

Meet the Giant Panda

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Name _____

Which fascinating animal is China's national treasure? Another hint: it is black and white! Give up? It is the giant panda bear. The Chinese people call the panda bear "Da xiong mao," which means "big bear cat" in Chinese.

In this month's Internet Challenge™, we will learn a bit about the giant panda, the rarest of bears. With fewer than 1,600 giant pandas existing in the wild, this unique bear is facing many problems as it tries to co-exist with humans. We will learn a bit about this endangered animal and read up on various conservation measures that are being taken so that the giant panda can survive and thrive in today's world.

Are you ready to begin our online activity? Let's begin!

Our first Web site is [San Diego Zoo: Mammals, Giant Pandas](http://www.sandiegozoo.org/animalbytes/t-giant_panda.html) located at http://www.sandiegozoo.org/animalbytes/t-giant_panda.html

Watch the short video and then read the material on this Web page. Once you are done, answer the following questions.

1. *Through the genetic study of a panda's DNA, it has been determined that panda bears are members of the bear family.*
 - a. True
 - b. False
2. Describe the diet of the giant panda.

3. How do pandas communicate?
4. For what reason are caretakers in China's panda facilities helping to raise twin panda cubs?
5. Explain the bamboo shortage and its impact on the giant panda's existence.

Awesome answers!

Our next Web site is "[Pandas International](http://www.pandasinternational.org/giantpanda.html)". Go to <http://www.pandasinternational.org/giantpanda.html>

Read the text, look at the pictures to see how they change, and then answer the next set of questions.

6. Select the correct choice below that shows a synonym for the word "store" in this sentence. *Unlike other bears, pandas do not store fat and therefore do not hibernate.*
 - a. accumulate
 - b. collect
 - c. both a and b

7. Explain the purpose of the panda's sixth toe.
8. What makes panda cubs so defenseless?
9. What is your opinion of the twin cub swapping process that was developed at the Wolong Panda Center? Give reasons to support your opinion.
10. *Logging and clearing the land for agricultural uses are two major factors in the reduction of bamboo.*
 - a. True
 - b. False
11. Explain why pandas sometime participate in "handstand marking."
12. Retell how the 2008 Earthquake affected wild pandas and the pandas at the Wolong Panda Center in China.
13. Because of China's dense and growing human population, the panda habitat is continuing to disappear as settlers push higher up the mountain slopes. What actions would you suggest to change this so that pandas and humans can share the environment? Write your views and be ready to discuss them with your teacher and classmates.

Good!

The next site we will be visiting is [The World Wildlife Fund: Pandas](http://www.panda.org/what_we_do/endangered_species/giant_panda/), which you can find by browsing to http://www.panda.org/what_we_do/endangered_species/giant_panda/

Look at the images on this Web page and then scroll down the page. Under "Conservation and Solutions," click the first link that says: "Why are they endangered?" Read the information and then answer this question.

Way to go!

Now, scroll back up the page and click on each of the titles in the sidebar (on the left) that are listed under Problems. Click "Habitat Loss," "Fragmentation," and "People and Pandas."

After you have read the material, answer the final two questions.

14. *Pandas stand a much greater chance of extinction if they remain isolated from each other.* Devise a way that this could be prevented – how would you do it? Write your viewpoint and be ready to talk about it with your teacher and classmates.
15. How has illegal harvesting of local plant species disturbed the panda habitat as well as caused the extinction of some of those plants? Write your opinions and be ready to share it with your teacher and classmates.

Terrific responses!

Extension Activity – Choose one or both of them!

1. The World Wildlife Fund: Pandas
http://www.panda.org/what_we_do/angered_species/giant_panda/solutions/

Read about the solutions on this Web page and then scroll back up the page and click each of the titles in the sidebar (on the left) that are listed under Solutions: click “People and Pandas,” “Protected Areas,” and “Panda Success.” Read the text on those Web pages.

You have been hired to present a short multimedia presentation on the giant panda to your community. Your goal is to educate and persuade your audience to help save the panda from extinction. How would you do this?

Go to any of the Web sites used in this online activity and/or those listed below. Look them over and decide how you want to convince your audience to get involved in halting the decline of the giant panda. Tell your audience why you believe in this and then present your facts. Remember to educate your audience so that they realize the importance of your message.

Using appropriate software, design a storyboard that outlines each part of your presentation. Then, create your slideshow, share it and then talk about it!

