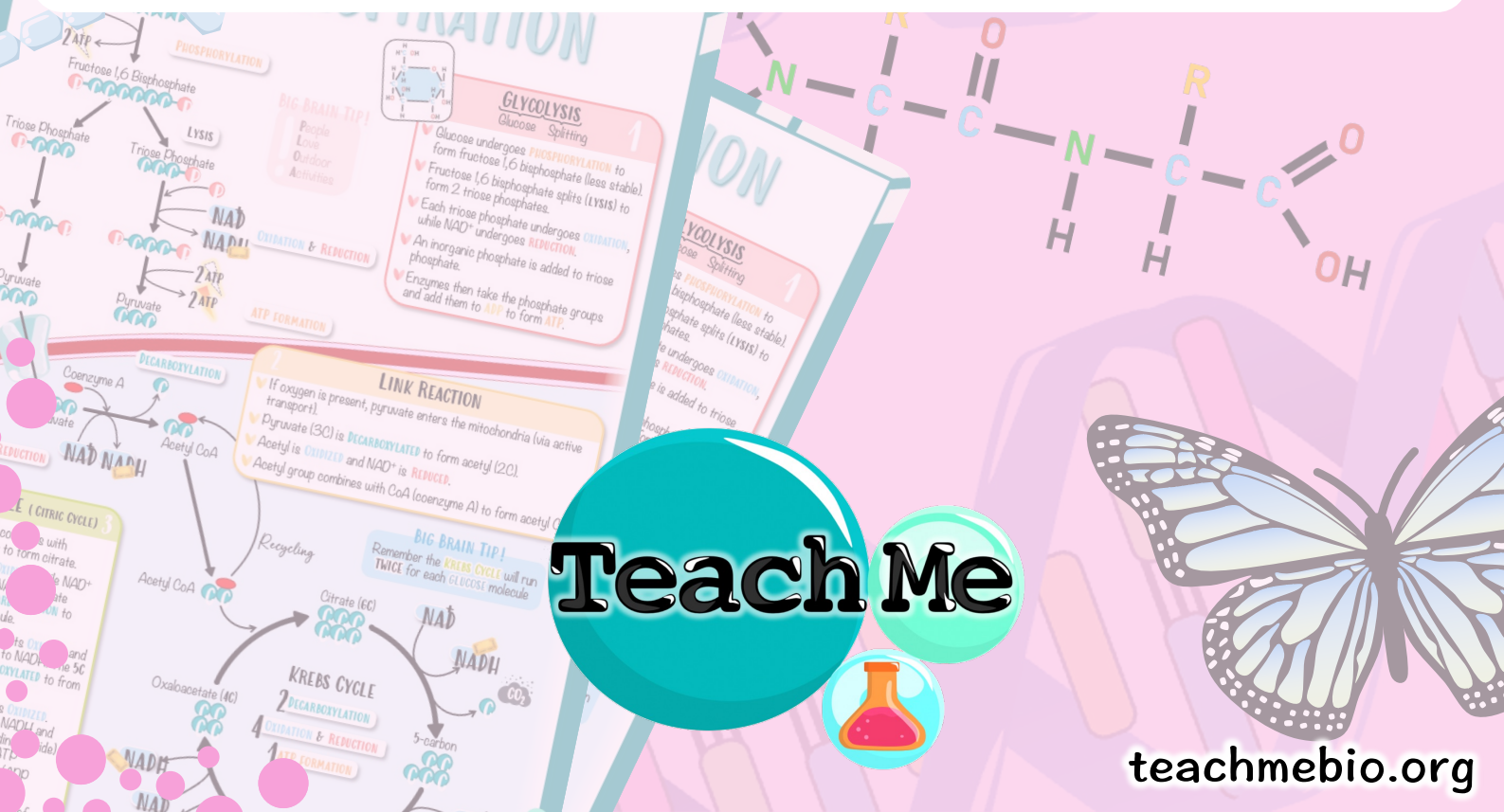


TeachMe

STUDY NOTES

UNIT 3 – CELLULAR ENERGETICS

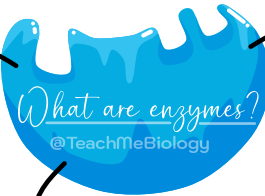
3.1 ENZYMES



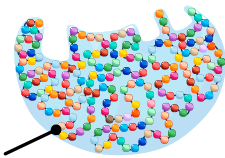
ENZYMES

Enzymes are biological catalysts.

