Why Don't I Look Like a Fish?

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www.ctahr.hawaii.edu/biotech
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Illustrated by Gayle Hori

I ask a lot of

questions because

I want to know...

Why are we different?

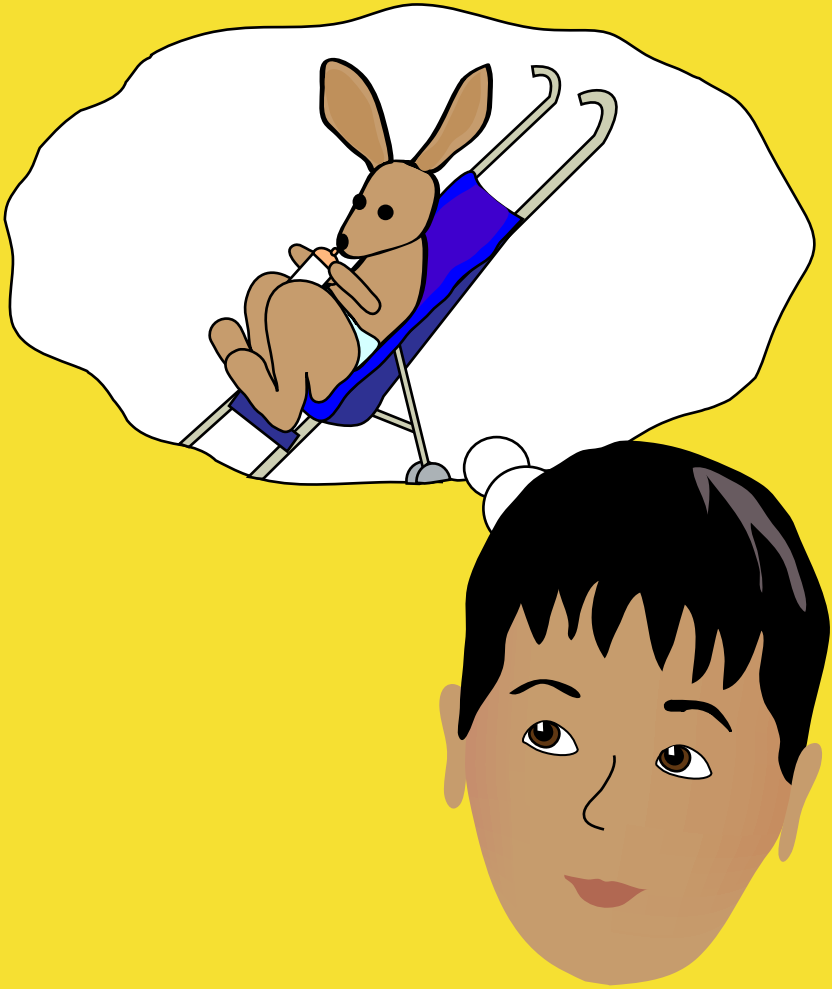
What tells us how to grow?

Why did mom have me

and not a kangaroo?

Why don't I look at all

like the creatures at the zoo?

