

The background features a light purple-to-blue gradient. Scattered throughout are several realistic water droplets of various sizes, some with highlights and shadows. In the center, there is a faint, large-scale diagram of a cell, showing a nucleus and other internal structures, rendered in a light, semi-transparent style.

1.2: WHERE DO LIVING THINGS COME FROM?

Science 8

BBC

02 Days 15 hrs



INVESTIGATING THE ORIGIN OF LIFE

1. What questions do you have about where the maggots came from?
2. What hypothesis could you come up with to investigate this?
3. Design an experiment to test your hypothesis.



SPONTANEOUS GENERATION (PRE-1600S)

Observations:

- Maggots on rotting food
- Mold on bread
- Mushrooms from dead tree stumps

“Spontaneous generation theory”: all life arose from non-living things!

What might have happened in the 1600s to overturn this idea?

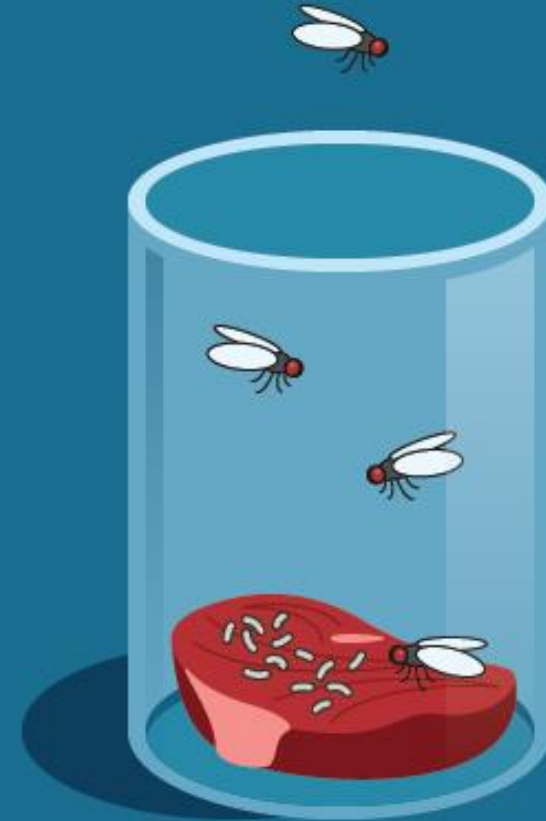
TESTING SPONTANEOUS GENERATION



Flask sealed

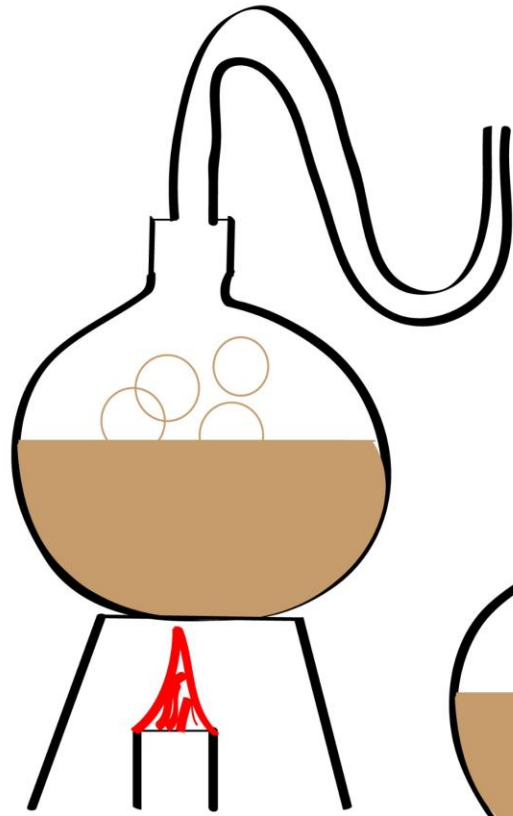


Flask covered
with gauze

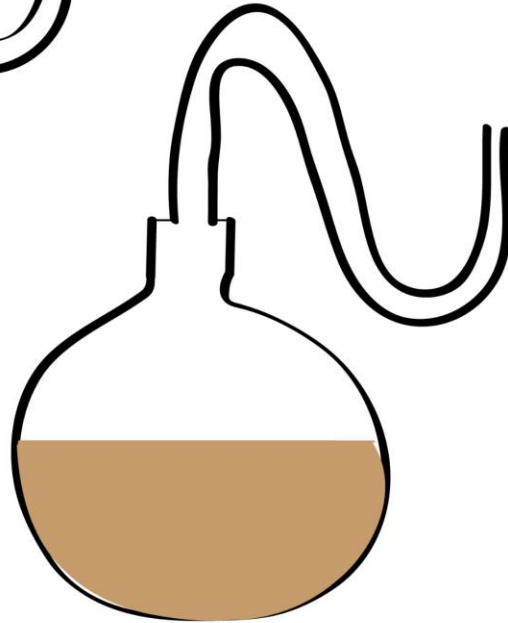


Flask open

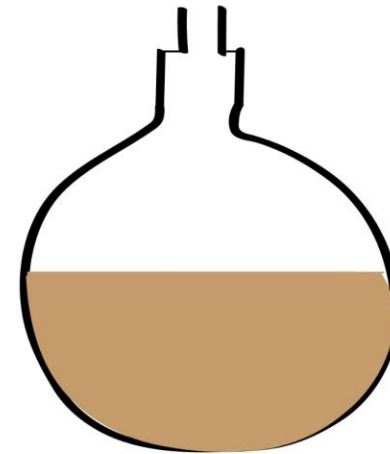
Pasteur's Test of Spontaneous Generation



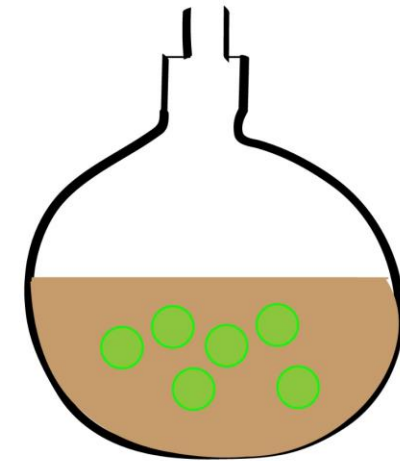
Broth is Boiled



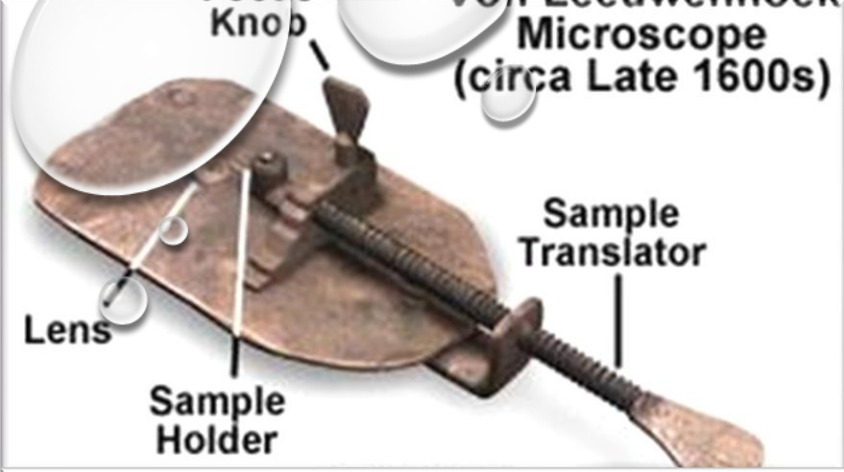
**Broth Remains Free
of Microorganisms**



