

TeachWithFergy

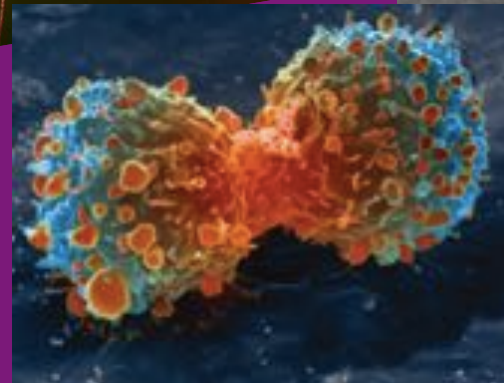
Preview File

Please enjoy this preview of your Student Version of the lesson. I've created this PDF for ease of viewing and to decrease the file size but of course, your lesson will be in PowerPoint format.

- Some slides appear blank because they have been removed.
- Student versions have portions of the text removed which is given in the teacher version and appear as _____
- Other slides may have on them, this represents writing that has been removed.

The Cell Theory – An Introduction

- Biology
- Cell facts
- Discovery of cells
- Cell Theory Scientists
- The Cell theory
- The Modern day cell theory
- Types of cells

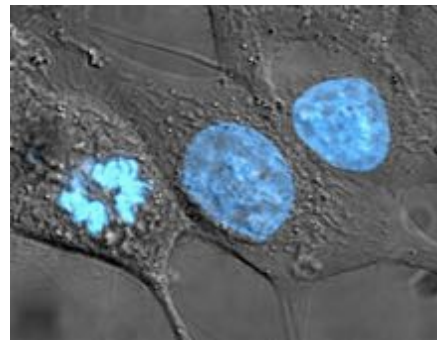


Biology

- Biology is the study of life
- It helps answer the questions:
 - How do we function?
 - Why do we act and like the things we do?



**In slideshow mode, click
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automatically open the
video**



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Some Cell Facts

1. The average human being is composed of around _____
2. There are over 200 different kinds of cell in your body
3. The biggest cells are nerve cells which can be greater than a metre and be seen even without a microscope.
4. Every cell in your body has the exact same instructions.
5. If the DNA in a single human cell were stretched out and laid end-to-end, it would measure approximately 2 meters . The average human body contains approximately 200 billion kilometers of DNA distributed among the 100 trillion cells.

Check out these links:

<http://www.cellsalive.com/howbig.htm>

<http://learn.genetics.utah.edu/content/begin/cells/scale/>

Discovery of Cells

- 1665- English Scientist, _____
- He described the cells as tiny boxes or a honeycomb
- He thought that cells



