

MOJAVE DESERT CHILDREN'S
PICTURE BOOK

By

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Abstract

When faced with issues like climate change, which can seem too big to handle, we are often left wondering, what can we even do to help? Education is key for finding solutions. Picture books are a perfect means for educating the next generation because they incorporate lexical and visual components together in an entertaining way for kids. Knowing this, I decided to create a picture book, Discoveries in the Sand, that introduces the audience— children ages 4 through 8— to the animals of the Mojave Desert. The goal of this book is to increase children’s interest for this desert, and nature as a whole, so that when these children grow up, they will be inclined towards making decisions that promote the well-being of our environment.

In Discoveries in the Sand, readers meet the main character, Nyla, in a state of frustration after she finds out her family’s annual trip will be to the Mojave Desert instead of at the beach. To Nyla, the desert is a barren land filled with tumbleweeds and sand; it is not until her parents give her the task of searching for some of the many animals of this desert, that Nyla realizes how full of life this ecosystem really is. By the end of the trip, she has had a change of heart and can’t wait to come back again so she can see more of what the Mojave Desert has to offer.

Introduction

When many people think of a desert, they think of barren lands, without any plants or trees; just sand, tumbleweeds, and a lot of heat. What these people may not realize is that deserts can actually be places that are full of life. If you look at the right time, you can see animals scurrying across the desert floor, birds flying from perch to perch, and cacti acting as homes to many desert dwellers. Deserts are alive. Their inhabitants have just gotten really good at hiding. Helping children find beauty and life in the desert landscape is what this project is all about.

For the scope of this project, I will be focusing on the environment of the Mojave Desert, some issues that it has been facing, and a method that is being used to help save it. Like most ecosystems, the desert needs our help, but in order to make any positive change, we need to have community buy-in (Christiano & Neimand, 2018). If the general population does not value a cause, or see the reasoning behind it, then they will not be willing to sacrifice their comforts or desire to take action. How then, do we get people to care?

Using scare tactics or evoking emotions of guilt and sadness are how many activist groups try to get people to care for their cause. In some cases, this method works, but more often than not, introducing fear or guilt-tripping your audience only leads them to avoid whatever information you are putting out (Sweeny et al., 2010). Using sadness or guilt as a driver can lead the audience to feel bad about themselves, make them feel obligated to do something, or threaten their identity (Sweeny et al., 2010). Climate change is a topic that can become especially gloomy. People are often inundated with messages that imply “the earth is dying, and there’s nothing we can do.” The end goal of

these environmental advocacy organizations is genuine; they want to open people's eyes to the state of our environment, but their methods usually lead to "eco-anxiety," which is "anxiety or worry people feel about climate change and its effects" (Clayton, 2020, p. 3). This stress can cause people to feel overwhelmed by the circumstances, and if they feel as though there is nothing they can do to help the situation, it can lead them to do nothing at all (Clayton, 2020). Invoking a sense of pride or other happy emotions is more likely to increase the amount of care people give to your campaign (Christiano & Neimand, 2018). So yes, give people the facts, but give those facts in a digestible form. Give people solutions, and let them know how their actions can help change the situation.

In addition to positive emotions, people respond very well to campaigns that make use of visual images (Christiano & Neimand, 2018). Humans are visual creatures, not just because of our evolutionary history, but because of our morphology and how it has increased our fitness. Even though we have five different senses, one-third of our brain is dedicated to vision (Christiano & Neimand, 2018). It connects to parts of our brain that deal with emotions. When we look at images, we are able to build emotional connections, causing that object to have more meaning to us, making images a powerful tool for leading people to care about an issue (Christiano & Neimand, 2018).

Children are always learning new things; everyday of their life is spent learning something that they didn't know before. From the time they are babies, they are introduced to a world of seemingly endless possibilities. While all human brains are constantly growing, children have the *largest* capacity for growth (Cantor et al., 2018). In early childhood and adolescence, plasticity and malleability are at their peak. These concepts are what allow our neurons and brains to adapt to experiences, ideas, and new

information that we come in contact with. Everyday, children are being shaped by the information they take in, which also alters how they will process that information (Cantor et al., 2018). When you nurture this affinity for growth early on, you can help children build morals, values, and increase their self-regulation (Cantor et al., 2018). These skills are important because when children grow up, you will not have to explicitly tell them what to do; they will make better decisions without being told to (Cantor et al., 2018).