A substance that speeds up a reaction.
(complete definition on page 3)



Enzymes are proteins (globular).



Amino acids

"All enzymes are proteins, but not all proteins are enzymes."

Enzymes are like cellular tools, helping reactions to occur.

Enzymes catalyze chemical reactions by either **BREAKING** molecules apart or **JOINING** them together.



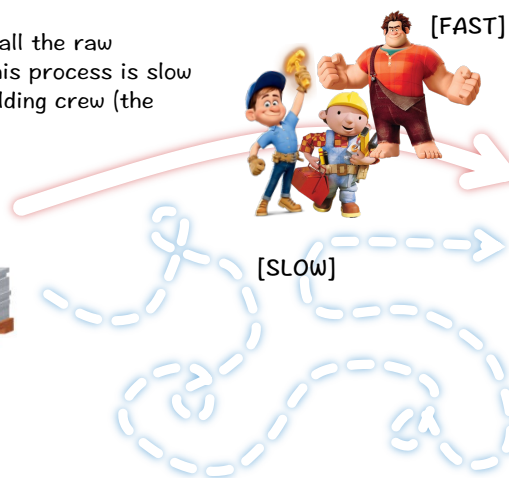
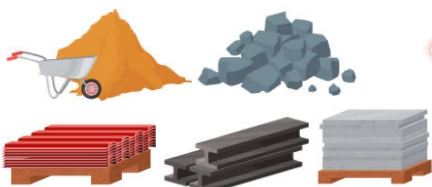
BIG BRAIN TIP!

Enzyme names almost always end in "ase"
Sugar names almost always end in "ose"



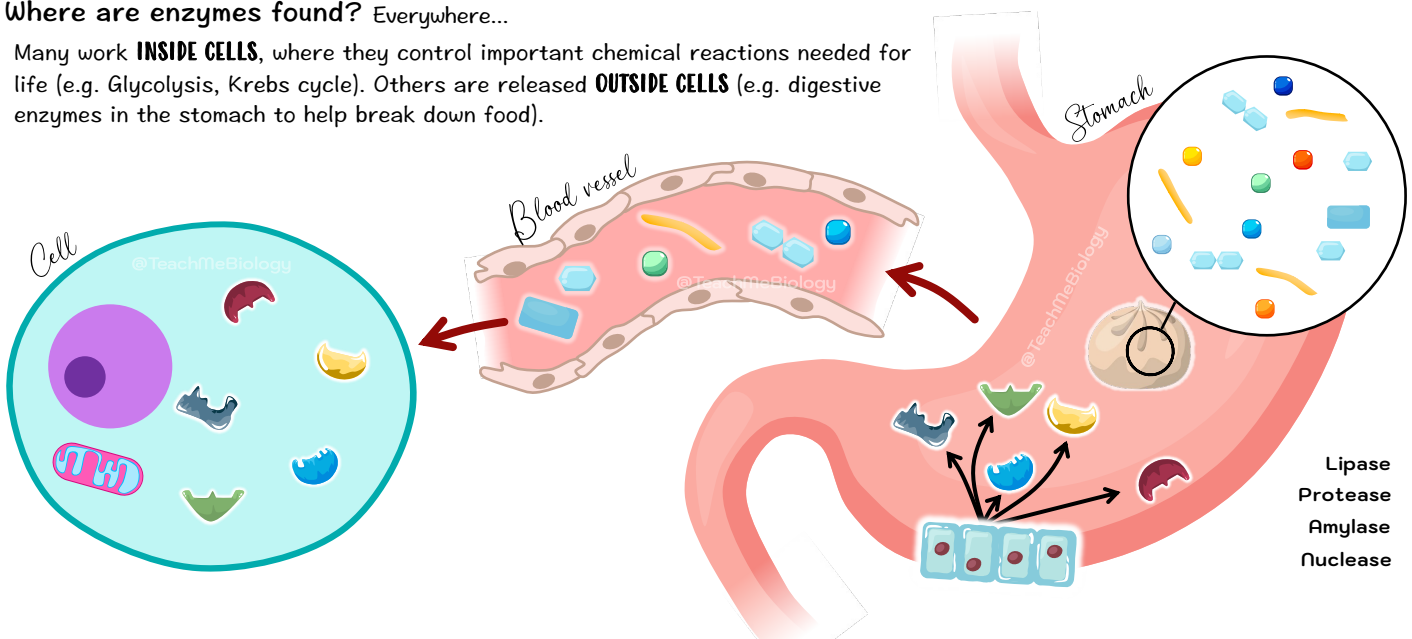
ANALOGY

You want to build a house; you already have all the raw materials. But the house won't build itself, this process is slow (if not impossible). So instead, you hire a building crew (the enzymes) to speed up the job. ⌚

