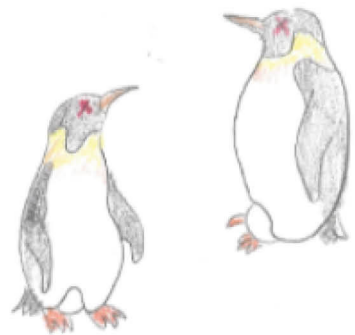
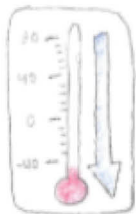


As the temperature gets colder and the weather gets harsher, Emperor Penguins must learn to adapt to their environment. Adapting will help them survive in future generations.

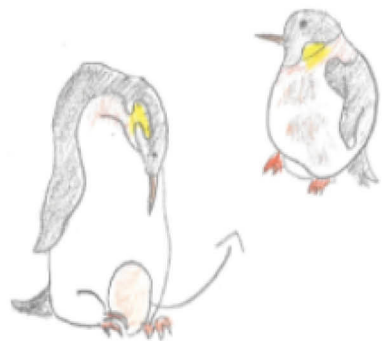
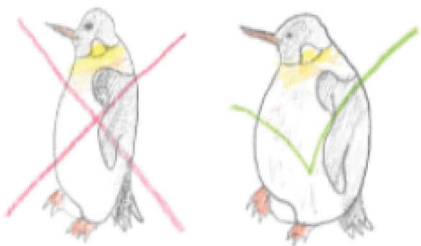


Emperor Penguins with a thin layer of fat and a small amount of feathers have died off. They could not survive the cold environment with their traits.



Since these penguins have died off, there are now more common traits in the remaining penguins: a fat layer and feathers. These traits can withstand the harsh conditions.

This shows that natural selection has come into play. The more favorable trait has been selected and the penguins without these traits do not survive.



As the Emperor Penguins reproduce, they will gain more feathers and thicker layers of fat.

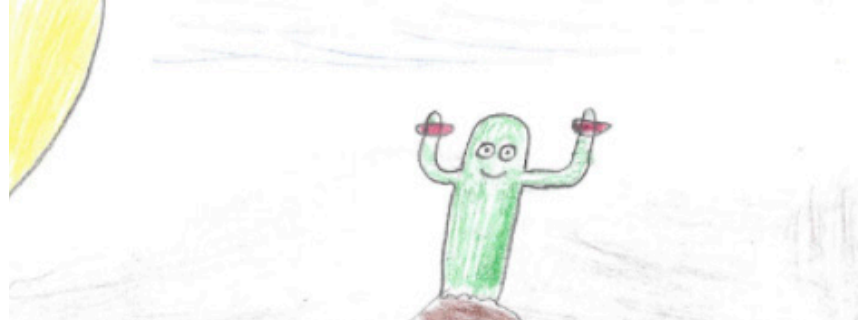
This increases the penguins' fitness because it is becoming easier for them to survive in the cold weather.



I chose an Emperor Penguin because they are a species that had to adapt to a cold and harsh environment over a long period of time. The variation that existed was a thin layer of fat versus a thick layer. The traits that helped the penguins adapt were thick layers of fat and feathers. The comic strip shows "survival of the fittest" because the favorable traits are chosen by natural selection. The weaker penguins who did not have those traits died off. The penguins eventually have feathers and a thick layer of fat in later generations. These variations have helped the penguins survive, so their fitness has increased.



In the desert, there are plants called cacti.



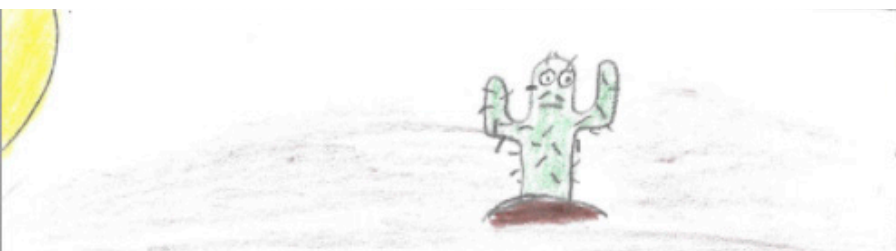
Here is Patrick the cactus. He has red flowers and green skin.



Patrick is mad because birds took his flowers.



He noticed his friend, Rick, has flowers still.