Children are able to learn in many ways, including through experience, interaction, and through reading. A tool that many people forget about as they grow up is the humble picture book. Picture books can teach kids how to read; increase visual literacy, understanding, communication, interaction, vocabulary; and help develop oral and written skills (Paul, 2021; Ganee et al., 2008). In addition to this, picture books can also teach core standards and values, which can lead children to make good decisions without being instructed to do so (Lain, 2017). This idea is based off of Kohlberg's theory of moral development, which says that humans are born selfish, but as we grow, we develop into good people; not just because we are obeying the rules, but because we desire to make decisions that benefit the welfare of others; even if it causes us to make sacrifices (Lain, 2017). If we raise children with morals and values, we will not have to spend as much effort *convincing* them to support a noble cause; they will do it because they know it will be beneficial to everyone in the long run.

Picture books have been written about many topics, including science, technology, engineering, and math (STEM). Kathleena Condon et al. (2020) created a series of picture books for younger children featuring female role models in STEM. After sending their books out to some children and their parents/caregivers, they surveyed what

people thought of them. 98% of the adults surveyed agreed that it was important for children to understand STEM. A majority of the adults also agreed that the organization's series of picture books presented STEM topics in an interesting way, which encouraged children to explore these pathways as career options. This informal learning process is suggested to be helpful for engaging children and can be a positive learning predictor for future engagement (Condon et al., 2020).

To bring all of these ideas together, I have written a children's picture book about animals in the Mojave Desert. This project takes ecological themes and pairs them with a creative medium to give children information about the environment in an easy-to-understand format. The hope is that children will become interested in the topic of the book and that it will spark engagement later on in their lives.

Literature Review

Ecology & Mojave Desert



Figure 1: Map of Mojave Desert (Encyclopædia Britannica, 2013)

At just 47,000 square miles, the Mojave Desert is the smallest of the four deserts (Sonoran, Great Basin, and Chihuahuan) in North America. It also happens to be the driest of the deserts, only getting 1.5 to 12.25 inches of rain each year (Walker & Landau, 2018). In fact, this desert holds the record for having the highest temperature in the world, at 134° in Death Valley on July 10, 1913 (Walker & Landau, 2018). Even though this desert is known for its aridity, it is still marked heavily by water, or lack thereof. In the summer, rains come suddenly, but do a considerable amount of damage in the short period of time that they are there. This is the time when flash floods are most likely to

occur– the kind of events that create mud slides, shape canyons, and can sweep a person or house away in the blink of an eye (Walker & Landau, 2018). Winter precipitation has a different temperament. The air is cooler, the rains are softer and longer lasting, which gives animals and soil more time to soak up the water and be replenished (Walker & Landau, 2018).

The Mojave Desert is full of extremes, so the animals and plants that live there must be hardy and adapt to the many changes: temperatures ranging from 115°F to 0°F, not a drop of rain for months to flash floods, and calm mornings to wind storms by noon (Walker & Landau, 2018). Because of this, many species of the Mojave are endemic, meaning that they only occur in this one area of the world. This is very significant because if any huge natural disaster or extinction event were to happen here, a lot of endemic species would be lost (Walker & Landau, 2018).

Some of the major issues facing the Mojave Desert (as with other biomes) are development, fragmentation, habitat destruction, invasion of species, and reduced ecosystem resilience (Walker & Landau, 2018; Guida, Abella, Smith, Stephen & Roberts, 2013). As more people move to this part of the world, we begin to develop new housing, more buildings, hotels, schools, stores, etc. This development not only destroys habitat but reduces connectivity by breaking up the remaining habitat and making it harder for species to travel and move through the land (Guida et al., 2013). Invasive species such as grasses, crayfish, insects, and fish compete with native species for resources and habitat. They make it harder for native species to survive in this area, and can lead to other problems like increased fires, species extinction, and disease (Guida et al., 2013).

While the inhabitants of the Mojave Desert are made specifically for a hot environment, there comes a point where conditions can become unlivable for even these species (Guida et al., 2019). The Mojave has been in a drought for quite a few years; the overall temperature has warmed, and precipitation has declined from 1979 to 2008 (Guida et al., 2013). To escape these pressures, animals and vegetation have been moving further north and higher up in the mountains to have access to more rain and cooler temperatures (Guida et al., 2013). If these negative trends continue, then these species will have nowhere else to go, which suggests that they will be caught up in an extinction event (Guida et al., 2019).