Giant Panda Facts – National Zoo
<http://nationalzoo.si.edu/Animals/GiantPandas/PandaFacts/default.cfm>

Globio – Glossopedia: Giant Pandas
http://www.globio.org/glossopedia/article.aspx?art_id=1

National Zoo – Giant Pandas
<http://nationalzoo.si.edu/Animals/GiantPandas/default.cfm>

National Geographic – Giant Pandas
<http://animals.nationalgeographic.com/animals/mammals/giant-panda.html>

Great Bear Foundation – Panda Bear
<http://www.greatbear.org/pandabear.htm>

Panda Bears.org
<http://www.panda-bears.org/>

Bear Life.org-Giant Panda Bear
<http://www.bearlife.org/panda-bear.html>

2. Design your own panda poster for your presentation! Illustrate a panda success story and tell a bit about it. Educate your public about the plight of this animal’s future survival. Look at the sites used in this online activity and be creative. Use computer software or paper, pencil, and art tools. After you are done, share it with your teacher and classmates. Talk about it!

Congratulations! You have done an amazing job in completing this month’s Internet Challenge™.

Answers to April's Internet Challenge™

1. (a) True
2. Bamboo is the most important plant in a giant panda's life. Pandas live in cold and rainy bamboo forests high in the mountains of western China. They spend at least 12 hours each day eating bamboo. Because bamboo is so low in nutrients, pandas eat as much as 84 pounds (38 kilograms) of it each day. Pandas also eat bamboo leaves. Giant pandas have also been known to eat grasses, bulbs, fruits, some insects, and even rodents and carrion. At the San Diego Zoo, pandas are offered bamboo, carrots, yams, and special leaf eater biscuits made of grain that is packed with all the vitamins and minerals pandas need.
3. Pandas make a bleating sound similar to the sound a lamb or a goat kid would make. It is a friendly sound, a greeting. They do not roar as a brown bear does. Pandas do bleat and honk, and sometimes huff, bark, or growl. Young cubs croak and squeal.
4. Females give birth to one or two cubs, which are very dependent on their mothers during the first few years of life. In the wild, mother pandas will care for only one of the young. In the panda facilities in China, caretakers help to hand raise any twin cubs. One baby is left with the mother and the keepers switch the twins every few days so each one gets care and milk directly from the mother.
5. When bamboo plants reach maturity, they flower, produce seeds, and then the mature plant dies. The seeds grow slowly into plants large enough for pandas to eat. Giant pandas can eat 25 different types of bamboo, but they usually eat only four or five different kinds that grow in their home range. The unusual thing about bamboo is that all of the plants of one species growing in an area will bloom and die at the same time. When those plants die, pandas move to another area. Now, with humans taking up much of the panda's habitat, pandas are often unable to move to another area and may face starvation.
6. (c) both (a) and (b) are correct.
7. The front paws of a panda are very different from other bears due to a special bone found in their wrists. The panda's sixth toe, an opposable thumb, is used for grasping bamboo. The panda uses this bone in the same way humans use their thumbs and it is often referred to as the "panda's thumb."
8. Panda cubs are especially vulnerable since pandas do not den and hibernate as other bears do. In the wild, pandas nest in hollow tree trunks or caves. The newborns would not be able to stand on their own for nearly four months.
9. Students' own opinions.
10. (a) True
11. To mark their location, pandas back up to a tree and rub their scent glands on the tree and then use their tail to spread the scent. Pandas sometimes engage in "handstand marking" in which they stand on their paws and rest their bodies against a tree while marking. It is thought that they do this so they can communicate their size to other pandas.
12. We all remember that thousands of people in China died and many were injured and left homeless as a result of this destructive earthquake. In addition, there were five staff members of the Wolong Nature Reserve who died from this earthquake. One panda was killed by the collapse of the exterior wall in her enclosure and another one escaped from his enclosure and is still listed as missing. Yet another panda died following the earthquake when roads were blocked and he could not be transported to medical care. A female panda was injured when her enclosure collapsed on her but was treated and is doing well. Wild pandas died as a result of the earthquake but no estimates to the number are available. Several pandas have been coming down from the mountains in search of food. Sadly, a wild panda was found dead from starvation due to the destruction of the bamboo.
13. Students' own opinions.
14. Students' own answers.
15. In the Minshan Mountains, there are over 5,000 plant species and 75% are used in Chinese traditional medicine. The mountains are also home to over 300,000 people, many of whom live in poverty. These people rely on the harvesting of traditional medicines as an important source of income. Unfortunately, the panda's habitat has decreased in size as a result of these actions.

Extension Activities – students own answers.