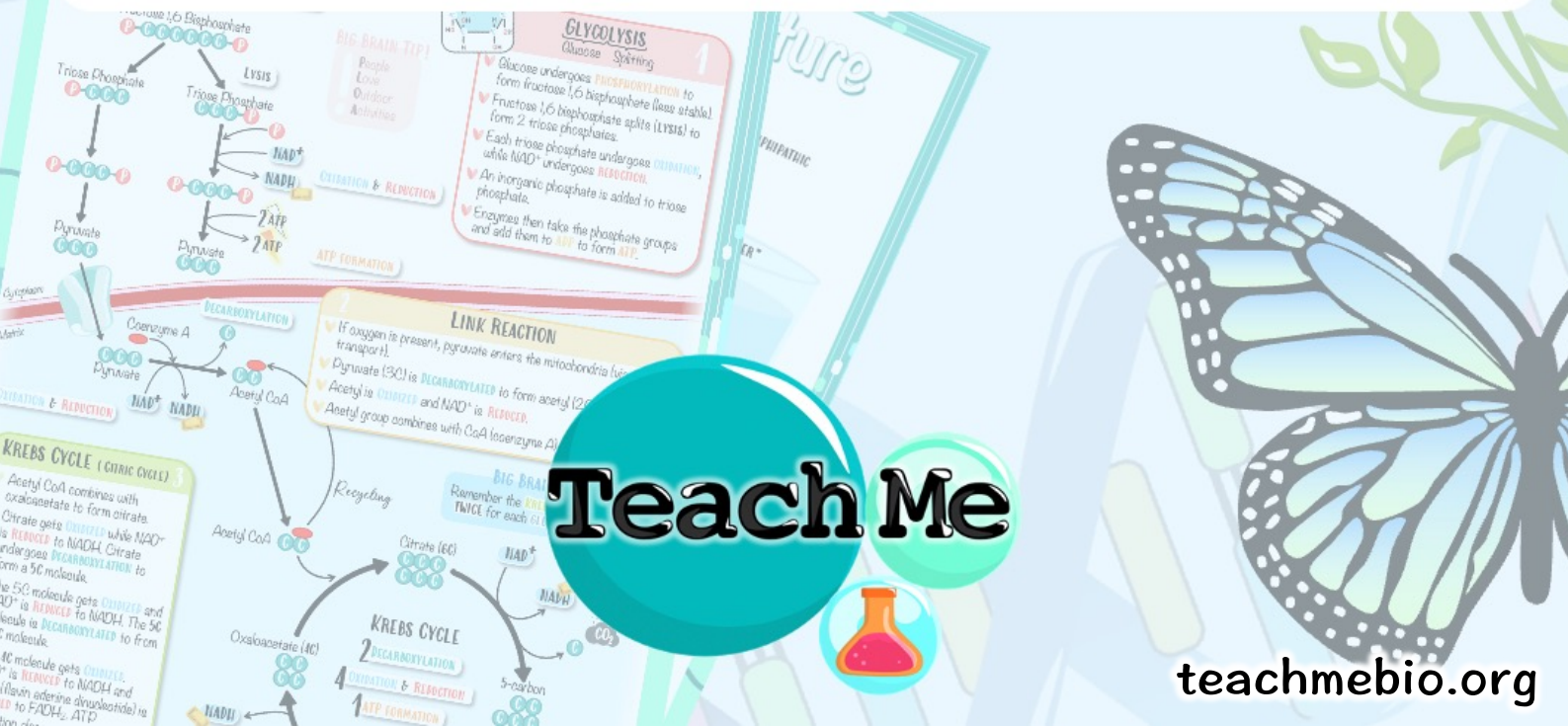


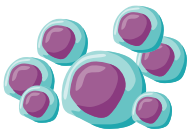
TeachMe

STUDY NOTES

B2.3 CELL SPECIALIZATION



Cell Specialization



Why do we look so complex?



