

SEA

SECULAR | ECLECTIC | ACADEMIC
HOMESCHOOLERS

**A Real-World
Application of the
Scientific Method**

So Much More Than Art

**LGBTQ+
Diverse Booklist**

**Vegan Ginger
Snaps Recipe**

**How to Talk to Kids
about Scary Science**

**Dragonborn Multilay-
ered Learning in The
Elder Scrolls V: Skyrim**

**Candy Rock
Cycle Activity**

**For Young Learners:
What do you DO with
literature?**

**Punctuation
Crossword Puzzle**

FALL 2021





CONTENTS

**A Real-World Application
of the Scientific Method** 06

By Blair Lee, M.S.

So much more than art 13

By Beth Herrild

LGBTQ+ Diverse Booklist 20

By Joshua Jernigan

Vegan Ginger Snaps Recipe 22

**How to Talk to Kids about
Scary Science** 24

By Blair Lee, M.S.

**Dragonborn Multilayered Learning
in *The Elder Scrolls V: Skyrim*** 27

By Dr. Sabrina M. Weiss

Candy Rock Cycle Activity 32

**For Young Learners:
What do you DO with literature?** 36

By Sydney Miller Milbert

Punctuation Crossword Puzzle 42

Contributor Bios 44



FROM THE EDITOR

How are you doing?

As I sit here pondering what to write next, I realize what a loaded question that is. There are so many ways that question could be taken. SEA Homeschoolers is a homeschooling group, so possibly I am asking how homeschooling is going. SEA Homeschoolers is also a community focused organization. In that context, I might be asking how you are doing in Year 2 of this uncertain time. The truth is, I am asking this open-ended question, expecting you to answer however you need to.

I have been homeschooling and mentoring homeschoolers for many years. I think of the SEA Homeschoolers Facebook group as “The Teacher’s Lounge.” A really BIG Teacher’s Lounge! The purpose of that group has stayed true since I started it on April 9, 2015. It is a place to get and give advice for those who want to provide a secular academic homeschool experience for their children. When I ask a homeschooling parent how they are doing, I am asking how homeschooling is going. Even that question is open to interpretation. That is because, I want the person I am asking it of to focus on what they want to talk about in their homeschool journey.

I believe strongly that it is important to feel connected to a community. I am also asking how you are doing in the larger context. Do you need to talk to someone? Do you have something you need to share? Do you need to feel that you are not alone? That is another reason for asking how you are doing. I grew up in a household with a mother who suffered from mental health issues. My mother committed suicide one week after my seventeenth birthday.

It was a lonely road for me from that time to being okay. When I ask how someone is doing, I am always opening myself up to that person. It is important to me they know they are not alone; that they know I am here as a part of their community if they need me.

So, how are you doing?

Much Love, Blair

Spring Classes Enrolling Now!



SEA Online Classes offers engaging, meaningful learning experiences taught by experienced teachers with expertise in their fields.



courses.seahomeschoolers.com



A Real-World Application of the Scientific Method

By Blair Lee, M.S.

How the Scientific Theory of Evolution Was Developed, and How and Why It Continues to Evolve (As All Good Scientific Theories Do)

For all the controversy surrounding evolution, you would be justified in thinking the theory of evolution stands on shaky ground as far as the scientific method goes. In fact, it was through standard, rigorous applications of the scientific method that scientists came to their current understanding of the evolutionary process.

Science investigations begin with one or more questions about phenomena observed in the natural or physical world. The theory of evolution attempts to answer three basic questions: Why are there so many different forms of life, when based on environmental conditions there could be fewer? Why have most species gone extinct with others taking their

place? How did the many different types of organisms come to be?

Before looking at how the scientific method was applied to the theory of evolution, it is important to understand that the theory of evolution was not developed from one hypothesis or one study. Biological evolution is genetic change in a population occurring over several generations. That evolution happens is a fact. It is a fact that populations of organisms evolve. The science supporting this statement is very solid, and so substantial it would take several lengthy books to share all of it. The theory of evolution attempts to explain how and why evolution has happened in the past and continues to happen

today. The theory of evolution has many different parts, each one attempting to give more information about how and why organisms evolve. Applying the scientific method to specific limited aspects that look at how and why evolution occurs, has resulted in a well-substantiated, multi-varied, and complex scientific theory.

Every well-done experiment conducted in the field of biology uses and supports the theory of evolution. This is because at its most basic, the theory of evolution is the foundational tenet of biology. Countless well-done experiments have been conducted that have improved our understanding of evolution. Because of this, I am going to limit the examples I use for this article. My purpose is to show you how the scientific method has been applied to develop this theory and how the understanding of the theory of evolution

has evolved through continued investigations using the scientific method.

Every well-done experiment in science uses the scientific method. Science is not just a collection of facts. It should not be taught that way, and it cannot be adequately learned that way. Science is a method.

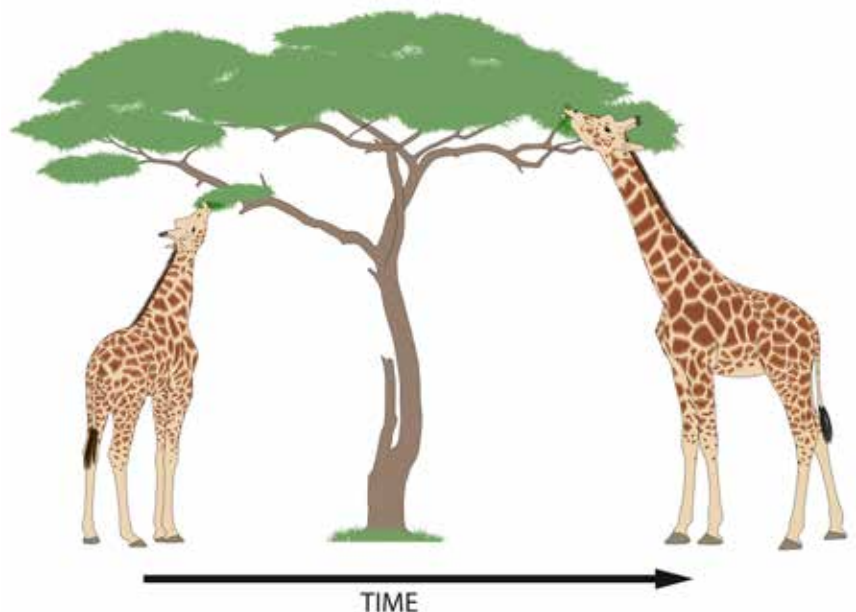
To really understand science, it is essential to understand the method used by scientists to develop scientific theories and scientific models. Understanding this method is essential to understanding how scientists develop both and why these theories and models can and should evolve through continued experiment.

It Starts with a QUESTION

Observations are not just made during an experiment. Before scientists develop a hypothesis, they make observations about something in the natural or physical world. It is from these initial observations that scientists come up with what they are going to study in the first place. After initially wondering why something is happening, scientists continue observing the phenomenon until they think they have a possible answer. This is where the process of developing a hypothesis begins.

A Possible Answer to the Why and How: THE HYPOTHESIS

- **Jean Baptiste Lamarck hypothesized** that traits organisms acquire in their lifetime can be inherited by their offspring. For example, the offspring of a long-distance runner could inherit his parent's ability to run long distances. We now know that Lamarck's proposed mechanism for evolution was incorrect. He was correct, however, in hypothesizing that organisms inherit traits from their parents, and that inheriting these traits can result in the traits becoming more common in populations of organisms. In other words, he was correct that populations of organisms evolve.
- Charles Darwin agreed with Lamarck that organisms evolve. Darwin hypothesized a different mechanism for evolution, called natural selection. Natural selection is the process where organisms have a better or a worse chance of survival because of their traits. According to Darwin, over generations organisms with beneficial traits live longer and have more offspring. Therefore, they are more likely to pass their traits to their offspring than those organisms with harmful traits. This results in the natural selection of beneficial traits, which therefore become more common within a population than harmful traits. Darwin's mechanism for evolution was only part of the story, however. Scientists now understand that there are other mechanisms for evolution in addition to natural selection.



- Gregor Mendel hypothesized a mechanism for how traits were inherited. Mendel proposed that organisms have a pair of factors inherited in discrete, unchanging units, now called genes, that control the likelihood of a given trait, and that organisms inherit these traits from their parents. Mendel was correct when he proposed that discrete units control traits and are inherited from an organism's parents. We now know, however, that Mendel was only partially correct when he proposed that genes are unchanging units. Sometimes genes do mutate and change.

To Be Meaningful in Science the Hypothesis Must Be Testable: THE PROCEDURE

Once a hypothesis has been proposed, scientists need to put together a plan, a procedure, for how they are going to rigorously test their hypothesis. It is important that the procedure be very specific to the hypothesis. A good procedure is detailed and complete enough that another scientist can duplicate the experiment exactly. It is essential that the experiment be well-controlled and that the procedure focuses narrowly on the specific observations the hypothesis is based on.

The procedures scientists use today are much more sophisticated than those used by Lamarck, Darwin, and Mendel. There are two reasons for this. The first is that the work of these three men has been repeated enough that there is no need to continue to repeat their experiments. The second is that the tools used today are more advanced. Modern tools enable scientists to look at organisms' cells, cell structure, and genetic makeup. These modern tools have been critically important in advancing our understanding of how organisms evolve.

Testing the Hypothesis: CONDUCTING THE EXPERIMENT AND MAKING OBSERVATIONS

Once a procedure is decided upon, it is time to conduct the experiment. If the observations confirm the hypothesis, the researcher must do two things. First, they must re-examine the procedure to make sure there isn't another possible answer for what they are observing. After that, the scientist needs to repeat their experiment many times. Mendel, for example, used thousands of pea plants for his experiment, which he repeated many times over several years.



Storytelling through Song

A Project-Based Unit Study

By Blair Lee, M.S.



THE SCIENCE OF CLIMATE CHANGE:

A HANDS-ON COURSE



Innovative Academic Materials from SEA Publishing

BOOK 1

What is Magic?