So what do we do? Using a conservation method is one way to address these issues. The overall goal of conservation is “to preserve diversity (both genetic and species), ecosystem structure, and ecosystem function” (Walker & Landau, 2018, p. 239). The “umbrella species concept” is a method of conservation which works to preserve a certain species “whose conservation confers protection to a large number of naturally co-occurring species” (Roberge & Angelstam, 2004, p. 77). Typically, when you protect a species, it involves taking care of the entire habitat they live in, which ends up benefiting any other species that live in that area. In the Mojave Desert, the desert tortoise (*Gopherus agassizii*) is one of these umbrella species (Boykin, 2021).

This reptile is characterized by its scales, hard shell, and slow pace. Desert tortoises tend to live in woodlands or shrublands, which gives them access to a plentitude of vegetation. This is optimal for them because they are herbivores. Some of their diet includes beavertail cactus, desert buckwheat, desert pincushion, forget-me-not, and Mojave prickly pear (“Desert Tortoises Background Unit,” n.d.). Desert tortoises are

relatively solitary and are rarely seen by people because they spend most of the day tucked away in the burrows they build for themselves (“Desert Tortoises Background Unit,” n.d.). These burrows act as a safe space for them from the elements; they hibernate in the winter to escape cold temperatures, and estivate in the summer to escape the hottest parts of the day. Tortoises are ectothermic, which means that their internal body temperature is dependent upon the temperature of the environment. If the overall climate of the Mojave desert continues to get hotter, the extreme temperatures could put the tortoises in a serious predicament where they would either need to adapt to the conditions, or cease to exist (Vale & Brito, 2015; “Desert Tortoises Background Unit,” n.d.).

In addition to rising temperatures, the Mojave Desert has been experiencing decreased precipitation rates as well. Water happens to be the biggest limiting factor for most desert species; it has a huge effect on an animal’s fitness (Nafus et al., 2017). One study by Nafus et al. (2017) found that juvenile tortoises were able to grow a lot more when there was a high precipitation rate in the winter. This is why not only the amount, but timing of precipitation is so crucial for organisms in the Mojave. When plants are able to get their full fill of water, they can grow bigger, which provides tortoises with a more reliable, nutritious source of food (Nafus et al., 2017).

Desert tortoises are considered umbrella species because the burrows that they create can be used by many desert inhabitants. Some of these animals, called “commensals” include the woodrat, banded gecko, sidewinder, jackrabbits, and some birds (Todd, et al., 2016; “Desert Tortoises Background Unit,” n.d.). Each of these organisms have their own domino effect, where their actions may benefit other species.

While tortoises may be making burrows for their own purposes, their actions are aiding the survival of many other species in their community (Boykin, 2021; “Desert Tortoises Background Unit,” n.d.). While the umbrella approach can be effective in preserving multiple species, it does not offer complete coverage, so it is necessary to apply other conservation methods in addition to this one (Roberge & Angelstam, 2004). It will take a lot of effort from many different groups to improve the state of the Mojave and to then maintain these conditions. The proposed project focused on educating children through a picture book.

Proposed Work

Current Picture Books

In my search, I found that there are numerous picture books about nature, but not a lot about the desert ecosystem, and far less books about the Mojave Desert. This image below shows the number of picture books available on various databases when searching “nature,” “Mojave Desert,” “desert,” and “ocean.” On each website, “desert” yielded far fewer results than “nature” or even “ocean” did, and “Mojave Desert” had less than 5 results on all websites, with Barnes and Noble having absolutely no books specifically about the Mojave Desert.

	Result #		
Location	"Mojave Desert"	"Desert"	"Ocean"
UNLV TDRL	3	42	393
Henderson Libraries	3	101	839
Barnes & Noble	0	248	448
Amazon	2	622	2,000

Table 1: Picture Book Topic Search

(UNLV TDRL - Teacher Development Resources and Learning library at the University of Nevada, Las Vegas; Henderson Libraries - includes all the books in four libraries in the city of Henderson, Nevada)

Illustration

Out of the children's books that I did read about deserts, most were published 20+ years ago and have an illustration style that is different from the direction picture books are going in now. With the increased availability and influence of TV, tablets, phones, and social media apps, picture books are having to battle for the attention of children. For a book to be successful, it needs to grab the reader – the images must be vibrant and fun to look at, the words must be captivating (Paul, 2021). While the books previously published about deserts were written well, they were written in a time before the technological boom, and I think that this book topic needs to be revived in order to keep up with the interests of young people. Throughout my writing and illustrating process, I reviewed books that were published more recently. My goal is to have bold, eye-catching colors and add a fresh perspective to the mix.

