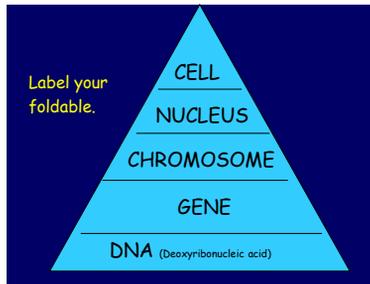


ZOOMING IN
On
DNA



Level 1: The Cell

- If you could zoom in on your skin, it would start to look like this:

Each of these enclosed areas is called a **cell**.

Level 1: The Cell

- Cells are not just in your skin!
- Cells are the building blocks for every living thing!

Close-up, cells can look pretty complicated.

Level 1: The Cell

- Cells are called "the basic unit of life" because ALL living things are made of cells.

Level 2: The Nucleus

- Zooming in farther to the center of each cell, we find the **nucleus**.

The **nucleus** is the control center of the cell - like the main office of a school.
The **nucleus** contains all the information about the cell.

Level 3: The Chromosome

- Inside the nucleus are x-shaped structures called **chromosomes**.

Humans have 23 pairs of chromosomes in most cells (46 total).
Chromosomes come in pairs - you get one set from your mom, and one from your dad.
Chromosomes are made of long strands of wound-up DNA (more on that later!).

Level 4: The Gene

- Certain sections of each chromosome are called **genes**.

No one's genes are exactly like yours (unless you are an identical twin).
Genes are the unique "recipe" for making you.
Genes are codes for different proteins, which make up your cells.

Level 5: DNA

- Each gene is made up of a strand of **DNA**.

DNA stands for deoxyribonucleic acid. There are two long strands (DNA's "backbone") and short connecting pieces called "base pairs." The order of the base pairs is the "recipe" for different proteins.
DNA is a long molecule that looks like a twisted ladder - which is why DNA is called the "Double Helix".



Let's Review...

- DNA is the chemical that provides a "recipe" for making living things
- Long strands of DNA make genes - a complete code for one protein
- Lots of genes are on each chromosome, which are tightly-wound chunks of DNA
- There are 23 pairs of chromosomes in the nucleus, or control center, of human cells.
- Cells are the building blocks for all living things.