

Middle School Curriculum Guide

Florida State Standards Aligned



With gratitude to:

THE EVOLUTION OF DR. JANE GOODALL

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ABOUT THIS TOOLKIT

This toolkit for educators provides resources to support students' visit to the National Geographic Society's [Becoming Jane](#) museum exhibition. Use these activities and discussion questions before or after your visit to the museum exhibition to engage students and deepen their learning on the life and work of Dr. Jane Goodall.

Visit natgeoed.org/jane for more free classroom resources.

This toolkit includes six activities for middle school students. Included in each activity are facilitator tips, extension ideas, resources for further investigation, and curriculum standards and principles.

Activities included in this toolkit:

▲ MIDDLE SCHOOL

- Design a Story Graph
- Exhibit Pamphlet
- Write a Resume
- Find the Hidden Treasure
- True or False?
- A Story to Tell

ACTIVITY 1**DESIGN A STORY GRAPH** MIDDLE SCHOOL**STANDARDS:****MATHEMATICS (B.E.S.T)**

- MA.8.DP.1.1 – Given real-world bivariate numerical data, construct a scatter plot or line graph as appropriate for the context.

SCIENCE

- SC.8.N.1.1 – Collect and organize data; interpret data in charts, tables, and graphics; analyze information, make predictions, and defend conclusions.
- SC.8.N.1.3 – Use scientific evidence appropriately and understand that scientific results support or fail to support knowledge claims rather than provide conclusive proof.

Teacher Notes:

This activity provides practice in STEM, literacy, and critical thinking skills. It is paced for two periods.

- A key skill practiced in this activity is the ability to transform data into visual information. Another skill is how to use data as a starting point for talking about related topics.
- Review how publications present graphs using imagery in the form of infographics.
- Students might make one graph with both data points or two graphs with separate data points. One way to manage the activity is to divide the class into two groups and assign each set of data to one of the two groups.
- Discuss ways in which students may show the data point spread—172,000 to 300,000—in a graph.
- Discuss how to show the data point about the African ape. Students need to find a population estimate for the current population to compute the decline of the African ape over the next 30–40 years.

The *Becoming Jane* museum exhibit tells the story of Dr. Jane Goodall's life and work with chimpanzees and conservation. Over the years, Dr. Goodall and her team have tracked the [populations of chimpanzees](#) and other African apes in the wild.

■ T O D O : You work for the [Jane Goodall Institute](#) in public communications. You have been asked to transform the data in the quote below into graph form by using the data to graph the decline in the size of the chimpanzee population and the decline in African ape populations over the ensuing years. Use your creative talents to design one or two graphs that not only show the data but also tell the story. There may be more than one story to tell. What story do you want to tell?

"Where they numbered perhaps 1 million at the turn of the 20th century, today it's estimated there are 172,000–300,000 chimpanzees remaining in the wild. Current trends indicate that African ape populations will decline by an additional 80 percent in the next 30–40 years. We have a generation and a half—possibly two—to alter the trend."

■ DISCUSS: Why do you think these numbers are called estimates?

■ DISCUSS: How important are data when you are reporting on or discussing this topic or any science topic in the news?

Extensions:

- Assign one of the questions as a writing or oral report activity.
- Display graphs in a hallway exhibit with captions to explain the content.
- Invite a local expert to discuss the issues of endangered species and extinction as well as the impact of these issues and solutions to these issues.

Resources:

- [National Geographic Education Resource Library](#)
- [What is an Infographic?](#)
- [NCES Kids' Zone: Create a Graph](#)





ACTIVITY 2

EXHIBIT PAMPHLET

▲ MIDDLE SCHOOL



STANDARDS:

ENGLISH LANGUAGE ARTS (B.E.S.T.)

- ELA.8.C.1.4 – Write expository texts to explain and analyze information from multiple sources, using relevant supporting details, logical organization, and varied purposeful transitions.
- ELA.8.C.1.5 – Improve writing by planning, editing, considering feedback from adults and peers, and revising for clarity and cohesiveness.
- ELA.8.C.4.1 – Conduct research to answer a question, drawing on multiple reliable and valid sources, and generating additional questions for further research.
- ELA.8.R.2.2 – Analyze two or more central ideas and their development throughout a text.

