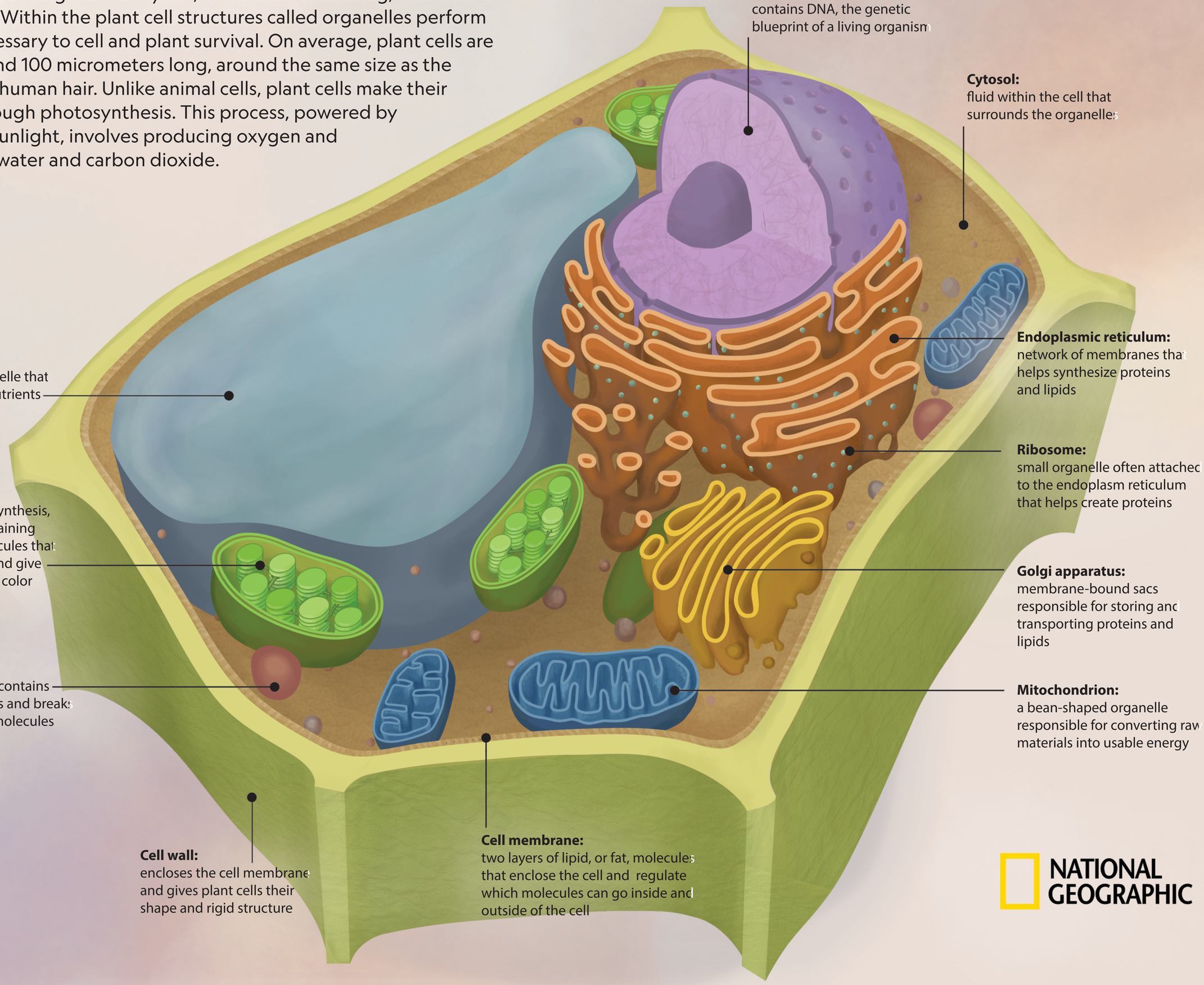
PLANT CELL

Plant cells are rectangular eukaryotic, or nucleus-containing, cells with a rigid cell wall. Within the plant cell structures called organelles perform functions necessary to cell and plant survival. On average, plant cells are between 10 and 100 micrometers long, around the same size as the diameter of a human hair. Unlike animal cells, plant cells make their own food through photosynthesis. This process, powered by energy from sunlight, involves producing oxygen and glucose from water and carbon dioxide.



Nucleus:
contains DNA, the genetic blueprint of a living organism

Cytosol:
fluid within the cell that surrounds the organelles

Endoplasmic reticulum:
network of membranes that helps synthesize proteins and lipids

Ribosome:
small organelle often attached to the endoplasm reticulum that helps create proteins

Golgi apparatus:
membrane-bound sacs responsible for storing and transporting proteins and lipids

Mitochondrion:
a bean-shaped organelle responsible for converting raw materials into usable energy

Vacuole:
a fluid-filled organelle that stores food and nutrients

Chloroplast:
the site of photosynthesis, an organelle containing chlorophyll, molecules that absorb sunlight and give plants their green color

Lysosome:
an organelle that contains digestive enzymes and breaks down biological molecules

Cell wall:
encloses the cell membrane and gives plant cells their shape and rigid structure

Cell membrane:
two layers of lipid, or fat, molecules that enclose the cell and regulate which molecules can go inside and outside of the cell

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