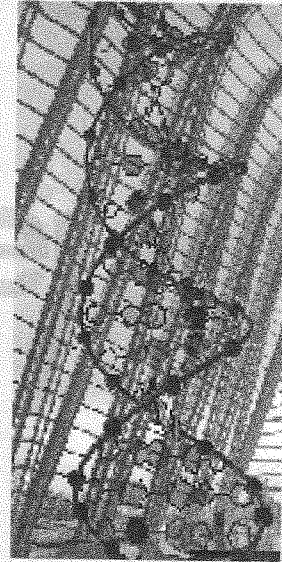
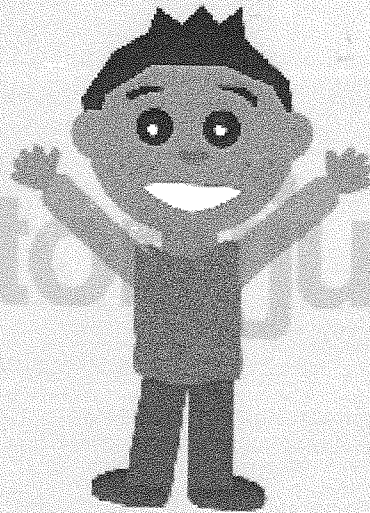
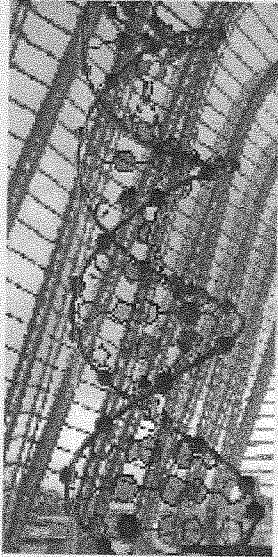
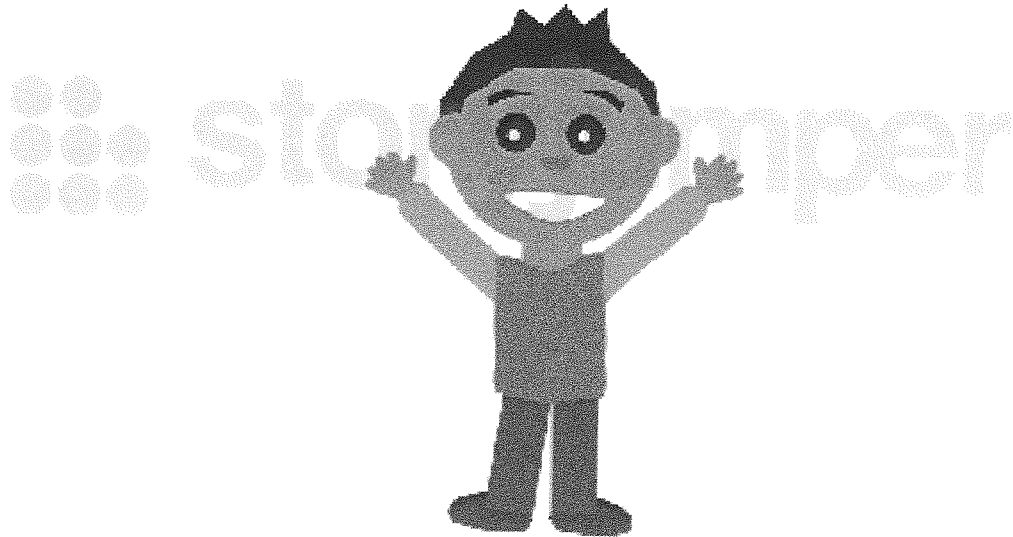


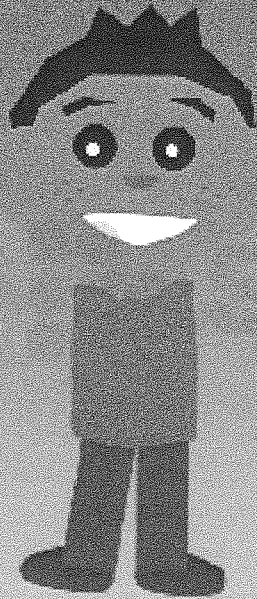
WHO AM I?