CELL SPECIALIZATION

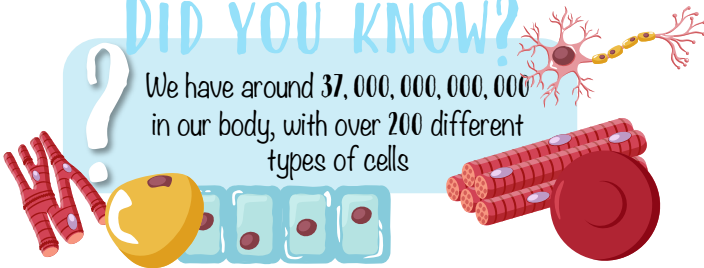
Cells develop into distinct cells types with specific functions allowing the organism to be uniquely adapted to perform tasks efficiently.



You can think of different cells each being a different instrument in a band, each have a soecific role which contributes to the overall task at hand: the concert.

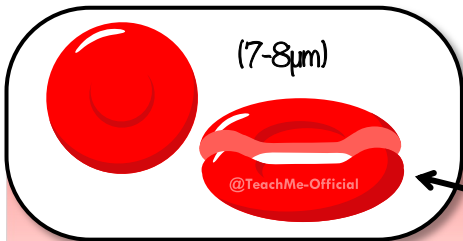
DID YOU KNOW?

We have around 37,000,000,000,000 in our body, with over 200 different types of cells



ERYTHROCYTE (RBC)

(7-8µm)



Hemoglobin - Carry oxygen
Biconcave shape - efficient
Lacks organelles - More space for oxygen
Small & flexible - Pass tiny capillaries

FAT CELL (ADIPOCYTE)

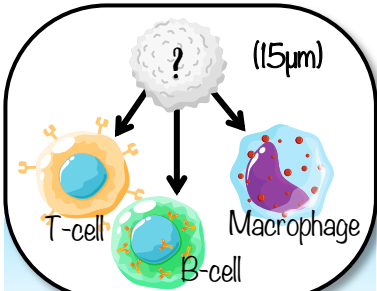
(50 - 150µm)



Lipid Storage

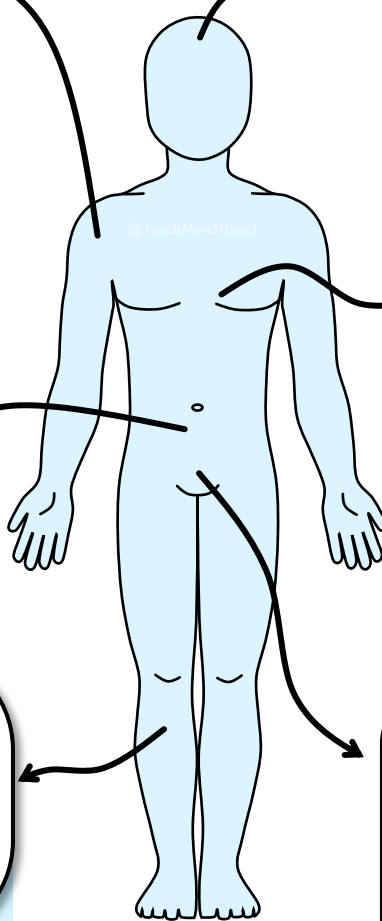
LEUKOCYTE (WBC)

(15µm)

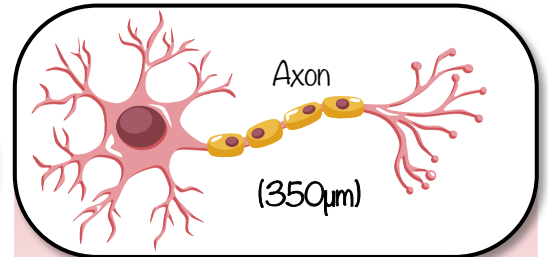


Defense against infections

SOME examples OF CELLS



NERVE CELLS (NEURONS)



Carry signals over long distances

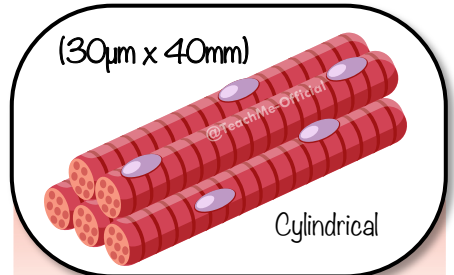
Different Type = Different Function

Motor - Carry signal from brain/spinal cord to muscle (to contract)

