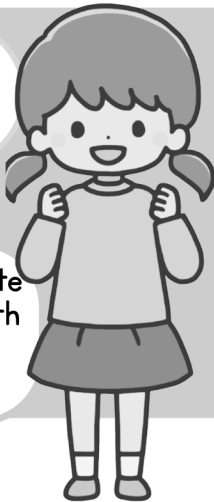


# Color to Discover: Curious about Diversity

**Celebrate your uniqueness, learn about DNA and the science of skin color!**

Hello!  
I'm Lily.  
Nice to meet  
you.

Grab your favorite  
thing to color with  
and hang out  
with me!

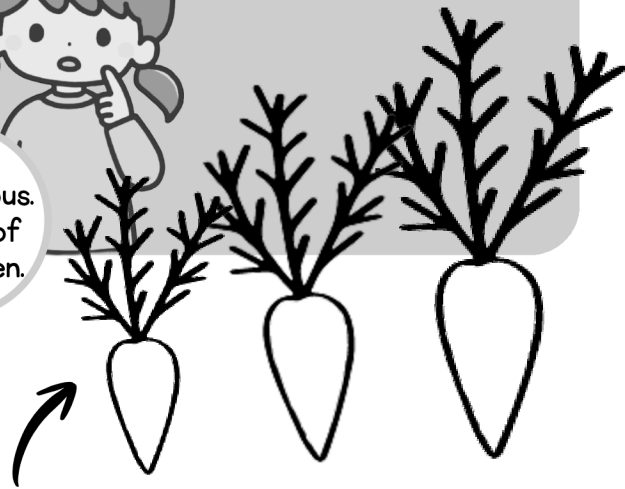


When I meet  
someone, I get super  
curious about them. I  
wonder what it's  
like to be them.

Each person  
is kind of mysterious.  
They remind me of  
carrots in a garden.



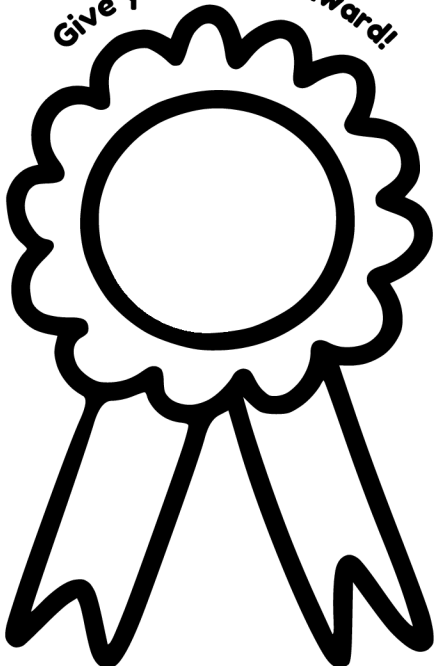
You can see the leafy  
parts sticking out of the  
ground, but there's a whole  
delicious carrot to get to  
know under the dirt.



**Give these carrots faces!**  
**The sillier, the better!**

Like, if you just look at me, you might not guess  
that one of my talents is that I can pick up  
almost ANYTHING with my toes.

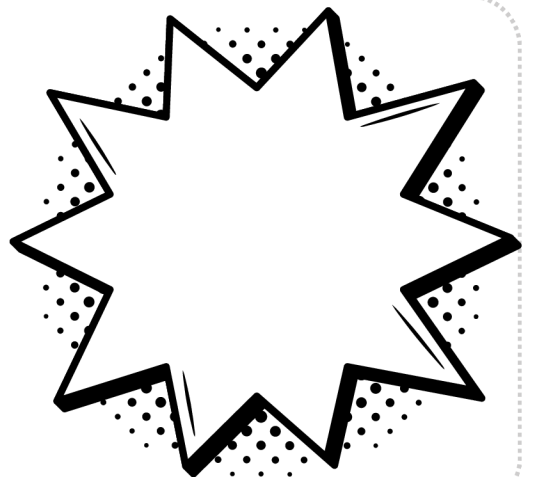
**What are your talents?**  
**Give yourself an award!**



You might not guess that every day on our way to  
school, my older sister calls me a slowpoke, and I  
daydream of one day being able to fly right past her.

