BEARCAT DAY 6

GRADE 6
ANDERSON COUNTY SCHOOLS

ANDERSON COUNTY MIDDLE SCHOOL

6TH GRADE BEARCAT DAY 6

LANGUAGE ARTS	DRAMA REVIEW PRACTICE PRACTICE SET 6 This assignment is located in your ELA class' Google Classroom. Please complete it Google Classroom if you are able. If you are not able to please write your answers on notebook paper to turn in at school.
MATH	ONE-STEP EQUATION REVIEW PRACTICE SET This assignment is located in your Math class' Google Classroom. Please complete it Google Classroom if you are able. If you are not able to please write your answers on notebook paper to turn in at school.
SCIENCE	EARTH, THE MOON, AND THE SUN (BEYOND THE BASICS) This assignment is located in your Science class' Google Classroom. Please complete it Google Classroom if you are able. If you are not able to please write your answers on notebook paper to turn in at school.
SOCIAL STUDIES	THE ROMAN REPUBLIC LESSON 2 (CONT) This assignment is located in your Social Studies class' Google Classroom. Please complete it Google Classroom if you are able. If you are not able to please write your answers on notebook paper to turn in at school.
PE/HEALTH	PHYSICAL ACTIVITY LOG Student and parent will sign the activity log once the activity is complete.
LITERACY	ANSWER THE QUESTIONS FROM THE ARTICLE "WHAT WE LOSE WHEN ANIMALS BECOME EXTINCT." This assignment is located in Ms. Hamrick's Google Classroom. Please complete in Google Classroom if you are able. If you are not able to please write your answers on notebook paper to turn in at school.

Use the Reading Guide to help you understand the drama.

How the Peacock Got His Tail

Reading Guide

What is the setting? How might it affect the plot and characters?

The Bird Carver uses antiquated language. Use context clues to figure out the meaning of the words.

Why do you think the Bird Carver uses antiquated language but the birds do not?

Cast of Characters

BIRD CARVER, the maker of all the birds
PARROT, one of the Bird Carver's creations
OWL, one of the Bird Carver's creations
EMPEROR PENGUIN, one of the Bird Carver's creations
PEACOCK, the Bird Carver's latest creation

(*Setting: A clearing in the woods, long before there are humans on Earth. Owl, Parrot, and Emperor Penguin are partially concealed, spying on Bird Carver, who is working in the open clearing on his latest creation, Peacock.*)

BIRD CARVER: (*hums as he works*) Thou art becoming a fine bird. Splendid, in fact. Just a few more touches, and thou shalt be complete.

PARROT: (*whispers*) The Carver creates yet another bird. (*peers into the clearing*) He thinks that . . . (*laughs*) He thinks that the bird is almost done? Why, look! Only its neck is colored properly, and that tail . . . Why, it's far too long.

OWL: I quite agree, Parrot. That bird will never fly with such a monstrosity weighing him down.

EMPEROR PENGUIN: (*flaps wings as if in flight*) Well, Parrot, as I can attest, not being able to fly isn't the end of the world. I must admit, however, that the rest of its body is rather dull. (*peers into clearing*) That brown is as dull as dirt.

PARROT: (*nodding*) Yes, Emperor Penguin. I agree wholeheartedly. Boring.

OWL: (*smoothes feathers on body*) Careful, Emperor Penguin and Parrot. Brown suits some of us very well.

BIRD CARVER: (*lifts head and speaks loudly*) Appearances can be deceiving. There's so much more to consider. (*lowers head and continues working*)

PARROT: Is another bird really necessary?

Reading Guide

Pay attention to what the birds say about one another. What do you learn about Owl, Emperor Penguin, and Parrot from their dialogue?

How does Bird Carver's punishment fit Owl?

OWL: My thoughts exactly, Parrot. When Carver made me, he created the wisest bird. Why make yet another?

EMPEROR PENGUIN: Come now, Owl. When Carver made me, he created elegance and class. (*turns around gracefully*) Why bother with anything less?

(*Bird Carver turns and watches the birds, clearly irritated. Birds don't notice.*)

OWL: (*laughs*) Elegance! Class! Who, you? Surely you jest. I can spin my head and see all around me, which makes me the wise bird that I am. (*turns head from side to side*) Perfection does not lie in elegance or class. Perfection lies in wisdom.