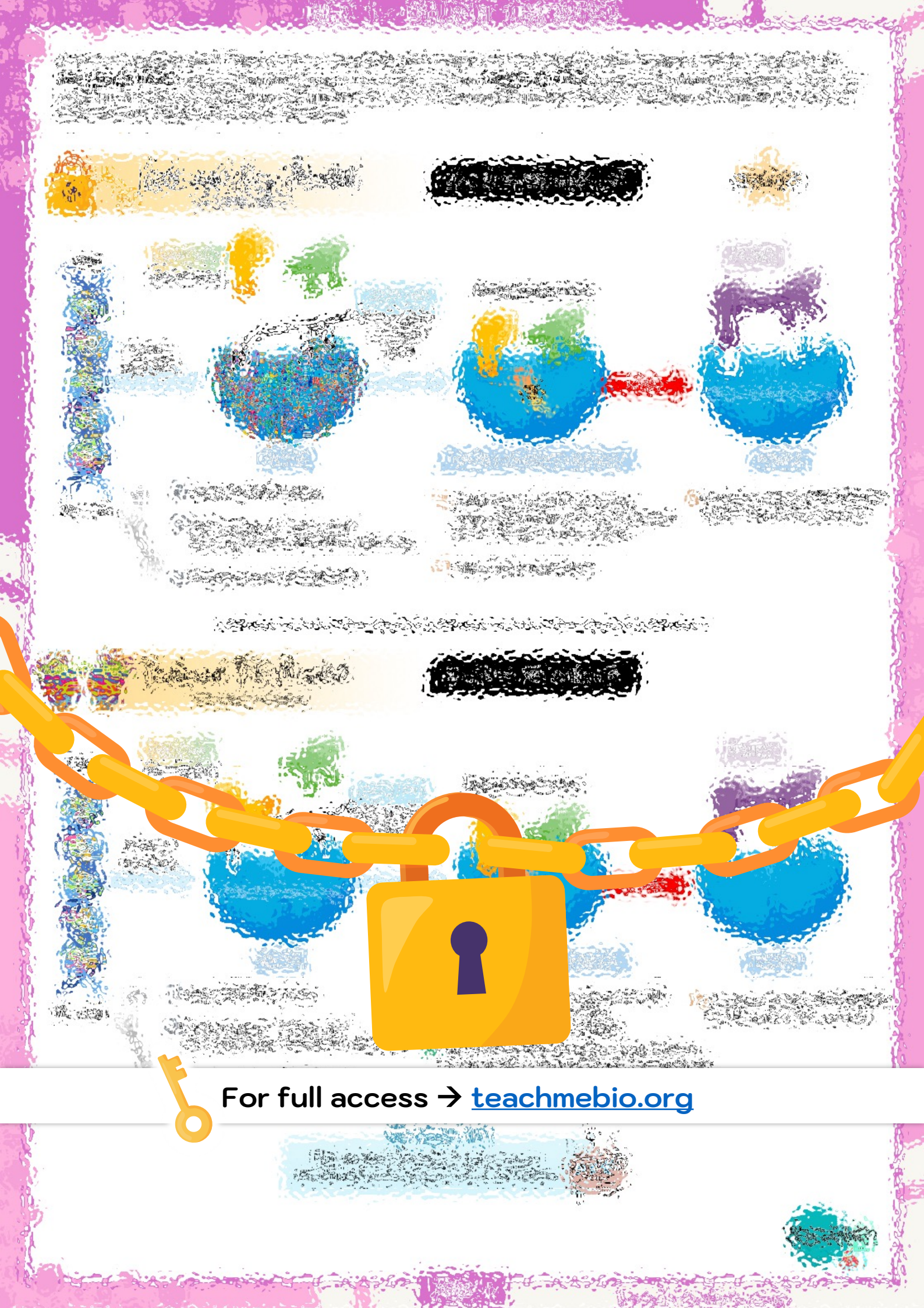


Where are enzymes found? Everywhere...

