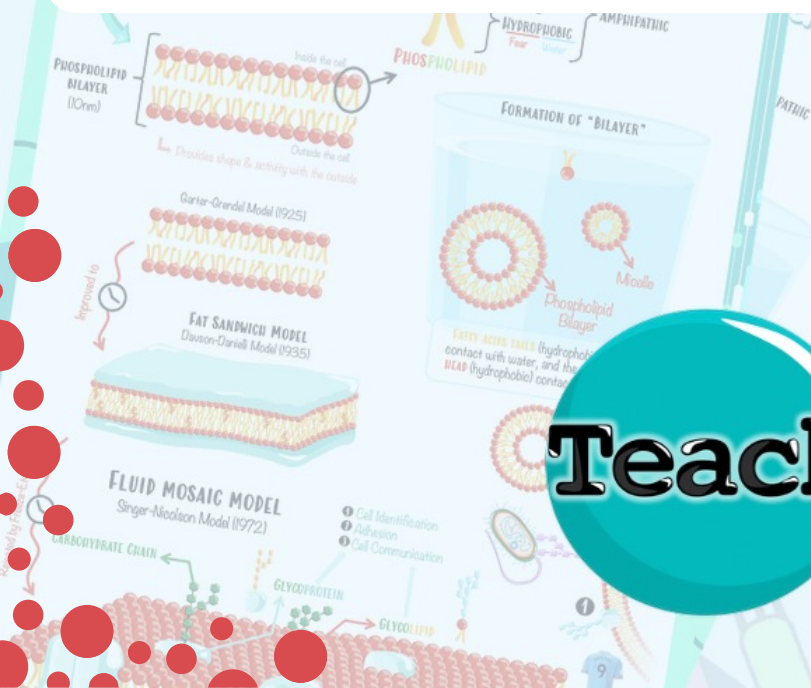


TeachMe

STUDY NOTES



B2.1 MEMBRANE STRUCTURE

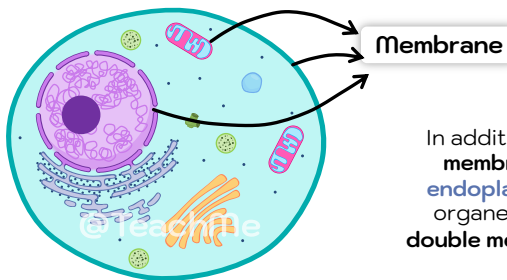


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MEMBRANE STRUCTURE

The cell membrane is a dynamic, **selectively permeable** structure found surrounding the cell and many organelles within it.



The cell membrane forms the boundary between the **intracellular** and **extracellular** environments, controlling what enters and leaves.

In addition to the outer cell membrane, **internal membranes** surround organelles such as the **endoplasmic reticulum**, **Golgi apparatus**. Some organelles, like the **nucleus**, are enclosed by a **double membrane** (nuclear envelope), consisting of two phospholipid bilayers.

Big Brain Tip!

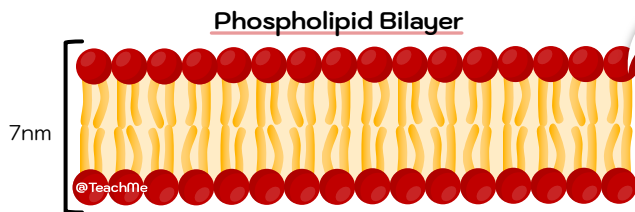
Cell membrane Biological membrane
Phospholipid bilayer Plasma membrane
Cell surface membrane

You may encounter various names for the cell membrane – they all mean the same thing, you can use them interchangeably!

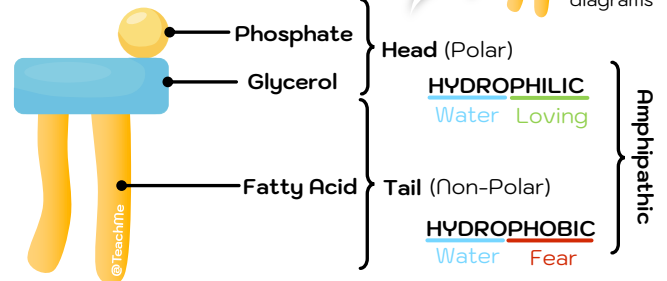


Cell membrane basic structure

The cell membrane is made up of **phospholipids**, which form the basic structure known as the **phospholipid bilayer**.