AN UNOFFICIAL EXPLORATION OF
HARRY POTTER AND THE SORCERER'S STONE



Project-Based Learning

CREATING A MODERN EDUCATION OF
CURIOSITY, INNOVATION, AND IMPACT



SEABOOKSANDMORE.COM

If the observations are not what the scientist expects, they need to look at their procedure to see if the problem is with the procedure or if all or part of their hypothesis needs to be rejected. Lamarck's hypothesized mechanism for evolution was discarded based on casual observations. Sometimes, though, the answer to what is being observed isn't as easy to figure out. Darwin's hypothesis that natural selection is the mechanism for evolution is a good example. Darwin was correct that populations evolve through natural selection, but there are other mechanisms of evolution. It was observable that populations sometimes evolve in ways that are harmful.

“Mutation, migration, and genetic drift may cause populations to evolve in ways that are actually harmful overall or make them less suitable for their environments. For example, the Afrikaner population of South Africa has an unusually high frequency of the gene responsible for Huntington's disease because the gene version drifted to high frequency as the population grew from a small starting population. Finally, the whole idea of ‘progress’ doesn't make sense when it comes to evolution.”

https://evolution.berkeley.edu/evolibrary/misconceptions_faq.php#b1



That means Darwin's hypothesis is sometimes invalid and sometimes confirmed. When this happens, the researcher must determine if the hypothesis is too big and possibly needs to be narrowed down. For example, Darwin's hypothesis could be corrected to say, “Natural selection is one of the mechanisms for evolution.”

Analysis: THE DATA AND RESULTS

A meticulous analysis of the data and results is critical. This is what the conclusion is based on. Once a scientist concludes that the data and research give specific answers about a process, they share their research including the data and results. Other scientists pore over the data analysis looking for holes and missteps. It has been through the meticulous analysis of the data and results from vast numbers of experiments conducted by many different researchers that scientists have come to understand that evolution occurs. This thorough, peer review analysis of the data and results is important when forming conclusions about how and why a scientific phenomenon occurs.

A More Complete Understanding: THE CONCLUSION

If you think of a theory as a puzzle, the conclusion from each experiment is a piece of the puzzle. When the conclusion is that the hypothesis is incorrect, that puzzle piece doesn't fit, and doesn't give information about that theory. It does, however, give information about what isn't happening, which is also important information.

A conclusion that validates the hypothesis gives information about the theory, but it isn't the entire completed puzzle. Instead, it leads to a more complete understanding of the pieces that make up the theory. Once the conclusion has been accepted as a sound explanation through numerous experiments conducted by numerous scientists, new experiments, all using the scientific method, can be built from that piece. Just like a puzzle piece, the experiment gives information about what to focus on next from the pieces already in place.

Lamarck, Darwin, and Mendel contributed to our understanding of the theory of evolution. Each of them observed something in nature, hypothesized a possible mechanism explaining what they observed, tested hypotheses, meticulously analyzed data, and came to conclusions based on experiments. Through years of applying the scientific method by these scientists and others, it was shown that part of each of their hypothesis was valid, and part was incorrect or incomplete. Then and now, experiments build on those areas where an understanding of the process is solid and attempt to find answers for those areas where science, as of yet, does not have an answer. That is how science works, through stops and starts, failed experiments and successful ones. That is how researchers arrived at today's theory of evolution. This is a theory that will continue to grow and evolve as more experiments, all using the scientific method, are conducted.



Find more information about the author of this article [here](#)



HOMESCHOOLERS

ONLINE CONFERENCE SERIES

The Secular Homeschool Conference
January, April, June, August, October

Brought to you by the generous
support of our friends at



Amazing opportunity for veteran homeschoolers, new homeschoolers, people considering homeschooling, and educators in other settings who are looking for innovative academic ideas!

- ✓ 5 Conferences a year!**
- ✓ Presentations for parents and educators.**
- ✓ Live Q&A with speakers and vendors.**
- ✓ Sessions on a variety of topics to support and inspire.**
- ✓ Interactive sessions for families.**

Register now to attend live sessions and have access to recordings to watch our conferences online at your convenience.

seahomeschoolers.com/online-conference-series



SO MUCH MORE THAN ART

By Beth Herrild

A quality art education can play a critical role in your child's development and education and teaching art, as parents, can feel a little daunting. But, it doesn't need to! You are uniquely qualified to teach art to your child, but let's reframe that a bit, to discover art with your child! When you discover the art together it takes all of the pressure off of you having to be perfect and frees your child to make their own decisions and engage in the creative process.

It's in the creative process that kids get the good stuff we all want them to have like social emotional learning and enhanced creative problem solving skills. When art is taught in a very prescriptive way, kids may learn some skills and techniques but they miss out on all of the emotional and brain benefits of engaging in their own creative process. My philosophy around

art education is to give kids a structure, maybe show them a few techniques or sometimes not, but then within that structure, give them the freedom to create what and how they want. For instance, "Today, we're going to do a watercolor project." Then you show them how to get their brush wet and pick up pigment onto the brush. You discuss how much water is enough and how much is too much. Maybe you demonstrate (or watch a video) on how to do a watercolor wash. And you also tell them that they can go back in and paint on top of a dried watercolor wash to add more detail if they want to. If your child is older, you might also discuss different types of subject matter (still life, landscape, portrait etc), how realism and abstraction are on a continuum, and that it is totally ok to use artistic license. Artistic license is the way that artists change reality in order to make artwork that is more interesting

or beautiful. So, in other words, if your child is painting a tree outside your window and the tree has red leaves, they can paint the leaves any color they want to. Or like the project below, they can paint the sky any colors they want to. Most younger children and some older children will just naturally use their artistic license!

Process art, being focused on the process rather than a particular product, is about experimentation, but not about being random. We also want to engage kids in planning, trying things, debriefing them, problem solving, making adjustments etc. Instead of complimenting your child by saying "Oh that's so pretty!" Try saying things like, "I love how hard you worked on that." or "I love how you chose to use those two colors together, I wouldn't have thought of that." Instead of asking the question we often want to ask "What is it?" **Try asking open-ended questions like "Can you tell me about your artwork?" or "Would you show me how you made those marks?" or even "Why did you choose to make those trees so much larger than the other ones?"** The more your child tells you about their artwork, the more cognizant they will become of their own planning process and they will be able to make subsequent artwork more nuanced and complex little by little.

ACTIVITY

If you have watercolors at home, try this project below. It calls for liquid watercolors simply because they can be easier for younger kids, but if you don't have liquid ones, no worries. If you have watercolors that are in the dried cakes, just dip a brush into water and put some drops of water on each color before starting (so they begin to soften up) and then show your child how to dance the brush on the watercolor cake to pick up enough color. Also, if you don't have the book, *Sky Color*, you can find it at your local library and often, you can find read-alouds of books on YouTube, [*like this one*](#).

Lastly, why not do the project with your child? Have fun!

GRADE LEVEL: K-5

Time Needed – 50 Minutes Minimum, 1 Hour Preferable

Element & Principles of Art: Color, Color Mixing

MATERIALS NEEDED:

- 1 *Sky Color* (Creatrilogy,) by Peter H. Reynolds
- 1 Color Wheel or Color Wheel Image
- 1 Round, Size 6 Brush per Student
- 1 Oval, ½” Wash Brush per Student
- 2 Sheets of 9” x 12” Watercolor Paper per Student
- 1 Water Cup per Student
- 1 Plastic Paint Palette per Student
- 1 Liquid Watercolor of Each of the 3 Primary Colors; Red, Yellow & Blue per Table
- 1 Zip Type Plastic Snack Bag per Student
- Shaving Cream
- 1 Roll of Masking Tape per Class
- (Optional): Coarse Table Salt & Plastic Wrap



READ THE BOOK, *Sky Color* by Peter Reynolds

READ ALOUD TO BEGIN THE LESSON

Questions to Ask:

- I wonder what you might have done if you were in Marisol's situation?
- How many colors do you think there are in the world?
- How many do you see every day?
- Think about how the book is about so much more than art and ask some other open-ended wondering questions.

PLANTS

COMMUNICATION
BATTLING INSECTS
LIGHT HARVESTING COLORS

The Molecules that Make
Plants Special

Microbiology for
Kids:
Hands-On Project-Based
Science



Important
Science
Everyone
Should Know!



Innovative,
Hands-On Science
Classes with
Blair Lee, M.S.



WOLVES

Evolution
Behavior
Ecology

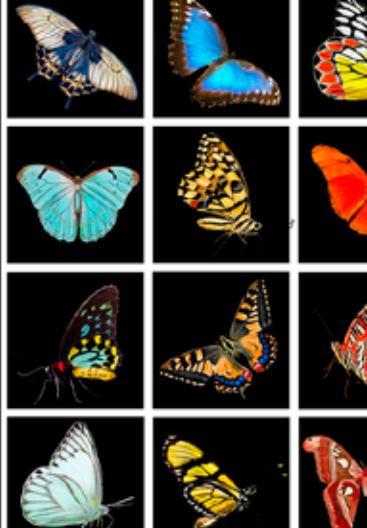
Featuring the Wolves of
Yellowstone National Park



EVOLUTION

LAST UNIVERSAL
COMMON ANCESTOR
EVOLUTION
NATURAL SELECTION

Why There Are so Many
Filling the Same Niches



Save 10% off Elementary
Science Series Bundles &
Microbiology for Kids with
coupon code **science** through
November 10, 2021