**Curved Neck
is Removed**



**Microorganisms
Grow in Broth**



THE MICROSCOPE

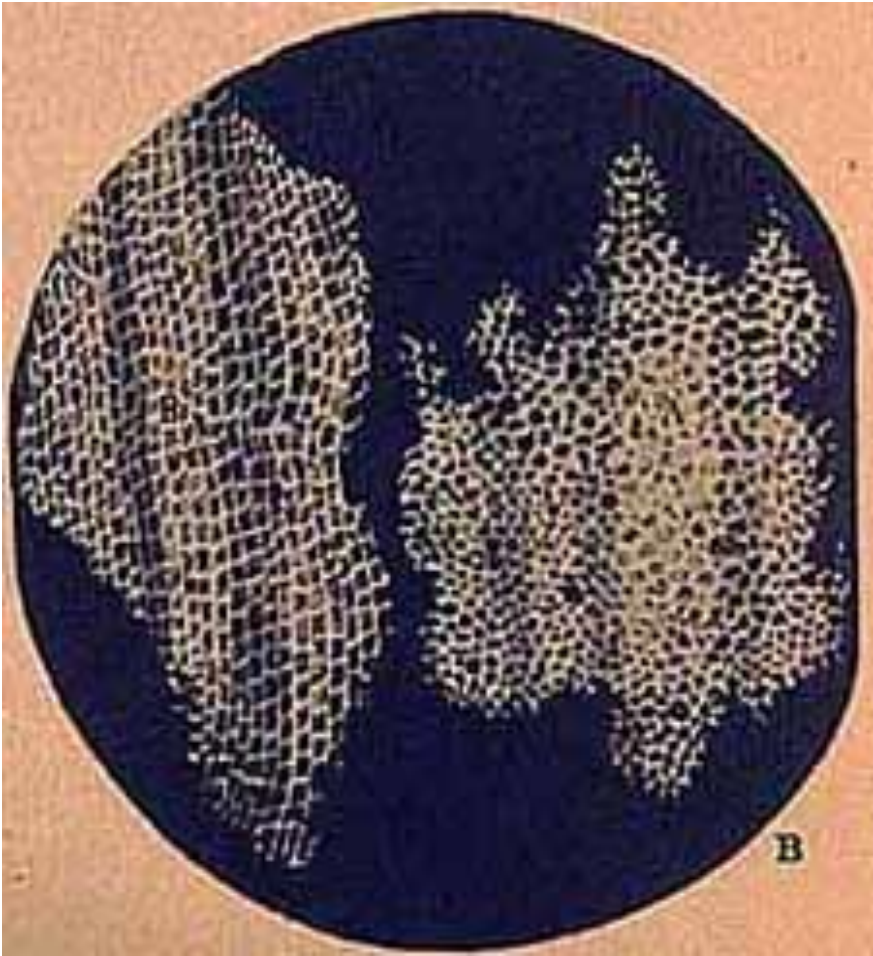
Microscope:

- Invented in 1600s by Anton van Leeuwenhoek

Robert Hooke:

- British scientist
- Pioneer in microscopy
- Discovered cells in tree tissue





The background of the slide is a microscopic image of plant cells, likely from an onion skin, showing a grid-like structure of cell walls and small, dark, circular nuclei. A dark, semi-transparent rectangular box with a white border is centered on the slide, containing the text. The text is white and uses a serif font. The title 'CELL THEORY' is in all caps and larger than the list items. The list items are numbered 1, 2, and 3, and are left-aligned within the box.