PARROT: (*raises voice*) Of course, Owl. You would say that. You're just jealous because you're not especially . . . outstanding in your appearance. I may not be smart or classy, (*primps and preens*) but my bright, colorful feathers make me the cream of the crop. Beauty is the epitome of perfection.

OWL: (*sternly*) Wisdom!

EMPEROR PENGUIN: Elegance! Class!

(*Bird Carver stands and stares at Owl, Emperor Penguin, and Parrot. The birds don't notice.*)

PARROT: Beauty!

OWL: Hmmph. If you were smarter, you'd understand, Parrot. I'd be happy to explain in simpler terms.

EMPEROR PENGUIN: (*nose in air*) Showy, that's what you are, Parrot. All that color makes you dizzy. You're a rainbow, beautiful to behold but nothing at the end of the line. You're not classic, like my stylish black and white. (*spins*)

BIRD CARVER: So! (*booms loudly, startling the three birds*) So thou each thinkest thou art the best. Thou thinkest thou art better than my newest bird, Peacock, too?

(*Birds exchange nervous glances.*)

OWL: No, no, Sire . . .

EMPEROR PENGUIN: Of course not, Sire. No, of course not.

PARROT: Uh-uhn. No way, your . . . Sire-ness.

BIRD CARVER: I shall punish thine vanity. (*points to Owl*) Owl, thou art the wise one? Dost thou not know that a truly wise bird

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Reading Guide

Why does Bird Carver single out each bird in turn? What repeated message is he sending?

Notice the pattern in Bird Carver's address to the birds. He tells each one why he is upset and then explains the punishment.

How does each bird's punishment help to explain how owls, emperor penguins, and parrots acquired some of their features and determined where they would live?

judges not a work in progress? Here is thy punishment. Thou shalt remain awake at night, while other creatures sleep. Look around thee then. Thine eyes shan't have much to see and enjoy, and each sound thou wilt greet with, "Who?"

OWL: (*sighs miserably*) Yes, sire.

BIRD CARVER: Thou, (*points to Emperor Penguin*) thine appearance is elegant indeed. But elegance is class only when manners and attitude complement the dressing. One must look deep within to find true class. To punish thee, I send thee where few will see thee—inside or out! I banish thee to Antarctica.

EMPEROR PENGUIN: (*hugs himself and shivers*) Yes, sire.

BIRD CARVER: And lastly, thou, Parrot. (*points to Parrot*) Thou art bright and beautiful, but thy beauty is only skin deep. True beauty shines from within and echoes with every word thou speakest. Verily, thy feathers art a beauty to behold, but thine words and heart lack beauty. Thy punishment? One day creatures will put thee in a cage to behold thy beauty. They will ask thee over and over, "Polly want a cracker?" To which, thou wilt parrot a response.

PARROT: (*shudders*) Yes, Sire.

BIRD CARVER: Now, behold, my newest creation! (*gestures to Peacock*) I call him Peacock. His tail may be long and cumbersome, and he may not be attractive at first glance, but watch! (*Peacock slowly opens tail.*) One day he will grace the most elegant of palaces and gardens. He will be admired by all as one of the most beautiful and remarkable animals to walk on Earth!

(Light fades. Curtain falls.)

Answer the following questions.

1. Read each sentence on the left. Then, match the underlined phrase with a type of figurative language on the right.

A. That brown is as dull as dirt.	1. metaphor
B. . . . but my bright, colorful feathers make me the cream of the crop.	2. pun
C. You're a rainbow, beautiful to behold but nothing at the end of the line.	3. simile
	4. idiom

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2. This question has three parts. First, answer Part A. Next, answer Part B. Then, answer Part C.

Part A

Underline the antiquated language in this excerpt from the play.

BIRD CARVER: . . . Here is thy punishment. Thou shalt remain awake at night, while other creatures sleep. Look around thee then. Thine eyes shan't have much to see and enjoy, and each sound thou wilt greet with, "Who?"

Part B

Which words mean "you"? Circle **all** that apply.

A. thy
B. thee
C. thou
D. thine

Part C

Rewrite the excerpt using modern English.

3. This question has two parts. First, answer Part A. Then, answer Part B.

Part A

Which sentence **best** states one theme of *How the Peacock Got His Tail*?