KITCHEN SCIENCE

COOKING WITH YEAST
FERMENTING FOOD
BUTTER, SUGAR, FLOUR, EGGS

VEGAN and GLUTEN FREE
OPTIONS



WAVES

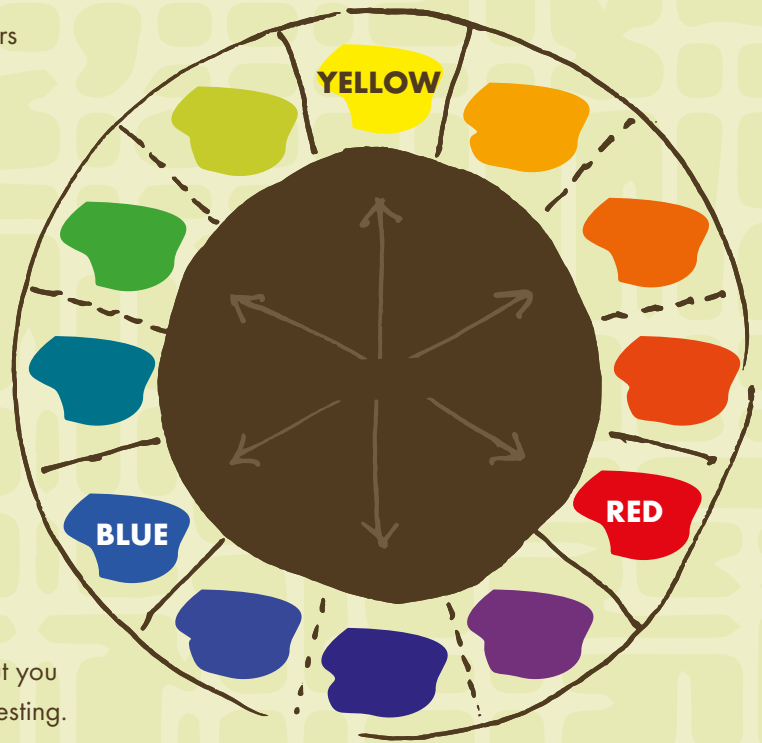
LIGHT
WATER
SOUND

How Energy Travels

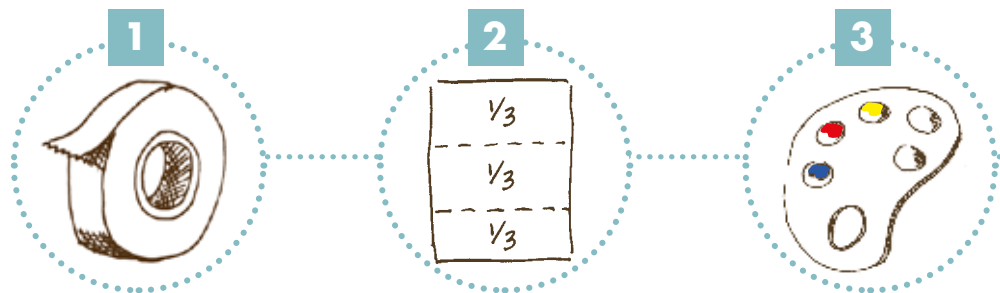


SET THE STAGE WITH YOUR STUDENTS:

- > Let's look at the Color Wheel now: the three primary colors are: red, yellow and blue.
- > All other colors can be made from these 3. They are like the grandparents of every other color! If you mix 2 of the primary colors together, you get a secondary color. Red + Yellow = Orange. Blue + Yellow = Green. Red + Blue = Purple.
- > Colors next to each other on the color wheel are called analogous: they are in groups of 3, like red, orange and red-orange. They are kind of like family. They have some similarities and kind of go together nicely together in a work of art.
- > Colors across from each other on the color wheel are called complimentary; like red and green. They are very different, but make things more fun and interesting. You probably have a friend, who is very different from you, but you complement each other, and make life more fun and interesting.



INSTRUCTIONS TO GIVE YOUR STUDENTS:



1 Before you begin, use 4 long pieces of masking tape to tape down your watercolor paper onto your work surface. This will keep your paper flat while you paint.

2 Divide your paper into thirds from top to bottom. The top two-thirds will be your sky. The way you position your subject on the paper is called composition. One important composition rule is the Rule of Thirds. You divide your paper into thirds and try to put the main parts in the 1/3 place or the 3/3 place instead of in the middle!

3 Pour each of the 3 primary paint colors into its own hole in your palette.

4 We are going to do a watercolor wash. Wet your oval wash brush (the biggest one) & "paint" lots of clear water on the sky area. Then, blot a lot of the water out of your brush & dip it into one of the paint colors. Paint a strong solid, thick line of color across the top of the wet area or maybe you will swirl it like Marisol. Can you see the color spread out? Rinse your brush in the water cup. Repeat this whole process with another color next to the first one. Watch the colors blend together to make another color. Keep going if you want to.

> **What do you notice about your sky?** Did the blue and red mix into purple where they flowed together? If there's too much water, you can dab it a bit with a paper napkin if you want but it will also take some of the color away. It might look like you have clouds in your sky!

> **Try this:** to add interest: sprinkle a little bit of salt on the wet sky, let the sky dry, then gently brush the salt off with your hand OR you could put a piece of plastic wrap onto the wet sky, wrinkle it up and push it into the paint and then gently peel off. What do you notice about the sky now?



EXTENSION ACTIVITY

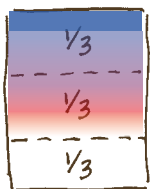
(CAN BE DONE AT ANY TIME)

Fun with shaving cream and color

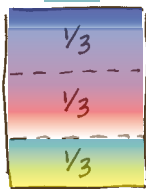
Instructions for the adult:

Fill a baggie NO MORE THAN 1/4 full with shaving cream. Then hold it by the corners and instruct a student to choose only 2 of the 3 primary colors. Instruct them to hold one of them upside down, not even squeezing, and allow 5 drops of paint to drip into one side of the baggie. Repeat with another color on the other side. Seal the baggie well and allow them to gently mush the shaving cream so that the colors begin to mix right before their eyes!

4



5



6



5 The bottom 1/3 of the paper is the land. Let's do a green wash on that. In one of your empty palette cups, pour a little blue and a little yellow until you get a blueish green. In another empty palette cup mix another green with more yellow so that it is a vibrant spring green. Wet the whole area by painting it with clear water again. Lay down a strong line of blueish green right at the top of the wet area. Let it bleed down a bit. At the bottom of the page, paint a thick, strong line of the yellowish green. Let it or help it with your brush, to bleed upward toward the blueish green.

6 Now, let's put some dots of red, or purple, or orange on the green grass to look like a field of flowers. If you do this when your field is still wet, the dots will bleed, spread a little and mix a little with the green. If you wait until your field is dry, the dots will not mix with the green and will spread less. Your choice! If you decide to use purple or orange, you'll need to mix them in your empty palette holes. Fill your smaller round brush with your desired color. Hold the brush in one hand sideways over your field and gently tap the handle of it with the other brush handle to flick dots of color onto the green.

> If you still want to do more, when the painting is dry, you can add a tree or a few trees or bushes using a dark purple color (remember blue + red.) These will look like silhouettes at sunset. But, remember, not to paint them right in the middle!

**You are the Artists,
Have Fun!**

outsidetheboxcreation.com





CLEAN UP IS PART OF ART

Watercolor paint cleans up with water, so just rinse your palette, brushes, and water cup in the sink with warm water. When your paintings are dry, gently peel up the corner of a piece of the tape, hold that corner of the paper down with one hand and gently peel the tape the rest of the way off with the other. Repeat with the other pieces of tape. You should have a nice crisp white line around your art piece, almost like a mat or frame.

If possible protect your work surfaces and clothing with paper and aprons.
Children should never be left unattended with art supplies.
Never allow children to put any of the art supplies in their mouths.



**Please share your creations on Instagram & Facebook.
We'd love to hear how you're doing with the box!**

Follow us on Instagram, Facebook and Pinterest!



outsidetheboxcreation.com

© 2017 Outside the Box Creation LLC is a registered trademark. All rights reserved. Other brand and product names are property of their respective holders.

Find more information about the author of this article [here](#)

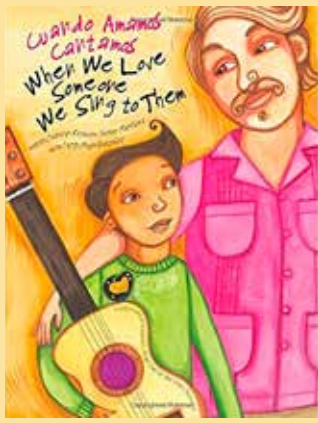


we make
homeschool art
super fun &
easy peasy



subscription
boxes &
digital
memberships

[outsidetheboxcreation.com](https://www.outsidetheboxcreation.com)



LGBTQ+ Diverse Booklist

by Joshua Jernigan

Kids often experience the world for the first time through books. Having diverse books available to them helps expand their world in magnificent ways! Books help expose children to new ideas, new concepts, and new people they may have never known of otherwise. This booklist offers lgbtq+ books that are fun, whimsical, and diverse. Please check them out and enjoy watching your young readers see the world in a new perspective.

[When We Love Someone We Sing to Them: Cuando Amamos Cantamos](#)

by Ernesto Javier Martínez Recommended for ages 6 to 10

[Aalfred and Aalbert](#) by Morag Hood Recommended for ages 3 to 7

[Stella Brings the Family](#)

by Miriam B. Schiffer - Recommended for ages 4 to 8

[Be Amazing: A History of Pride](#)

by Desmond Napoles - Recommended for ages 3 to 7

[From Archie to Zack](#)

by Vincent X. Kirsch - Recommended for ages 3 to 7

[The Hips on the Drag Queen Go Swish, Swish, Swish](#)

by Lil Miss Hot Mess - Recommended for ages 3 to 8

[Keesha & Her Two Moms Go Swimming](#)

by Monica Bey-Clarke and Cheril Clarke - Recommended for ages 4 to 8

[The Bravest Knight Who Ever Lived](#)

by Daniel Errico - Recommended for ages 5 to 8

[The Answer](#)

by Rebecca Sugar - Recommended for ages 8 to 12

[Hurricane Child](#) by Kheryn Callender - Recommended for ages 8 to 12

[Ivy Aberdeen's Letter to the World](#)

by Ashley Herring Blake - Recommended for ages 8 to 12

[Middle School's a Drag](#)

by Greg Howard - Recommended for ages 10 to 13

[The Pants Project](#) by Cat Clarke - Recommended for ages 9 to 13

[Riding Freedom](#) by Pam Muñoz Ryan Recommended for ages 9 to 12

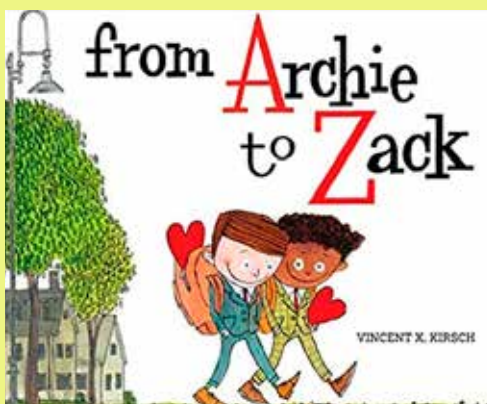
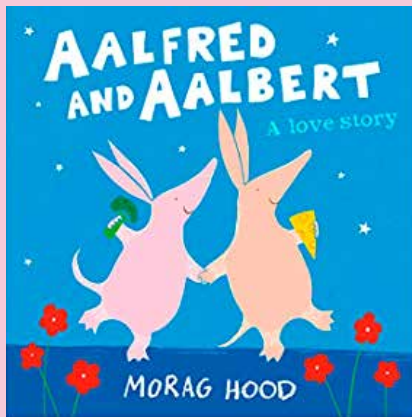
[Princess Princess Ever After](#)