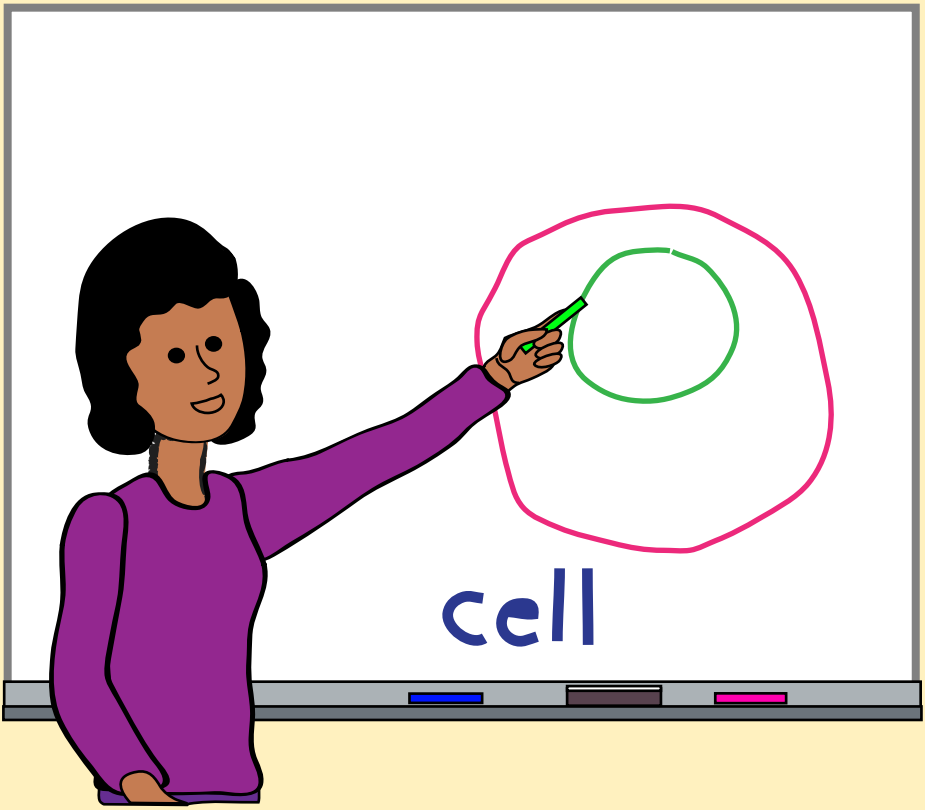


My science teacher told me

we all start as one cell.

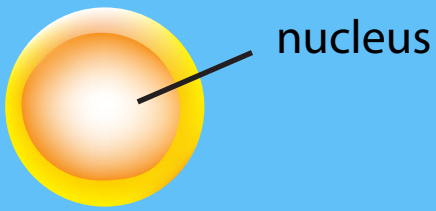
Fish and birds and bugs do,

and flowers do as well.

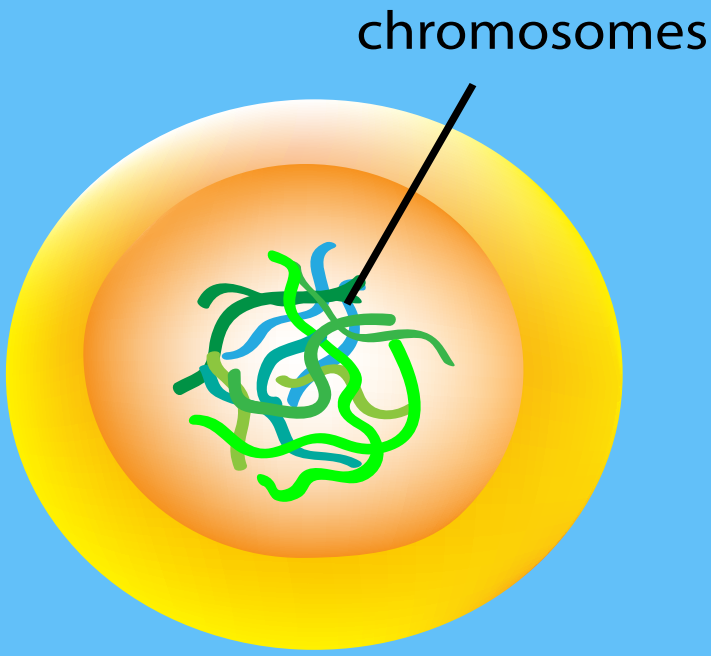


The cell must be the place
where all the info hides.

I will use a microscope
to see the cell's insides.



I looked into the microscope
and saw a tiny cell.
In the middle was the nucleus,
like a pearl within its shell.

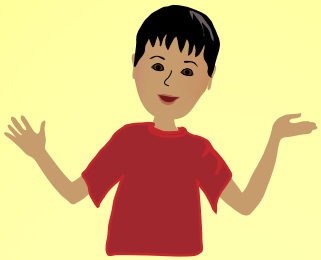


I zoomed in a little closer

and this is what I got.