A. No bird is better than another.
B. Beauty is the epitome of perfection.
C. Elegance isn't the same as class.
D. Don't judge on appearance alone.

Part B

Look back at the play and underline two sentences to support your answer to Part A.

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4 Read the following excerpt from the play and answer the question.

BIRD CARVER: (*lifts head and speaks loudly*) Appearances can be deceiving. There's so much more to consider. (*lowers head and continues working*)

What do these lines reveal about Bird Carver? How do they advance the plot of the play and hint at the theme?

5 Consider how the plot develops over the course of the play. Complete the chart to identify the major events of the play.

Exposition	
Rising Action	
Climax	
Falling Action	
Resolution	

6th grade Bearcat Day6 Math p1

One-Step Equations with Integers

* Required

1. Email address *

2. First Name *

3. Last Name *

Reference the following video for instructions and help to solve one-step equations.

http://youtube.com/watch?v=bS6KGpAwSEU

Question 1

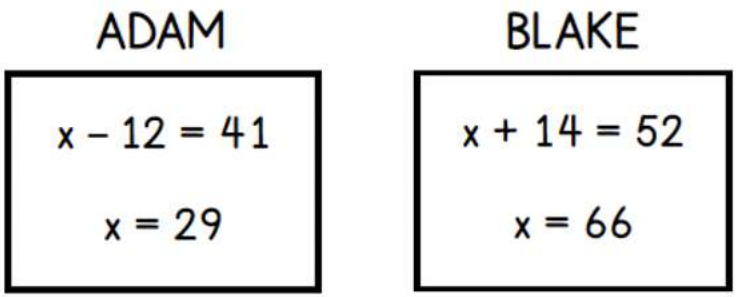
Math Bearcat Day 6. grade 6 p2

4. 1. Find the value of n needed to make the equation shown true. 1 point

$$n + 19 = 40$$

Question 2

5. 2. Adam and Blake solved the equations shown. Who solved their equation correctly? 1 point



Mark only one oval.

- A. Adam only
- B. Blake only
- C. Both Adam and Blake
- D. Neither Adam and Blake

Question 3

Bearcat Day 6 Grade 6 Math p3

6. 3. Which equation has a solution of x = 2? 1 point

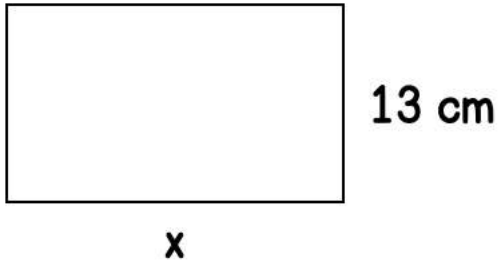
Mark only one oval.

- A. $\frac{x}{8} = 16$
- B. $-2x = 4$
- C. $17x = 34$
- D. $x - 14 = 16$

Question 4

Bearcat Day6 Grade6Math p 4

7. 4. The area of the rectangle below is 221 square cm. Find x, the length of the rectangle. 1 point



Question 5

8. 5. According to CBS, in 2010 the average cost of a Super Bowl ticket was $3,509. This is $441 less than the cost of a 2015 ticket. How much was a ticket in 2015? 1 point

Mark only one oval.

- A. $3,950
- B. $3,068
- C. $2,618
- D. $2,968

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LESSON 3: BEYOND THE BASICS

KEY CONCEPTS

- revolution ✓
- axis ✓
- rotation ✓
- seasons ✓
- eclipse ✓
- tide
- phase

THINK LIKE A SCIENTIST

Suddenly you receive an e-mail from Hawaii. "You will never believe this. It's daytime, and the sun has gone dark! Can you see what has happened from up in the space station?"

You can see that the moon has passed between the sun and Earth. You can also see that the moon is casting a shadow on part of Earth. Hawaii is in the moon's shadow.

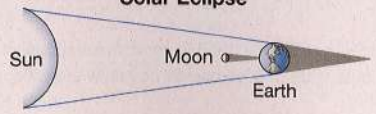
"I can see the round, dark shadow of the moon as it passes across your island!" you explain. "It won't last much longer. Is anything else unusual happening now?"

"The tide is very high and the surfing is good! Do you think it has something to do with what's going on with the sun and the moon?"

