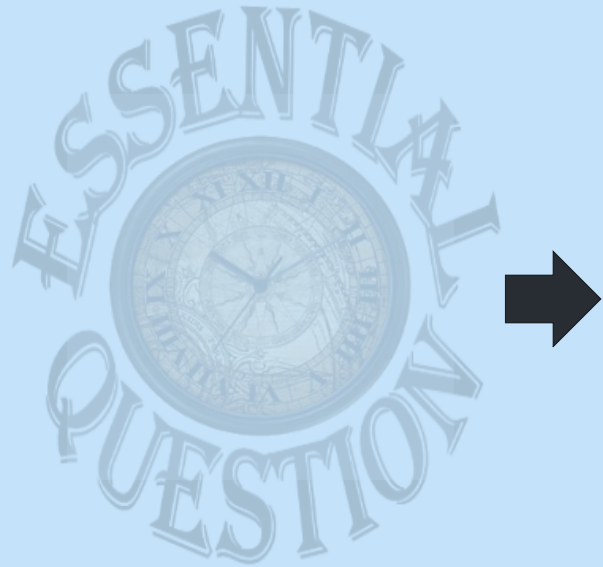


CELL HISTORY & CELLS

**HOW DO
WE KNOW
CELLS
EXIST?**



What we know today and accept to be true, even as students, is VERY different from what adults knew and accepted in the 17th century...

But it was 1 invention that set the ball rolling down the path of revolutionary discovery

[Click on box](#)



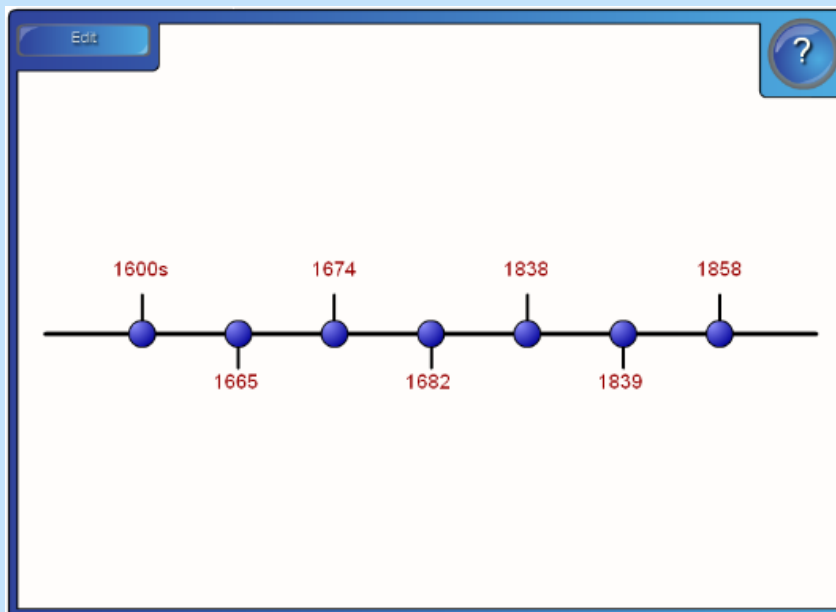


The invention of the microscope led biologists to begin looking in to the MICROSCOPIC world.

It was sheer curiosity that drove them...

to find out what makes up the living things around us!

Cell History Timeline & Key Players



What is the CELL THEORY?



Robert Hooke
British scientist
(1665)



Created a 3 lens
microscope to look at
plants, insects and
flowers

Cut a thin piece of cork and found
hundreds of little boxes or 'honeycomb'

Named the boxes "CELLS" or "little
rooms" in Latin



Antoni van Leeuwenhoek
Dutch scientist
(1674)

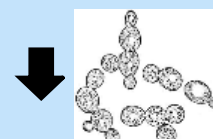
Observed living things (algae) in pond
water samples and called them
"animalcules" or "little animals"



Advanced the use of the
microscope and was the first
to use a single lens to
magnify microscopic objects.



He was the first to discover
unicellular organisms and the
first see bacteria

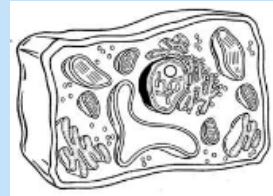


Matthias Scheliden
German botanist
(1838)



Proposed that all plants
are made of cells

Helped contribute to the
first part of the Cell Theory

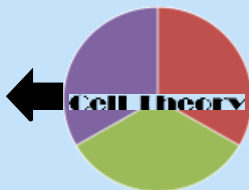


back



Theodor Schwann
German scientist
(1839)

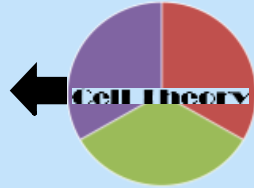
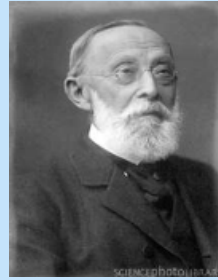
Concluded that all animals
are made of cells