Sensory - Carry signals towards the brain (sensation)

STRIATED MUSCLE FIBERS (SKELETAL)

(30µm x 40mm)

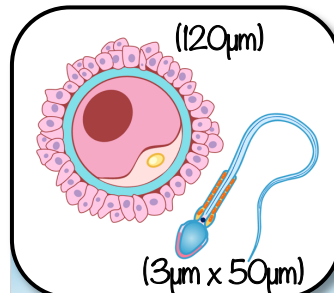


Cylindrical

Contraction (movement)

EGG AND SPERM CELLS

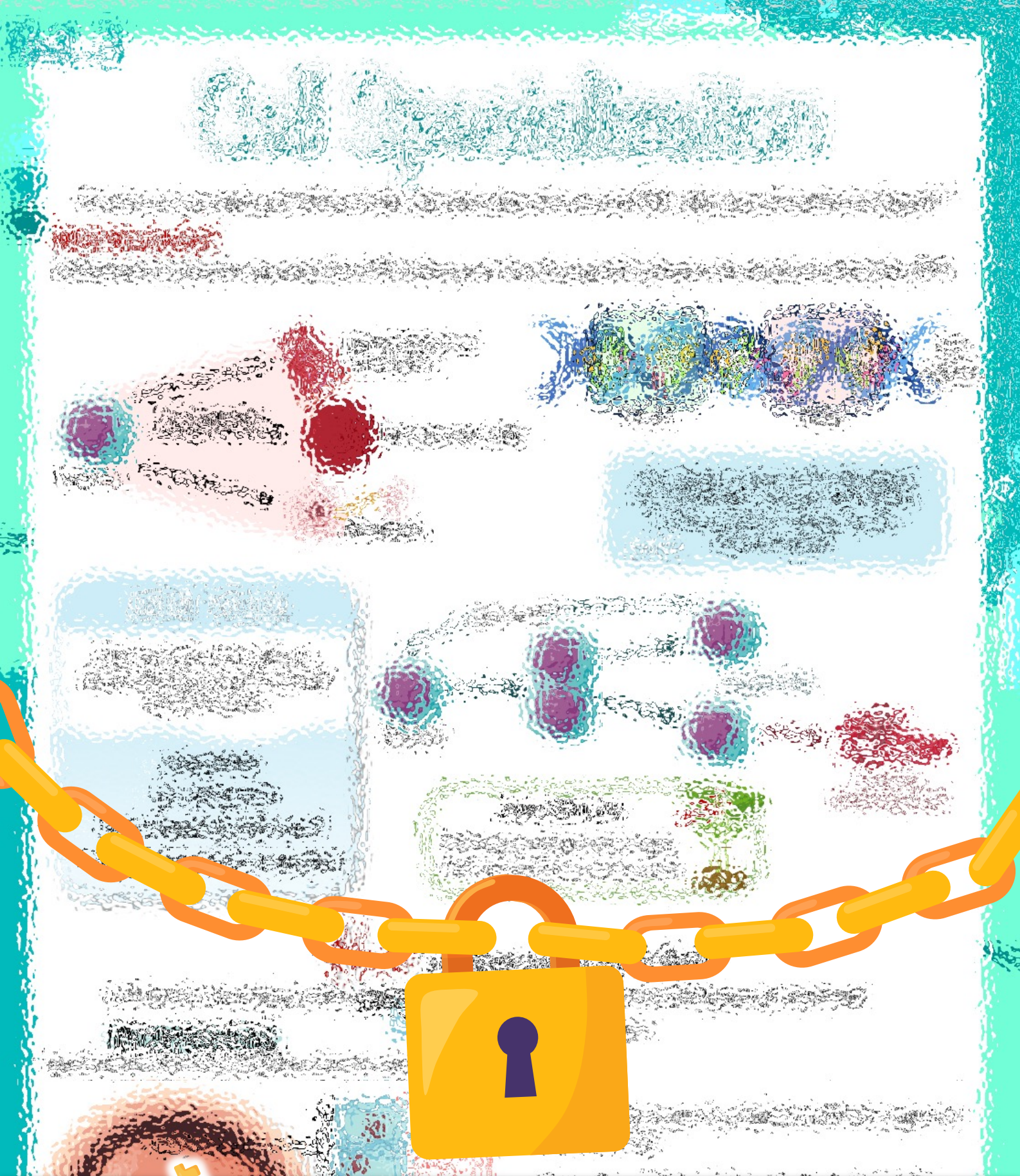
(120µm)