Inclusivity

In the world of literature, there is this idea of books either being mirrors, windows, or sliding glass doors. It was coined by Rudine Sims Bishop (1990) and states that books can be mirrors that make people feel seen, windows which let other people see from a different perspective, or sliding glass doors – allowing us to walk through and imagine ourselves as part of this world. Bishop talked about how non-white children do not have as many positive mirrors to look at; many of the books available to them give negative subtle hints as to what society thinks of them (Bishop, 1990).

In general, the amount of children's picture books with black children as the main character has increased, but when it comes to picture books about black children in

nature, the case is not the same (Breau, 2019). After searching for picture books with a young black protagonist exploring the outdoors just for fun, author Andrea Breau found only 16 out of 3,000 met her requirements. Some other books with black protagonists were not included because they involved the child being outdoors out of necessity (slavery, racism, undesirable circumstances, etc.) (Breau, 2019). Due to a marred history, lack of access, and at times, financial barriers, many people in the black community have subconsciously been led to believe that “the outdoors” are not for them (Fetters, 2019). In the 1960’s, even Martin Luther King Jr. and Coretta Scott King were denied access to explore a national park (Fetters, 2019). Other outdoor organizations such as The Boy Scouts of America and Girl Scouts of America also fought to keep African Americans from becoming members (Fetters, 2019).

While circumstances have improved, we are still seeing the repercussions of these dark times. According to a career search website, out of all the practicing ecologists in the US, only 2.7% of them are black, and even when you add the percentages of all the other minority groups, it barely amounts to a quarter of the whole field. **Figure 2** below shows the percentages of ethnicity groups within the field.

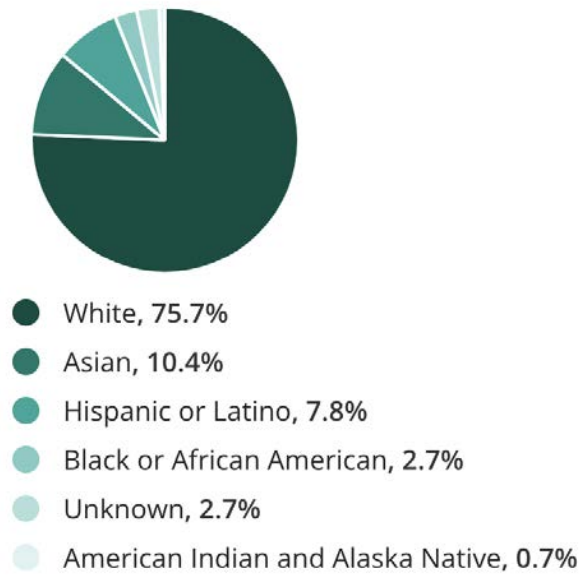


Figure 2: Ecologist Statistics by Race (Zippia)

How can we expect there to be literature about minorities exploring nature when there is a lack of minorities exploring nature in the real world? I was amazed when I found this pie chart because I do not often think about life in terms of race. But once I saw this data, it made me realize that I have experienced this phenomenon myself. In my ecology classes, I am often one of two or three black students out of a room of 30. The only time I have ever had a non-white ecology professor was when I studied *abroad* in Costa Rica.

Figure 3, made by David Huyck and Sarah Dahlen, illustrates percentages of books made by and/or about Black, Indigenous, and People of Color (BIPOC) based on data from the Cooperative Children's Book Center. The overall premise is that there are far more books by/and about white people, than there are by/and about BIPOC. What astounded me was that there is even a higher percentage of books about *animals and*

trucks than there are about *all* of the different BIPOC groups *combined* (Cooperative Children's Book Center [CCBC], 2021).