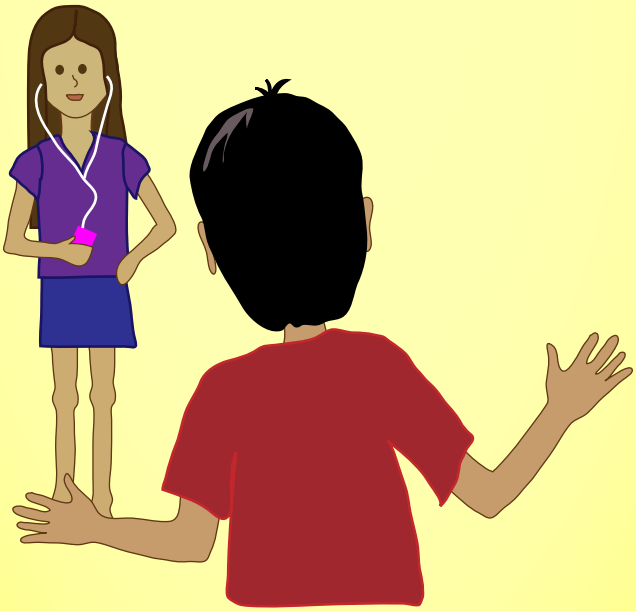
A bunch of stringy chromosomes

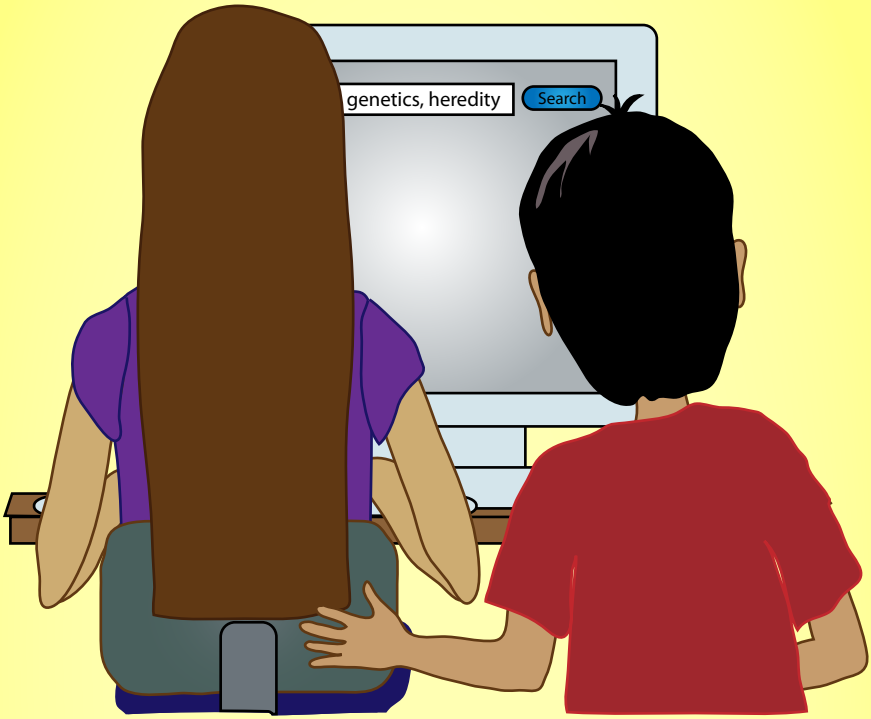
like noodles in a pot.



How do the chromosomes
know just what they should do?
How do they make my eyes
look green or brown or blue?

I said, "Sis, I need some answers."
She said, "Don't have a fit.
I will go to my computer,
and quickly google it."



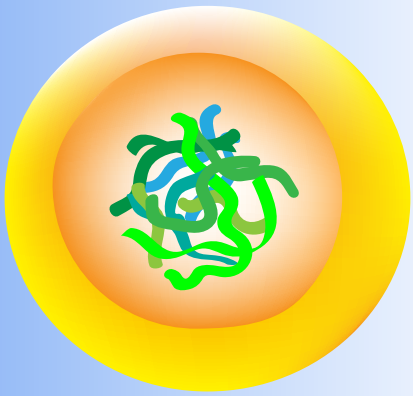


With a few clicks of the keyboard,

she looked it up for me.