Wrote the first two parts of
the Cell Theory

back

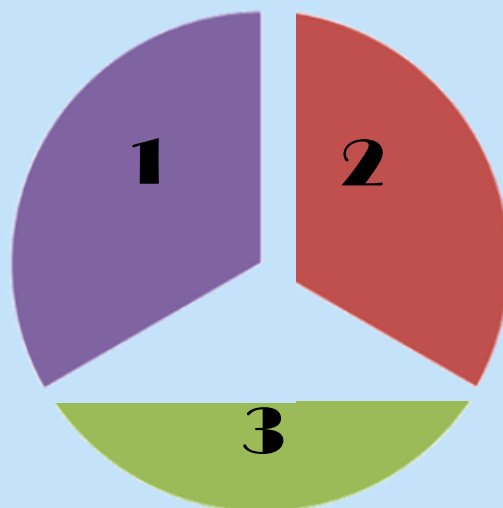
Rudolf Virchow
German doctor
(1859)



Wrote the last part of the
Cell Theory

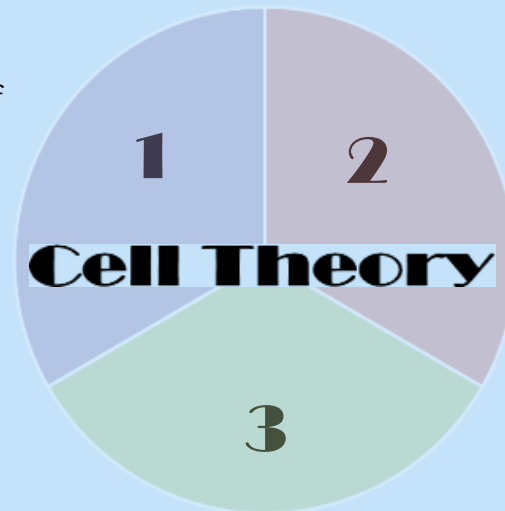


3 Parts of the Cell Theory



3 Parts of the Cell Theory

All living things are composed of cells



Cells are the smallest working unit of all living things

All cells arise from pre-existing cells



Is your head in the game?

Drag the scientist to the appropriate description

1. "Hello. I may not have made many contributions (in comparison) but I did conclude that all cells come from already existing cells. No magic here " Who am I? _____
2. "Guten tag! I'm a botanist - that means that I really like plants. Well, I heard about those cell things and I thought I would look and see if my green plant friends were also made of 'cells'. Well, I looked at EVERY plant I could find and I finally decided that they were all made of cells!" Who am I? _____
3. "Hey hey! After lots of observations, I have come to find that animals are made of cells!! Who knew!? I also have two suggestions; that all living things are made of cells and that cells are the smallest working unit in those living things" Who am I? _____
4. "Hoi! I have this pond out back and decided to look at the water. It was amazing! Here it is, the late 1500's and I found all these little things, that I called "animalcules", swimming around in pond water! Well, I guess I won't drink that anymore!" Who am I? _____
5. "Hi! I'm kind of a lonely guy - I was just messing around and looking at cork one day and I noticed these tiny boxes! Well, they looked like honeycomb called cells, so I went ahead and named them CELLS! Wow...now I'm kind of famous...I wonder if girls like guys that name things..." Who am I? _____

Drag this to the target to reveal the answers.

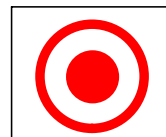
van Leeuwenhoek

Virchow

Hooke

Schwann

Schleiden





Is your head in the game?

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Virchow

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Schleiden

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van Leeuwenhoek

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Hooke

van Leeuwenhoek

Virchow

Hooke

Schwann

Schleiden

Drag this to the target to reveal the answers.

What is a cell?



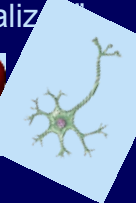
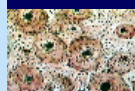
A cell is the **SMALLEST WORKING UNIT** of living things

Even though they range from the enormously large to the microscopic, a multicellular organism is highly organized... all starting with a cell

Specialized cells perform only their specific functions and cannot live on their own.