**What  
superpower  
do you wish for?**

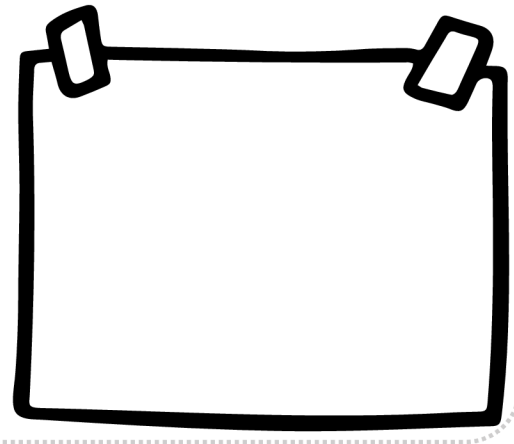
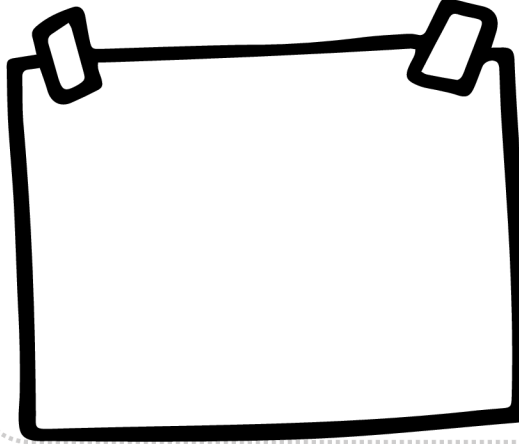
**Write or  
draw it here!**



You might not guess that my parents were born on opposite sides of the world from each other, and that when my mom takes us to the grocery store, people get really curious about us.

Partly it's because 5 kids is a lot of kids for one family.

**Write or draw 2 things that people might not guess by looking at you!**



It's also because we don't look a lot like our mom. Don't worry, we're not aliens or anything (though that would be cool).



Our hair is a totally different color, and our eyes are a different shape than hers. It feels odd when people stare or ask questions, because we feel normal, but people see us as unusual.

**It's not easy being a kid!**

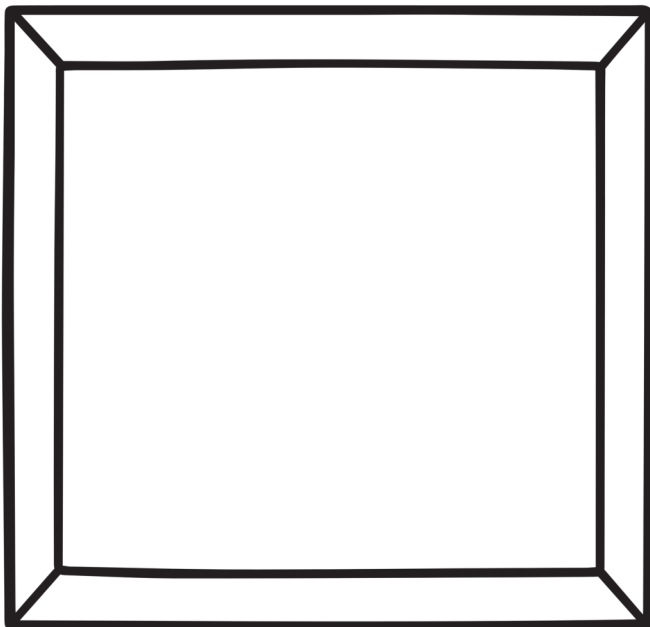


**But I guess that's part of being a kid - sometimes things don't make sense.**



We start out as babies, not really knowing anything except how to cry & look cute.

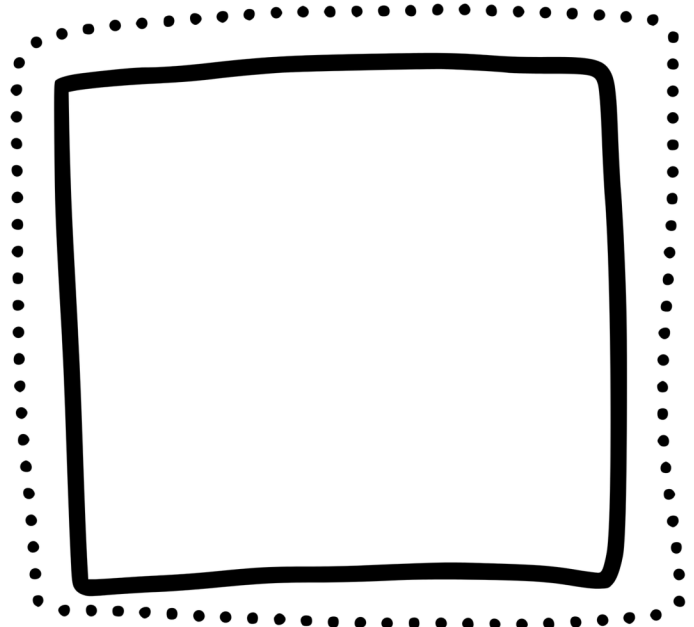
We're like little sponges - we have to learn everything!