Teacher Notes:

This activity provides practice in STEM (life science) and literacy (writing, language) skills and is paced for one or two periods. Students learn about Dr. Goodall's work and practice writing for a specific audience and purpose. This activity also provides an opportunity to teach ways in which writers use sources without plagiarizing. If possible, have students use computer resources to create their pamphlets.

Conduct a discussion on the role of writing and communications in Dr. Goodall's work and in STEM careers.

The *Becoming Jane* museum exhibit tells the story of Dr. Jane Goodall's life and work with chimpanzees and conservation. The museum needs a pamphlet for school kids visiting the exhibit.

■ T O D O: The following words relate to Dr. Goodall's research with chimpanzees and her work to help to save them. After reading about Dr. Goodall's work in conservation and studying these words, use these words in a pamphlet you create.

- | | |
|----------------|------------------|
| 1. chimpanzees | 8. mission |
| 2. species | 9. behaviors |
| 3. habitats | 10. conservation |
| 4. sanctuary | 11. Tanzania |
| 5. endangered | 12. impact |
| 6. extinction | 13. research |
| 7. compassion | 14. empathy |

■ DISCUSS: What do you think are the two most important things young people should know about Dr. Goodall's research work?

■ DISCUSS: What made Dr. Goodall different from other researchers of her time?

Extensions:

- Students place their pamphlets in the school library.
- Students invite a local expert on animal habitats to engage in a discussion with them.

Resources:

- [Jane Goodall Institute](#)
- [National Geographic Education Resource Library](#)



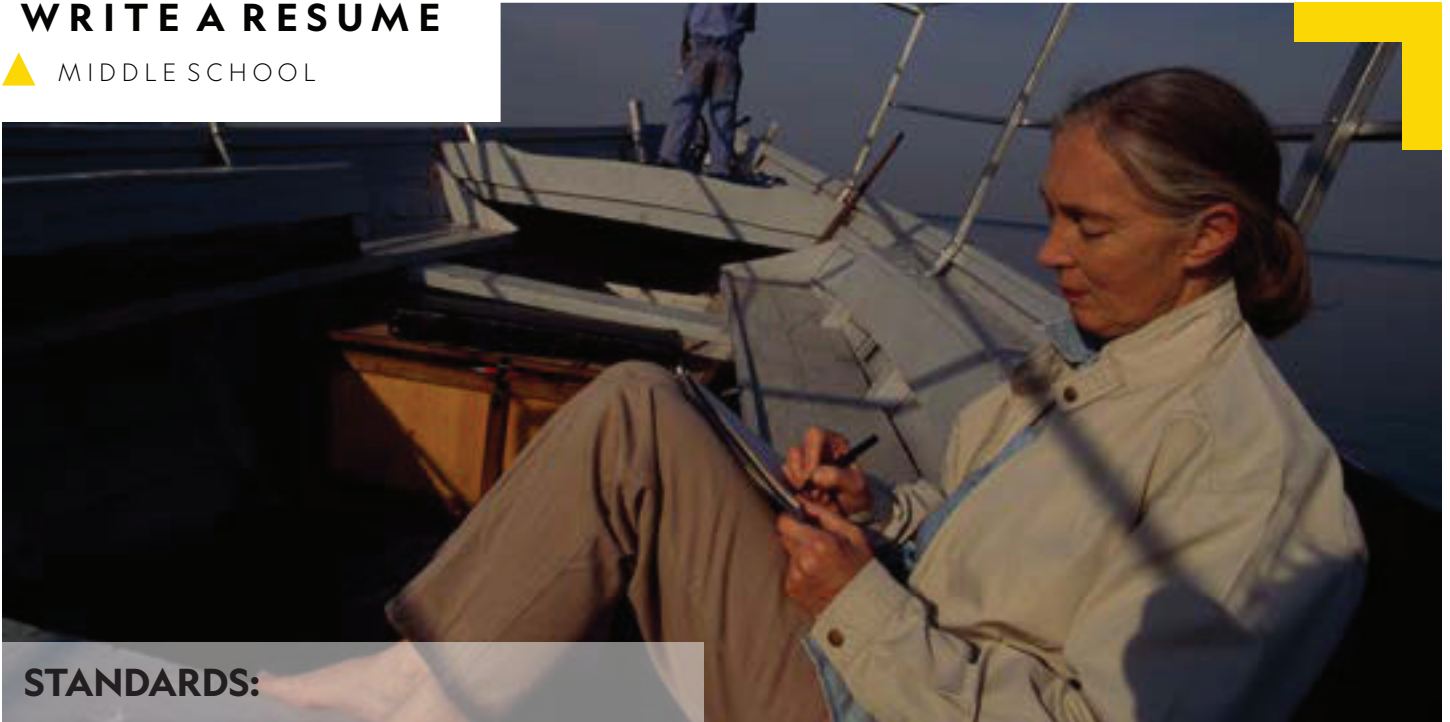
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ACTIVITY 3

WRITE A RESUME

▲ MIDDLE SCHOOL



STANDARDS:

ENGLISH LANGUAGE ARTS (B.E.S.T.)