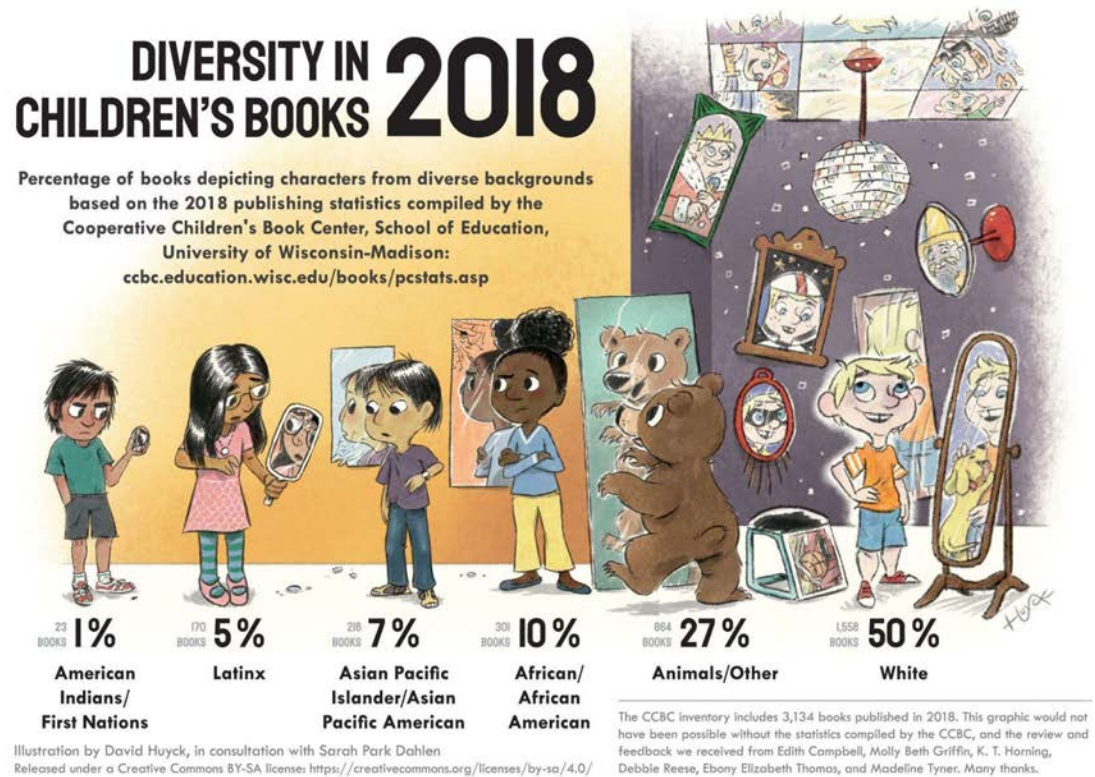


Figure 3: Diversity in Children's Books 2018 (CCBC, 2021)

How are black children to know what possibilities lie ahead of them if they don't have mirrors to see themselves in? Now that I have been made aware of these trends in literature, I aim to help fill the need by making the main character of my book a black little girl.

To give myself an idea of what the current state of picture books is today, I read a number of books about various topics. Below, I have pictures and a brief overview of some of the key takeaways, and I included a comparison of illustration styles over the years:



A Desert Scrapbook

By: Virginia Wright Frierson

Ages 6+
1996

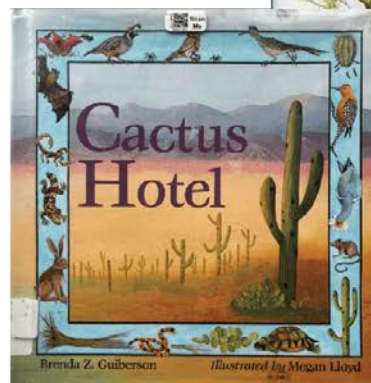
Describes plant and animal interactions in the Sonoran Desert. Is organized like the scrapbook of a biologist. Colors are washed out, like water-color. Images are very detailed and realistic.

Cactus Hotel

By: Brenda Z. Guiberson

1991

Describes the life cycle of a saguaro cactus in the Sonoran Desert. It talked about how many organisms rely on the cactus at every stage of its life. It reminded me of a science textbook with very realistic depictions of nature.



We are Water Protectors

By: Carole Lindstrom

2020

The main character rallies her people to defend water against the "black snake," aka oil pipelines. Represents indigenous people. Won a Caldecott (award for best illustrations). Overall, a very moving and engaging book.