**Draw yourself as a baby here!**



We learn all about the people and the things around us.



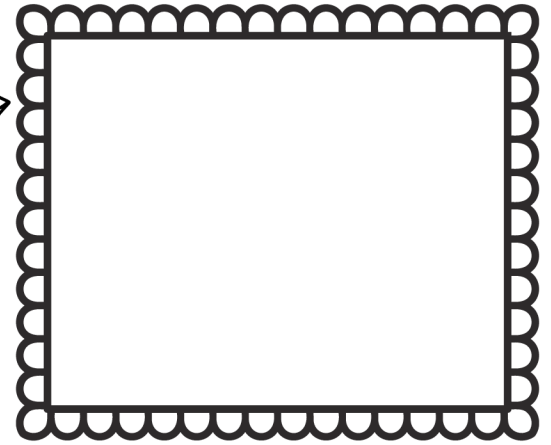
**Draw someone you love here!**

## We learn about ourselves!

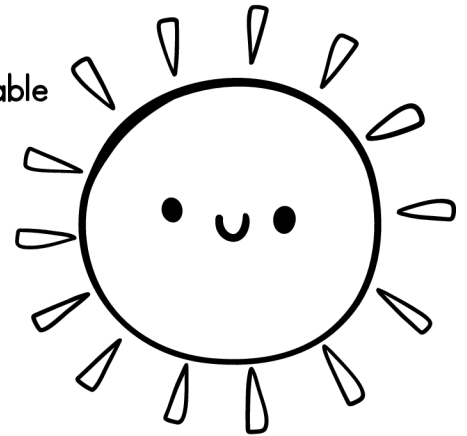
### What do you like to do?

|                          |                    |
|--------------------------|--------------------|
| <input type="checkbox"/> | Running            |
| <input type="checkbox"/> | Dancing            |
| <input type="checkbox"/> | Making stuff       |
| <input type="checkbox"/> | Being with family  |
| <input type="checkbox"/> | Playing outside    |
| <input type="checkbox"/> | Listening to music |
| <input type="checkbox"/> | Eating             |
| <input type="checkbox"/> | Hugging a stuffie  |

**Draw yourself  
doing something  
you love to do!**



We learn unbelievable stuff like even though it looks like the Sun is moving across the sky, we're the ones moving.



We learn that we are **tiny!**

Earth is tiny compared to the Sun (over ONE MILLION Earths could fit inside the Sun), and the Sun is tiny compared to the galaxy.

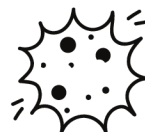
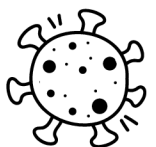
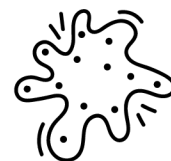
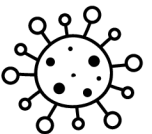


... and our Sun is just one star in the Milky Way galaxy, which is just one small galaxy in the universe.

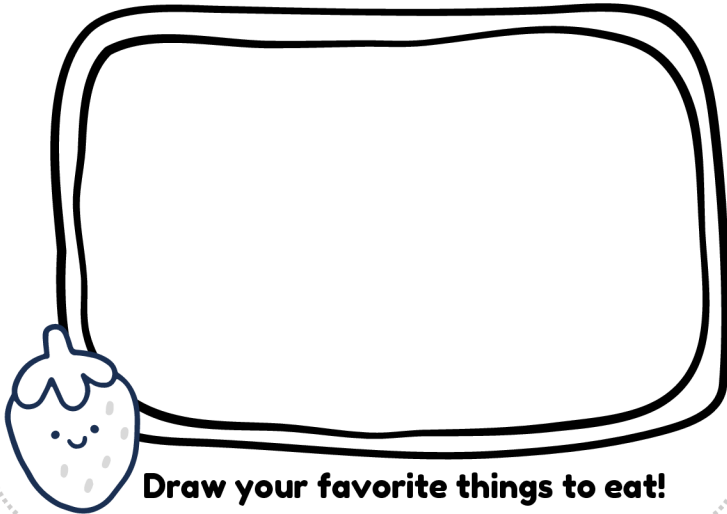
We learn that we are

**gigantic!**

We share our bodies and our environments with millions of teeny tiny things that are so small we can't see them.