Eclipses, Tides, and Phases

What you just observed from space was an eclipse. An **eclipse** is the casting of a shadow by one object in space on another. An eclipse happens when Earth and the moon line up so that one of them blocks sunlight from reaching the other. One kind of eclipse, called a *solar eclipse*, is shown below.

Solar Eclipse

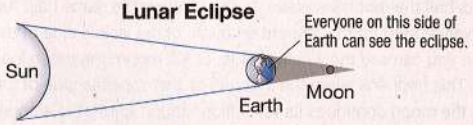


Grade 6 Bearcat Day 6 SCIENCE

During a solar eclipse, the moon moves between the sun and Earth. The moon blocks the sunlight and casts a shadow on parts of Earth's surface. Solar eclipses do not last very long. That's because the moon's shadow is not very large compared with Earth's surface.

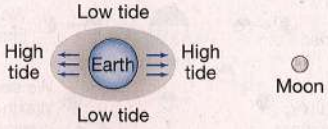
A *lunar eclipse* occurs when the moon is on the far side of Earth from the sun and passes through Earth's shadow. Lunar eclipses last longer. Because Earth is much bigger than the moon, it takes longer for the moon to travel through Earth's shadow.

Lunar Eclipse



As Earth's gravity pulls on the moon, the moon's gravity also pulls on Earth. Earth's rock layers don't move in under the pull of the moon's gravity. However, the water that covers most of Earth's surface does move.

Water levels rise, or bulge, on the side of Earth that is closest to the moon. Water also bulges on the opposite side of Earth, where the water is protected from the pull of the moon by the mass of Earth. In other areas of Earth, water levels fall. This rise or fall in water level caused by the pull of the moon's gravity is called a **tide**.



KEY CONCEPTS

- revolution ✓
- axis ✓
- rotation ✓
- seasons ✓
- eclipse ✓
- tide ✓
- phase

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KEY CONCEPTS

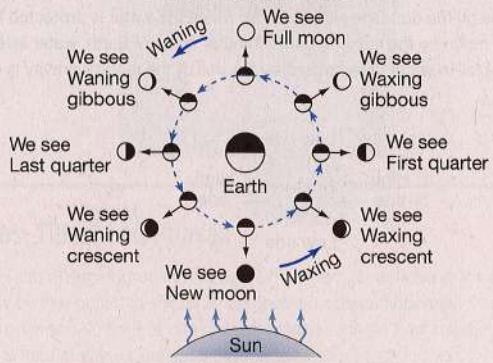
- revolution ✓
- axis ✓
- rotation ✓
- seasons ✓
- eclipse ✓
- tide ✓
- phase ✓

High and low tides in an area change in a cycle. It takes about six hours from high to low tide. The tides change because, as Earth rotates, the side of Earth that the moon is on changes.

From the space station, you can't see the tides change. But you might see how the moon appears to change shape each night. You have probably noticed these changes in shape from Earth. Each different shape of the lit half of the moon as seen from Earth is called a **phase**.

The moon does not give off its own light but reflects the sun's light. The sun always lights half the moon's surface, but not always the same half. As the moon revolves around Earth, different amounts of the visible side of the moon are lit. When you can see the whole lit side, or *full moon*, the moon looks like a full circle. This happens when the moon is on the opposite side of Earth from the sun. As the moon continues its revolution around Earth, the amount of its lit side we see gets smaller, or *wanes*. It wanes until it seems dark; a dark moon is a *new moon*. Then the amount of the lit side we see gets larger, or *waxes*, until we see a full moon again. The diagram below shows the names of all the moon's phases.

Phases of the Moon



You now have a better understanding of some of the things you can see from the space station. As the first student in space or a person back on Earth, you can enjoy the show that the sun and moon put on for you.

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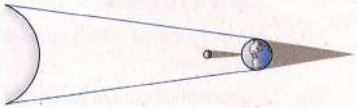
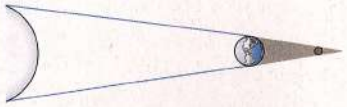
EXPLORE

Look at each diagram in the left-hand column. In the right-hand column, circle the term that best describes what's happening in the diagram.

INQUIRY SKILLS

- interpreting diagrams ✓
- classifying ✓

	high tide low tide both high tide and low tide
	crescent moon quarter moon new moon
	solar eclipse lunar eclipse no eclipse
	solar eclipse lunar eclipse no eclipse

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PUTTING IT ALL TOGETHER

You are now ready to show you understand the key concepts covered in this topic. Read each question. Circle the letter of the best answer.

