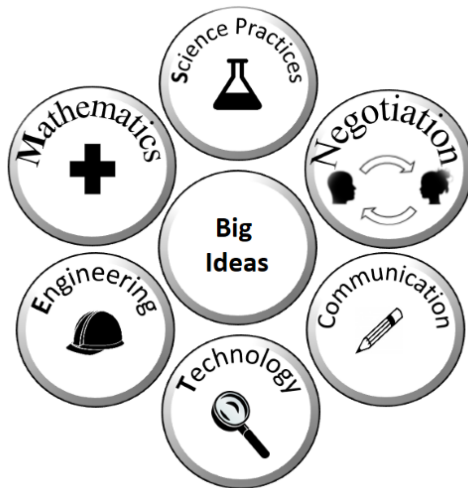


4th Grade

Life Science



The ASSIST Approach

Name: _____



Vision Video

Why do you think vision is important for animals to survive in the wild?



Hearing Video

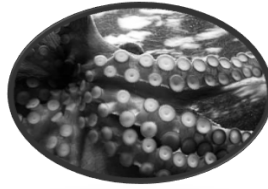
Why do you think it is beneficial for animals to have good hearing in the wild?



Smell Station

Why do you think animals with better capability to smell have a better chance to survive in the wild?



**Touch Video**

Why do you think animals that have excellent touch have a better chance to survive?

**Taste Video**

Can you think of any ways animals use their sense of taste to help them survive?





What is the "Big Idea" for the unit?

What Questions do you have?



Look at the picture above.

The lion is a predator and is looking at its prey, the zebra. This picture was taken during the daytime when the sun was out. In the space below explain how the lion can see the zebra. In your explanation use the words:

Lion

eyes

sunlight

zebra

My first claim is that the lion can see the zebra because.....



CLAIM

What happened in the thought experiment?

I think that....

What is your evidence? *(Explain Why, use your prior knowledge).*

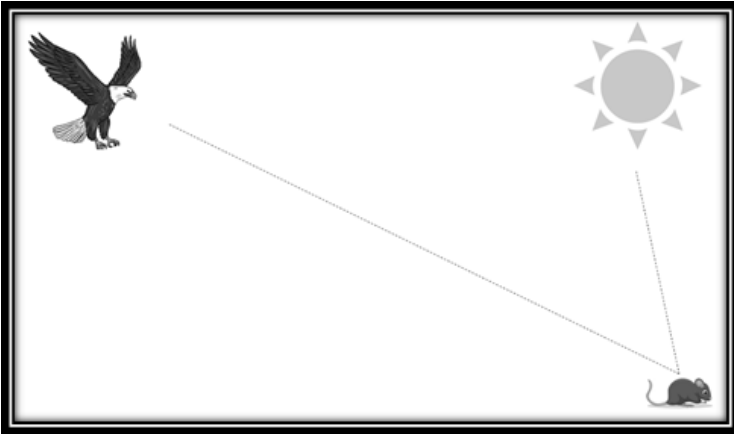
Draw Your Ideas Here



How Far Can an Eagle See?

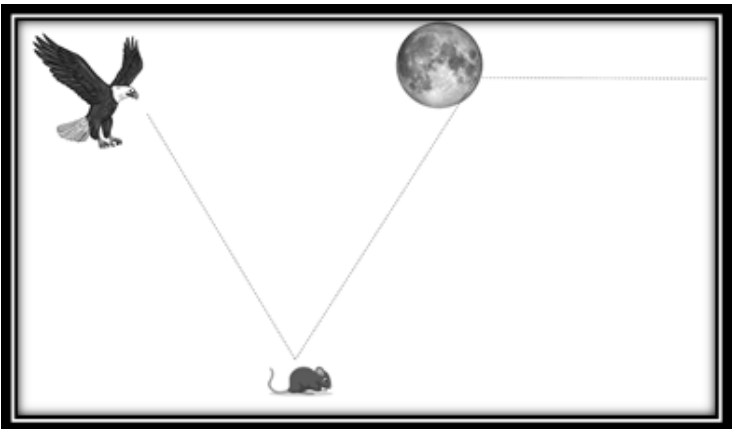
On a sunny day, the sunlight enters the eagle's eye after it reflects off its prey. An eagle can see its prey up to 3 miles away. One mile is 5,280 feet. On a sunny day how far away, in feet, can an eagle see its prey?

Work Space



Eagles usually do not hunt at night because the only light comes from sunlight that reflects off the moon and then off the prey. A scientist tracked two eagles who hunted at night and found that Eagle 1 could see 5,280.76 feet and Eagle 2 could see 5,280.69 feet. Which eagle can see farther?

Work Space



Academic Language for Negotiating

**Use this page during your discussions to help you share your ideas out loud.*

Agreeing and Disagreeing

I support the idea that _____ because of the evidence _____.

I agree with _____ because _____.

I disagree with _____ because _____.

Making an Observation

I noticed that _____.

Expressing an Idea

I support the idea _____.