We learn all about food!



**Draw your favorite things to eat!**

What if there were  
an ice cream tree?



*Draw your favorite treats on the tree.*



We don't have lollipop trees yet, but  
there is an amazing variety of apples!

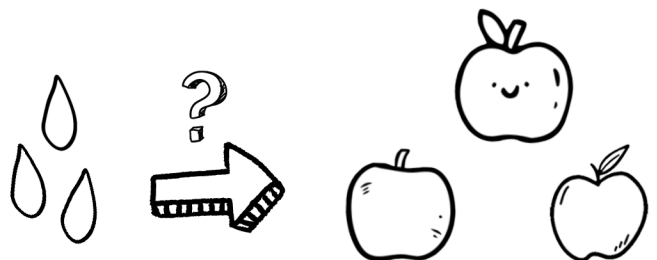
**Color these to make  
them look like your  
favorite kinds  
of apples!**



**How do you like your apples?**

|                          |                |
|--------------------------|----------------|
| <input type="checkbox"/> | A little sweet |
| <input type="checkbox"/> | super sweet    |
| <input type="checkbox"/> | crisp          |
| <input type="checkbox"/> | soft           |
| <input type="checkbox"/> | juicy          |
| <input type="checkbox"/> | sour           |
| <input type="checkbox"/> | tangy          |
| <input type="checkbox"/> |                |

How do the apple seeds know  
which kind of apple to make?

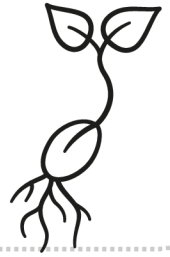


It's wild.

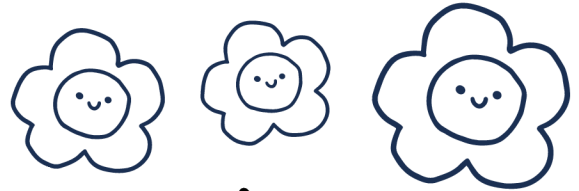
Each apple seed contains a baby plant that has an entire cookbook full of recipes for how to make an apple tree.



Once the seed is in a good spot, with enough light, water, and air, the seed opens its cookbook and starts following the recipes.



There are recipes that tell the apple plant how to make roots, branches, bark, tubes, leaves, flowers, sugar, and more!



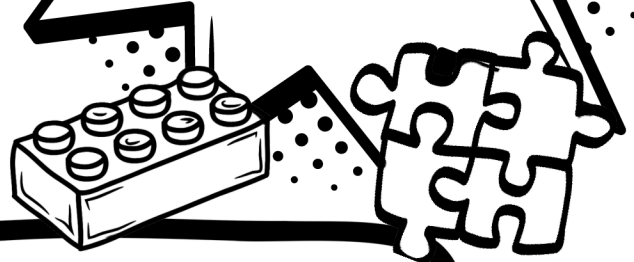
Even apples, which seem pretty simple compared to animals like dinosaurs or octopuses, are complicated!

All living things have recipes - and we all use the same language.

It's called DNA.

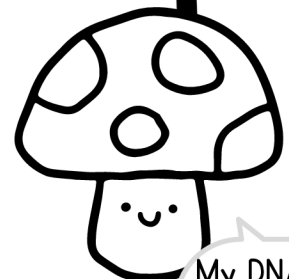


Instead of a written or spoken language, the language of DNA uses shapes to communicate. It's kind of like a bunch of blocks or puzzles.



**Draw some of your favorite animals!**

Every living thing has its own cookbook full of recipes and instructions!



My DNA told me how to grow!

Me too!