1. What causes day and night?
   - **A.** Earth's revolution
   - **B.** Earth's rotation
   - **C.** the moon's revolution
   - **D.** Earth's tilted axis

2. What term describes Earth's turning on its axis?
   - **A.** tide
   - **B.** eclipse
   - **C.** revolution
   - **D.** rotation

3. When the north end of Earth's axis points toward the sun, what season is it in the northern half of Earth?
   - **A.** summer
   - **B.** fall
   - **C.** spring
   - **D.** winter

4. Earth's axis is an imaginary line that runs
   - **A.** around the equator.
   - **B.** between time zones.
   - **C.** from the North Pole to the South Pole.
   - **D.** from Earth to the moon.

5. Which of the following is true of the sun?
   - **A.** Because it is a ball of gases, its gravity is very weak.
   - **B.** It is more than a million times the size of Earth.
   - **C.** It gives off no light of its own.
   - **D.** Its surface is covered with craters.

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6. Which of the following happens because the moon's gravity pulls on Earth?
   - A. tides
   - B. seasons
   - C. phases
   - D. night

7. What kind of eclipse occurs when the moon passes between the sun and Earth?
   - A. full
   - B. lunar
   - C. spring
   - D. solar

8. Which of the following statements is true about the planets in our solar system?
   - A. They all move around the sun.
   - B. Earth is the only one that turns on an axis.
   - C. The length of each planet's year is the same as that of Earth.
   - D. The length of each planet's day is the same as that of Earth.

9. The tilt of Earth and its movement around the sun are the causes of
   - A. eclipses.
   - B. the moon's gravity.
   - C. tides.
   - D. the seasons.

10. What causes the phases of the moon?
    - A. Earth's revolution
    - B. Earth's rotation
    - C. the moon's revolution
    - D. the moon's tilted axis

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Name Period 6th Date

READING STUDY GUIDE CONTINUED

Republican Government

(pages 438–439)

How was the republican government organized?

The leaders of the Roman Republic set up a government with three branches. The legislative branch made the laws. Rome's legislative branch included the **Senate** and the assemblies. The Senate was made up of 300 members who advised Roman leaders. Most Senators were patricians. The assemblies were made up mostly of plebeians. They protected the rights of plebeians. The judicial branch ran the courts and governed the provinces. In Rome, the judicial branch was made up of eight judges.

The executive branch carried out the laws. Two **consuls** led Rome's executive branch. They directed the government for one year. Each consul was able to veto, or overrule, the other. In times of problems, the consuls chose a dictator to rule in their place. This was a leader with absolute power. The dictator was chosen to rule for a limited time. In 458 B.C., a man named **Cincinnatus** was made dictator to save Rome from an attack. He defeated the enemy and returned power to the consuls the same day.

The U.S. government is like the Roman government in many ways. The U.S. government has three branches of government. Each branch puts limits on the other so that no branch becomes too powerful. Like Rome, the United States has a written set of laws—the Constitution.

The Romans were proud to serve their nation, or perform their civic duty. Civic duty is also important in the United States today. People perform their civic duty by voting, paying taxes, and serving on a jury.

2. What was the role of the dictator in the Roman Republic?

The Republic Expands

(pages 440–441)

How did Rome expand?

After becoming a republic, Rome began expanding its territories. By 275 B.C., all of the Italian Peninsula was under Roman control. Rome offered citizenship to the people it conquered. It also allowed them to rule themselves. The conquered people had to pay taxes and send soldiers to the Roman army.

In 264 B.C., Rome began fighting the Punic Wars. These three wars were fought against the city of Carthage in North Africa. Rome won all three wars, although it almost lost the second. In 146 B.C., Rome captured and destroyed Carthage. The lands that Rome gained as a result of the wars extended Roman territory from Spain to Greece.

The Romans came back from the war with great wealth. They bought large farms and worked them using slaves. Many small farmers could not keep up with the large farmers, so they lost their land. Poverty increased, and the gap between rich and poor grew wider. This caused conflict between Rome's social classes.