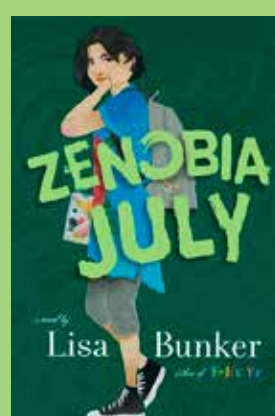
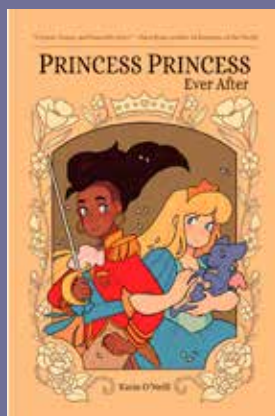
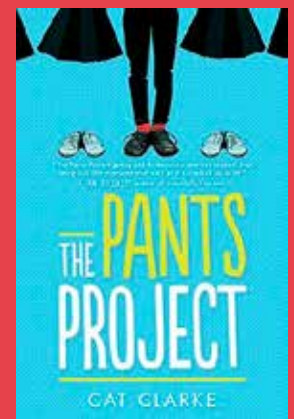
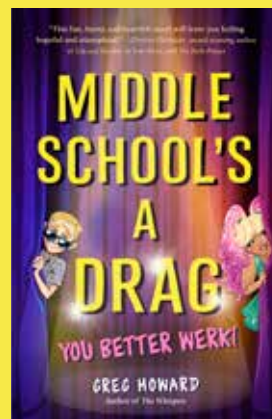
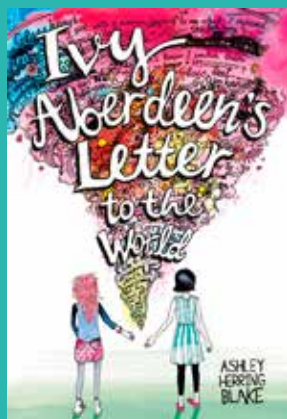
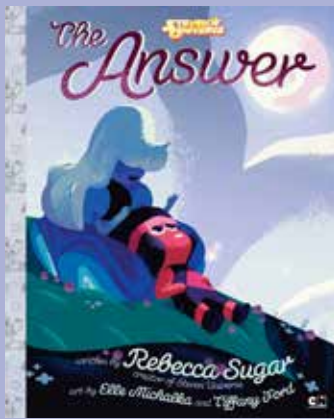
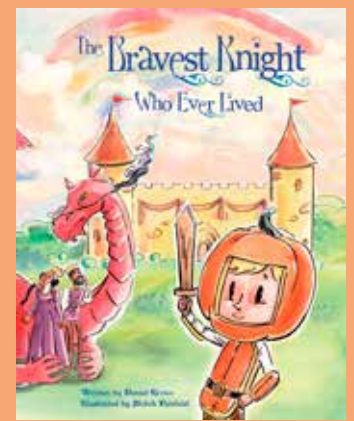
by Katie O'Neill - Recommended for ages 8 to 12

[Zenobia July](#) by Lisa Bunker - Recommended for ages 10 to 13

Age recommendations on this list were pulled from publisher listings and/or author interviews. This list includes affiliate links. Using these links to make a purchase helps keep this magazine free.

Find more information about the author of this article [here](#)







Vegan Ginger Snaps

(makes about 40 cookies)

Ingredients:

- | | |
|--|---|
| 1 cup vegan butter (225g) | ½ teaspoon salt |
| 1 ½ cups brown sugar (300g) | 1 tablespoon ground ginger |
| ⅓ cup molasses (125g) | 1 tablespoon ground cinnamon |
| 2 teaspoons vanilla extract | ½ teaspoon ground allspice |
| 3 ½ cups all-purpose flour (420g) | ½ teaspoon ground cloves |
| [use same measure of gluten free flour
blend for gluten free cookies] | ⅓ cup granulated sugar + ½ teaspoon cinnamon
(for rolling dough balls) |
| 2 teaspoons baking soda | |

Instructions:

- Preheat the oven to 350 F and line two cookie sheets with parchment paper.
- Whisk the flour, baking soda, salt, and spices together.
- Cream room temperature butter and sugar together on medium speed for about 2 minutes or until the mixture is light in color and fluffy.
- Stir in the molasses and vanilla along with a large spoonful of the flour mixture.
- Gradually mix in the flour mixture on low speed until blended.
- Place dough in refrigerator for 15-30 minutes. Chilled dough will be easier to roll into balls.
- Combine ⅓ cup granulated sugar and ½ teaspoon cinnamon.
- Roll the dough into tablespoon-sized balls, then roll the balls in cinnamon sugar.
- Space the cookies 2-3 inches apart on the cookie sheets. Bake at 350 F for 15 minutes.
- Cool 5 minutes on cookie sheet and then let them cool completely on wire racks.

**Teen
Book
Club!**



**Tween
Book
Club!**



**New
Elementary
STEAM
Book
Club!**



How to Talk to Kids about Scary Science

By Blair Lee, M.S.

From the climate crisis to anti-vaccine misinformation to the coronavirus, it seems that every time you turn the news on, the discussion is about scary science. These topics can make you and your children worried about something you feel powerless to do anything about. It is a common occurrence in the SEA Homeschoolers Facebook group to have parents ask for help talking to their kids about these topics. Parents are often worried that talking about them will make their child even more afraid.

So how do you discuss them? How do you address science topics in a way that does not alarm your children even more? Perhaps, it would be better to just say nothing? As parents we want to allay our children's concerns and let them know everything is going to be okay. But what do you say if you are not sure that's true?



Talking about scary science is something I do often. Here are my tips for how I deal with it with my grandkids and in the classes that I teach.

1. Talk about scary science.

If you and your child are worried about scary science, address it. Be willing to have big, meaningful, meaty conversations about scary science topics. Do this in an age and stage appropriate way. The older your child is, the bigger the conversations can and should be.

When these issues are not discussed, I think of it as, “Pretending they do not exist in the hopes they just go away.” All this does is create “elephants in the room,” “elephants” your child needs help addressing so that they are less scary. You can help dispel the “elephants” by having honest conversations about the science.

2. Teach the science.

Education is an essential early step for dealing with scary science. Science literacy is an important part of allaying fears. For example, coronavirus is scary. If you and your child understand the science of germ theory and how vaccines work, you can minimize the risks of

getting coronavirus and reduce fears about it. The science explaining global warming and climate change is not complicated. Understanding the science is the best way for your children and you to feel empowered instead of powerless.

3. Use adequate, credible resources.

We live in the age of social media. Unless your children are very young, they have access to information from online sources. The best way to handle a concern in the news that is not going away any time soon, is to provide credible, age-appropriate information for your child.

The internet is full of alarmist rhetoric and false denialist statements. Studies show that people are more likely to click on headlines that make outrageous claims. Be careful when these are about scary science. Beginning as early as it makes sense, talk to your children about how to evaluate and vet the sources they use for information.

4. Discuss science successes.

As a part of science literacy, learn about science successes. Learn how we went about enacting change to shrink the ozone hole, which was another manmade science crisis. Learn about the development of the smallpox vaccine and how the deadly smallpox virus was eradicated. Learn about the Southern White Rhinoceros that was delisted

from the Endangered Species List. Learning about science successes is an important step in empowering children to be the change they want to be in the world. When they learn about the successes of others, they can see how they too can be a part of the solution to fixing scary science.

5. Take action.

Taking action is an important step for people who are scared or angry about an issue. You might feel these science issues are too big for you to solve through your actions alone. You are probably correct. This is worth discussing with your child if they feel that way. The flip side, however, is that by not doing anything, they are not part of the solution. And for young people who are scared, it is empowering to feel they are doing something to address their concerns.

Talk to your child about how they want to take action. It is important they feel ownership over the activist work they do. When you teach your child to act on issues they are concerned about, you are teaching them a far-reaching lesson. You are teaching them how to deal with “scary” issues in a positive way. You are teaching them to show up and use their voice. Together, that is how we can solve scary science.



Find more information about the author of this article [here](#)

NEW BOOK BY AUTHOR BLAIR LEE



At the mention of climate change, Kee buried his head and exclaimed, "I don't like change, Gabi!"

Gabi thought of all the new things she had tried to give Kee. "I remember, Kee," Gabi said.



Join Gabi and her best friend Kee as they learn about global warming and climate change. The picture book and accompanying activity book, by author Blair Lee, will be available for presale on Kickstarter this January.