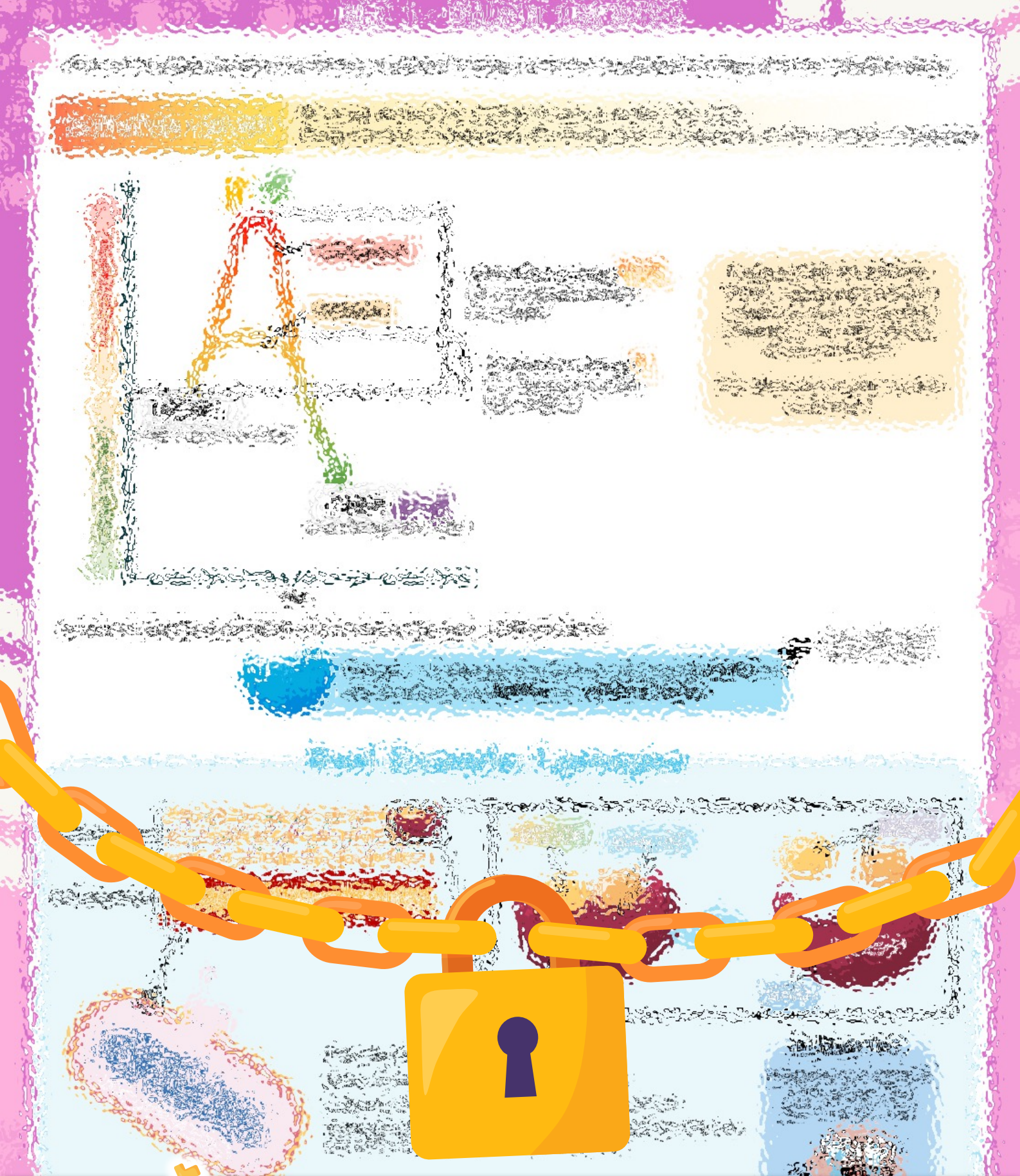
Many work **INSIDE CELLS**, where they control important chemical reactions needed for life (e.g. Glycolysis, Krebs cycle). Others are released **OUTSIDE CELLS** (e.g. digestive enzymes in the stomach to help break down food).