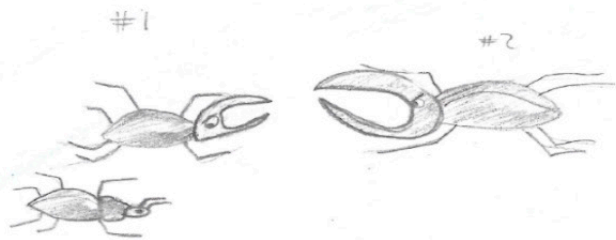


Rick's popularity over Patrick allowed Rick to have kids that had spines, too.

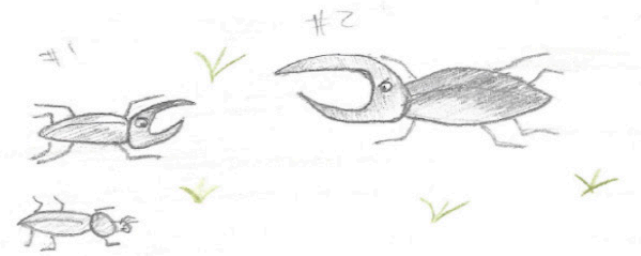


Rick's children now have flowers with no birds eating them.

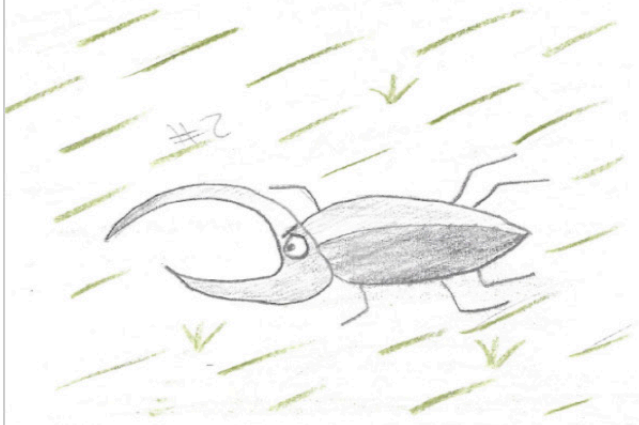
In natural selection, animals and plants adapt to changes in the environment. I chose cacti because their change was huge in protecting them. When birds flew by and took the flowers, cacti had nothing they could do about it. Over time, a variation between them were cacti with spines versus cacti without spines. The ones that had spines prevented the birds from eating their flowers. Now birds struggle or even give up because the cactus pricks can injure them if they are not careful. So the cacti that have spines are more likely to have more offspring with that trait, and the ones without spines die off over time.



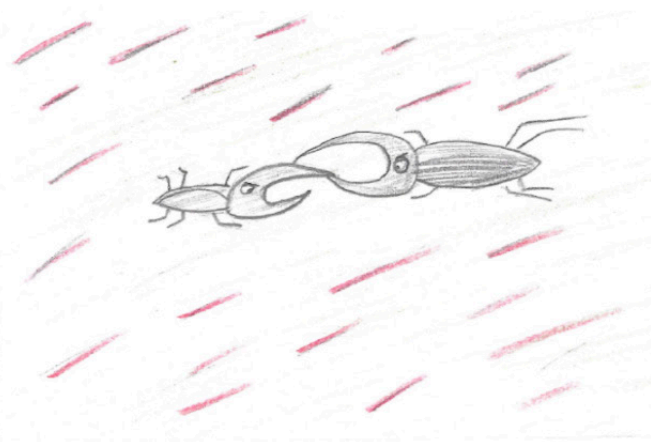
#1: Oh no, he's gonna steal my mate!  
#2: I'm coming for you!



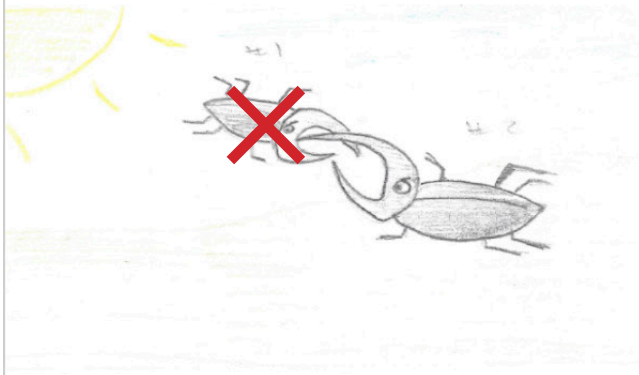
#1: You know what? I'm confident that I can beat you because of my agility.