Phospholipid



NOTE!

We simplify the head as a red circle in the diagrams



This bilayer consists of **two layers** of phospholipids arranged with their hydrophilic heads facing outward and their hydrophobic tails facing inward because of the phospholipids' **amphipathic property**.

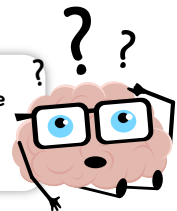
- Amphipathic property -

Meaning they have both a water-attracting (hydrophilic) region AND a water-repelling (hydrophobic) region.

Common Confusion!

Two layers of phospholipids.
Structure of cell membrane, Golgi membrane, endoplasmic reticulum membrane.

Double membrane – Nuclear envelope
Structure of the nuclear membrane (even the mitochondria)



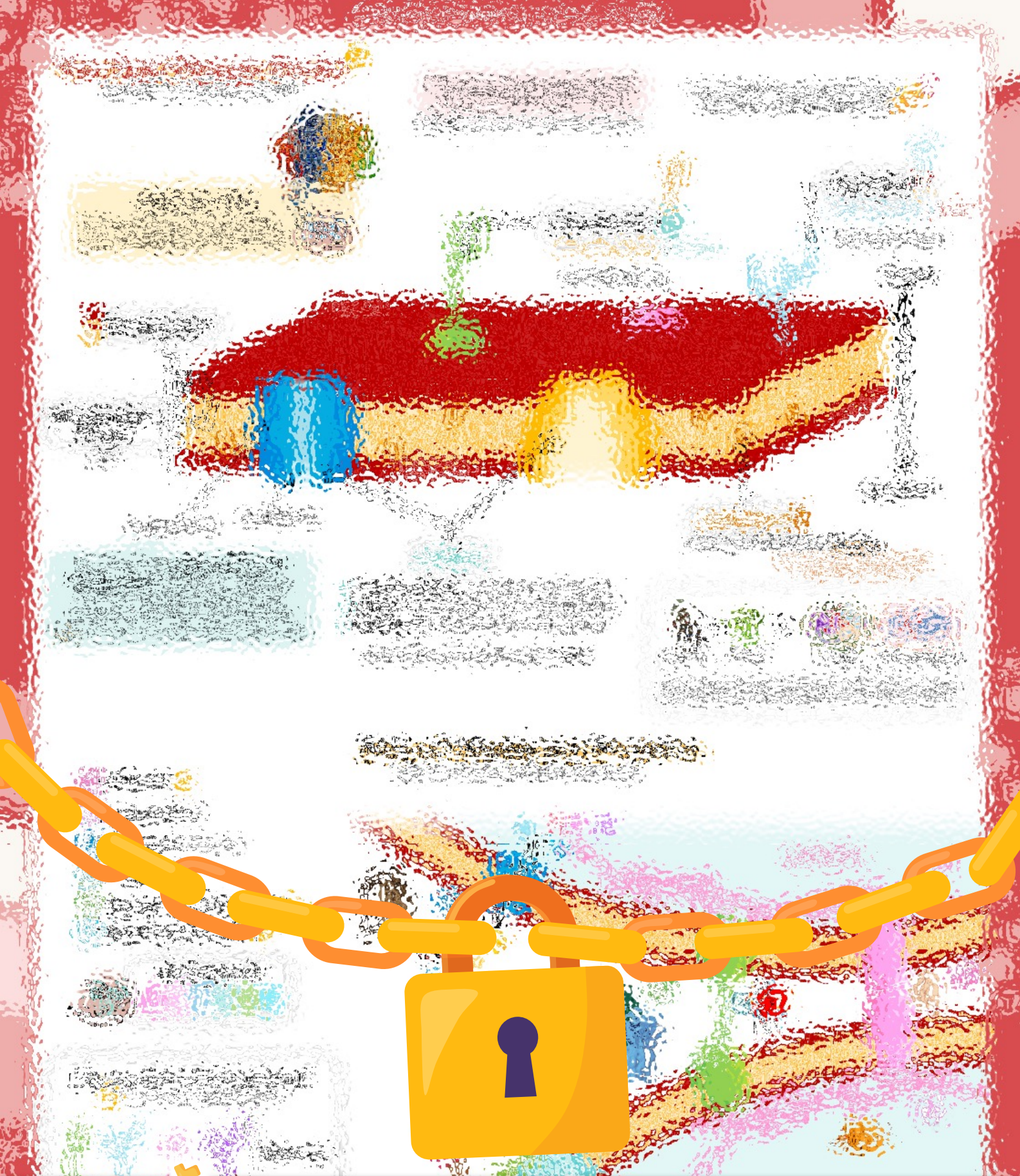
How does the Phospholipid Bilayer form?