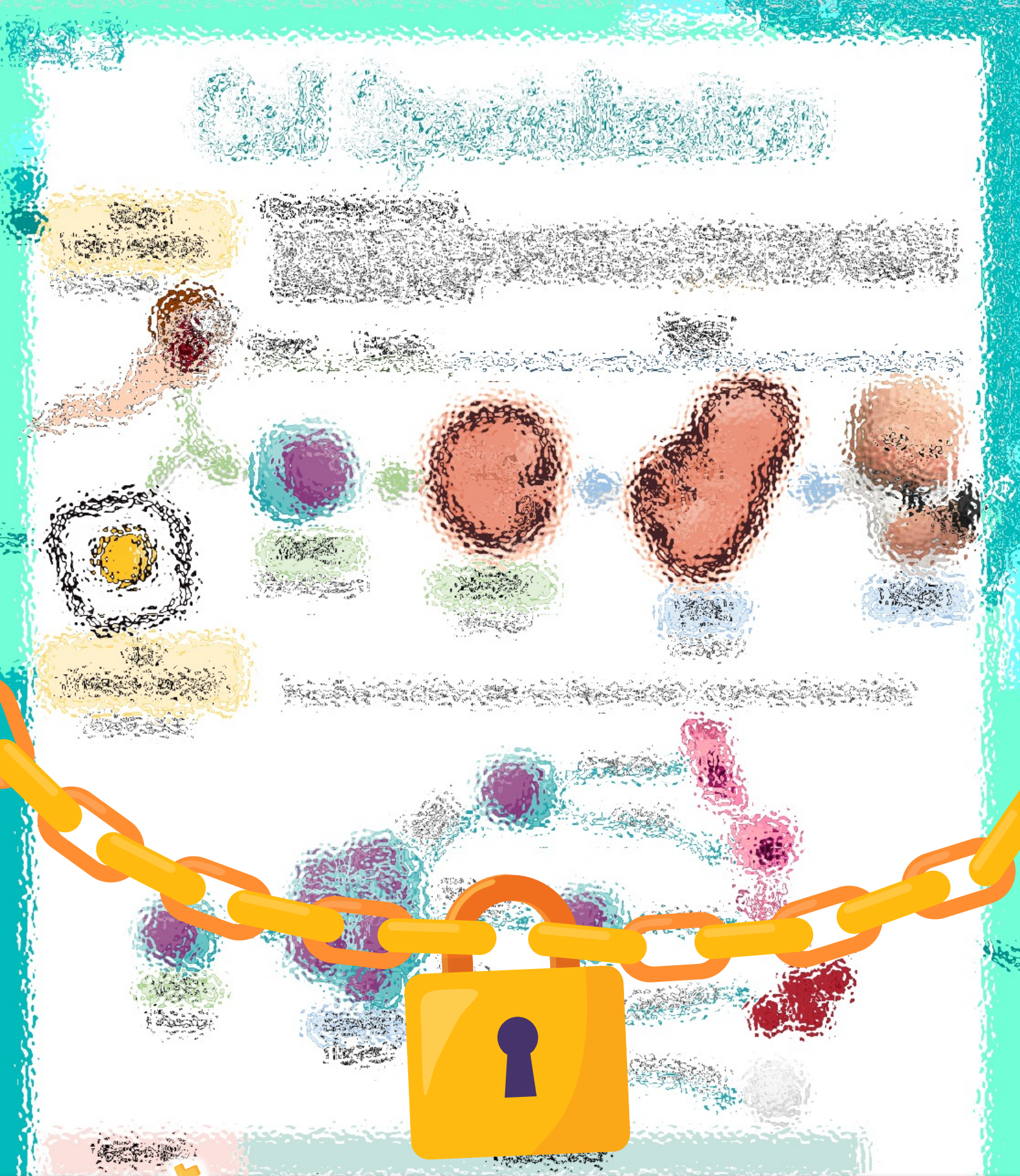
(3µm x 50µm)