Her search words were genetics

and heredity.



DNA

De-ox-y-ri-bo-
Nu-cle-ic
Acid

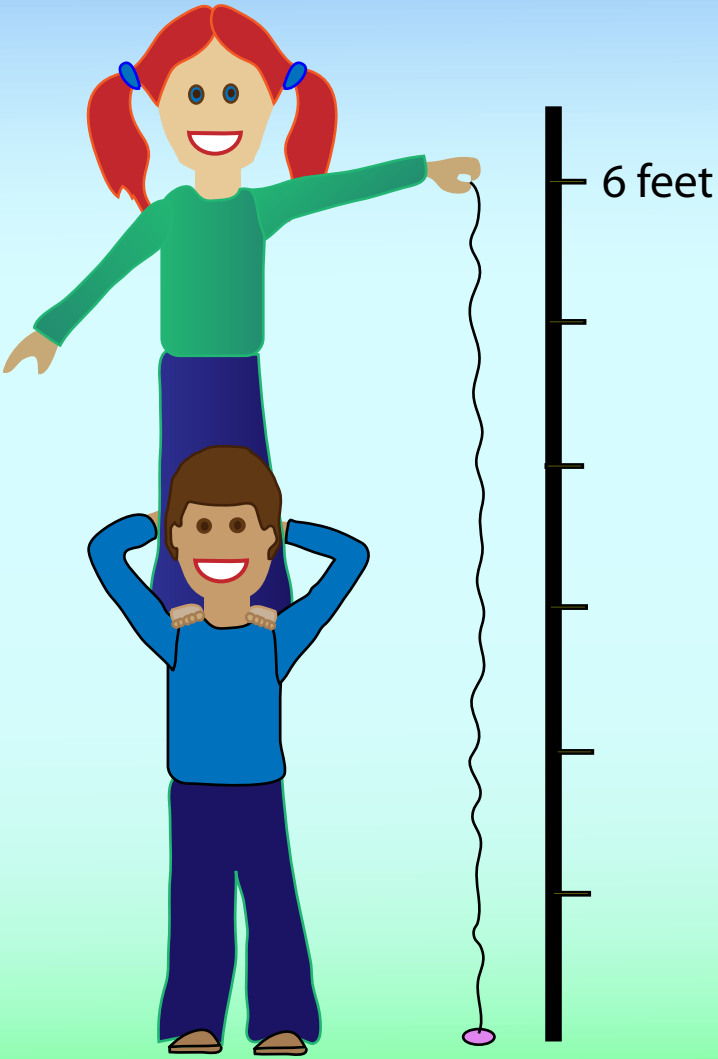
The chromosomes are long pieces

of stuff called DNA.

De-ox-y-ri-bo-nu-cle-ic acid,

a big mouthful to say.

(dē-ox-ē-rī-bō-nū-clā-ic)