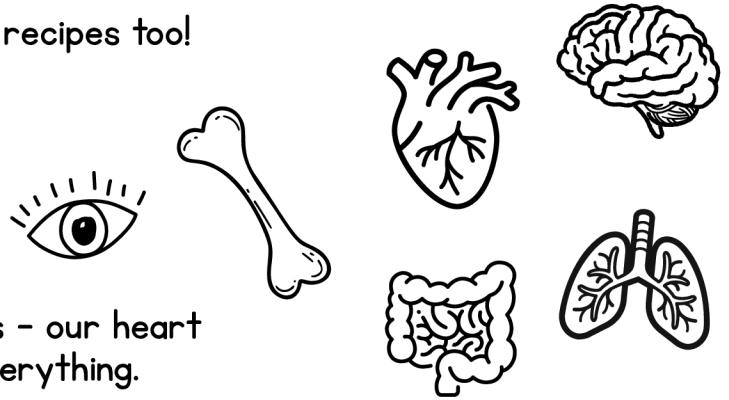


Each person has a whole cookbook full of recipes too!

Everything that we can see on the outside like hair and noses and arms...

Plus way more stuff on our insides!

We have recipes for all of our body parts - our heart and lungs, brain, bones, eyes, muscles - everything.

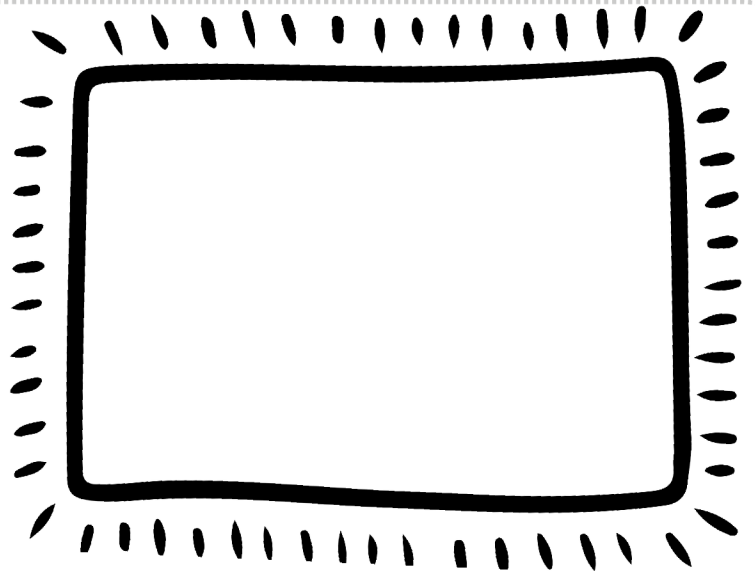
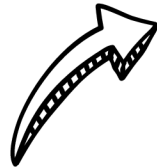


YOU have your very own cookbook.

You are **unique**.

There's no one else like you!

**Draw or write about  
your favorite part of you!**



Our bodies are so cool!

Did you know ...

- ☐ Livers can regenerate!
- ☐ Stomach acid can dissolve metal.
- ☐ Laid end-to-end, an adult's blood vessels would circle Earth 2 times.
- ☐ Humans have 206 bones.
- ☐ Our bones are stronger than steel.
- ☐ Smallest organ: Pineal gland
- ☐ Largest organ: Skin

### Our Skin

Waterproof!

Keeps germs out!

Helps keep our bodies the right temperature!

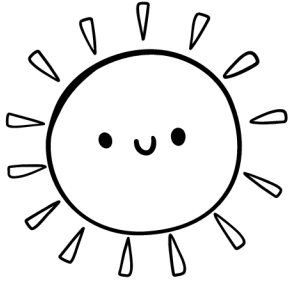
Helps us explore the world by sensing temperature, texture, pressure, and more!

Makes Vitamin D for strong bones.



Our skin is amazing, and it has a bunch of different layers and parts. Plus, there are at least 169 recipes just for mixing your shade of skin!

Why do we have different shades of skin?



**It all has to do with sunlight.**

- Sunlight is super powerful. It's literally sending energy down to Earth.
- Plants need it, and we need plants.
- We also need it to make Vitamin D, super important for helping us grow and stay healthy.

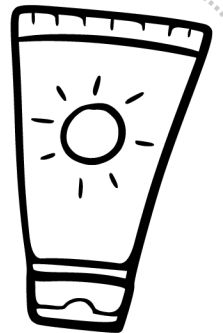
### Cool facts about the Sun

|                          |                                                                              |
|--------------------------|------------------------------------------------------------------------------|
| <input type="checkbox"/> | Sunlight travels about 93 million miles to get to Earth.                     |
| <input type="checkbox"/> | It only takes 8 minutes for the light to get to Earth.                       |
| <input type="checkbox"/> | It's about 27 million degrees F in the center of the Sun.                    |
| <input type="checkbox"/> | The Sun is 20.5 years old (it's traveled around the galaxy almost 21 times). |

**But, sunlight so strong that it can break our DNA, or recipes - and that can hurt us.**

So, to protect us from getting hurt from the Sun, our bodies make **sunscreen!**

**The name for the sunscreen we make is called melanin.**



People with dark skin make a lot of sunscreen.