- ELA.8.C.4.1 – Conduct research to answer a question, drawing on multiple reliable and valid sources and generating additional questions for further research.
- ELA.8.C.1.4 – Write expository texts to explain and analyze information from multiple sources, using relevant supporting details, logical organization, and varied purposeful transitions.
- ELA.8.C.1.5 – Improve writing by planning, editing, considering feedback from adults and peers, and revising for clarity and cohesiveness.

Teacher Notes:

This activity addresses skills in STEM and literacy and is paced for two periods. Key skills practiced in this activity are the abilities to do research for a work-place purpose, to identify relevant factors, and to write a workplace document. This activity offers an opportunity to discuss the role of internships as students think about future careers.

Day 1: Review sample resume/s; research the Institute or visit the exhibit; read internship requirements; list skills and knowledge.

Day 2: Draft a resume, edit, and rewrite final copy. Conduct guided discussion.

Day 3: (Optional) Write a cover letter.

The *Becoming Jane* museum exhibit tells the story of Dr. Jane Goodall's life and work with chimpanzees and conservation. This activity helps you learn about her work and the skills and knowledge you need to do the work of conservationists.

TO DO: Imagine you are applying for an internship with Dr. Goodall's Institute.

1. Read about the [Jane Goodall Institute](#).
2. Review the [traits of a compassionate leader](#).
3. Identify the internship you would like to apply for. Or imagine an internship that you would like to do at the Jane Goodall Institute. What programs and work environments interest you?
4. List the skills and knowledge needed for the internship.
5. Use a resume template to write your resume for the internship.
6. (Optional) Write a cover letter for the internship.

DISCUSS: How might the work the Jane Goodall Institute does influence policies and practices in conservation?

Extensions:

- Students participate in mock interviews for their jobs.
- Students write a cover letter.
- Students invite a science researcher specializing in animals or zoo caretaker to talk about the work.
- Students may not be old enough to apply for these internships now, but that does not mean they need to wait to make a difference. Students design their own internship by identifying a challenge and implementing a project to solve it.

Resources:

- [Resume and Cover Letter Templates](#)
- [Roots & Shoots Toolkit](#)



ACTIVITY 4

FIND THE HIDDEN TREASURE

 MIDDLE SCHOOL



STANDARDS:

ENGLISH LANGUAGE ARTS

- ELA.8.V.1.1 – Integrate academic vocabulary appropriate to grade level in speaking and writing.

Teacher Notes:

This activity provides practice in STEM and literacy skills and is paced for one or two periods. A key skill practiced in this activity is the ability to make connections among word meanings and ideas.

Hidden ideas for discussion:

1. Species—the idea that scientists construct intellectual order by identifying living and non-living things in groups with common traits. (Other words are *class* or *genus*..)
 2. Habitats—the significance of places to live. (Is a habitat the same thing as a *home*??)
 3. Sanctuary—the idea that there are dangers that cause animals (and people) to seek a safe place to live
 4. Endangered—the idea that animals (and other things such as languages and traditions) are not always safe from harm by social and environmental forces or events
 5. Extinction—the idea that social and environmental forces and events can cause a species to die out
 6. Mission—the idea of pursuing a cause or having a sense of duty
 7. Behaviors—the idea that animals (and people) act in certain ways for specific reasons
 8. Impact—the idea that actions have results and consequences positive, negative, and indifferent
 9. Environment –natural or man-made surroundings and their conditions
- Students work in pairs or small groups to complete the TO DOs.
 - Conduct a class discussion to find the hidden meanings.

The *Becoming Jane* museum exhibit tells the story of Dr. Jane Goodall's life and work with chimpanzees and conservation.