THE BIG IDEA:

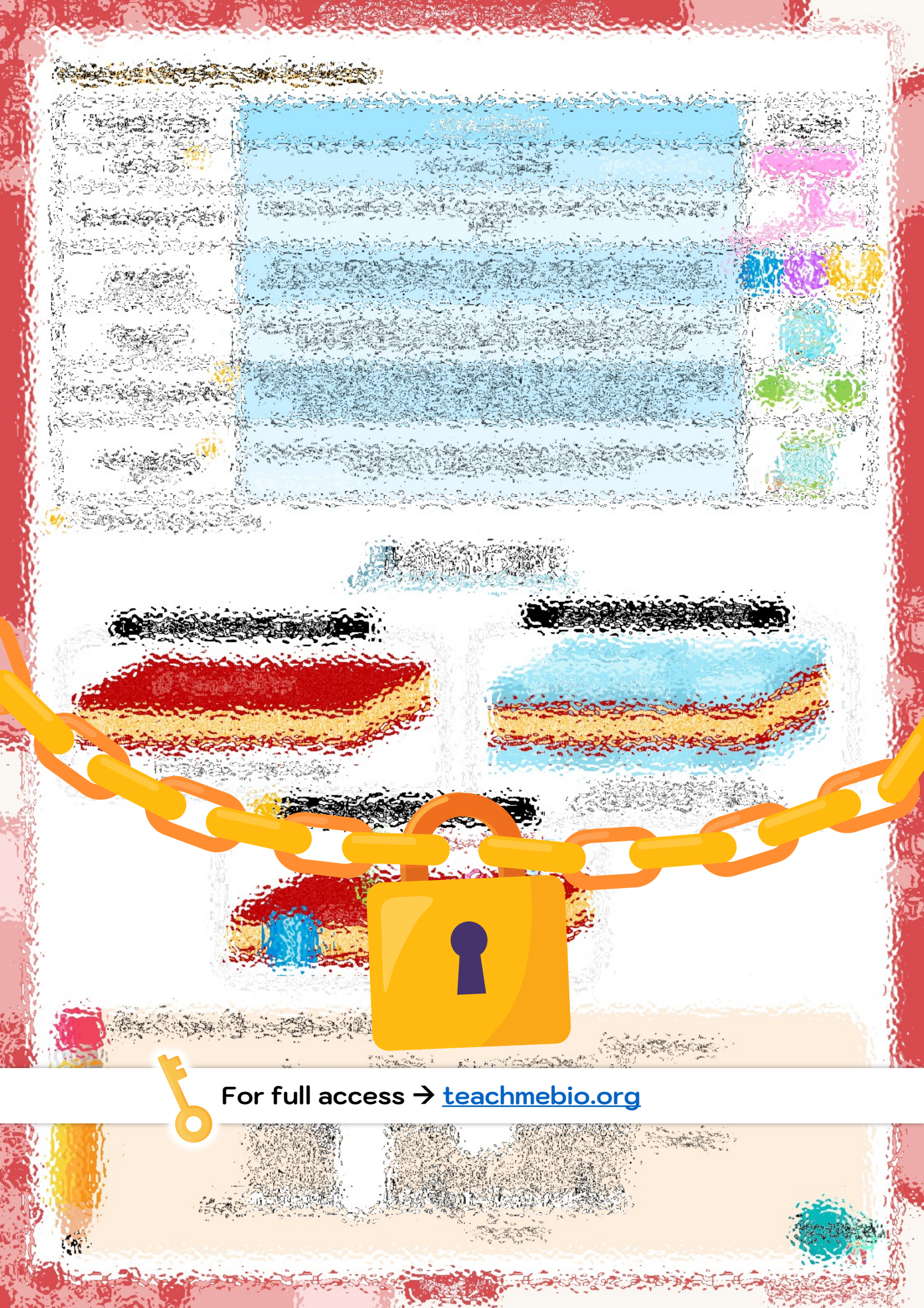


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