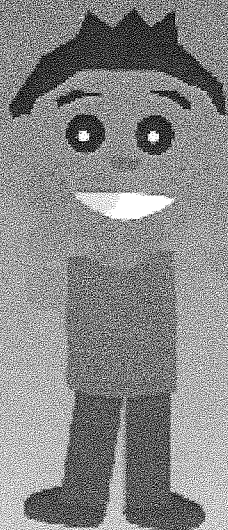
An introduction to Genetics

This is Tom! Tom is a curious little boy and lately, he's been asking questions about why he looks like he does!

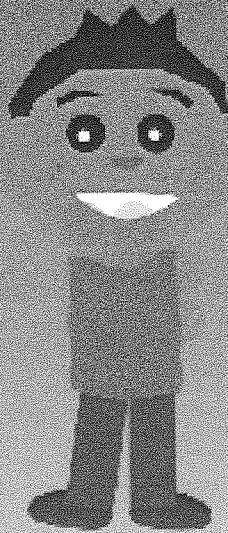




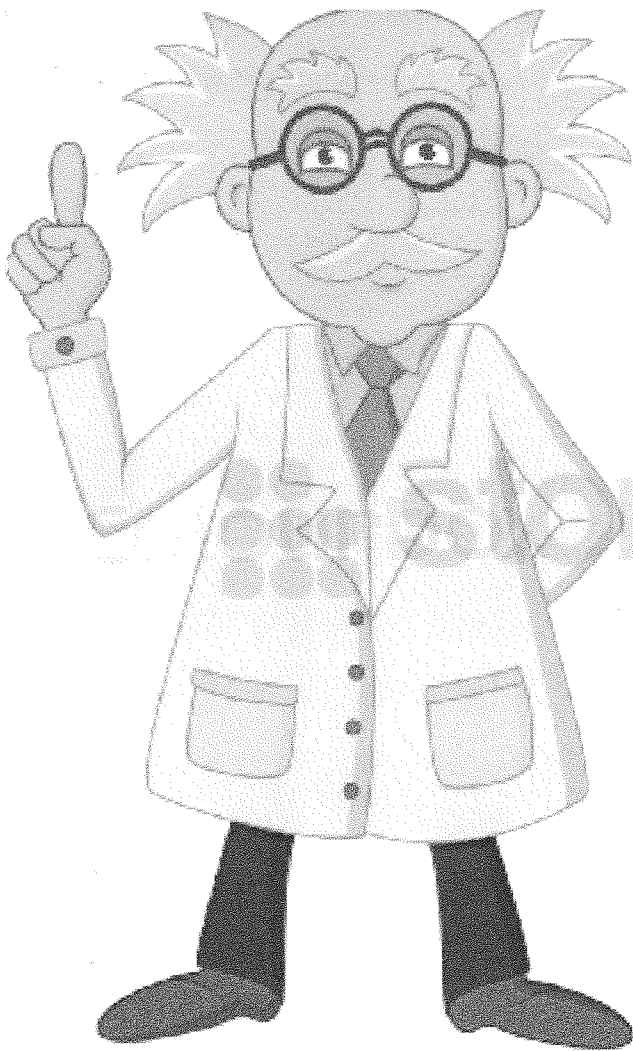
Why do I
have brown
eyes?



Why do i
have black
hair?



Why do I
have
freckles?



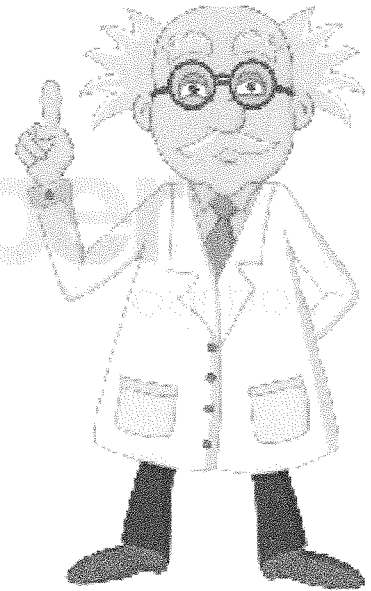
So Dr. Science
decided to
teach him a
little lesson on
a big subject
called
GENETICS.