#2: Okay then, we'll have to fight over her.



Both: AHHHHH!



#1: Oh nooo!  
#2: I told you, haha!



#2: Do you see how strong I am?  
#3: Ooh, you have muscles!

This comic strip shows survival of the fittest because in the world of the Rhinoceros beetle, you want to be bigger to beat a male. The variation is a small-horned versus a big-horned male. When two males fight over a female, they try to pin each other by using their horn to make the other stay in the air for as long as possible. This is why you ideally want to be big and have bigger horns for the length advantage. This allows the beetle with the bigger horn to mate and have babies with big horns as well, while the smaller beetle doesn't get to make babies.



In the world of butterflies, finding a mate is critical for producing offspring and increasing the population.



Butterflies go through natural selection to find and choose their mate. Male butterflies look for female butterflies.



Male butterflies look for their mates by using their sense of smell. Female butterflies that smell good will attract a male butterfly.



While other female butterflies that can't attract a male will have to find other ways to attract.

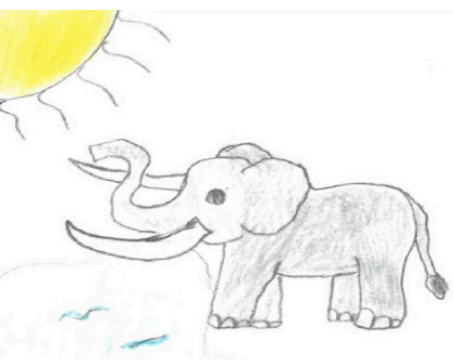


Female butterflies that are able to attract a male butterfly will exchange egg and sperm to produce offspring.

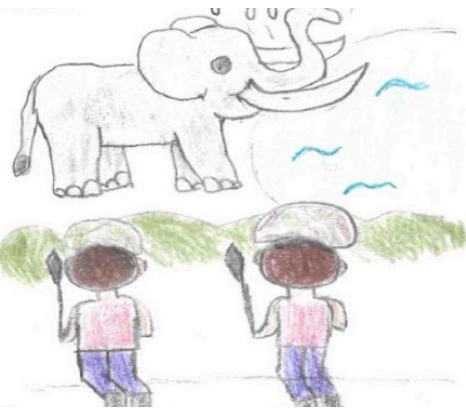


The offspring will produce even more offspring that will carry the same trait of smelling good to attract mates.

Butterflies find their mates from their sense of smell. Butterflies whose scent can attract another will be able to reproduce. This is called natural selection because those whose scent attracts are being favored over others whose scent doesn't. The butterflies who don't find a mate will have to wait until next season to find another way to reproduce, or they will die off.



Elephants started being attacked in their own environment.



Not long ago, almost all of the elephant population had tusks. These tusks attracted poachers.



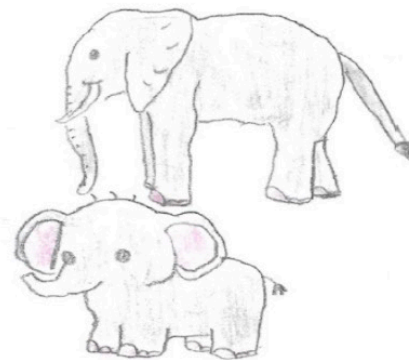
Poachers attacked elephants and killed them for their tusks.



The only way elephants can survive now is without their tusks. Even in many of our zoos today, they do not have tusks or they have been cut off. Scientists are working to reverse this change caused by humans.



Over time, poaching became more common. Poachers sold the tusks for a lot of money.



The number of elephants being born without tusks began to increase. Now, over half of the elephant population does not have tusks.

The  
end

The animal I chose is the elephant because they're different when it comes to their fitness. Instead of being more fit because of a trait they have, it's because of a trait they don't have: tusk versus no tusk. This shows survival of the fittest because those without tusks were left behind by poachers, while those with tusks were killed. By the 2000s, 98% of almost 200 female elephants in Mozambique, Africa, had no tusks. Now there are almost no elephants with tusks because they have evolved to live without them, which is the main reason they're still here today.