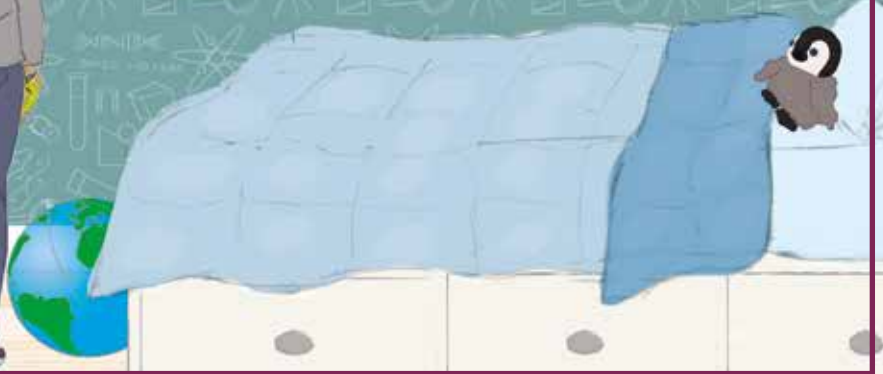
Sign up for this [newsletter](#) to be the first to hear when it goes live. There will be a limited number of books on presale at Early Bird pricing that you will not want to miss.



Kee plopped down on his bed surrounded by his favorite things. "Can't we just change the climate back, like you changed my favorite things back?" Kee asked.

Gabi picked up one of Kee's favorite tennis balls but was distracted by the changing weather outside.

"Kee," Gabi explained, "Changing the climate back isn't that simple. To understand climate change, first you have to understand what makes weather."



Dragonborn Multilayered Learning in The Elder Scrolls V

SKYRIM

By Dr. Sabrina M. Weiss

Video games can offer a rich opportunity to engage with ethical thinking and decision making. Roleplaying games in particular can offer a chance for players to create a character, step into the shoes of someone very different from themselves and interact in an immersive world. Games with mods, like *Skyrim*, also afford rich opportunities to learn and practice basic coding and program development skills. In this article, I will share an example of how we can use a popular video game, *Skyrim*, to engage with ethical thinking and other learning opportunities in an educational and enriching way. After giving some background about the game, I will discuss how its sandbox style of design can help promote a growth mindset and player-directed goals, how in-game worldbuilding offers rich choices that have consequences, and how modifications to the game offer another dimension to game and learning engagement.

Please note that *Skyrim* has an ESRB rating of M for Mature, largely because of violence and some commentary about sex (no explicit sexual situations). As a game made 10 years ago, I believe that because of changing social standards it is

not as violent as many modern games with an M rating, and depending on the individual and family standards, it could be appropriate for older teen players. Even if this game may not be a good fit for your player, this analysis can be a model for approaching other games (specific topics may vary with each game). One aspect of this game's design that is notable is that the gender balance of named non-player characters (NPCs) is nearly 50/50, with both women and men holding diverse jobs and social positions, from servants to mercenaries to merchants and rulers. And thanks to a variety of clothes and armor, characters of all genders have options ranging from skimpy to fully covered. These design decisions are a great opportunity for discussion and are a topic I often cover in my classes as part of gender and gaming studies.

About the game

Skyrim is the fifth installment in The Elder Scrolls series of video games, released in 2011 by Bethesda Game Studios. Each game in the series focuses on an area and story within the world of Nirn, usually focusing on the continent of Tamriel. On Tamriel, there are many fantastical races, include

several types of humans (Norn, Redguard, Breton, Imperial), elves (Altmer, Dunmer, Bosmer), Khajit (feline people), and Argonians (reptilian people).

The game allows you to create a customized character from one of these races, and this character is a prisoner who was captured by Imperial soldiers. You wake up in a wagon and see the world through first-person perspective (you create your character later - making for an interesting narrative trick of perspective).



(The first think the players sees and hears in the opening game cinematic)

Right before being executed, a dragon attacks, throwing the entire camp into chaos and giving you a chance to escape. After fleeing the camp, you are released into the world with a suggestion quest to follow, provided by a helpful non-player character (NPC), but you are free to go wherever you like from this point on.

Open Sandbox and Growth Mindset

Skyrim could be considered a modern video game classic thanks to its open “sandbox” style of play and openness to modifications, called “mods”, that are created by the community and freely shared online. This openness, both within and around the game, makes it an enduring favorite of many gamers, who often reject the “main story” part of the game and instead play for discovery

or self-fulfillment. Like *Minecraft*, which rewards players through experience globes from many types of activities, from killing monsters to breeding animals to cooking potatoes, *Skyrim* rewards players through skill advancement in many ways - from smithing armor to casting spells to simply sneaking around (and improving one’s Stealth), an open style of [procedural rhetoric \(Ian Bogost\)](#). The more you do a task associated with a skill in the game, the better you get at that skill, the more special abilities you unlock (“perks”), and the more levels your character gains over time. And because there are infinite procedurally generated side quests available, usually consisting of “go to X location, do Y”, a player can always have reasons to travel and explore.

This open advancement system reflects an ethos of a [“growth mindset,”](#) (coined by Carol Dweck, et al) an educational paradigm that challenges the older “fixed mindset” that assumes that our capabilities are unchanging over time. Games like *Skyrim* can model to learners how practice over time makes you get better and offers opportunities to reflect on this process in both games and real life. While less of an *ethic* (appropriate conduct) and more of an *ethos* (way of being or valuing), this is no less valuable for our learners to practice and internalize as part of metacognitive skill sets.

Open sandbox games also offer opportunities for players to create and pursue goals of their own making, which fits well with player-directed activities. Want to become a Master of all the schools of magic and take the position of Archmage at the Mages College, then blast dragons from the sky with giant fireballs? You can do it. Want to become a traveling blacksmith who specializes in crafting shoes? You can do it. Want to become the Cheese Emperor by stealing all the cheese in the world and filling your house with it? You can do it.

In the game: Worldbuilding and Choices

One of the core stories of *Skyrim* focuses on the civil war between the Imperial Legion, who want to conquer Skyrim, and the Stormcloaks, mostly Nords of Skyrim who are fighting to keep their independence and homeland. In the course of the main storyline, the player is urged to join one side to assist in their military campaign; over time, the player will see control and leadership in the major cities change depending on who takes control. It's not an easy decision: The Imperial Legion is influenced by the sinister Aldmeri Dominion (High Elves) and resembles the Roman Empire in many ways, while the Stormcloaks, in addition to wanting independence, frequently oppress and discriminate against non-Nords, especially Dark Elves and beast races like Khajit (cat people) and Argonians (reptilians). While the player is never required to choose a side, there are many parts of this story that can't be experienced without participating in it.

Life is hard in *Skyrim*, and the player frequently encounters beggars; some beggars are orphaned children, some are military veterans. Many NPCs the player encounters ask about missing family members - people who went to serve in the military or got lost after an encounter with monsters. Sometimes, if a named NPC with a family dies (killed by a dragon or bandits, perhaps), the surviving family member changes their dialogue to acknowledge their death. **These tragic backstories add richness to the world and give the player opportunities to act charitably (giving a coin to a beggar, helping someone find a family member), or callously.** Once the player buys or builds a house, they can even adopt orphans, who will come live in the house and greet the player as a parent.



Honorhall orphanage

There are many opportunities to build alliances and join organizations that specialize in a variety of activities: the bold Companions, the wily Thieves Guild, the mysterious Dark Brotherhood, a guild of assassins, and the Mages College. Each group opens up new quests and stories, and the player may join any or all of these organizations if they like, and likely deal with the consequences of their choices.



Cicero, an assassin with the Dark Brotherhood, who asks the player for help when his wagon is broken

These are some examples of content within the game that offers immersive and thought-provoking opportunities to discuss, reflect, and choose based on personal or roleplayed values. Is your character going to be a dark assassin with a soft spot for adopting and helping orphans? Or will your character be an honorable Companion who wants to liberate the Nords of Skyrim from the oppressive Imperial Legion?

Beyond the Game: Using Mods

Some games, like *Minecraft*, *Stardew Valley*, and *Skyrim* are designed in a way that is friendly to community modding - players in the community are able to create modification programs that are usually freely available for other players to add to their game. These mods change the game in a variety of ways, from cosmetic - offering new hairstyles or changing dragons into My Little Ponies - to world features - introducing more available religions to follow - to new or improved skills and magic spells.



A screenshot of a mod that replaces dragons with Fluttershy

Depending on the mods a player adds, the game could be made significantly easier (with stronger abilities), or harder (using a hardcore survival mod that requires you find warmth and shelter in cold areas), and different parts of the game could

be emphasized, like cooking or building a house and adopting children.



A screenshot of a mod that replaces dragons with Thomas the Tank Engine

These possibilities can lead to some great discussions about how modifications to a game could be seen as “cheating” or as enriching the game by different people. On the other hand, some mods improve the A.I. of NPCs, often to their benefit. For example, when a dragon attacks, the normal behavior is for many NPCs to confront and attack it, even if they only have a fork. This tends to be deadly for most normal NPCs. But there is a mod, called “Run for your Life!” that changes the A.I. of non-combatant NPCs so they run away and hide from a dragon instead of attacking it. In this case, a mod could help save more lives of innocents and therefore might be seen as more ethical and kind.

Mods can be a great gateway into developing tech skills; even the process of acquiring, installing, and troubleshooting mods can be technically intensive, and requires a fair amount of patience and persistence to make them work smoothly (especially with other mods). Programming and creating mods offer a great creative coding and development opportunity for learners to practice coding skills. And there are often active collaborative communities among modders (I have observed that the *Stardew Valley* mod community is especially wholesome).

Conclusion

Video games can provide a great platform to explore a variety of practical and intellectual engagement activities. Games with sandbox or open design especially can offer players opportunities to choose self-directed goals and practice growth mentality. A game like *Skyrim* that has a large, developed story world can help players reflect on choices and consequences, including the ethical ramifications of decisions. And using mods with games opens up a wide variety of ethical, technical, and interactive community opportunities for learning beyond the game.

Here are some other games that offer similarly rich opportunities for multilayered learning engagement that may be attractive for tween/younger teen players: *Stardew Valley*, *Don't Starve / Don't Starve Together*, *Garden Paws*.