The following words relate to Dr. Jane Goodall's work in Africa where she studied and protected chimpanzees and their habitats. Seek out the meanings of these words to better understand her work. Many words are linguistic treasures because they hold more than one meaning and can lead us to other ideas.

■ T O D O: Study this list of treasure words by looking up their dictionary meanings, then talk about the ideas hidden in them.

- | | | |
|--------------|---------------|----------------|
| 1. species | 4. endangered | 7. behaviors |
| 2. habitats | 5. extinction | 8. impact |
| 3. sanctuary | 6. mission | 9. environment |

■ T O D O: Read these excerpts from Dr. Goodall's Institute and fill in the blanks with the treasure words from the list above.

1. The Gombe Stream Research Center was founded in 1965 to advance Jane Goodall's revolutionary findings about chimpanzee tool-making and other _____ .
2. We're on a _____ to save chimpanzees from _____. Together, we can turn these numbers around.
3. The Jane Goodall Institute believes that the best way to protect healthy _____ is to focus on actions that not only protect _____ animals but also benefit the local people whose lives depend on a healthy _____ .

■ DISCUSS: What do you think people can do to protect chimpanzees and save them from extinction?

■ DISCUSS: Are there any endangered species that live around you?

Answers: Excerpts from the **Jane Goodall Institute**

1. The Gombe Stream Research Center was founded in 1965 to advance Jane Goodall's revolutionary findings about chimpanzee tool-making and other behaviors.
2. We're on a mission to save chimpanzees from extinction. Together, we can turn these numbers around.
3. The Jane Goodall Institute believes that the best way to protect healthy habitats is to focus on actions that not only protect endangered animals but also benefit the local people whose lives depend on a healthy environment.

Extensions:

- If your class visits the Jane Goodall Exhibit or reads about it online, ask students to look for these words and think about how they are used in the texts.
- Students invite a local expert on animal habitats (or any other related topic) to engage in a discussion with them.

Resources:

- [Jane Goodall Institute](#)
- [National Geographic Education Resource Library](#)
- [World Wildlife Fund's Endangered Species List](#)