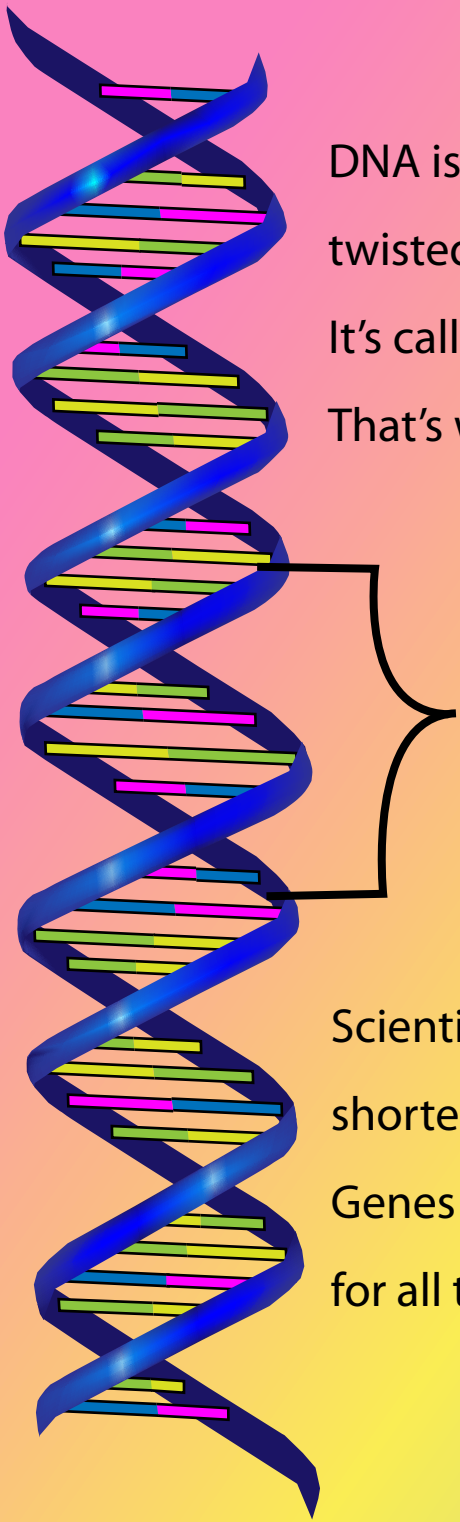


DNA is long and thin

and wraps up nice and neat.

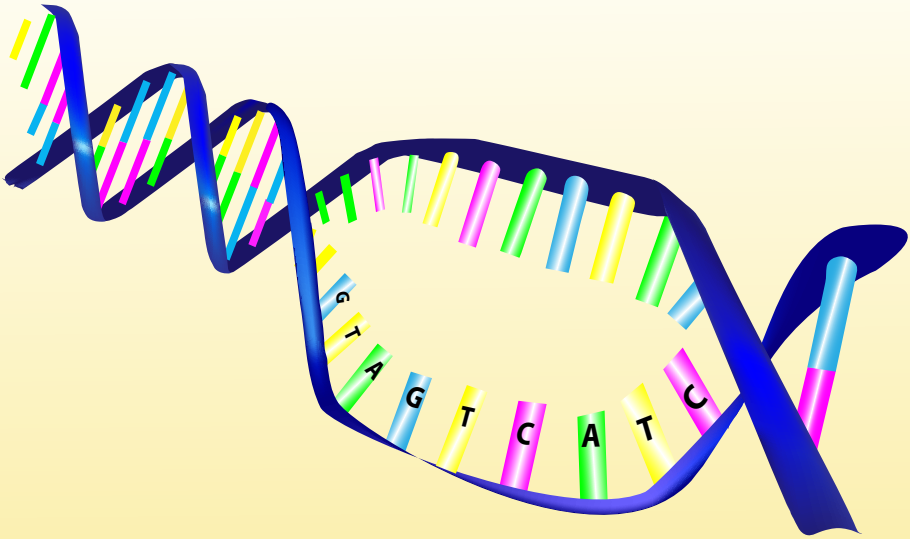
From each tiny little cell,

it can stretch out to six feet.



DNA is like a ladder
twisted round and round.
It's called a **double helix**.
That's what my sister found.

Scientists like to study
shorter parts called genes.
Genes hold the information
for all the traits you've seen.



Each step of the ladder
is made up of one pair.
When the ladder unzips,
a code is written there.