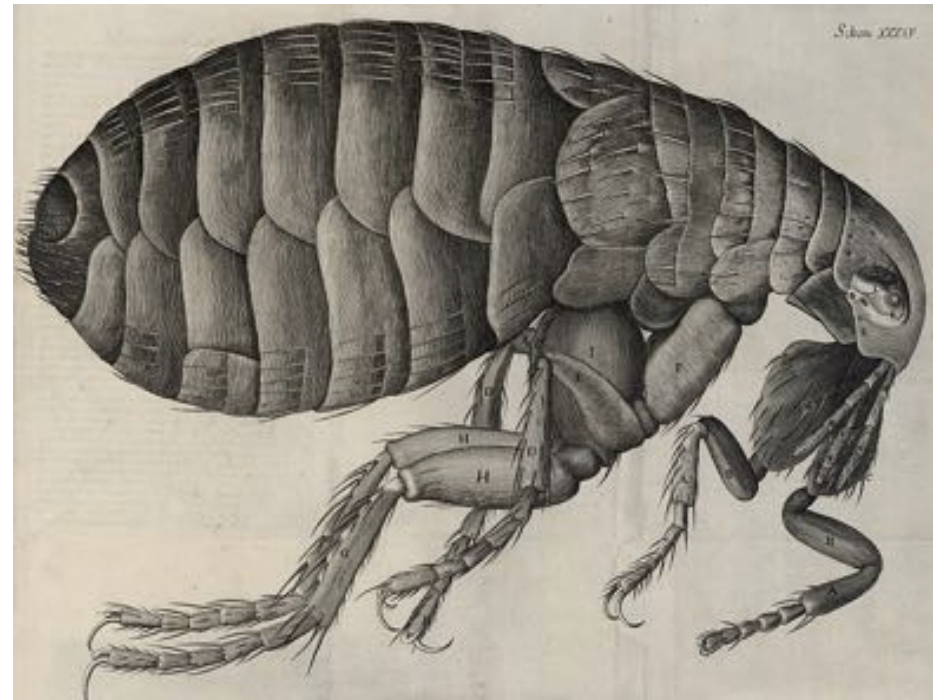
Hooke's Microscope - 1665



Robert Hooke



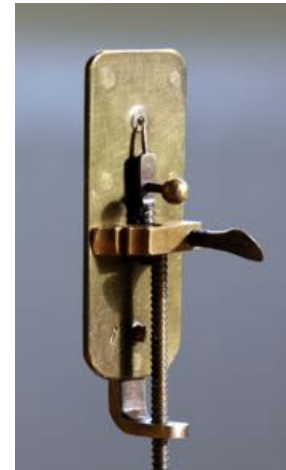
Hooke's drawing of cork - 1665



Hooke's drawing of a flea using his microscope

Anton van Leeuwenhoek

- 1673- Used a handmade microscope to observe pond scum & discovered single-celled organisms
 - He called
 - He also observed blood cells from fish
 - Therefore, it was known that cells
-



Leeuwenhoek's handmade microscope ¹



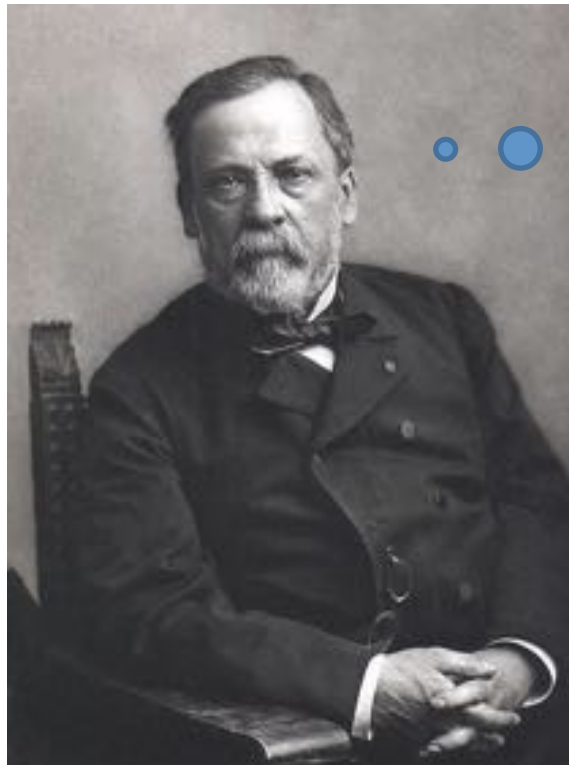
¹ Photo credit: Jeroen Rouwkema <http://www.flickr.com/photos/rouwkema/2262158965/>

150-200 Year Gap

- Between the Hooke/Leuwenhoek discoveries and the mid 19th century (1850's), ...
- This is probably due to the widely accepted, traditional belief in _____
- Examples:
 - Mice from dirty clothes/corn husks
 - Maggots from rotting meat

19th Century Advancement

- However, there was much doubt around the idea of Spontaneous Generation. To many it didn't make sense.
- This idea was disproved by _____



Ummm, I
don't
think
so!!!