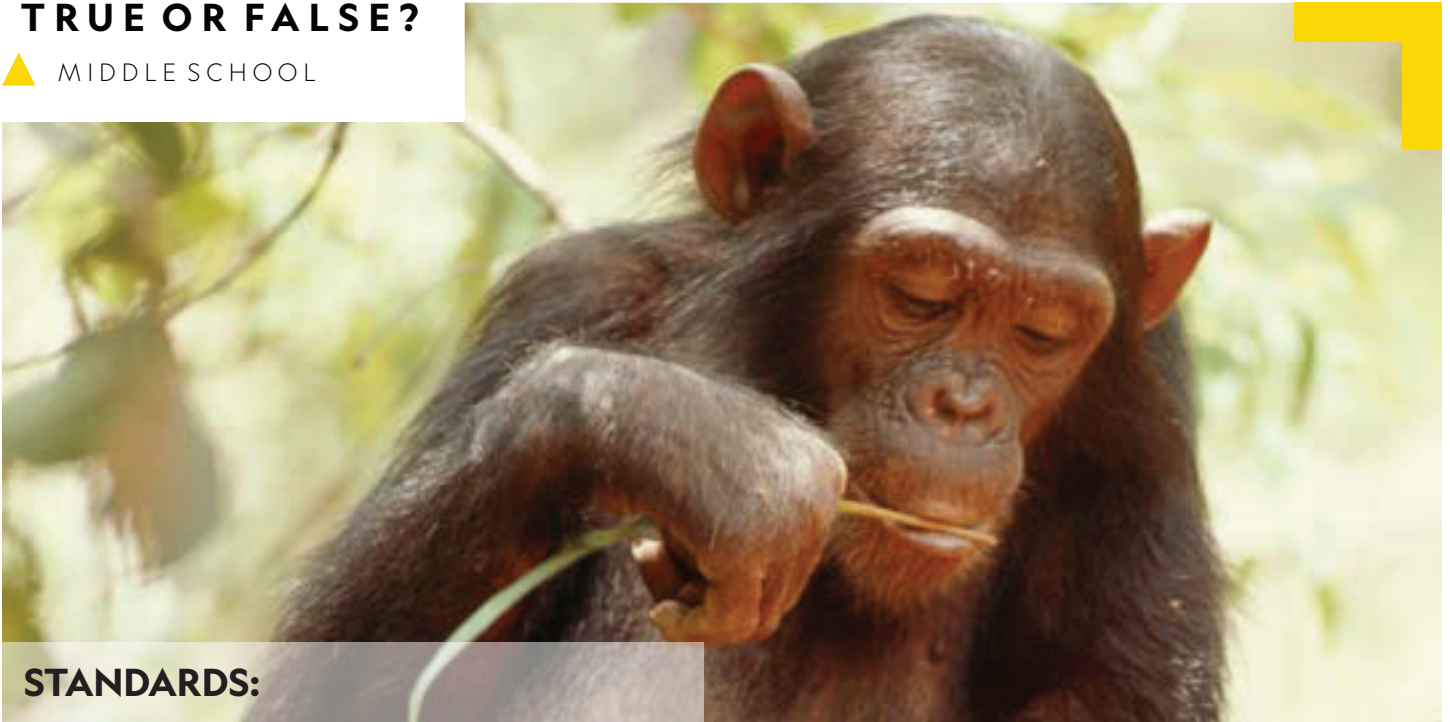


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ACTIVITY 5

TRUE OR FALSE?

 MIDDLE SCHOOL



STANDARDS:

ENGLISH LANGUAGE ARTS

- ELA.8.C.4.1 – Conduct research to answer a question, drawing on multiple reliable and valid sources and generating additional questions for further research.
- ELA.8.R.3.2 – Paraphrase content from grade-level texts.
- ELA.8.C.2.1 – Present information orally, in a logical sequence, supporting the central idea with credible evidence.

Teacher Notes:

This activity addresses skills in STEM and literacy and is paced for one or two periods. A key skill practiced in this activity is the ability to determine what is factual and what is not.

There are a variety of instructional strategies you can use with this activity, such as the following:

- Host a game show such as Jeopardy.
- Assign small groups to answer statements; then have students post their answers.
- Hold a guided discussion or seminar using the discussion questions and facts.

The *Becoming Jane* museum exhibit tells the story of Dr. Jane Goodall's life and work in Africa with chimpanzees and conservation. This activity helps you learn about her work and the animals she has spent most of her life studying.

■ T O D O : Imagine you are on a quiz show, and you must say which of these statements are true and which are false. Hit the button and give your answer!

1. Chimpanzees are more like gorillas than humans.
2. Chimpanzees are called "knuckle walkers."
3. Chimpanzees can live in forests for up to 100 years.
4. Chimpanzees live in deserts.
5. Chimpanzees never laugh.
6. Chimpanzees like a lot of different foods, unlike other apes.
7. Chimpanzees kiss, hug, and tickle each other.
8. Chimpanzees spend a lot of time picking insects out of their fur.
9. Chimpanzees live in the wild all over the world.
10. Chimpanzees can get a cold from humans.
11. Chimpanzees use tools to crack open nuts to eat.
12. Chimpanzees make good pets.
13. Chimpanzees are not endangered.

■ DISCUSS:

- What three facts are most interesting to you? Why?
 - Why do you think Dr. Goodall was so interested in chimpanzees that she spent many years studying them?
 - Are there any pets or animals you interact with each day who also share some of the same traits as chimpanzees?
- Fun fact: Jane first learned about and fell in love with the unique personality of animals with a neighbor dog named Rusty.

Answers:

1. *Chimpanzees are more like gorillas than humans. (F)
2. *Chimpanzees are called “knuckle walkers.” (T)
3. *Chimpanzees can live in the forests for up to 100 years. (F)
4. *Chimpanzees live in deserts. (F)
5. *Chimpanzees never laugh. (F)
6. *Chimpanzees like a lot of different foods, unlike other apes. (T)
7. *Chimpanzees kiss, hug, and tickle each other. (T)
8. *Chimpanzees spend a lot of time picking insects out of their fur. (T)
9. *Chimpanzees live in the wild all over the world. (F)
10. *Chimpanzees can get a cold from humans. (T)
11. *Chimpanzees use tools to crack open nuts to eat. (T)
12. *Chimpanzees make good pets. (F)
13. *Chimpanzees are not endangered. (F)

Extensions:

- Students respond to one of the questions in writing or in an oral report.
- Students invite an expert to talk to them about chimpanzees.
- Students host a quiz show on these and other facts about Dr. Goodall’s work.