GENETICS teaches you about what makes you you!

To start, let's talk about something called **deoxyribonucleic acid**.

This is a scary word but you can say it like this:

Dee-OCK-see-rye-boh-NEW-klay-ick acid.





It looks difficult, but kids,
say it with me. I promise it
works!

Dee-OCK-see-rye-boh-NEW-
klay-ick acid - PERFECT!

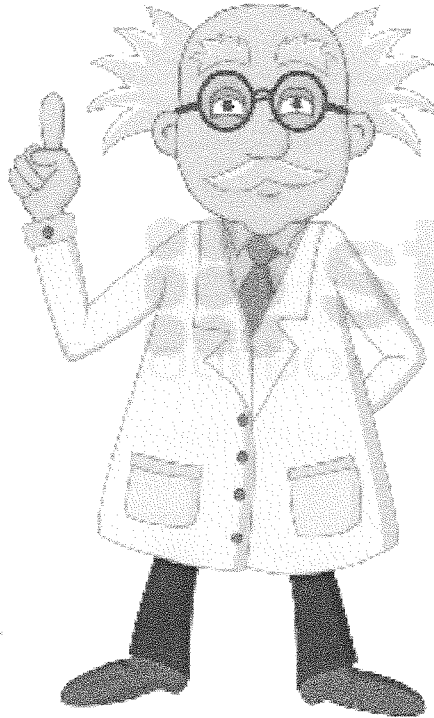
This word can also be
shortened to **DNA**.



OK!!

So, Dr.

Science, what
does DNA do?



Good question Tom!

DNA is a molecule that contains water, sugar and fats and they all help you develop, survive and reproduce!

You can find DNA inside something called a CELL!

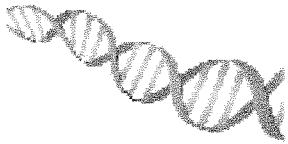
I will tell you more about what a CELL is later! But first, this is what DNA looks like:

Here is a BIG version of what DNA looks like, it is shaped like a ladder twisted into a spiral shape!

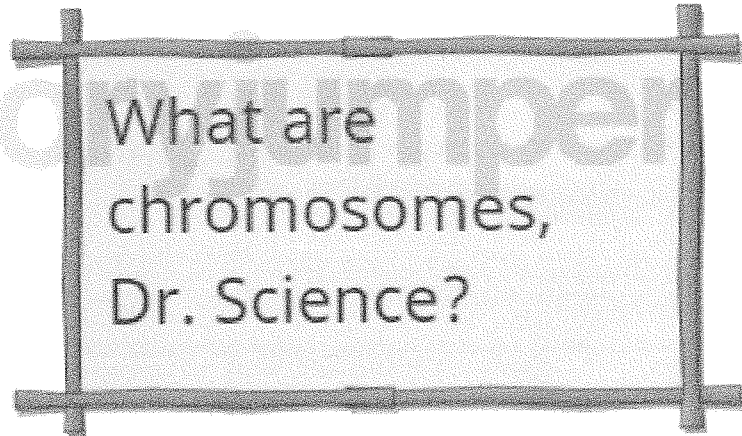
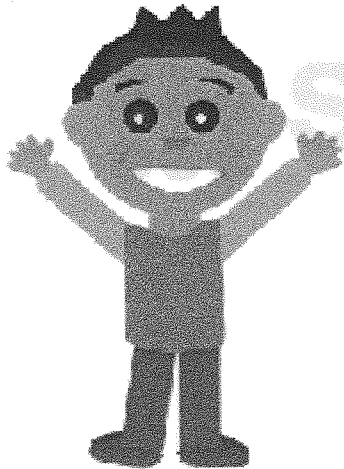
There are millions of these in your body and they are identical.

Go on, have a look:



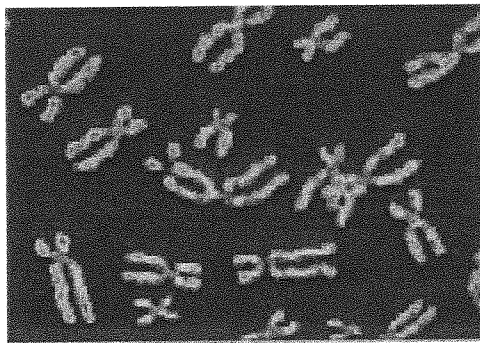


DNA are all tightly curled and packaged into thread-like structures called **chromosomes**.