CELL THEORY

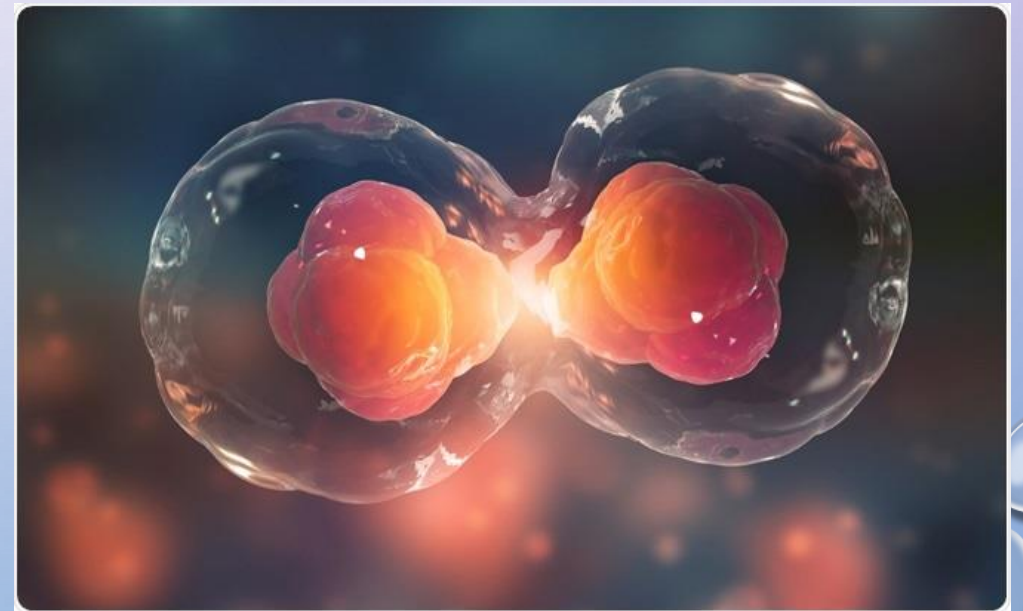
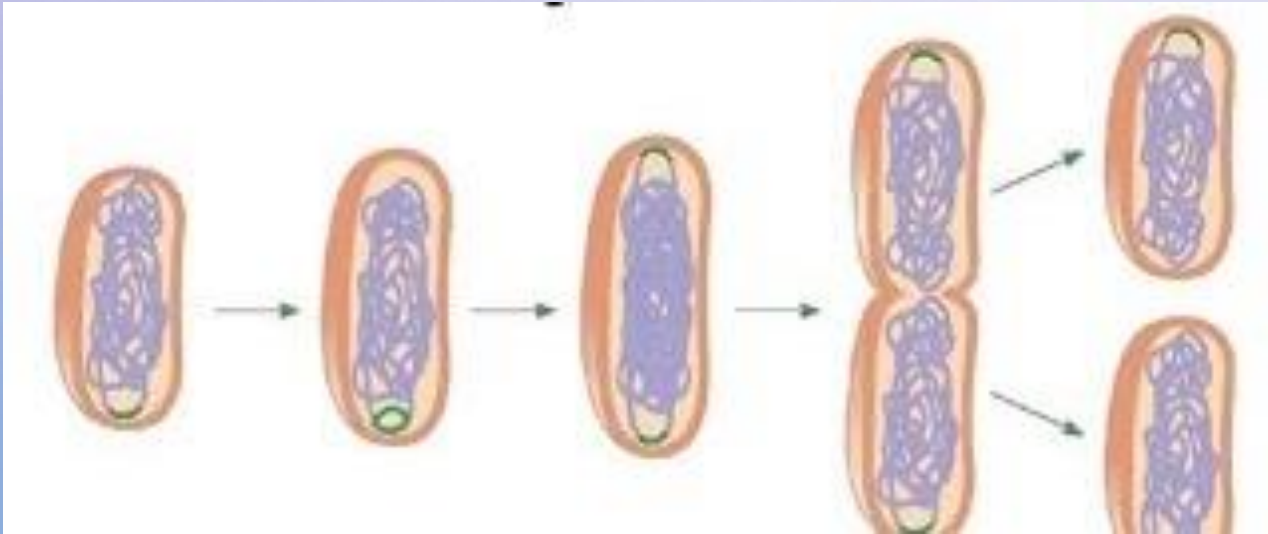
- 1) The cell is the basic unit of life.
- 2) All new cells come from pre-existing cells.
- 3) All living things are made up of one or more cells.