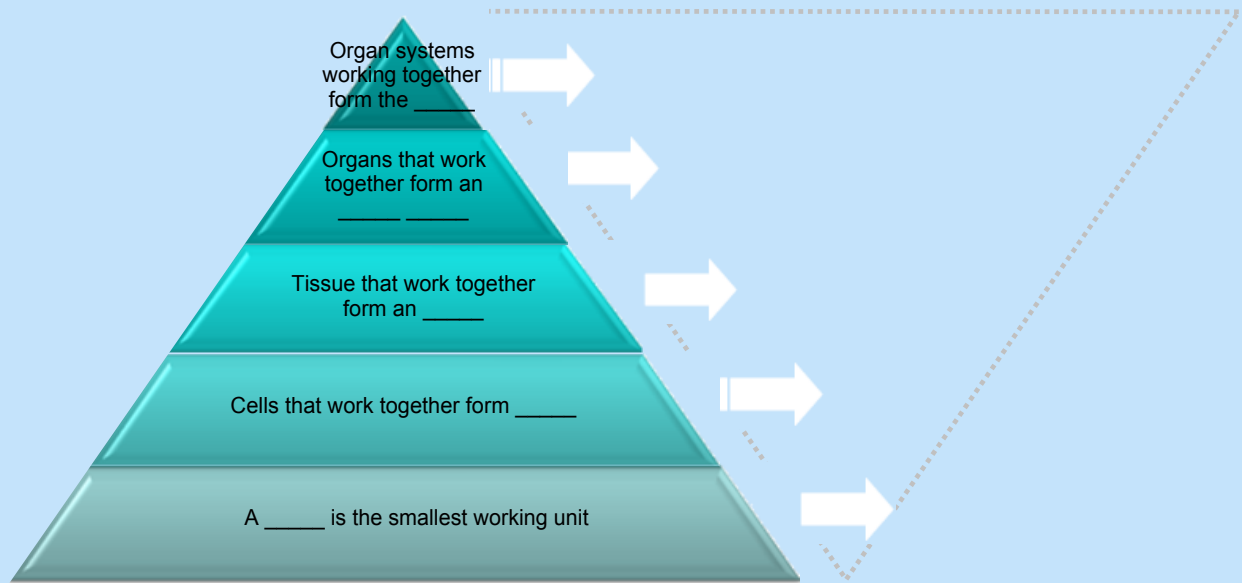
For example, there are blood cells, muscle cells, nerve cells, bone cells, etc

These cells are said to be "specialized"

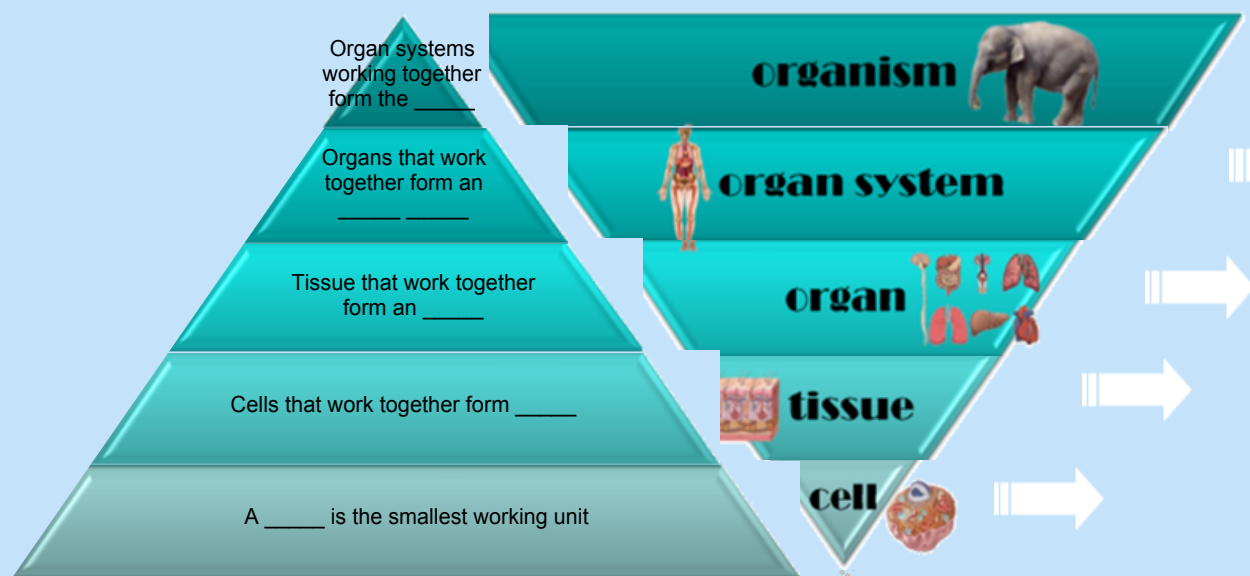


Multicellular organisms have cells that do many different jobs.

Levels of Organization within Living Organisms



Levels of Organization within Living Organisms





How Organized Are You?

Learn & Quiz

skool.com

Learn

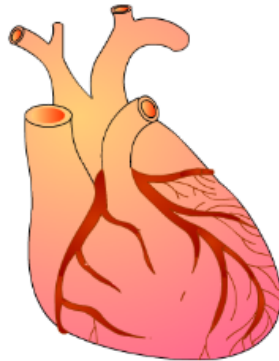
Test

Review

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Organisation in Living Things

Scene 6 of 8



The heart is made of muscle tissue, nervous tissue and connective tissue.

SMART
Technologies Inc.



Supporting
Education :