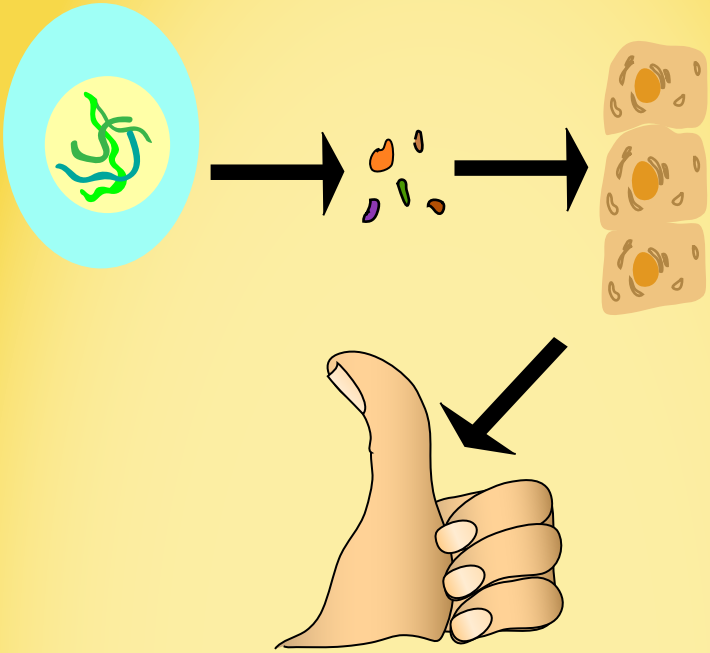
A gene is quite simply
a protein recipe.
Written in 4 letters,
A, T, G, and C.

So now I have the answers

for how I came to be.

DNA holds the info

for the person that you see.

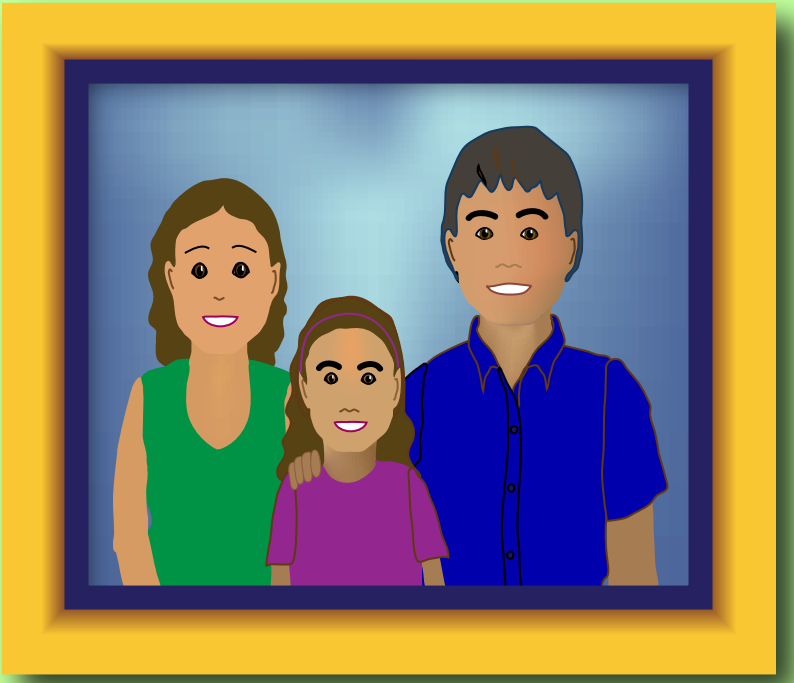


DNA tells the cells

which proteins they should make.

Those proteins then combine

and you see a trait.