3. What were the results of the Punic Wars?

BEARCAT DAY 6 6th GRADE Health/PE. Page 1 of 1

You can e-mail your fitness log to Mr. Ginter or keep track of your activity on notebook paper and drop it off with your Bearcat work.

Physical Activity Log

Warm up:

30 seconds of Jumping Jacks and 60 seconds of running in place.

Stretches:

Triceps both right and left arm for 15 seconds each
Deltoid (shoulder) 15 seconds each arm
Toe Touches 15 seconds
Hurdler stretch, 15 seconds for each leg
Butterfly stretch 15 seconds
Flamingo, 15 seconds for each leg
Calve muscle, 15 seconds each leg

Exercises:

2 minutes of jumping jacks
2 minutes of jumping rope
2 minutes of running in place
1 minute of squats
10 push ups
10 sit ups
1 minute break
Repeat the exercise routine 3 more times.

Additional Physical Activities:

20 minutes of work around the house (cleaning, shoveling snow, whatever needs to be done)

I, _____, have completed all of the above activities for Bearcat Day 1.

Student Signature _____ Date:_____

Parent Witness _____ Date:_____

Quiz

What We Lost

BEARCAT DAY 6 6th GRADE Literacy PAGE 1 of 5

1 Read the introduction of the article [paragraph 1].

How does the introduction develop the main idea?

(A) It provides background information about the data on species extinction and suggests the problem is much larger than it appears.

(B) It summarizes the various human activities that threaten to cause the extinction of one million animal and plant species.

(C) It contrasts the number of species on the "red list" with species on the "green list" to indicate a high level of progress toward conservation.

(D) It narrates the experiences of scientists and government agencies as they study species in danger of extinction in their own habitats.

2 How are the sections organized to help develop understanding?

(A) The sections indicate that mass extinctions have caused many species to disappear in the planet's history, then provide a chronology of all mass extinctions, and finally propose solutions for preventing another such event in the future.

(B) The sections summarize how human actions have become a threat to species compared with the past, then describe efforts to document disappearing species, and finally provide a list of human-related threats with specific examples.

(C) The sections contrast the information scientists have about biodiversity today with the lack of information about the age of dinosaurs, then elaborate on the problems that international groups have gathering accurate data on extinction.

(D) The sections explain that humans can still conserve animal and plant species by describing the causes and effects of the last mass extinction, then explore a list of theories for how to end the threats facing specific plant and animal species.

3 How does the author develop their own perspective in the article?

(A) by using passionate and emotional language to encourage others to protest against deforestation, and describing personal visits to affected areas

(B) by praising the work being done to save and photograph endangered species, and emphasizing the need for humans to focus more on preservation

(C) by arguing that the world has entered a new geologic epoch called the Anthropocene, and analyzing the arguments of others against this claim

(D) by developing a logical explanation for human effects on climate, and providing reassurance that most species will continue to thrive despite extinctions

4 Based on the article, what is MOST likely the reason the author includes the perspective of E.O. Wilson?

(A) to show that humans are the strongest and best-adapted species living at this time

(B) to suggest that rapid species extinction is now something we should accept as normal

(C) to explore the differing theories about extinction and evolution created by various scientists

(D) to emphasize the devastating effects that humans have had on the planet and its species

What we lose when animals become extinct

By Elizabeth Kolbert, National Geographic on 01.28.20
Word Count **1,611**
Level **MAX**