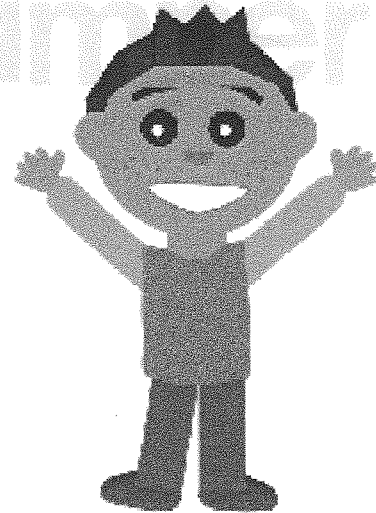
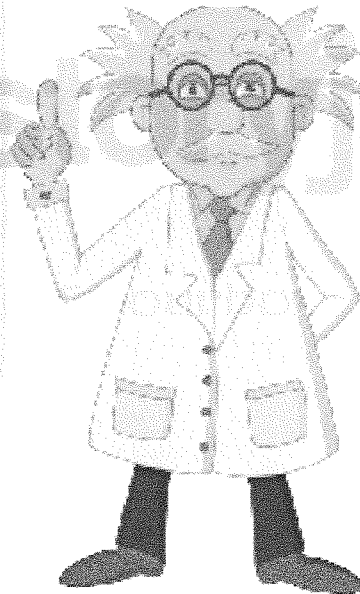
Another great question Tom!

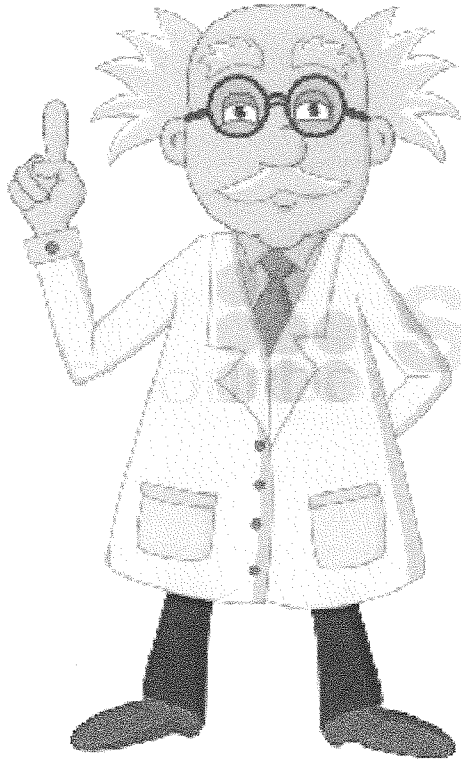
So chromosomes are made up of lots of DNA molecules tightly packed together and they end up looking like this:



So do you
remember
asking earlier
why you have
black hair,
brown eyes
and freckles?

YEAH! I
remember!





Well, the reason for this is because of something called **genes**.

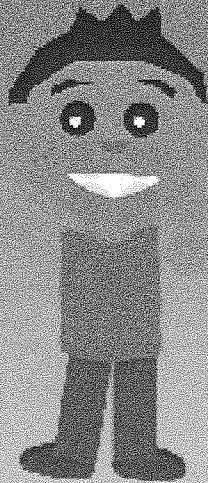
Genes are sections from the DNA so if you take a section from the DNA, that section will explain a genetic trait of yours.

So if I picked one section, it would show me your eye colour; another section will show me your hair colour.