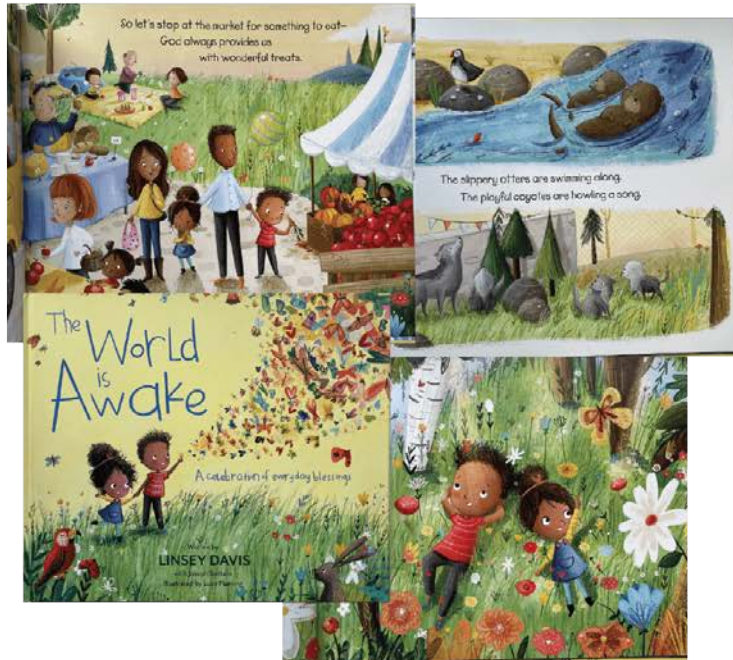


Cece Loves Science

By: Kimberly Derting & Shelli R. Johannes

2018

A curious little girl is tasked with creating her own science project. She observes her dog and goes through the scientific method. This book seemed to have a more detailed storyline and the characters talk more. Most of the pages are completely filled with bright images. This was one of my favorite books to read.



The World is Awake

By: Linsey Davis & Joseph Bottum

Ages 4-8

2018

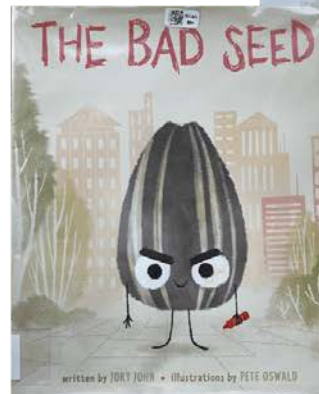
Brother and sister appreciate nature and how beautiful it is. The animals are more playful but are not personified. The colors are bolder. Uses an AABB rhyming scheme. I loved how detailed the images were.

The Bad Seed

By: Jory John

2017

A sunflower seed talks about how bad he is, and what happened to make him this way. The character development in this story was very obvious. This book has more earth tones and I like how there is a lot of contrast between the characters and background. The wording is simple, but gets the point across.





Sulwe

By: Lupita Nyong'o

2019

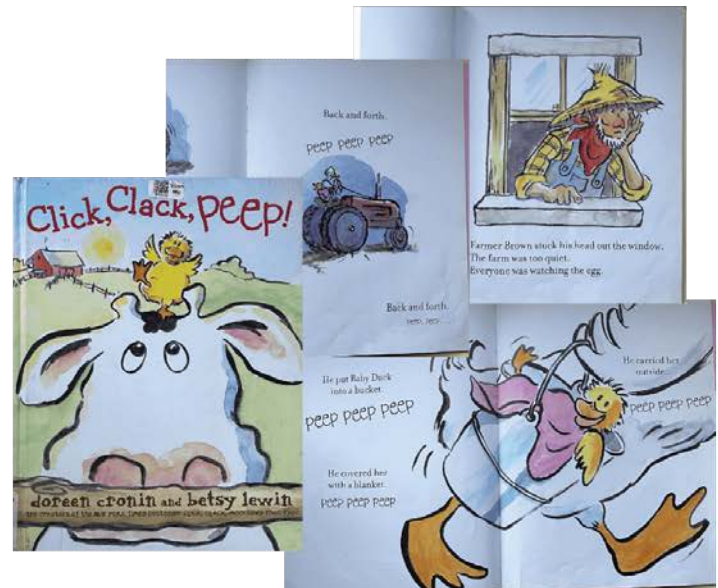
A little girl is visited by shooting star who helps her not be ashamed of her dark complexion. This the most beautiful book I have ever seen. It used a lot of purples and blues; the images looked very celestial and magical. The character development in this book is obvious as well.