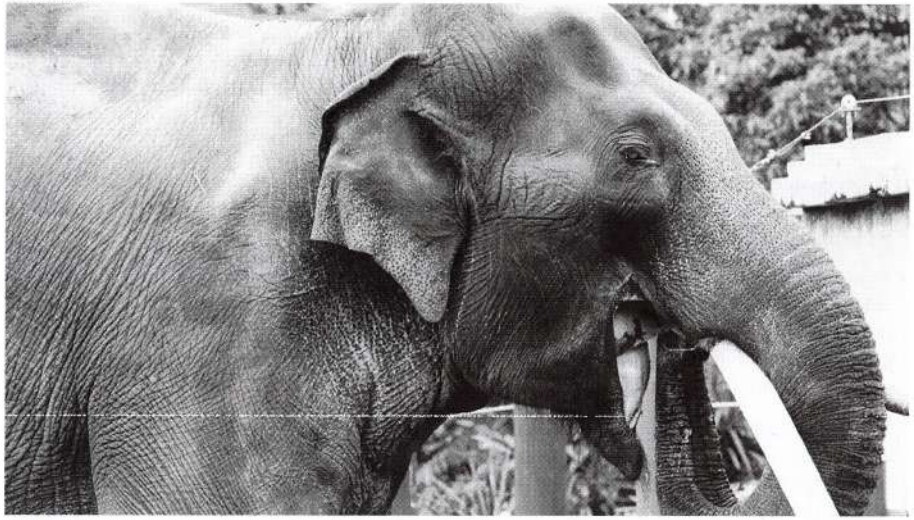

Image 1. An Asian elephant eating a watermelon at the Melbourne Zoo in Australia. Elephants are endangered because of habitat loss and poaching. Photo: Fir0002/Wikimedia

The International Union for Conservation of Nature says more than 28,000 species of animals and plants are threatened with extinction. That number actually understates the risk. Since 1964, when the IUCN established a "red list" of threatened species and began compiling data gathered worldwide, the list has become the preeminent global database of endangered life and an essential tool for conservation policy. Yet the IUCN has been able to assess only about 106,000 species of the more than 1.5 million species of animals and more than 300,000 plants that scientists have described and named — which they estimate is less than a quarter of what's really out there. An intergovernmental report on the biodiversity crisis estimated that extinction threatens up to a million animal and plant species, known and unknown. The IUCN hopes to raise the number of species assessments to 160,000 by 2020. Next up on its agenda: a "green list" of conservation successes. It will be much shorter than the red one.

The Biggest Threat: Humans

Habitat loss — driven primarily by human expansion as we develop land for housing, agriculture and commerce — is the biggest threat facing most animal species, followed by hunting and

fishing. Even when habitat is not lost entirely, it may be changed so much that animals cannot adapt. Fences fragment a grassland or logging cuts through a forest, breaking up migration corridors; pollution renders a river toxic; pesticides kill widely and indiscriminately. To those local threats one must increasingly add global ones: Trade, which spreads disease and invasive species from place to place, and climate change, which eventually will affect every species on Earth — starting with the animals that live on cool mountaintops or depend on polar ice. All of these threats lead, directly or indirectly, back to humans and our expanding footprint. Most species face multiple threats. Some can adapt to us; others will vanish.

If we lived in an ordinary time — time here being understood in the long, unhurried sense of a geologic epoch — it would be nearly impossible to watch a species vanish. Such an event would occur too infrequently for a person to witness. In the case of mammals, the best-studied group of animals, the fossil record indicates that the "background" rate of extinction, the one that prevailed before humans entered the picture, is so low that over the course of a millennium, a single species should disappear.

But of course we don't live in an ordinary time. Everywhere we look, species are winking out. Just in the past decade, two mammal species have gone extinct: a bat known as the Christmas Island pipistrelle and a rat, the Bramble Cay melomys.

The International Union for Conservation of Nature lists more than 200 mammal species and subspecies as critically endangered. In some cases, like the Sumatran rhino or the vaquita — a porpoise native to the Gulf of California — there are fewer than a hundred individuals left. In others, like the baiji (also known as the Yangtze River dolphin), the species, though not yet officially declared extinct, has probably died out.

And unfortunately, what goes for mammals goes for just about every other animal group: reptiles, amphibians, fish, even insects. Extinction rates today are hundreds — perhaps thousands — of times higher than the background rate. They're so high that scientists say we're on the brink of a mass extinction.

The last mass extinction, which did in the dinosaurs some 66 million years ago, followed an asteroid impact. Today the cause of extinction seems more diffuse. It's logging and poaching and introduced pathogens and climate change and overfishing and ocean acidification.

But trace all these back and you find yourself face-to-face with the same culprit. The great naturalist E.O. Wilson has noted that humans are the "first species in the history of life to become a geophysical force." Many scientists argue that we have entered a new geologic epoch — the Anthropocene, or age of man. This time around, in other words, the asteroid is us.

What's Lost?

One way to think of a species, be it of ape or of ant, is as an answer to a puzzle: how to live on planet Earth. A species' genome is a sort of manual; when the species perishes, that manual is lost. We are, in this sense, plundering a library — the library of life. Instead of the Anthropocene, Wilson has dubbed the era we are entering the Eremozoic — the age of loneliness.