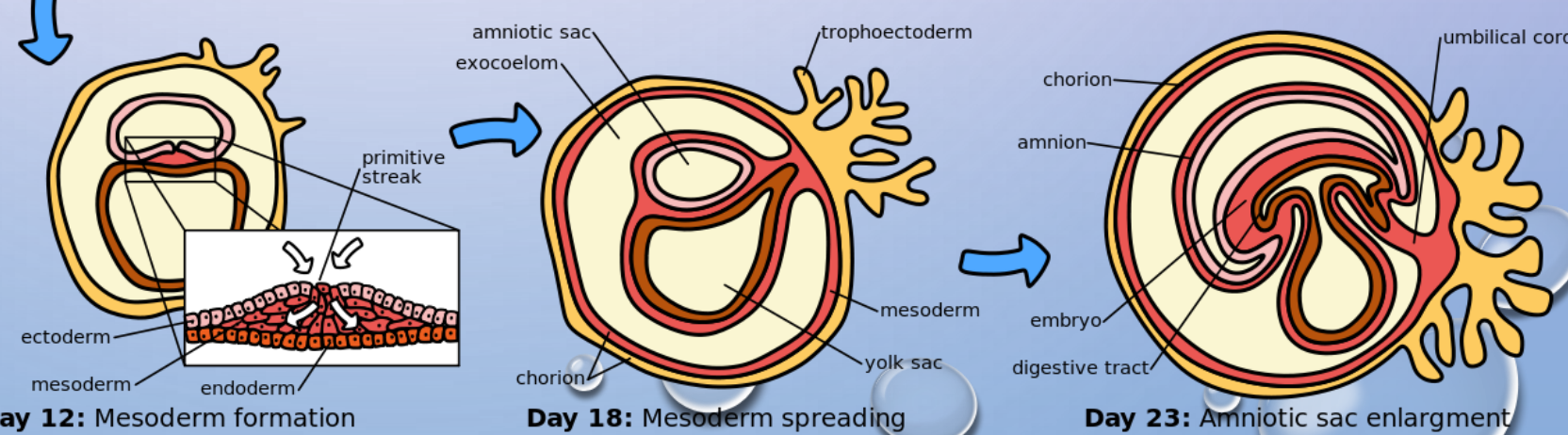
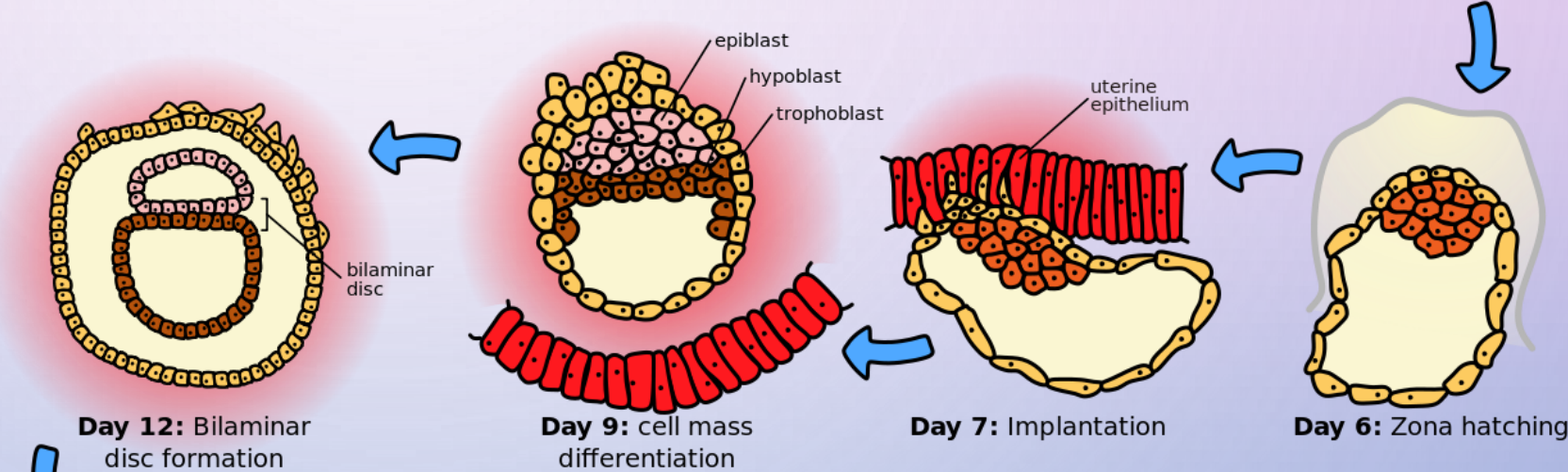
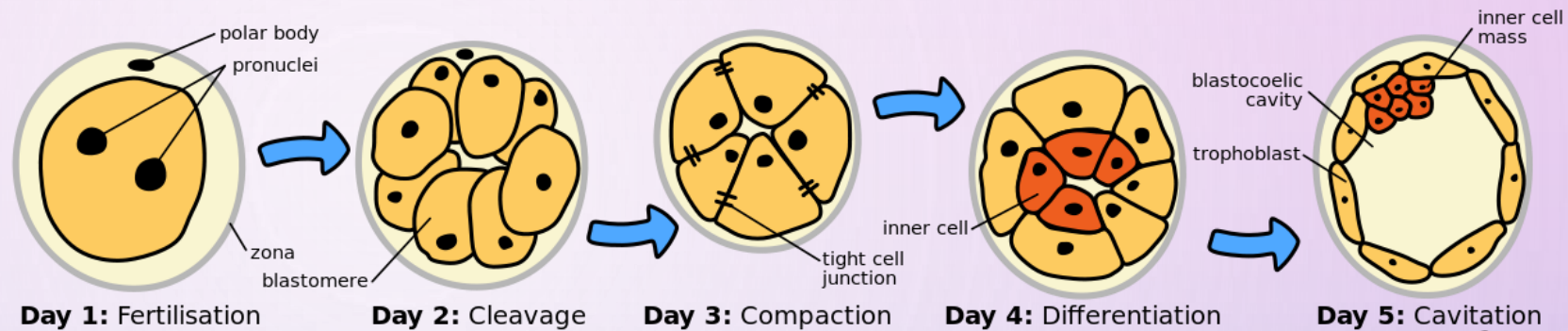
1) THE CELL IS THE BASIC UNIT OF LIFE