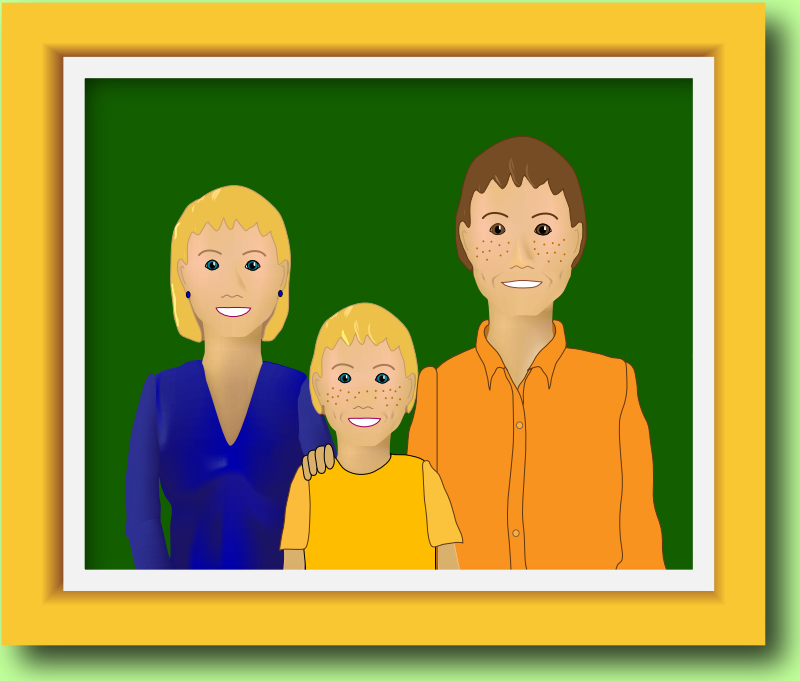


Your DNA came to you

from your mom and dad.

Half came from each,

they passed down what they had.

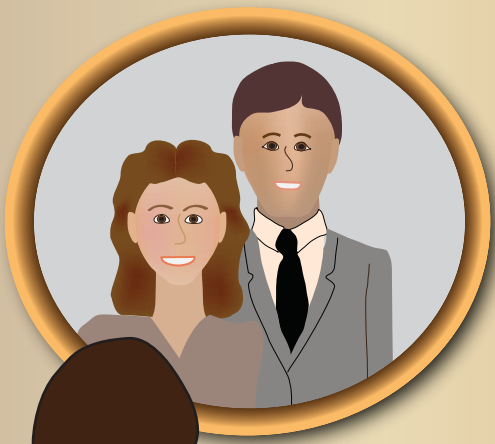


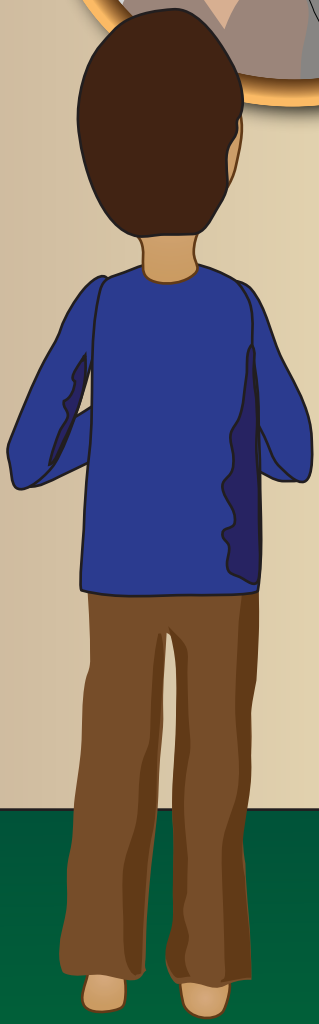
Your parent's genes gave you

the freckles on your nose,

the dimples on your cheeks,

and the length of your big toes.



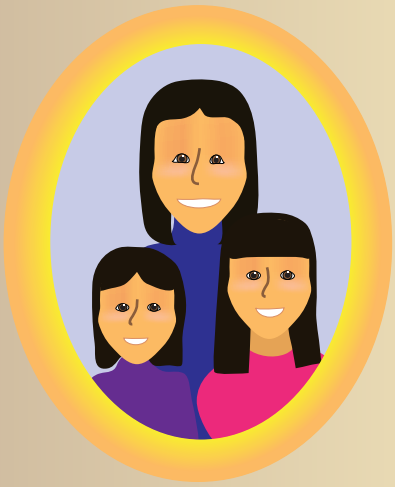


Looking at old photos

can give you some clues.

Genes that your parents got

are ones that you might use.



You can’t look like a donkey,

so forget your fears.

Unless...

...your Great-Grandpa Joe

had humongous ears!!!

A boy wonders why we do not
look like animals.
This simple introduction to genetics
explains that we are different because we have
our own unique DNA.

College of Tropical Agriculture and Human Resources

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