Find more information about the author of this article [here](#)



Make Writing Magical

- ✓ A safe creative writing community for kids
- ✓ Perfect for homeschooling
- ✓ Over 1,000 different learning games and activities

START A 7 DAY FREE TRIAL



MATERIALS

- Candy: It helps if there's chewy candy in the mix. This lab would be harder to do if all the candy was hard. Even if you normally like them, a few Starbursts or fruit rollup pieces, with their low melting points, should be included.
- Scissors, knife, and/or mallet (it depends on the candy)
- Baggie
- Cutting board
- Microwave
- Heavy book

Candy Rock Cycle Activity

As research for this activity, I put a poll in the SEA Homeschoolers Facebook group to learn which candy most people would be throwing out sometime between November and March. What I learned surprised me. It truly was a situation where one person's trash was another person's favorite candy. Take Tootsie rolls for example. I was a young child when I decided that Tootsie Rolls were yucky. What could that chewy, fake chocolatey sweet be made of? And why are they foisted on young people as if they are treat? Could it be that there just inexpensive to make? That's the answer I settled on. Much to my surprise, we have many SEA members who list Tootsie Rolls as their favorite candy. And licorice, it goes without saying the best candy in the world, was not well liked it all. Whatever candy you are thinking of throwing out over the next few months, this activity is for you.

PROCEDURE



1

Unwrap the candy. On your activity sheet, where it says “Any Type of Rock” draw a picture of this.



2

Weather the candy. **Weathering** is the process of breaking down rocks. Use your weathering tools (scissors, knife, and/or mallet) to break the rocks down. Draw a picture of this in the box that says “Sediments”.

3

Divide the sediments into three piles. Take one of the piles and knead it with your hands. Press down on it once it softens, and then knead it a bit more. Press down once more. That compaction of the sediments is how **sedimentary rock** forms. Draw a picture of this in the box labeled “Sedimentary Rock.”

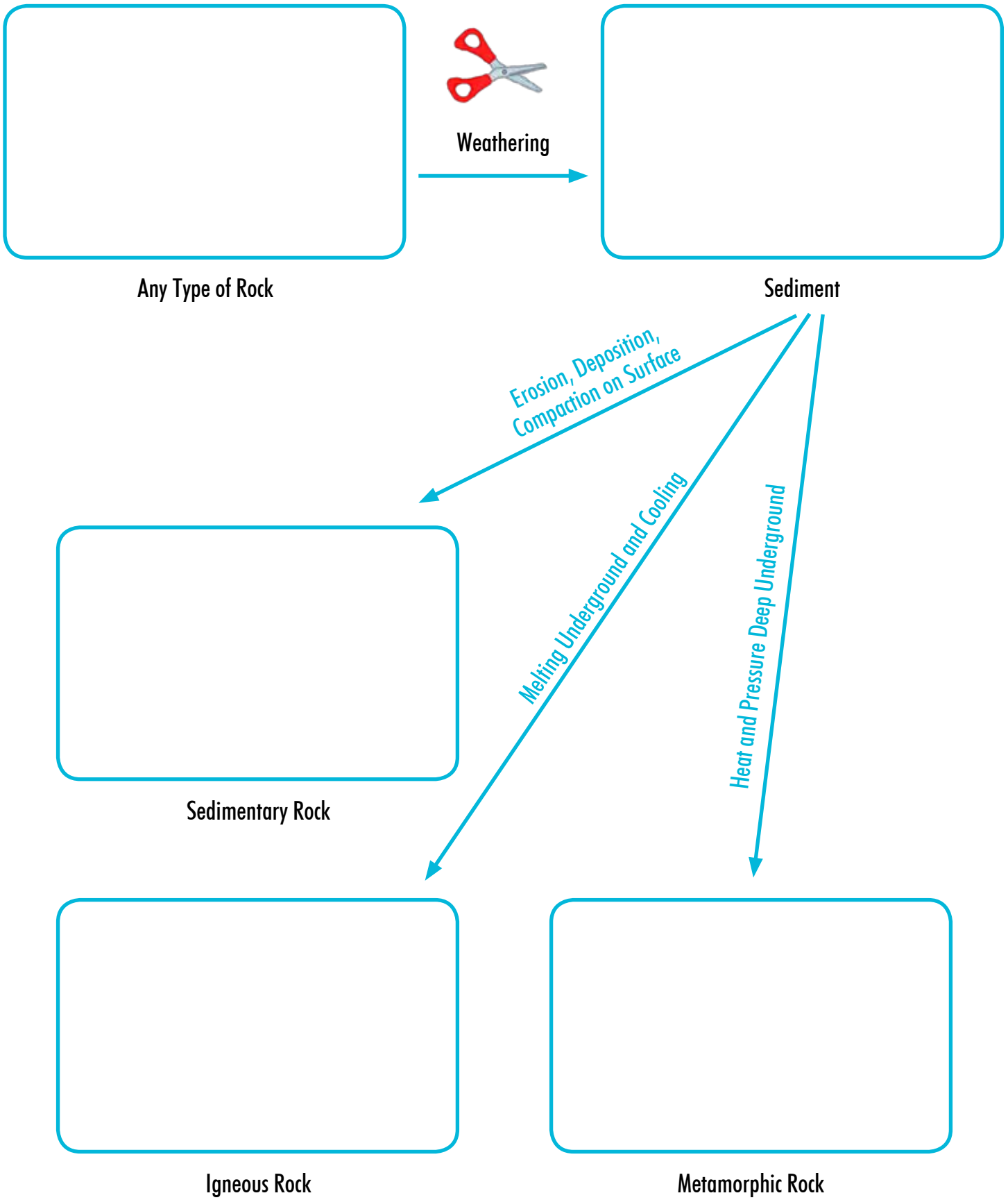
4

Put one of the piles of sediment into the baggie. Knead this until it sticks together. Press down on this with the heavy book. Heat this for 10 seconds. Make sure it is not too hot. Continue kneading and folding. And pressing with the book. Fold it at least 5 times. Melting, folding, and cooling under pressure models how **metamorphic rock** forms. Take it out of the baggie and draw a picture of this in the box labeled “Metamorphic Rock.”

5

Put the last of the piles of sediment into the baggie. Heat this for 20 seconds. **Make sure it is not too hot to hold.** Knead it until it starts to cool. Press on it with the book in between melting and kneading. Repeat this until the candy is melted and well mixed. Melting under pressure models how **igneous rock** forms. Draw a picture of this in the box labeled “Igneous Rock.”

CANDY ROCK CYCLE ACTIVITY SHEET





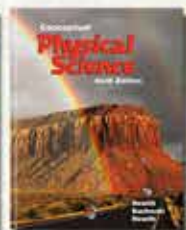
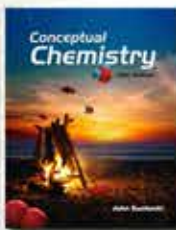
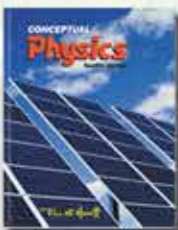
**Conceptual
Academy**

*Complete, Authentic, and Engaging
Science Programs Grades 7 - 12*

Featuring our video textbooks paired with our traditional textbooks

Visit our Homeschool support site to learn more

LearnScience.Academy

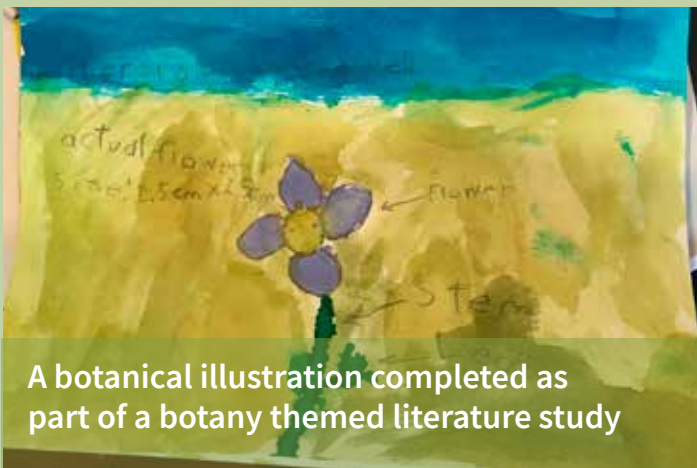


For Young Learners: What do you DO with literature?

By Sydney Miller Milbert

When the question of what to do with literature comes up, the answers can vary widely. Some simply say: “Let them read!” Others may emphasize the importance of copywork and analysis of grammar or literary devices. Those answers depend on many variables, including your learner’s preferences and abilities and your family’s homeschooling methodology. One facet of literature instruction that is especially meaningful, however, is the ability to build connections. Those connections can be made with the text, with other academic subjects, and with other learners.

Sometimes, it’s easy for our young learners to connect with characters and get lost in a story. Those are wonderful literature experiences and they require no instruction. Those are “Let them read!” moments. Your young learners



A botanical illustration completed as part of a botany themed literature study



might excitedly pick out these books on their own and spend time independently reading or ask you to read aloud, again and again.

What about other books, though, those in which the characters aren’t quite so relatable or the subject matter isn’t something your learner would select on their own? How do we encourage our learners to connect with those stories?

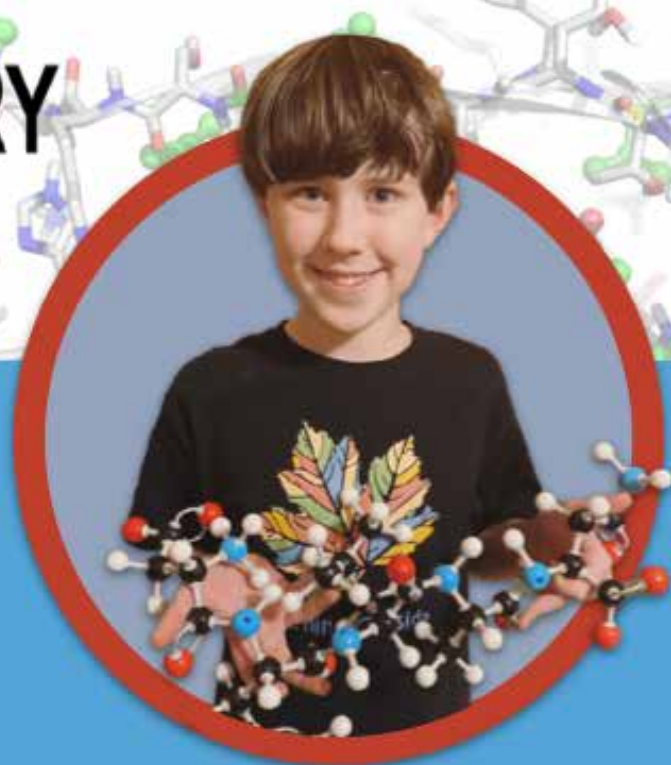
First, read aloud! Reading aloud is a wonderful way to make a book more approachable and engaging, even if your learners are already independent readers. Family read-alouds also give you the opportunity to connect with your children over a shared literature experience.