And people with lighter skin make less sunscreen.



People with really light skin make only a little bit of sunscreen.

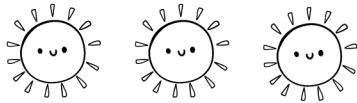




Why do people make different amounts of sunscreen?

It all has to do with protecting our recipes, or DNA, from harmful sunlight, while getting enough sunlight to make Vitamin D.

## Not all places on Earth get the same amount of sunlight.



Places near the Equator get a lot of really intense sunlight throughout the whole year.

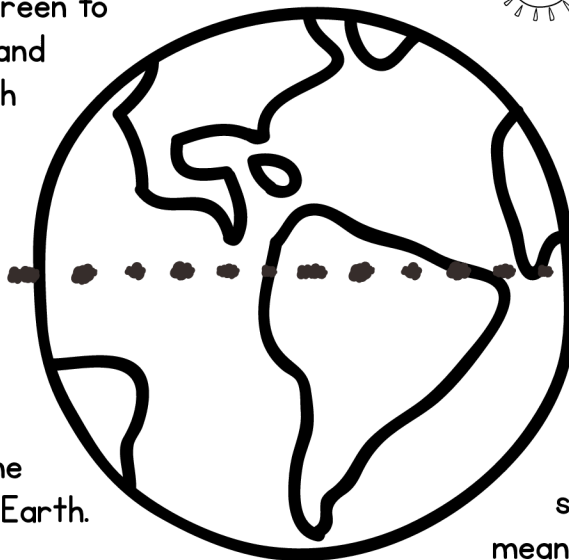
People living near those places need a lot of sunscreen to protect their skin, and they still get enough sunshine to make Vitamin D.



Other places on Earth don't get much sunlight during some parts of the year, which means it's harder to make enough Vitamin D.

People living in areas that don't get a lot of sunshine don't need a lot of sunscreen. Having less sunscreen means they can absorb sunshine more easily to make Vitamin D.

People made up an imaginary line called the "equator" to talk about the top and bottom halves of Earth.



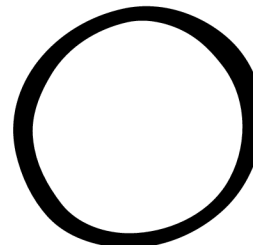
And when people are exposed to more sunlight, like when they travel or they get more sunlight in the summertime, then their bodies **MAKES MORE SUNSCREEN** to protect them! Amazing!!

## How much sunscreen do **YOU** make?



No matter how dark or light your skin is, your skin is amazing just as it is.

There's no such thing as "too light" or "too dark," too much or too little sunscreen!



**Do your best to color this circle with the same shade as your own amazing skin!**

If your skin makes a lot of sunscreen (is a rich, dark brown), your ancestors probably lived somewhere near the equator.



If your skin makes only a little sunscreen (is a pale, light shade), your ancestors probably lived north or south, far away from the equator.