Here, let me show you! Look at the DNA structure here, if i choose the red section, it would tell me about your hair colour and if i choose the blue section, it would tell me about your eye colour!



storyjumper

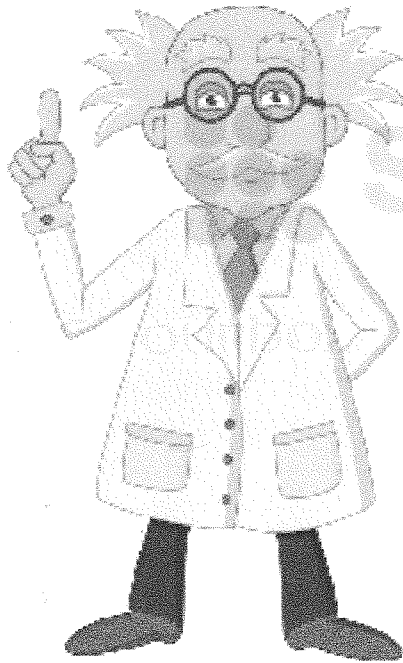


That's so cool!

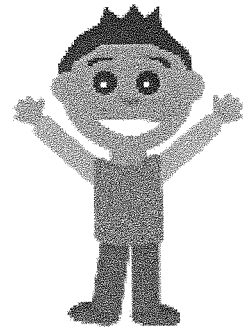
So where can I find
chromosomes and genes, Dr.
Science?

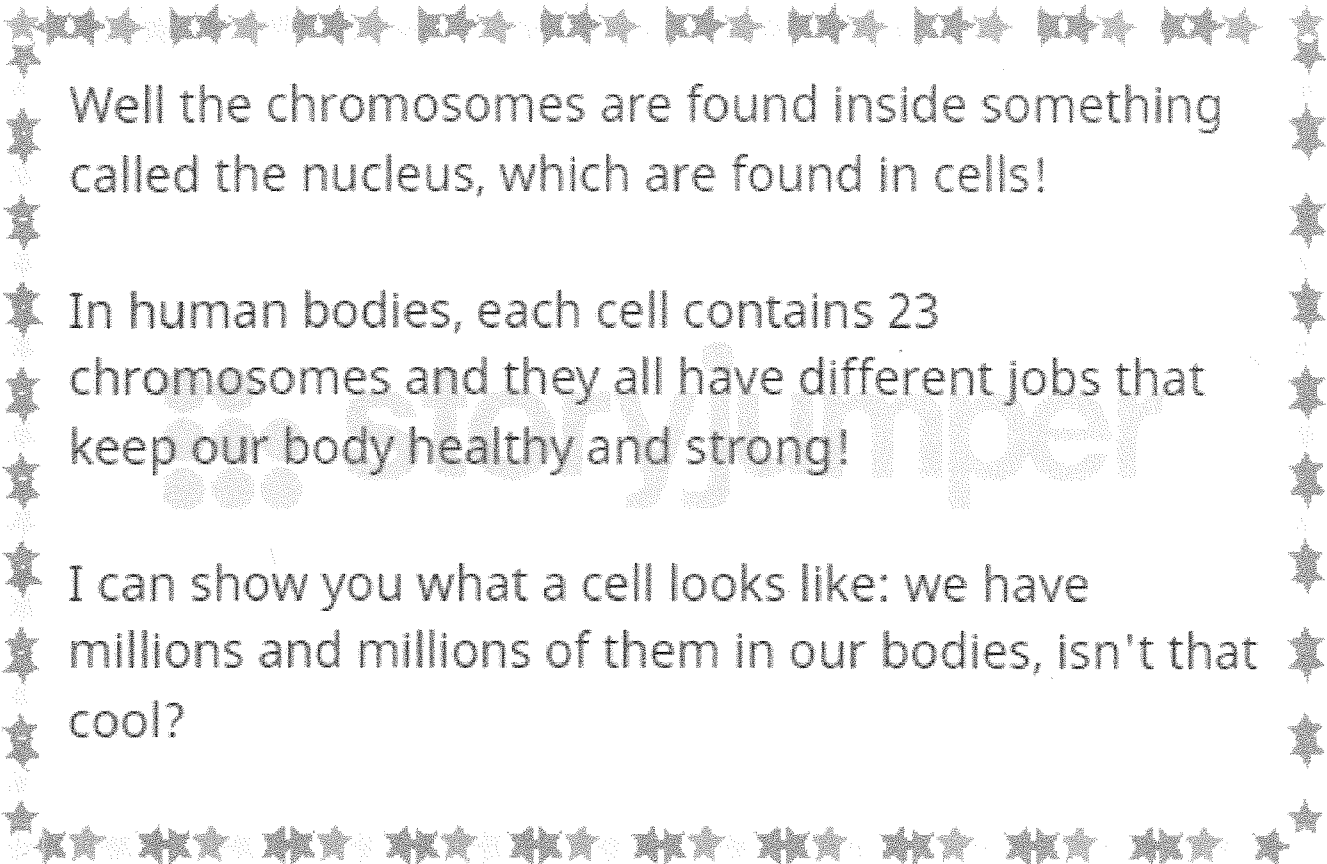
Wow Tom, you are on fire!
Another great question!

