

Upper Elementary Curriculum Guide

Florida State Standards Aligned



BECOMING JANE

With gratitude to:

THE EVOLUTION OF DR. JANE GOODALL

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ABOUT THIS TOOLKIT

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

This toolkit for educators provides resources to support students' visit to the National Geographic Society's [Becoming Jane](https://natgeoed.org/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.

This toolkit includes five activities for upper elementary 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:

▼ UPPER ELEMENTARY

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

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

- MA.5.DP.1.1; MA.4.DP.1 – Collect, represent and interpret data and find the mean, mode, median or range of a data set.
- MA.4.DP.1.1 – Collect and represent numerical data, including fractional values, using tables, stem-and-leaf plots or line plots.

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

- ELA.4.C.1.4 – Write expository texts about a topic, using multiple sources, elaboration, and an organizational structure with transitions.
- ELA.5.C.1.4 – Write expository texts about a topic using multiple sources and including an organizational structure, relevant elaboration, and varied transitions.

SCIENCE

- SC.4.L.17.4 – Recognize ways plants and animals, including humans, can impact the environment.
- SC.5.L.15.1– Describe how, when the environment changes, differences between individuals allow some plants and animals to survive and reproduce while others die or move to new locations.

Teacher Notes:

This activity provides practice in STEM (math) and literacy (speaking and listening) standards and is paced for one period. A key skill practiced in this activity is the ability to transform data into visual information.

- Review how publications present graphs. One example is USA Today which publishes graphs on different topics and uses creative designs.
- Regarding the skills a researcher needs, Dr. Goodall revolutionized animal research with her compassion and empathy. She was the first to see chimpanzees as having feelings and personalities.

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 the team at the Jane Goodall Institute have tracked the [populations of chimpanzees](#) and other African apes in the wild.

Researchers estimate that the chimpanzee population has declined from 1 million in 1900 to less than 300,000 today. Your graph should help people understand why the [chimpanzee](#) is on the [World Wildlife Fund's Endangered Species List](#).

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

TODO: As a member of the [Jane Goodall Institute](#) Public Communications Team, you have been asked to use this data to design a graph of the decline in the size of the chimpanzee population over the years. Use your creative talents so that people can see and understand the change in population that has resulted in the chimpanzee becoming one of the many animals on the Endangered Species List. Add a short caption about the graph.

DISCUSS: What do you think is happening to put the chimpanzee on the [Endangered Species List](#)?

DISCUSS: What skills and knowledge do you think a researcher on the Goodall team needs to have? What skills and knowledge do you think a science writer needs to have?

Extensions:

- Assign one of the questions as a written or oral report activity.
- Students take a [leadership self-assessment](#).
- Students invite a local expert to talk to them about chimpanzees as endangered species.

Resources:

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



SCAN FOR
RESOURCES

ACTIVITY 2

EXHIBIT PAMPHLET

UPPER ELEMENTARY



STANDARDS:

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

- ELA.4.C.1.4; ELA.5.C.1.4 – Write expository texts about a topic, using multiple sources, elaboration, and an organizational structure with transitions.

SCIENCE

- SC.4.L.17.4 – Recognize ways plants and animals, including humans, can impact the environment.
- SC.5.L.15.1 – Describe how environmental changes, differences between individuals allow some plants and animals to survive and reproduce while others die or move to new locations.

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 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.

This activity also offers the opportunity to discuss the role of research and writing 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 with chimpanzees and studying the list of words, use the words in your pamphlet.

- | | |
|----------------|-----------------|
| 1. chimpanzees | 6. endangered |
| 2. species | 7. extinction |
| 3. habitats | 8. behaviors |
| 4. sanctuary | 9. conservation |
| 5. compassion | 10. empathy |

■ DISCUSS: What do you think is most important for school kids to know about Dr. Goodall's work with chimpanzees?