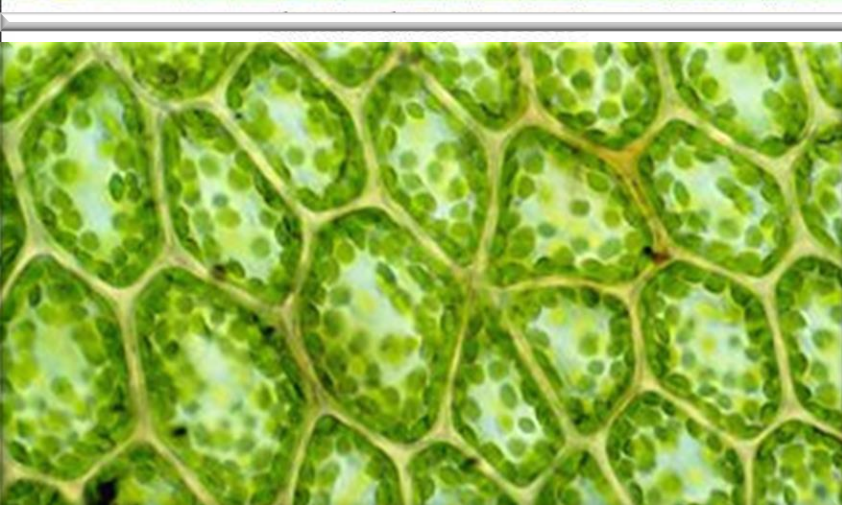
- Cells exhibit the 7 characteristics of living things:
 - Made of cells
 - Use nutrients
 - Require energy
 - Produce waste
 - Grow and develop
 - Reproduce
 - Respond to stimuli

2) ALL NEW CELLS COME FROM PRE-EXISTING CELLS

- Cells divide to make new cells
- All the cells in your body were produced through cell division







3) ALL LIVING THINGS ARE MADE UP OF ONE OR MORE CELLS

Review! Living things can be:

- **Unicellular** (made of one cell)
- **Multicellular** (made of multiple cells)

PRACTICE

Complete workbook pg. 11: we will go over the answers all together.