So do you remember
something called cells I
was talking about earlier?



Yeah I do!



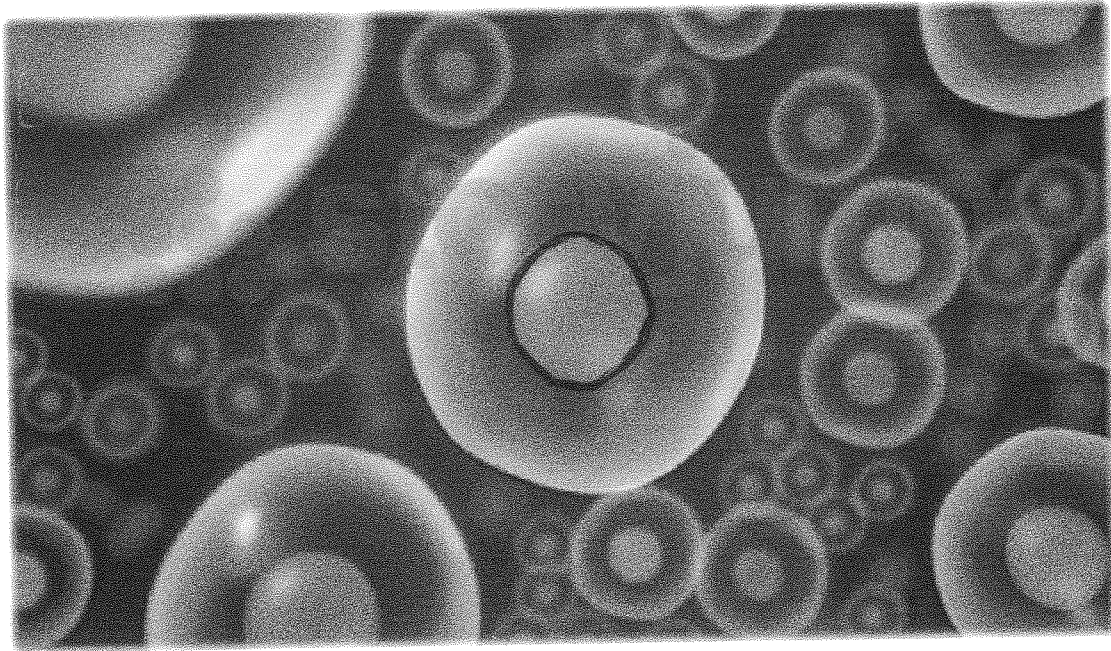


Well the chromosomes are found inside something called the nucleus, which are found in cells!

In human bodies, each cell contains 23 chromosomes and they all have different jobs that keep our body healthy and strong!

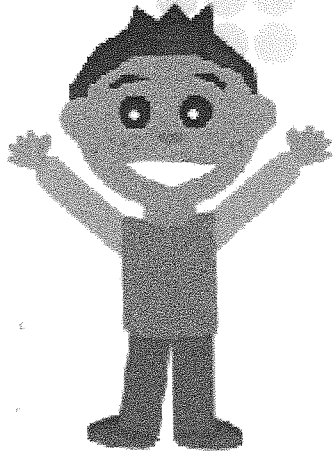
I can show you what a cell looks like: we have millions and millions of them in our bodies, isn't that cool?

So the outside of the circle is the cell and the purple circle is the nucleus! If we were to zoom in further, we would be able to see the chromosomes!



WOW! That's awesome!

Thank you for teaching me Dr. Science, I
have learned so much today!



No problem Tom!! If you
want to learn anymore,
come find me again!