Then, start conversations around topics within the book that are relatable, even if other parts feel out of reach. Focus on one scene or piece of dialog at a time and ask your learner what they would do or say in that situation. This allows your learner to think about just one part and put them-



BIOCHEMISTRY LITERACY

for kids



Unlocking the true potential of young learners

Developed by a Yale Ph.D. and college professor, Biochemistry Literacy brings fun, engaging, high-level science into focus for kids of all ages.



Lesson videos



Computer modeling



Model building



Zoom classes

Great for younger kids with a love of science and older kids who want support for high school courses like AP Biology and AP Chemistry.

Featured in The New York Times

Used by public and private elementary, middle, and high schools

Join the community of 500+ homeschool families around the world!



Course Includes

The Periodic Table
Chemical Bonding
Ionic Compounds
Acids and Bases
Protein Folding
Sugars and Flavors
Cell Membranes
DNA and Genetics
Radioactivity

selves in the story, creating deeper connections to the text. This can be done orally or as a written assignment; if done orally, be sure to record or jot down your learner's responses so you can refer to them later.

Alongside those conversations, engage learners with hands-on activities that relate the text to other topics. Multidisciplinary hands-on activities, inspired by the text in small, meaningful ways create even more connections.

These activities may be simple and take only a few minutes, or they could be more involved and take place over multiple days. In selecting or creating hands-on activities, it is important to hone in on just one part so that young learners find ways to connect as they journey through the story.

Finally, as a story comes to an end, reflect on the experience by looking back on the full text with their conversations and completed activities. Some learners will find this challenging and others will find reflection comes more naturally. To encourage this, as you read together, let your learners know that their opinions on and reactions to the story matter.

Creating connections between young learners and literature is powerful. These methods can be used independently, but are even more effective (and fun!) when used in a group setting. When learners have the opportunity to discuss their responses to the story and even share their work after completing multidisciplinary literature-inspired activities, they build connections between themselves and the text and then, perhaps most importantly, between themselves and others around literature. Sharing these experiences encourages community, and building community around meaningful topics encourages a passion for lifelong learning.

STEAM Book Club | Sneak Peek

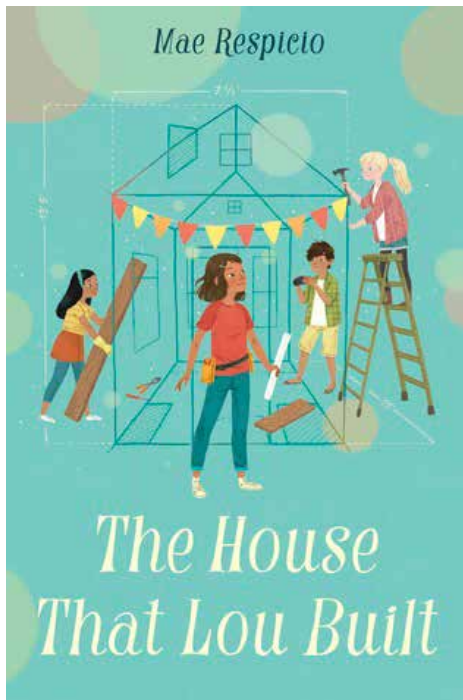
In my STEAM Book Clubs for elementary-aged learners, we read middle grade fiction books that are interesting, diverse, and explore STEAM-related topics. Families are encouraged to read aloud together, but independent readers may read on their own if they prefer. In the club, learners engage in weekly discussions, hands-on multidisciplinary (science, technology, engineering, art, and math) activities and complete a project for each book. The final project is an exercise in reflection and learners can choose to: write a book review, expand on a topic within the book by doing their own research and create a news-style report, or imagine themselves in the story and create something of their own design, inspired by the text. During every stage, learners are encouraged not only to complete the weekly assignments and monthly projects, but also to share and discuss their thoughts and completed work with their peers.



Learners creating marbled paper as part of a water themed literature study

Combining a love of reading with thoughtful discussion and hands-on activities encourages engagement and meaningful connections between literature, multiple academic disciplines, and other learners.

STEAM Connection Hands-On Activity Sample



The House That Lou Built by Mae Respicio is “a coming-of-age story that explores culture and family, forgiveness and friendship, and what makes a true home” (Cover copy). One of our STEAM Book Club’s weekly discussions for *The House That Lou Built* asks learners to consider and discuss if they, like our main character, Lou, enjoy making things with their hands. Learners also explore architecture through STEAM-inspired activities, like designing their own tiny house floor plans and building skyscrapers out of their favorite materials. In our final STEAM Book Club projects, learners share book reviews, architectural news, and personal visions for the future.

Work Cited: *The House That Lou Built*, by Mae Respicio, Yearling, 2019.

Book: *The House That Lou Built* by Mae Respicio

STEAM Connection Theme: Architecture

Activity: Design A Tiny House Floor Plan

The STEAM theme for *The House That Lou Built* is architecture. Architecture is "the art or practice of designing and constructing buildings" (The Oxford English Dictionary) and an architect is someone whose job it is to do that designing and constructing.

ACTIVITY:

This week, you will think like an architect and **design your own tiny house floor plan!**

In our book, Lou is inspired by tiny houses. Have you ever seen one?

Check out some of these for ideas

Materials:

- Tape measure
- Ruler
- Pencil and Eraser
- Crayons or colored pencils
- 1/2" graphing paper ([Download and print here](#))

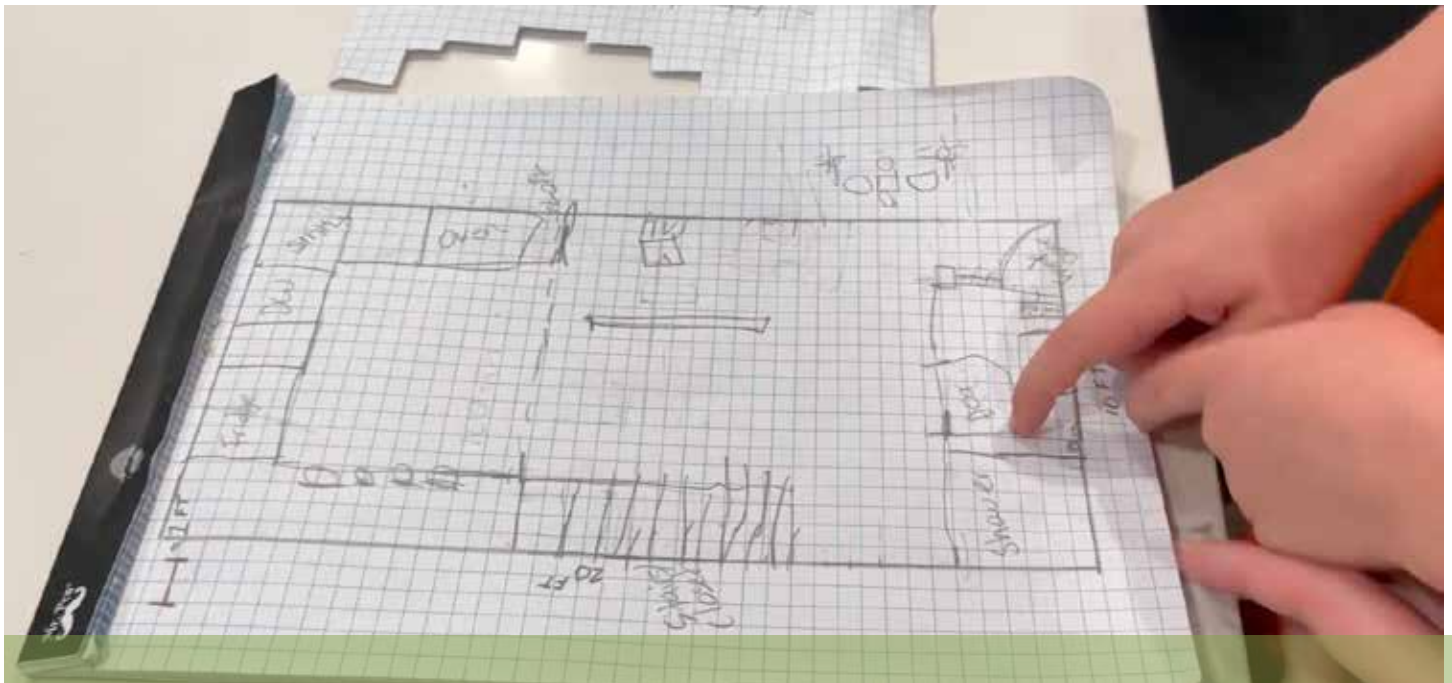
*Find more information
about the author of
this article [here](#)*

Information and Guide:

- Even though this is a tiny house, it's still way too big to draw without using a scale! You may have seen a scale on a map before. It will say a certain distance represents another, usually larger distance. For example, on a map, 1 inch may represent 1000 miles! [Learn more about scales](#)
- For your tiny house plan, your scale will be using 1/2" to represent each foot (12") of space in your tiny house.
- A tiny house is typically between 100 and 400 square feet. That means you need to think about perimeter and area. For example, if I wanted my tiny house to be 200 square feet, my house might be 10 feet x 20 feet and my scale drawing would be 10 half-inch blocks by 20 half-inch blocks on my graph paper. This will equal out to be 5 inches by 10 inches in total.
- Once you decide on your overall size, you can decide what you want to put in your tiny house and draw them in.
- Grab a tape measure, go around your own house and measure things you want to include. Then, figure out how to make them fit in your tiny house space. Think about items in your house you use every day, for example: bed, closet or dresser, bath or shower, toilet, sink, oven/stove, kitchen table.
- Try to be as accurate as possible in your measurements and drawings so everything fits in your tiny house space!