Resources:

- [Jane Goodall Institute](#)
- [National Geographic Education Resource Library](#)



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ACTIVITY 6

A STORY TO TELL

 MIDDLE SCHOOL



STANDARDS:

ENGLISH LANGUAGE ARTS

- ELA.4.R.2.2; ELA.5.R.2.2 – Explain how relevant details support the central idea, implied or explicit.

Teacher Notes:

This activity addresses skills in STEM and literacy and is paced for two periods. The key skill practiced in this activity is the ability to transform information into terms an audience can learn from.

Instructional Tips: What to Teach

- How to establish a line of thought or theme (e.g., that Dr. Goodall followed her dream to study chimpanzees, and in doing so, she gave the scientific community and the public new information about them)
- That writers use narrative techniques when writing informational texts, such as in science writing
- The difference between the voice of a story and a report
- The use of techniques to establish the structure of a story with a sequence of events (e.g., headings such as *The Early Years*)
- The use of phrases and transition words to connect and emphasize ideas within the story (e.g., What a revelation!)

The *Becoming Jane* museum exhibit tells the story of Dr. Jane Goodall's life and work in Africa with chimpanzees and conservation.

■ T O D O: The National Geographic Society needs you to help tell Jane Goodall's story. Using these facts, write an engaging story that tells how her interests and work have contributed to science and conservation. If you need more information, such as dates or time periods, do your research at the [Jane Goodall Institute](#) and the [National Geographic Society](#).

1. Jane was fascinated with the continent of Africa as a child. She read about the continent in story books.
2. She liked to observe animals, especially those in her family's hen house.
3. Through a friend, she got a job with a famous anthropologist working in Africa, Louis Leakey. Jane saved and worked to afford passage to join Leakey in Tanzania.
4. She arrived at what is now known as Gombe Stream Research Center, in Tanzania, Africa.
5. Jane was inexperienced and lacked formal training.
6. At first, Jane couldn't locate the chimps. When Jane did find the chimpanzees, they fled every time she tried to get close enough to observe them.
7. It took patience to be accepted by chimpanzees.
8. In time, she got closer to the chimps and was finally accepted.
9. Her observations and research countered much of the past research on the life and habitats of chimpanzees.
10. She learned that chimpanzees use tools, communicate, and interact with each other.
11. During her time in Africa, Jane grew in awe of nature, the chimps, and the people who helped her.
12. As her work became known internationally, she became famous.
13. Jane realized that she could only do so much alone, but together, including the help of young people and their good ideas, we can make a big difference. In 1991, she founded Roots & Shoots, a program that invites young people from kindergarten through university to take action in their communities, supporting and celebrating them as they organize and implement projects that help people design solutions to the problems they see around them.
14. Dr. Jane Goodall passed away in 2025, at the age of 91. Her legacy lives on through the work of the Jane Goodall Institute.

Extensions:

- Students invite an expert to talk to them about chimpanzees.
- Students write their own story. Prompt: *What inspires you to want to make a difference like Dr. Jane Goodall?*
- Students publish their stories in a class journal.

Resources:

- [Jane Goodall Institute](#)
- [National Geographic Education Resource Library](#)



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VOCABULARY

chimpanzee (noun)

- large, intelligent ape native to Africa.

behavior (noun)

- anything an organism does involving action or response to stimulation.

chimpanzee (noun)

- large, intelligent ape native to Africa.

communication (noun)

- sharing of information and ideas.

conservation (noun)

- management of a natural resource to prevent exploitation, destruction, or neglect.

data (plural noun)

- (singular: datum) information collected during a scientific study.

empathy (noun)

- ability to identify and respect the emotions and attitudes of others.

endangered species (noun)

- organisms threatened with extinction.

environment (noun)

- conditions that surround and influence an organism or community.

estimate (noun)

- a guess based on knowledge of the situation or object.

extinction (noun)

- process of complete disappearance of a species from Earth.

habitat (noun)

- environment where an organism lives throughout the year or for shorter periods of time.

mission (noun)

- important goal or purpose.

observation (noun)

- something that is learned from watching and measuring an object or pattern.

population (noun)

- total number of people or organisms in a particular area.

research (noun)

- scientific observations and investigation into a subject, usually following the scientific method: observation, hypothesis, prediction, experimentation, analysis, and conclusion.

sanctuary (noun)

- protected area where wildlife can live and breed without threat from hunting.

species (noun)

- group of similar organisms that can reproduce with each other.



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