Joel Sartore has been photographing animals for his Photo Ark project for 13 years. In an ever growing number of cases, animals housed in zoos or special breeding facilities are among the last remaining members of their species. In some instances, they are the only members.

Toughie, a Rabbs' fringe-limbed tree frog from central Panama, lived at the Atlanta Botanical Garden. He became the last known of his kind when a fungal disease swept through his native habitat and a captive-breeding program failed. Toughie died in 2016, and it's likely the Rabbs' fringe-limbed tree frog is now extinct.

Romeo, a Sehuencas water frog that lives at the natural history museum in Cochabamba, Bolivia, was likewise believed to be a sole survivor. Scientists created an online dating profile for him. It linked to a donation page, and the $25,000 raised helped fund expeditions in the eastern Andes, where the species was once abundant.

Amazingly, the search has revealed five more Sehuencas water frogs, two males and three females. All were taken to Cochabamba; the one female mature enough to breed with Romeo was named Juliet. Whether she will prove a worthy mate and perpetuate the species, no one knows.

Was the Rabbs' fringe-limbed tree frog beautiful? Not in the flashy way of, say, the Spix's macaw (which is believed to be extinct in the wild) or the Gee's golden langur (which is endangered). But with its expressive brown eyes and gangly limbs, it had its own kind of charm.

Sartore treats all creatures — great and small, handsome and homely — with reverence. His photos capture what's singular and, I'd also like to say, soulful about every living thing. One of my favorite images of Joel's is of a Partula nodosa, or niho tree snail, laying down a trail of slime. There used to be dozens of Partula species in the South Pacific, occupying different islands and different ecological niches. Much like Darwin's finches, they are the darlings of evolutionary biologists — living, slime-producing illustrations of the power of natural selection. The introduction of carnivorous snails from Florida drove nearly a third of the Partula species extinct; several survive solely thanks to captive-breeding programs.

Precisely because extinction takes place so frequently now, it's possible to become inured to it. This desensitizing is what makes Sartore's images so crucial: They show us just how remarkable each species is that's being lost.

We live in an extraordinary time. Perhaps by recognizing this, we can begin to imagine creating a different one — one that preserves, as much as is still possible, the wonderful diversity of life.

Threat: Disease

Since the 1980s, a fungal disease called chytridiomycosis, likely spread through direct contact and by infected water, has ravaged global amphibian populations. More than 500 species have been affected; 90 of these may be extinct. The fungus disrupts transmission of electrolytes through the skin of a frog or toad, ultimately stopping its heart.

Threat: Invasive Species

Like many island species, the nearly flightless kagu, native to the French Pacific territory of New Caledonia, was seriously affected by the arrival in the late 1700s of European settlers and their animals. Roughly chicken size, the kagu continues to fall prey to non-native pigs, cats and dogs. The birds nest on the ground, and rats eat their eggs. Recent population estimates suggest fewer than a thousand kagu survive. Scientists nevertheless have some hope for the future: Decades of successful captive breeding have resulted in the reintroduction of the birds to the wild, and predator control has allowed some populations to rebound.

Threat: Fragmentation

This subspecies of the dama gazelle was once widespread across the western Sahara. Now there are fewer than 300 damas combined in Mali, Chad and Niger. Their range is broken up by grazing lands for livestock, and they're at risk from hunting. Reintroduction of captive-bred animals has had mixed success.

Threat: Habitat loss

Butterflies can fly long distances and feed on many types of flowers, but caterpillars are locavores, eating plants they hatch on or near. As those plants are lost to development or farming, butterflies disappear. The ones here aren't listed by the IUCN — which has evaluated only 8,100 insect species — but are considered at risk by other authorities.

Threat: Poaching

Early in the 20th century, perhaps 100,000 elephants roamed across Asia. Since then, their population likely has been cut in half. They're killed not just for their ivory tusks but also for their meat and hides — and sometimes in retaliation for the damage they do to crops.

Threat: Deforestation

For tree-dwelling lemurs, there's no life without the forest — or Madagascar, their only home. Yet the island nation has lost 80 percent of its trees to development, charcoal production, and slash-and-burn agriculture. Lemurs are squeezed into limited protected areas; 38 species are critically endangered. Fuel-efficient stoves are being introduced to encourage people to reduce wood use and protect forest habitat.