich current. These two currents cause the Garua, or dry, misty season. The Panama Current comes from the northeast and is a warm, but nutrient poor current. Its warming effect causes the wet season.

The most devastating effect on the climate of the islands is an El Nino event. When this happens, the cold currents fail to arrive and the warm Panama Current dominates. The result is massive rainfall and nutrient poor ocean waters. Land animals flourish on the increased plants, but marine animals suffer due to lack of food. This happens every 4-7 years. The last happened in 1997-98 and resulted in up to a 50% drop in marine animal populations. Of course, when things return to normal, land animals suffer from the reduced vegetation and their populations are reduced.

Name _____

Galapagos Islands Fact Quiz

Directions: Circle the correct answer to each question.

1. Which country in South America are the Galapagos Islands a province of?
 - a. Peru
 - b. Columbia
 - c. Brazil
 - d. Ecuador
2. What is the distance, in miles, from the mainland of South America to the Galapagos Islands?
 - a. 400
 - b. 500
 - c. 600
 - d. 700
3. What geologic activity built the islands?
 - a. volcanic
 - b. glacial
 - c. earthquake
 - d. tidal
4. What makes the marine iguana unique?
 - a. clings to rocks
 - b. feeds in the sea
 - c. eats plants
 - d. all of the above
5. Which geographic term best describes the Galapagos Islands?
 - a. isthmus
 - b. barrier island
 - c. continent
 - d. archipelago
6. Which bird is known for its brightly colored feet?
 - a. blue-footed booby
 - b. Nazca booby
 - c. albatross
 - d. masked booby
7. Which crop do the islands export?
 - a. apples
 - b. corn
 - c. coffee
 - d. mangos
8. Which of these animals has the longest life span?
 - a. sea lion
 - b. Darwin finch
 - c. iguana
 - d. tortoise

Galapagos Islands Fact Quiz **Answer Key**

1. D
2. C
3. A
4. B
5. D
6. A
7. C
8. D

Galapagos Animal Sort **Answer Key**

1. Mola-mola
2. Spotted Ray
3. Blue-footed Booby
4. Pilot Whales
5. Great Frigate Bird
6. Penguin
7. Lava Lizard
8. Galapagos Sea Lion
9. Sally Light-foot Crab
10. Nazca Booby
11. Albatross
12. Finch
13. Galapagos Tortoise
14. Flamingo
15. Marine Iguana

Short Answer:

1. protective coloration, mating (refer to questions for other answers)
2. mating rituals and coloring, ability to find food in the ocean, protective coloration (refer to questions for other answers)
3. Answers will vary.

Galapagos Islands Assessment **Answer Key**

1. C
2. D
3. A
4. B
5. D
6. A
7. C
8. B
9. C
10. D

Name _____

Galapagos Animal Sort

Directions: Match the description of the animal below with a picture of it. Write the name of the animal in the space provided.

1. I am a huge tropical fish with a rather odd appearance: flat, small tail, and two huge fins.
Who am I? _____
2. I have a diamond shape and a long tail. My color helps me blend with the ocean floor.
Who am I? _____
3. I am a comical looking bird with colorful feet. I do a dance to show them off to attract a mate.
Who am I? _____
4. I am not a fish, but a mammal. I am very intelligent and playful. I breathe through a hole on the top of my head.
Who am I? _____
5. I am best known for the red pouch on my neck that I inflate to attract mates.
Who am I? _____
6. I am usually thought of when you think of cold climates, but I am the only species of my kind to live at the equator.
Who am I? _____
7. I am a small lizard with a red neck who loves to eat insects. I prefer to live in rocky or sandy areas.
Who am I? _____
8. I am a type of seal, but my external ears are what make me different.
Who am I? _____
9. I am brightly colored and use my pincers to catch my food. I live on rocks along the shore.
Who am I? _____
10. Unlike my cousin, I have plain feet. However, the mask around my eyes makes me stand out.
Who am I? _____
11. I am the largest of the seabirds and spend most of my life at sea. I am graceful in the air, but rather clumsy on land.
Who am I? _____