It seems like _____.

Asking for Clarification

Could you explain _____ to me/us again?

What do you mean by?

I have a question about _____.

Offering a Suggestion

Maybe you could try _____.

Testing Ideas

If _____ were true, then _____.

How does _____ and _____ make sense?

Making Predictions

I predict that _____.



Understanding the Check With Experts

Question: How do animals use light to see?

What is your claim?: I think animals see when _____



Evidence from the text: Animals can see objects because light reflects off the objects and enters their eyes.



How does this evidence support or reject your claim?



Evidence from the text: if you look at the sun it will be painful and could cause serious damage to your eyesight.



How does this evidence support or reject your claim?



Fact #3 from the text: Lions usually don't hunt at night because the path of light is weaker because sunlight reflects off the sun travels to the object and then reflects again to enter the eye of the lion.



How does this evidence support or reject your claim?



If the idea connects with the experts put a check in the box

Evidence from the experts	The “Light to Eye” Idea	The “Light Reflects” Idea
Lions can see objects because light reflects off the objects and enters their eyes.		
We can see the moon because the sun, which is a bright star close to our planet, creates light and reflects it off the moon to the Earth so we can see it.		
Since there is less light, the path for the light to reflect off the object and enter the lion’s eyes is weaker.		

How does the information you learned help you better understand the Big Idea?





Letter From Principal Collins

Hello, my name is Gabe Collins, I am the principal of King Chavez Academy of Excellence. Our school mascot is a cheetah and to raise school spirit I am considering purchasing a live cheetah as our school pet. We will name him Aztec and we will have him to freely walk around campus and interact with students. Teachers will be allowed to invite Aztec into their classroom if they want their students to read to the big cat.

I know some people might be scared, but my family went to a magic show last year and the magician had a white tiger that was calm and it didn't attack the performers, so I figured a cheetah would be safe at our school. Plus, I read on the internet that famous people sometimes have cheetahs as pets.

I would like you to do some research for me and write an evidence-based report about whether or not this is a good idea. I look forward to reading your research!

After reading Mr. Collins letter write or draw what you think would happen if he bought a live cheetah and allowed it to walk around the school



Question: Can a wild animal be tamed?

CLAIM

I think that....

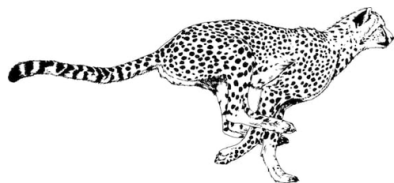
What is your evidence? *(Explain Why)*

Draw Your Ideas Here



Can you outrun a cheetah?

A really fast 4th grade student can run 12 Miles Per Hour (MPH). When a cheetah gets scared it runs about 6 times faster than that. How fast can a cheetah run?



Work Space

A cheetah can run really fast. At the San Diego Zoo scientist measured cheetahs running 330 feet in 3 seconds. When at top speed, how many feet per second can a cheetah run?



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Could you explain _____ to me/us again?

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Maybe you could try _____.

Testing Ideas

If _____ were true, then _____.

How does _____ and _____ make sense?

Making Predictions

I predict that _____.



Understanding the Check With Experts

Question: Can a wild animal be tamed?

Select 3 pieces of evidence from the check with the experts that support your claim.

List your evidence

- Remember your evidence can come from:

- The experts
- The cheetah report
- The incident report
- Your thought experiment
- The math investigation.



Evidence #1:



Evidence #2:



Evidence #3:

If the idea connects with the experts put a check in the box

Evidence from the experts	Wild Animals Can't be tamed	Wild Animals Can be Tamed
Animals use their senses to take in information to their brains and then they either react to that information or store the information as a memory.		
Wild cheetahs can be dangerous to people, especially young children because they might consider them a threat and attack.		
Sometimes cheetahs raised by humans are safe to be around, but these animals are natural killers so there is always a chance that when they get scared they could attack.		



How Do We Save the Bees?



*Hello, Dr. Bill Cartwright, I am an Entomologist
(that's a fancy name for a researcher who studies bees).*

I study Colony Collapse Disorder, which is a strange thing happening to bees where their colony suddenly dies. Currently, we have three working ideas of why this is happening.

One idea has very weak evidence, one idea has a simple solution, and one idea we haven't figured out how to solve.

This is why we need an **engineer** to think of solutions. Can you help us?

Electromagnetic
Interference



Pesticide
Poisoning



Parasite
Infection



How will you protect the bees?



- In your writing (or other mode of communication) please remember to explain your idea in detail.
 - It doesn't matter if your idea seems weird or unrealistic. Many ideas in science seemed strange at first, but that is okay. Science requires creativity.
- Explain in great detail your evidence of why you think this idea might work.
 - Remember, in science claims need evidence.
- Explain how your idea connects back to the Big Idea:
 - The Big Idea is: Living things use their minds and/or body parts to survive.
 - How does the bee or the flower use their external body structures to solve the problem in your idea?