Tip: Start with pencil and eraser as you work on your plan and then color in your design when you're ready.

Share: When your tiny house floor plan is complete, you can scan, take a photo, or create a video to share with others.



Learner-Created Tiny House Floor Plan.

This image is from a video created by one of the learners in my group, giving a video tour of his tiny house floor plan. In his tour, he points out the features included in his tiny house plan. The scale he used is on the bottom left corner of his drawing and then at the very top, there is a glimpse of a (very creative!) cut out he used to overlay a second level loft on his plan. *Shared with parental permission.*



Live, interactive online classes for kids ages 3-18.




480,000+
5-star reviews




100,000+ classes
to choose from




Classes taught by
inspired, vetted
educators




Teachers are great and content is awesome! The plus side is that all classes are kept affordable for families!
-D. Idk



My son (9 yrs. old) has just taken part in an Outschool class, brilliant experience, he can't wait to sign up for another class.
-C. Duncan



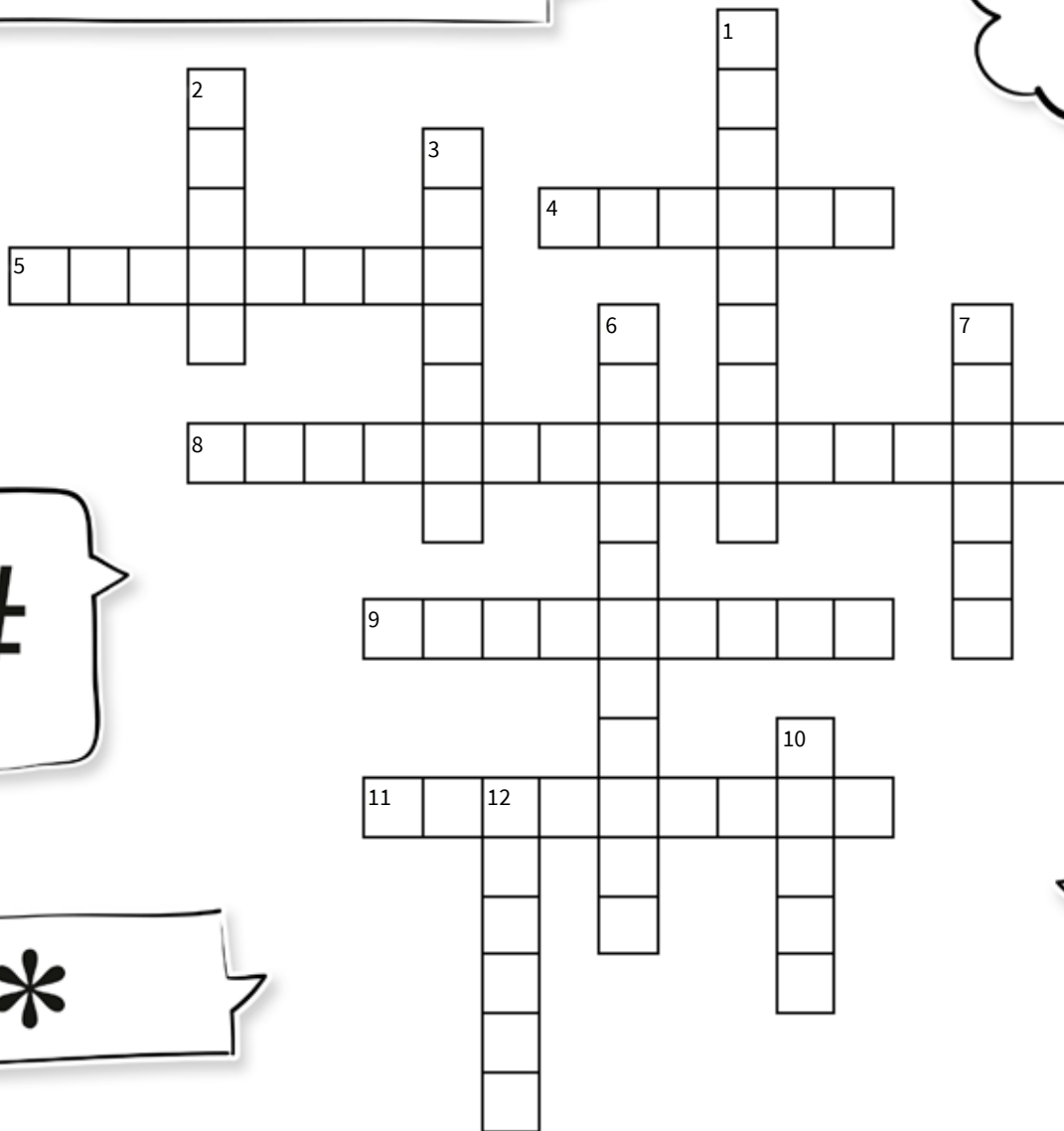
The teachers are supportive, encouraging, patient, and really know how to explain at each kids' level.
- A. Carrizales



Great variety of fun and engaging classes with amazing teachers... all at a reasonable cost!
-L. Shiflett

Find a class your learner will love.
Sign up for free at [Outschool.com](https://www.outschool.com).

PUNCTUATION CROSSWORD



ACROSS

4. Those in the U.K. may call it a "full stop," but Americans know it as this.
5. From the Greek for "omission," this punctuation indicates something has been removed.
8. This exciting punctuation mark didn't get added to typewriters until the 1970s.
9. This used to be the 27th letter in the alphabet, but today we know it as shorthand for "and."
11. If you open it to show who spoke, be sure you close it!

DOWN

1. Useful when you need to create a complex list — or a winking face.
2. The exclamation mark was initially the word "io" in this language, and it meant an expression of joy.
3. The official name for this eight-pointed mark is octothorpe, but Twitter users are more likely to call it this.
6. Got a question that's also shocking? This punctuation mark hasn't quite caught on yet, but it could in the future.
7. Along with White, this author penned one of the most famous style books on the English Language.
10. You use it after introductory phrases, to separate numbers in dates, in serial lists — like this one.
12. Want to start a punctuation debate? Just mention this kind of contested comma.

NEW WEBSITE
COMING SOON



**UP TO 30% OFF ON SELECT
MATERIALS SURE TO ENGAGE YOUR LEARNER**

History Quest

101 Things Everyone Should Know

Online Classes

Paws 4 Logic

Dog on a Log

Historical Fiction

Project-Based Learning

Re-Imagine Education

Books

Webinars

History Odyssey

Conceptual Academy

How to Write a Child

eBooks

T-Shirts

REAL Science Odys

of Climate Change

Be Naturally Curious

Annabelle & Aiden

Magic Forest Acad

Picture Books

Home School Support

Daylo Learning



T-Shirts

Webinars

History Timelines

Coffee Mugs

Simple Machines

SEA BOOKS AND MORE
Truly Secular
Homeschool
Materials & Classes

SEABOOKSANDMORE.COM

Contributor Bios

Blair Lee, MS is the author of *The Science of Climate Change: A Hands-On Course*, the primary author for the critically acclaimed *REAL Science Odyssey Series*, and co-author of *Project-Based Learning: Creating a Modern Education of Curiosity, Innovation, and Impact*. Through her speaking and writing, Blair's goal is to empower educators to dare to be innovative and create something unique and academically-rich when handcrafting their students' education. Blair is the founder of Secular, Eclectic, Academic Homeschoolers and SEA Books & More. In 2020, Michelle Parrinello-Cason and Blair started SEA Online Classes. The classes being developed are a different kind of online class that honor learning in a way that scaffolds the specific needs and goals of each student.

Beth Herrild has a BS in Fine Arts and a Master's in Whole Systems Design. When her three children entered elementary school, she was appalled at the lack of quality visual arts education. So, she became an art docent for over fourteen years, teaching elementary through high school art. In late 2016, she left her full time job and started her business, *Outside the Box Creation*. She believes that you don't have to be a great artist to do art with your kids. In fact, discovering art together actually offers your child more freedom.

Joshua Jernigan (he/him/his) is a transgender rights activist and philanthropist living in the greater Charlotte metropolitan area where he and his husband are raising their daughter together. He started the *Gender Education Network*, an organization helping transgender and gender diverse kids 12 and younger, and is passionate about ensuring every child has a safe and loving home to nurture their growing identities. He also is passionate about accurate LGBTQ+ History and teaches courses on Queer History through *SEA Online Classes*. Most recently he published his first children's books, *Meet My: Best Friend*, the first in a series of books about getting to know our trans loved ones.

Dr. Sabrina Weiss specializes in developing theoretical models that represent the ethical and social dimensions of issues at the intersection of science, technology, and society. Topics of interest include gender and sexuality, discourse theory, bodies and cyborgs, bioethics, food ethics, and innovative pedagogies, as well as the institutional and change dimensions affecting those areas.

Dr. Weiss earned a B.S. from Stanford's Science, Technology, and Society program, an M.S. in Bioethics from Albany Medical College, and a Ph.D. in Science and Technology Studies at Rensselaer Polytechnic Institute and is a former U.S. Naval Officer (ROTC) who served overseas in Japan and at the Office of Naval Research. An interdisciplinary and international scholar, Dr. Weiss has taught at Rochester Institute of Technology, which houses the National Institute for the Deaf, and at Leuphana University in Lüneburg, Germany. Dr. Weiss is a coauthor of *Worlds of Science-Craft: New Horizons in Sociology, Philosophy and Science Studies* (2009).

Sydney Miller Milbert has a background in the fine arts and graduated with degrees in fashion design and marketing. Changing paths after graduation, she worked for an international education technology company in content production and community building, where she developed an interest in project-based and collaborative learning for school-aged learners.

Sydney has taught classes and led clubs for learners aged 4 to 12, where she focuses on connecting learners not only with the subject of study, but with each other. She teaches with NICE Circle, the 501c3 non-profit homeschool support organization that she founded in her area, and SEA Online Classes. Sydney lives in the Washington, DC metro area and has been homeschooling her children for over 5 years. She also works with the SEA Homeschoolers Online Conference Series team and is currently illustrating an upcoming book with author Blair Lee.

PUNCTUATION CROSSWORD

Answer Key