Carry genetic information

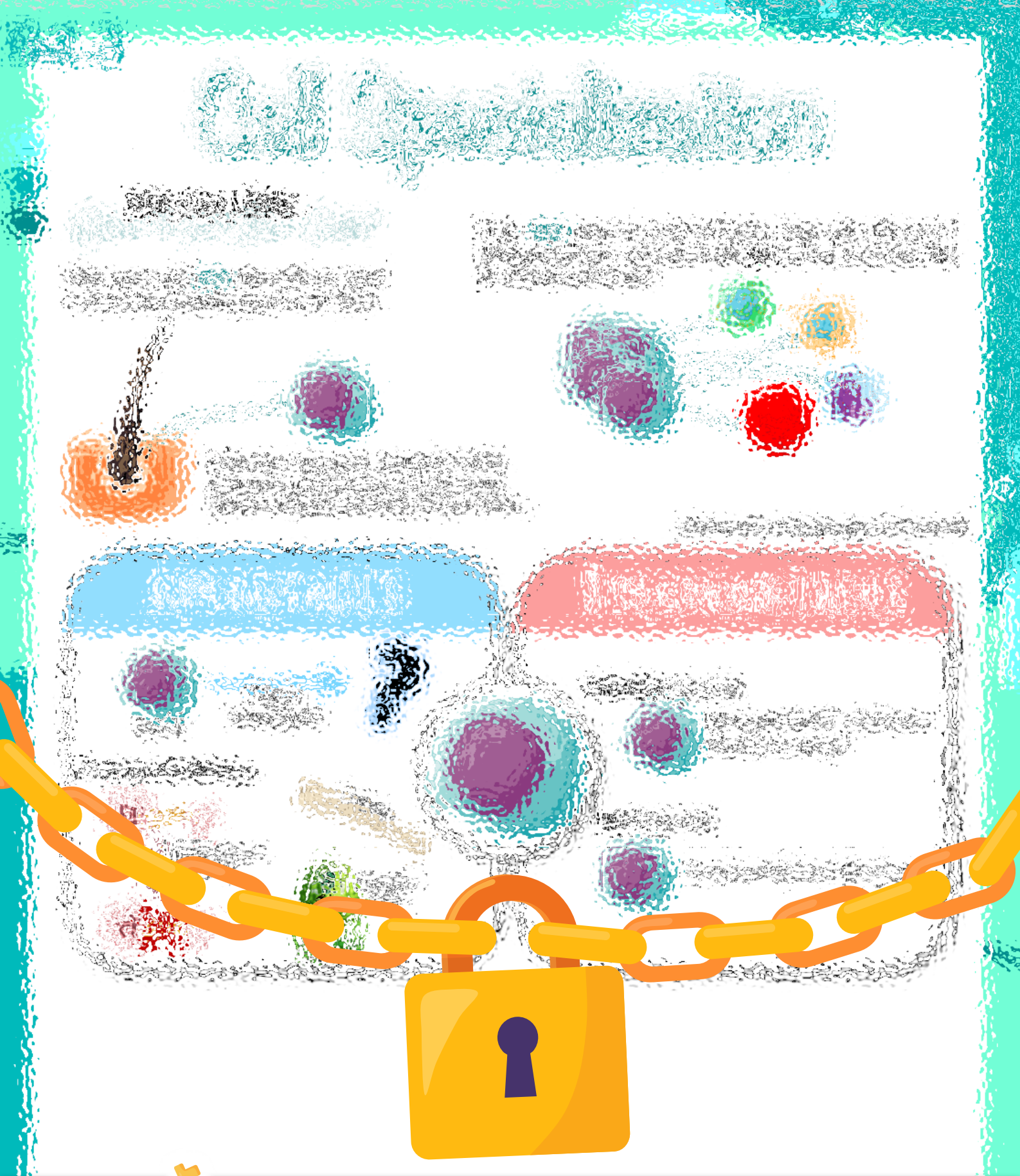