Development of the Cell Theory

- 1838- German Botanist, Matthias Schleiden, concluded that
- 1839- German physiologist, _____



Matthias Schleiden



Theodor Schwann

Development of the Cell Theory

- 1858- Rudolf Virchow - after extensive study of cellular pathology, _____

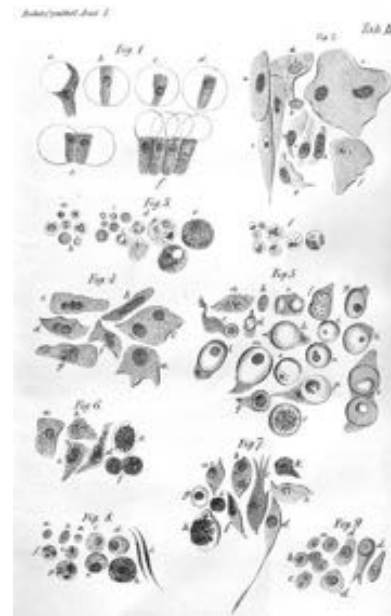
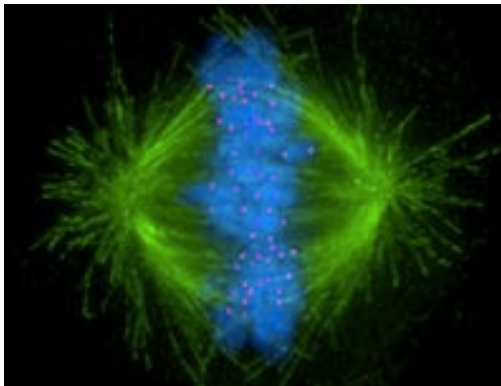
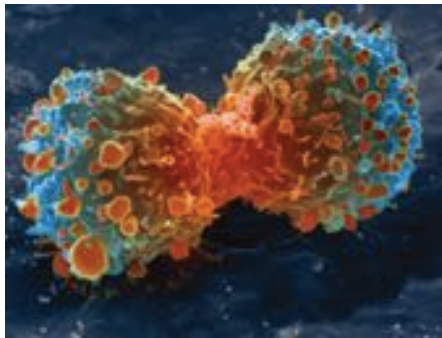


Illustration of Virchow's cell theory - 1847

The Initial Cell Theory

The 3 Basic Components of the Cell Theory were then complete:

1. _____

2. _____

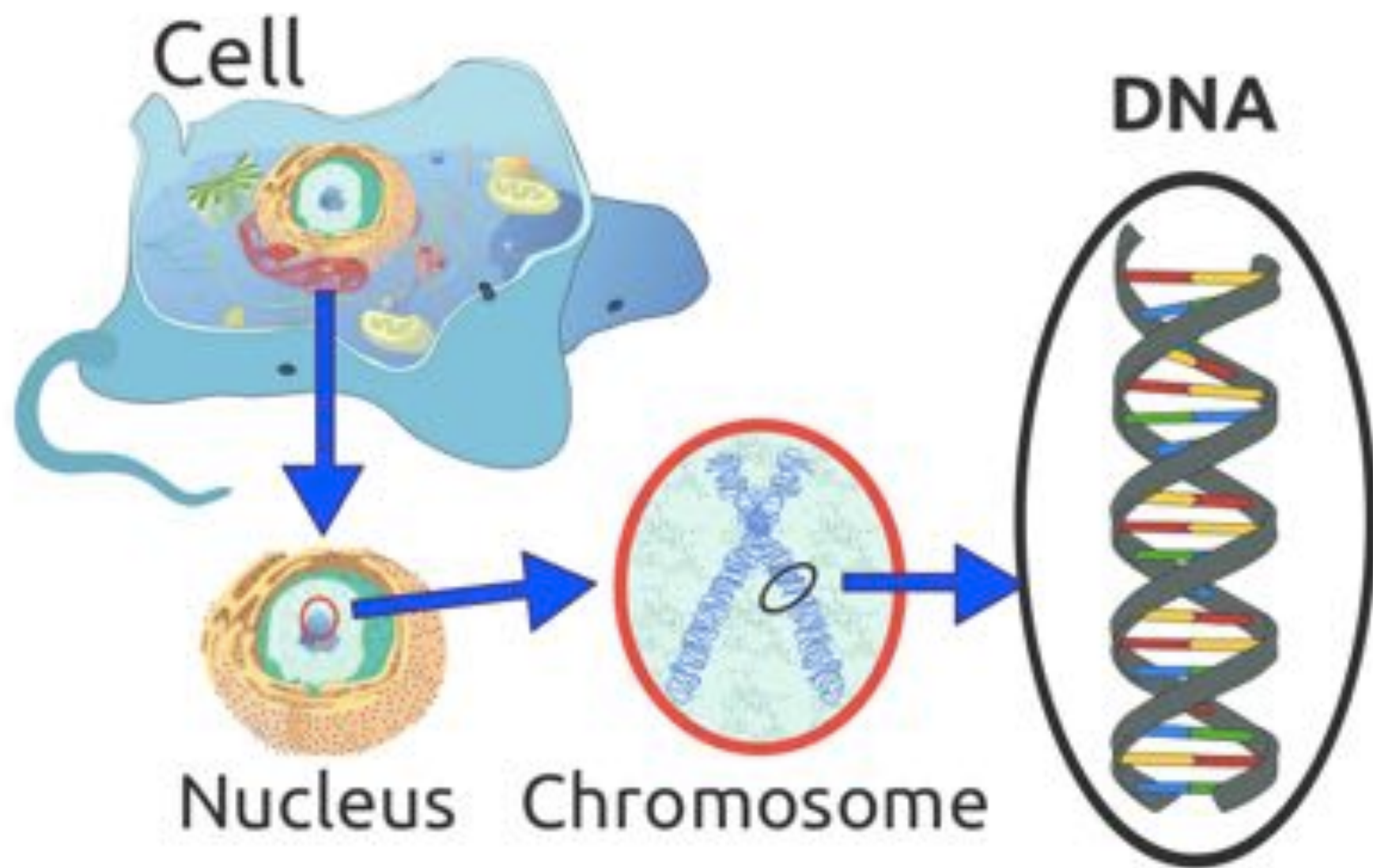
3. _____

Modern Day Cell Theory

- There have been a few additions and changes to the cell theory over the years

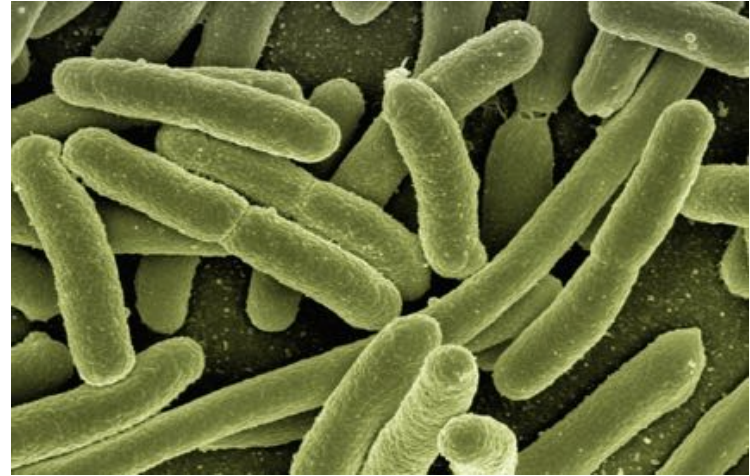
The Current Cell Theory

1. All organisms are composed of one or more cells.
1. The cell
2. All cells are produced by the division of
3. Energy flows inside cells
4. _____



The Two Main Types of Cells

- _____
 - No nucleus
 - Very simple organisms
 - Archaea and Bacteria



- Eukaryotes

- _____
- _____
- _____
 - _____



[Cell Gallery – Check it out](#)