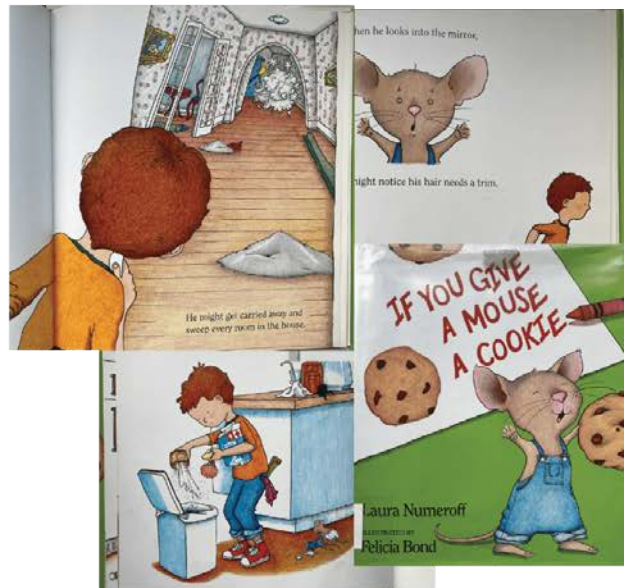
Click, Clack, Peep

By: Doreen Cronin

2015

The barnyard animals are trying to make the newest baby chick go to sleep with no avail. This book has a lot of onomatopoeia, repetition, and rhyming. The illustrations are more complex, and follow the style of Cronin's previous book.





If You Give a Mouse a Cookie

By: Laura Numeroff

Ages 4-8

1985

The main character responds to the many requests of his guest, the mouse. This book is very memorable, as I remember reading it as a kid. Here, there is more of a cartoon aspect, and the animal is personified.

2018



2020



2018



1996



1991



1985



The intended audience of my picture book is children because they pick up information quickly and generally find most things interesting. They are at a point in their lives where their brains grow at a quick rate, and they are open to new ideas (Cantor et al., 2018). Getting them interested in a topic is easier now than it would be when they are adults. I chose an age range of 4-8 years old because this is typical of most picture books, but I know that people outside of this range will be reading the book as well. Picture books are often read to children by adults, whether it is a caregiver reading to their child before bedtime, a teacher reading to their class, or a volunteer doing a story time at the library. For this reason, my *actual* audience is broader than just children, it extends to multiple generations (Feldman, 2021). Even further than that, teachers outside of elementary school often read picture books to their classrooms to introduce a new topic; picture books act as a springboard for going over topics in depth (Hager, 2015). My goal then, is of course to cater to 4-8 year olds, but also to make my book interesting enough that parents will not want to rip their hair out after having to read the book “just one more time.”

Expected Results or Outcome

Knowing that black children have not been represented very well in books about nature, it is fitting and imperative that the main character of my book be a black child. The story will be about this six year old little girl named Nyla who has a hard time trying new things. Every year, she and her family go on a trip to the beach, but this year her mom informs an unhappy Nyla that they will be staying close to home and visiting the Mojave Desert instead. In an attempt to show Nyla that the desert is not just sand and

cacti, her parents challenge her to find items on a nature scavenger hunt. We will go with her on a journey throughout the Mojave Desert and meet some animals –like the desert tortoise– along the way. The animals will not be anthropomorphised, meaning that they will not speak or have any “human-like” characteristics. While there will be some factual information within the dialogue of the book, I do not intend for it to be laden with science and heavy facts; writing an encyclopedia is not my goal. I want young readers to be interested in the topic and have fun while reading. I want this book to be a “mirror” for young black children to see themselves in a positive light; so they can know that “the outdoors” is for them too. It is also my goal that this book be a “sliding glass door” for all children that leads them to care more about the environment and want to help when they grow older.

When my project is finalized, I want to have created a book that:

1. Adds to the amount of books about the Mojave Desert
 - a. Lets people know that desert is not a “wasteland,” many plants and animals live there; there are exciting things happening all throughout the desert if you would pay attention
 - b. Gives information about what umbrella species are and why the desert tortoise is one of them
2. Lets minorities (specifically black children) know that “the outdoors” is for them too
 - a. Creates mirrors for black children to see themselves in
 - b. Creates windows for other children to see from a different perspective

3. Intrigues this new generation of children
 - a. Includes illustrations with vibrant, bold colors and good contrast
4. Encourages children to care about nature
 - a. Presents information in a positive way, without contributing to eco-anxiety
 - b. Leads children to desire to learn more as they grow up
 - c. Encourages children to make good decisions that will benefit the environment

Method/Creative Approach

The initial step for this project was to find information on the Mojave Desert (and why we should protect it), picture books (and how they benefit children), and how children learn. I then narrowed down the specific book plot and created a more detailed storyline. I looked to literature experts and read many picture books to get insight on how to style and structure my own book.