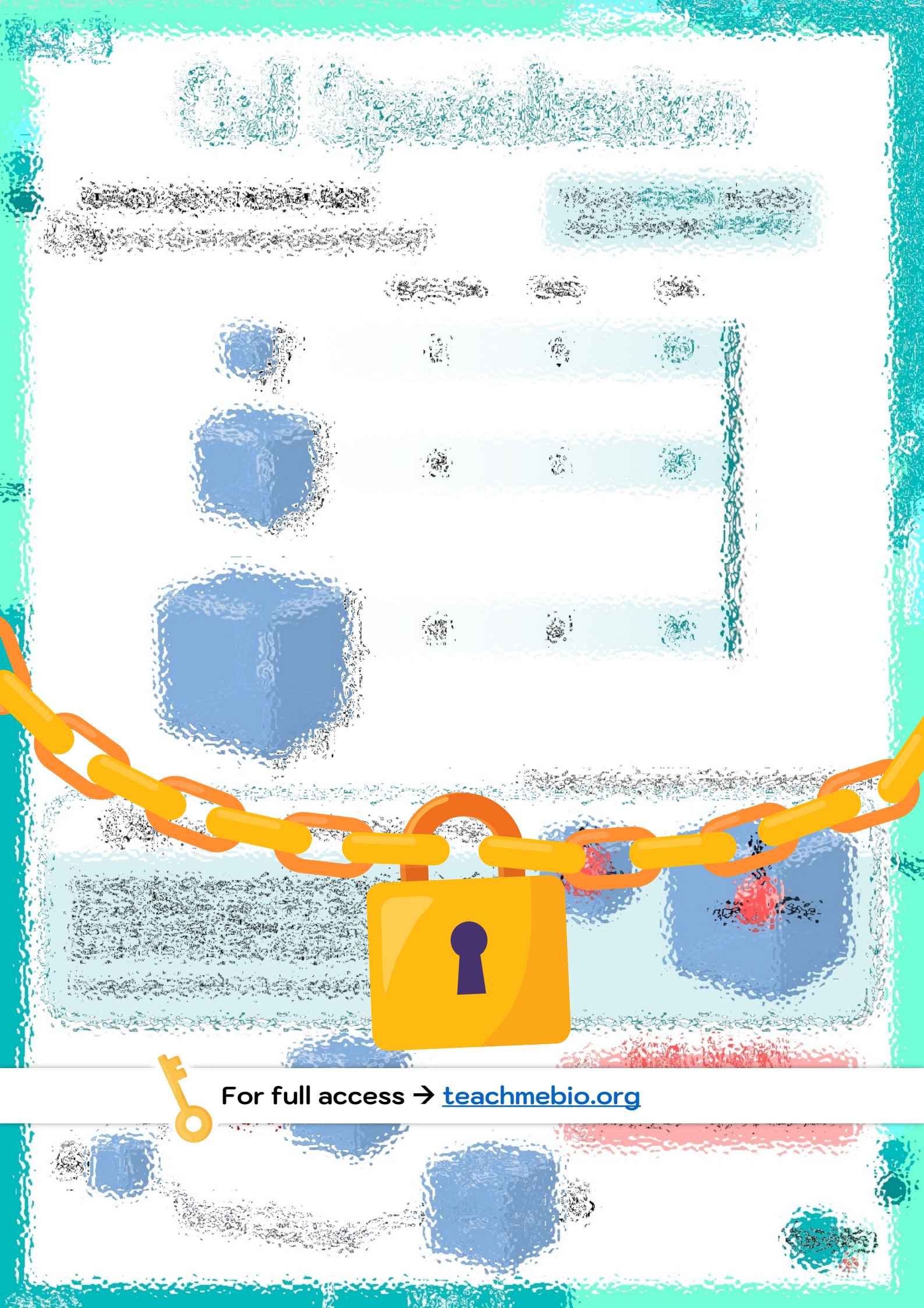
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