■ 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](https://www.jane-goodall.org/)
- [National Geographic Education Resource Library](https://www.natgeo.org/education/)



SCAN FOR
RESOURCES

ACTIVITY 3

WRITE A RESUME

UPPER ELEMENTARY



STANDARDS:

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

- ELA.4.C.4.1; ELA.5.C.4.1 – Conduct research to answer a question, organizing information about the topic and using multiple valid sources.
- ELA.4.C.1.5 – Improve writing through planning, revising, and editing, with guidance and support from adults and feedback from peers.
- ELA.4.C.5.2 – Use digital writing tools individually or collaboratively to plan, draft, and revise writing.

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 workplace purpose, to identify relevant factors, and to write a workplace document.

Day 1: Review sample resume/s and discuss the features; research the Institute or visit the exhibit; list skills and knowledge relevant to position.

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

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 scientists and conservationists.

■ T O D O: Imagine you are applying for a job with Dr. Goodall's Institute. You may apply to be a researcher, a communications officer, educator, youth program leader, or an animal caretaker. Write a one-page resume to apply for the job you choose.

1. Be sure to read about the [Jane Goodall Institute](#) and the work you are interested in. Identify the skills you need to have.
2. List the skills and knowledge needed for the position you are applying for.
3. Review the [traits of a compassionate leader](#).
4. Use a resume template to write your resume.

■ DISCUSS:

- Why do you think Dr. Goodall was so interested in chimpanzees that she spent many years studying them?
- Why would you like to do the job you chose?

Extensions:

- Students participate in mock interviews for their jobs.
- Students write a cover letter.
- Students invite a science researcher specializing in animals or a 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](#)

*Literacy – Write informational texts; produce clear and coherent writing.

*Technology – Use technology to produce and publish products.



SCAN FOR
RESOURCES

ACTIVITY 4**FIND THE HIDDEN TREASURE**

▼ UPPER ELEMENTARY

**STANDARDS:****ENGLISH LANGUAGE ARTS**

- ELA.4.V.1.3; ELA.5.V.1.3 – Use context clues, figurative language, word relationships, reference materials, and/ or background knowledge to determine the meaning of multiple-meaning and unknown words and phrases, appropriate to grade level.

SCIENCE

- SC.4.L.17.4 – Recognize ways plants and animals, including humans, can impact the environment.
- SC.5.L.15.1 – Describe how, when the environment changes, differences between individuals allow some plants and animals to survive and reproduce while others die or move to new locations.

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 studies and protects chimpanzees and their habitats. Seek out the meanings of these words to better understand her work and the research work that continues today. 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 Centre 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 and nurture healthy _____ is to focus on actions that not only protect _____ animals but also benefit the local people whose lives depend on a healthy _____ .

■ D I S C U S S: What do you think people can do to protect chimpanzees and save them from extinction?

■ D I S C U S S: Are there any endangered species that live around you?

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.

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.
- Start a **Roots & Shoots** group at your school to help endangered species both locally and globally.
- 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](#)



ACTIVITY 5

TRUE OR FALSE?

UPPER ELEMENTARY



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.

SCIENCE

- SC.4.L.16.3 – Recognize that animal behaviors may be shaped by heredity and learning.
- SC.4.L.17.4 – Recognize ways plants and animals, including humans, can impact the environment.
- SC.5.L.15.1 – Describe how environmental changes can affect the survival, reproduction, or movement of organisms.
- SC.5.L.17.1 – Compare and contrast adaptations, behaviors, and physical characteristics that enable organisms to survive in different environments.

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.

TO DO: 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! When you are finished, visit the [Jane Goodall Institute's Chimp Facts](https://www.jane-goodall.org/education/chimp-facts) website to check your answers.

1. Chimpanzees are more like gorillas than humans.
2. Chimpanzees are called "knuckle walkers."
3. Chimpanzees can live in the 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.*

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](https://www.jane-goodall.org/)
- [National Geographic Education Resource Library](https://www.nationalgeographic.org/education/)



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)

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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