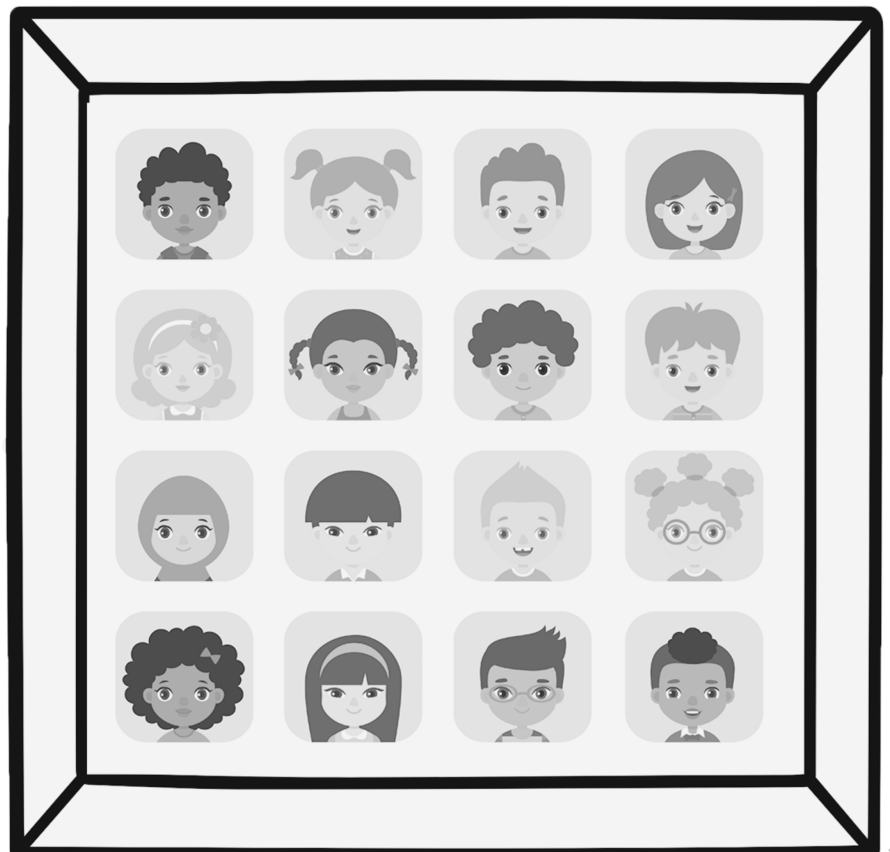
If you have the same shade of skin as someone else, does that mean you're more related to each other?



Look at this group of kids and take a guess about whose entire cookbooks are most similar to each other.

Use green to circle kids who might be the most closely related.

Use blue to circle kids who might be the least related.



Did you guess - like me - that the kids with similar shades of skin would be more related?



If you did, that makes sense! We learn to group things together by color all the time. That's how we know that green apples are sour.

This is totally counterintuitive - completely opposite of what it looks like.

Each person is mysterious. We can't guess what someone is like or where they're from by looking at them - we have to get to know each other!

## How can that be?

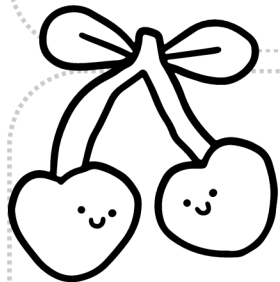
The recipes for skin color are just a few out of the thousands of recipes we have. We can see the results of these recipes. We can't see the results from the thousands of recipes that make up most of us.

Even if our recipes for how much sunscreen we make are different, that doesn't mean ALL our recipes are different.

You see, each of us has about 24,000 recipes in our cookbooks.

Even though we all might look different from each other, with different voices, and noses and eyes and skin colors and personalities, almost all of our recipes are the same - 99.5% of them.

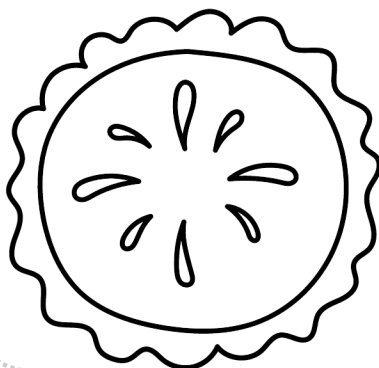
Only a tiny number of recipes, 0.5% of our whole cookbooks, account for ALL the amazing differences between each other that we see and notice.



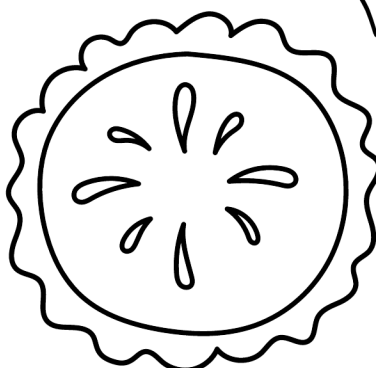
To help us understand this, let's imagine cherry pies.

## How many recipes to make YOU are different from someone else's recipes?

Imagine a person who looks completely opposite from you in every way. Here's their pie full of their recipes.



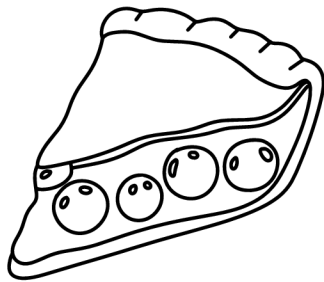
Imagine that this pie represents your cookbook full of recipes.