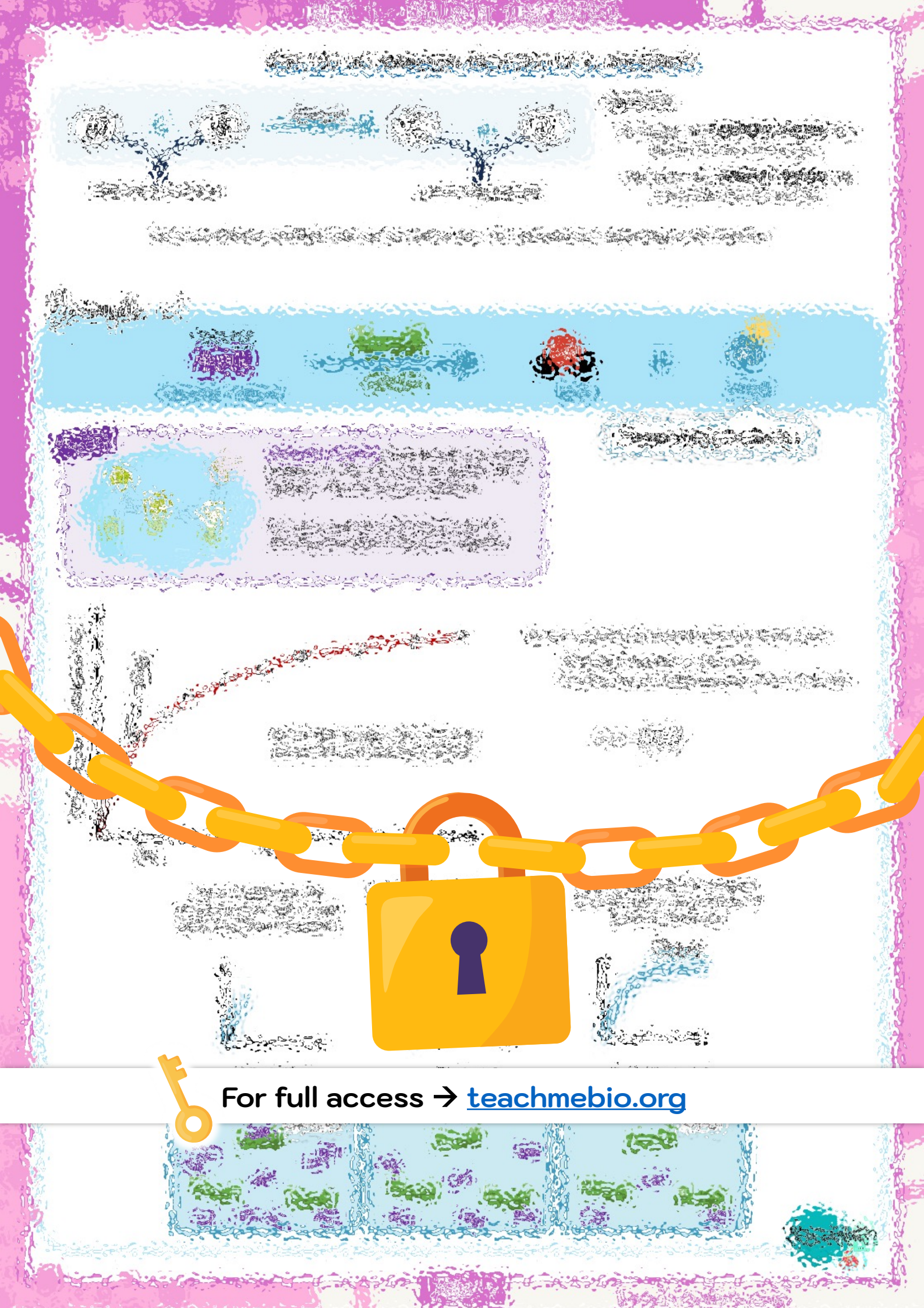
	Intracellular	Extracellular
Location	Occur within a cell	Occur outside a cell
Example	Glycolysis in cytoplasm Krebs cycle in mitochondria	Chemical digestion in stomach