I made rough sketches and experimented with which mediums/methods I wanted to move forward with. At the same time, I outlined the story, which included making a list of the characters and giving each of them a descriptive background. I then started piecing together a storyboard for the whole book; it included thumbnails (small depictions of the illustrations) and possible placement for text. I used this draft work to make rough sketches of each spread. After this, I revised as needed, and then worked on the final images and text placement. During the drawing process, I made rough sketches manually on pen and paper, and then transformed them into digital versions using Adobe Illustrator. My final step in this process is to publish the finished work.

Final Product



A look of disappointment returned to Nyala's face; she wasn't ready to go back home yet. There was still so much to see!

"We can come back soon to finish the rest of the scavenger hunt," suggested Nyala's Dad.

Having enjoyed the day, they took one last picture and piled back into the car.



Who would have thought there was so much to discover out in the sands of the desert?

The Mojave Desert

The Mojave Desert spans parts of California, Utah, Arizona, and Nevada, and is one of the four major deserts of the United States. It is the smallest and driest, getting between 1.5 to 12.25 in. of rain each year. In 1913, the Mojans reached the highest temperature ever recorded in the world at 134°F.

When most people think of the desert, they think of a land filled with nothing but sand, tumbleweeds, & hot air, but deserts are so much more than that; they are full of life & are surprisingly beautiful. The desert is a land of many different plants, animals, & people. It is softer, which allows it to soak deep into the ground, nourishing plants, & providing water for many desert dwellers. Some of the animals that call the desert home include: the banded Gila monster, kit fox, golden eagle, cottontail rabbit, American badger, northern Mojave rattlesnake, and leopard frog, & much more.

Umbrella Species

The "Umbrella Species Concept" is considered a form of conservation because when you protect one of these species, you take care of the entire habitat they live in... which also ends up benefiting any other species that live in that area.

Examples of umbrella species include the jaguar, grizzly bear, collo salween, northern spotted owl, and Mojave's own desert tortoise (*Gopherus agassizii*). These habitats & reptiles live in woodlands or shrublands, and are often found hiding away from the extreme temperatures of the desert. These "hiding places" are called burrows & are often protected by other animals including the desert bighorn sheep, desert badger, & jackrabbit. In this way, the actions of one species are able to aid in the survival of many others. Because of how vital the tortoise is to the ecosystem, it is important that you do not touch or disturb it. If you see one, please report it to the nearest ranger. Remember, if you see an animal you see in the wild, it's best that you do not disturb any.

About the Project

This picture book is something I created in fulfillment of a creative research thesis through my school's honors program. (The full research report can be found on my website thingbykate.com).

Being a biology major, we talk about the state of our environment a lot. I would at times feel sad and overwhelmed as I heard about some of the negative impacts we have had on our world. I would think to myself, "what is something I can do to actually make a difference?"

I have found that there is no "sure fire way" to fix our environment, but no matter which approach we choose, the first step is education. We cannot expect people to "take care of this environment" if they don't know what there is to "take care of." This book is an ideal method to introduce to students the importance of our environment in a fun & engaging way. I hope this book will help children understand the importance of our environment & lead them to find out more about this beautiful world we live in. It is important that we learn more about this land so that we can take better care of it, and ensure its beauty remains intact for future generations to enjoy. The prosperity of our future depends on the children of today.

About the Author

Kassie Bourne is a biology major with a focus in ecology and evolutionary studies. While this is the first book she has written, she is not new to making creative works, as she has been writing for her own small business where she hosts a blog and sells handmade greeting cards & earrings. She has grown up in the heart of the Mojave Desert and loves to go out and enjoy nature any time she can. In the future, she wishes to go to the field "studying animals, plants, & ecosystems" and continue to learn about the world. You can find out more about Kassie and her many projects at thingbykate.com.

For more Mojave Desert information, check out these resources:

www.britannica.com/place/mojave-desert
www.mojavehistory.com
 Natural History of the Mojave Desert by Frederick H. Landau and Lawrence K Walker

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