12. Darwin studied us and classified us into 13 species based on the size and shape of our beaks. We are the inspiration for his ideas on evolution.
Who am I? _____
13. I am not a turtle since I live on land. I grow to be very large and very old.
Who am I? _____
14. You think of me as a tropical bird, but I am not. I like to wade, and my bright color is due to the shrimp I eat.
Who am I? _____
15. I am the only lizard who goes into the ocean to find food. My fierce appearance made me popular as a prehistoric monster in the movies.
Who am I? _____

Answer the following in complete sentences:

1. Name 2 different ways in which the coloring of the animal is important to their existence.
2. Name 2 different ways that the animals of the Galapagos have adapted so they are successful in this environment.
3. If you were an animal in this group, which animal would you be and why?

Name _____

Galapagos Islands Assessment

Directions: Choose the letter of the best answer for each of the questions below.

1. The Galapagos Islands belong to which country?
 - A. Peru
 - B. Columbia
 - C. Ecuador
 - D. Chile
2. Which of the following is true of the protected status of the Galapagos Islands?
 - A. are a national park
 - B. are a marine reserve
 - C. are a World Heritage Site
 - D. all of the above
3. Who discovered the islands?
 - A. Bishop of Panama
 - B. Christopher Columbus
 - C. Charles Darwin
 - D. Erik the Red
4. What Englishman traveled to the Galapagos Islands and then came up with a theory on natural selection?
 - A. Isaac Newton
 - B. Charles Darwin
 - C. James Beagle
 - D. Hiram Walker
5. On what tectonic plate are the islands located?
 - A. Pacific
 - B. North American
 - C. South American
 - D. Nazca
6. How were the islands formed?
 - A. volcanoes
 - B. earthquakes
 - C. glaciers
 - D. landslides
7. What is the climate on the Galapagos Islands?
 - A. tropical
 - B. arctic
 - C. desert
 - D. continental

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8. What is a major influence on the climate of the islands?
- A. wind patterns
 - B. ocean currents
 - C. location on the equator
 - D. distance from South America
9. What had the biggest impact on the plant and animal life on the Galapagos Islands?
- A. climate
 - B. farming
 - C. invasive species
 - D. whalers
10. Which of the following currently threatens the plant and animal life on the islands?
- A. tourism
 - B. illegal fishing
 - C. population growth
 - D. all of the above

Name _____

Galapagos Islands Brochure Writing Prompt

You are an expert on the Galapagos Islands and have been asked to create a brochure on the islands. Your task is to present information on the location, formation, and plants and animals of the Galapagos as well as why it is important to protect these islands. You must illustrate your text with a map and pictures. Use the information you have gained in this lesson and well as other sources to complete your brochure. Use the check sheet below to make sure you cover all the requirements for the brochure. Good luck Galapagos Expert!

Location

I have included the latitude and longitude of the Galapagos. _____

I have included the countries nearby. _____

I have included the ocean where the Galapagos Islands are found. _____

Formation

I have included at least 2 sentences on how the Galapagos were formed. _____

Plants and Animals

I have included at least 2 sentences naming animals found in the Galapagos. _____

I have included at least 2 sentences naming plants found in the Galapagos. _____

Protection of the Islands

I have included at least 5 sentences explaining why the Galapagos must be protected. _____

Map

I have included accurate a map of the islands with legible labels. _____

Pictures

I have included at least 5 pictures in my brochure. _____

Galapagos Brochure Scoring Guide

Name _____

Has latitude/longitude of the Galapagos (1 pt)_____

Names the countries nearby (1 pt. per country up to 3 pts)_____

Names the ocean they are located in (1 pt)_____

Has two sentences on how the Galapagos were formed (1 pt each)_____

Has two sentences naming animals found in the Galapagos (1 pt each)_____

Has two sentences naming plants found in the Galapagos (1 pt each)_____

Has five sentences explaining why the Galapagos must be protected (1 pt each)_____

Has a map of the islands (1 pt)_____

Has five pictures of the Galapagos Islands (1 pt each)_____

Comments:

Total Points_____

Grade_____