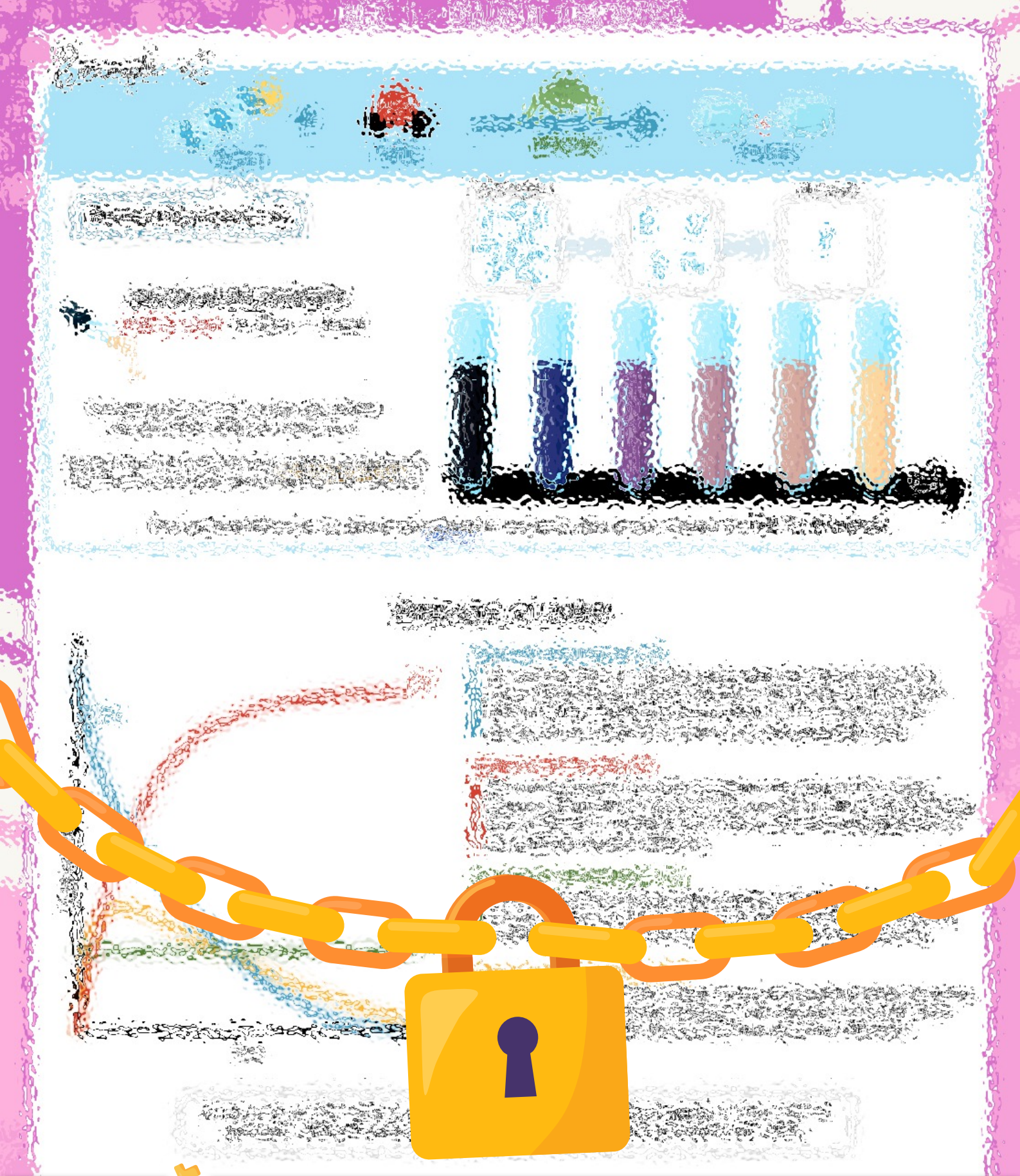
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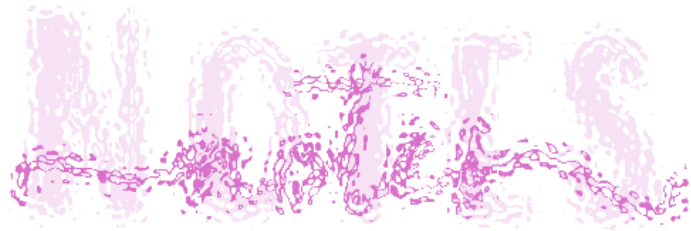
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A graphic of a yellow padlock and chain. The padlock is yellow with a dark blue keyhole. It is attached to a yellow chain with orange links. The background is white with faint, repeating text patterns in light blue and pink. The entire graphic is framed by a decorative border of pink and blue wavy lines.