**Take a guess!**  
Imagine how much of your pie, or recipes, would be different from the other person's pie, or recipes.

Color in some of your pie green to show how much would be the same as someone else's and color in some of the pie blue to show how much would be different.

Believe it or not, not even one slice would be different.



Something like only one cherry from the whole pie would be different. The rest of the recipes, or pie, would be exactly the same.



This might feel really surprising, because we're so used to putting things into different categories.

It's something human brains are really good at!

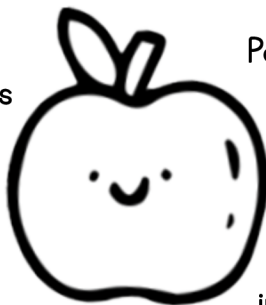


Putting things in categories helps me use less energy and think faster!



But when we put people into groups based on what they look like, it isn't helpful.

With apples, the color of the apple's skin tells you something about how the apple tastes, and you can predict how the apple will taste based on what its skin looks like.



People are not the same as apples. When you see a person, the only thing you know about them is how much sunscreen, or melanin, they make. People's skin color, eye, nose, and lip shapes and anything else about their bodies - don't give you any information about their personalities, interests, talents, stories, cultures, or skills.

Of course, even though almost all of our recipes are exactly alike, we are each also wonderfully unique!

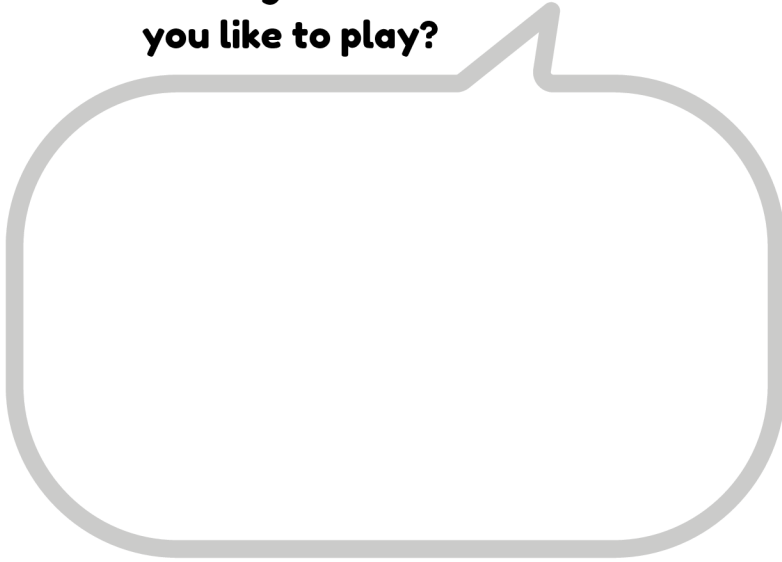


We are the same  
and  
we are different!



Write or draw pictures in each speech bubble  
to show some of the things that make you unique!

**What games do  
you like to play?**



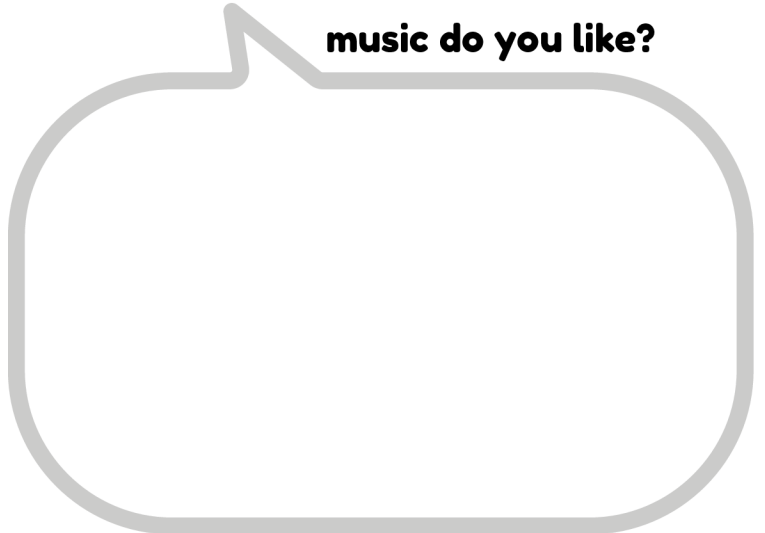
**What do you like to  
do with your family?**



**What makes you laugh?**



**What kind of  
music do you like?**



**What do you like to read?**

