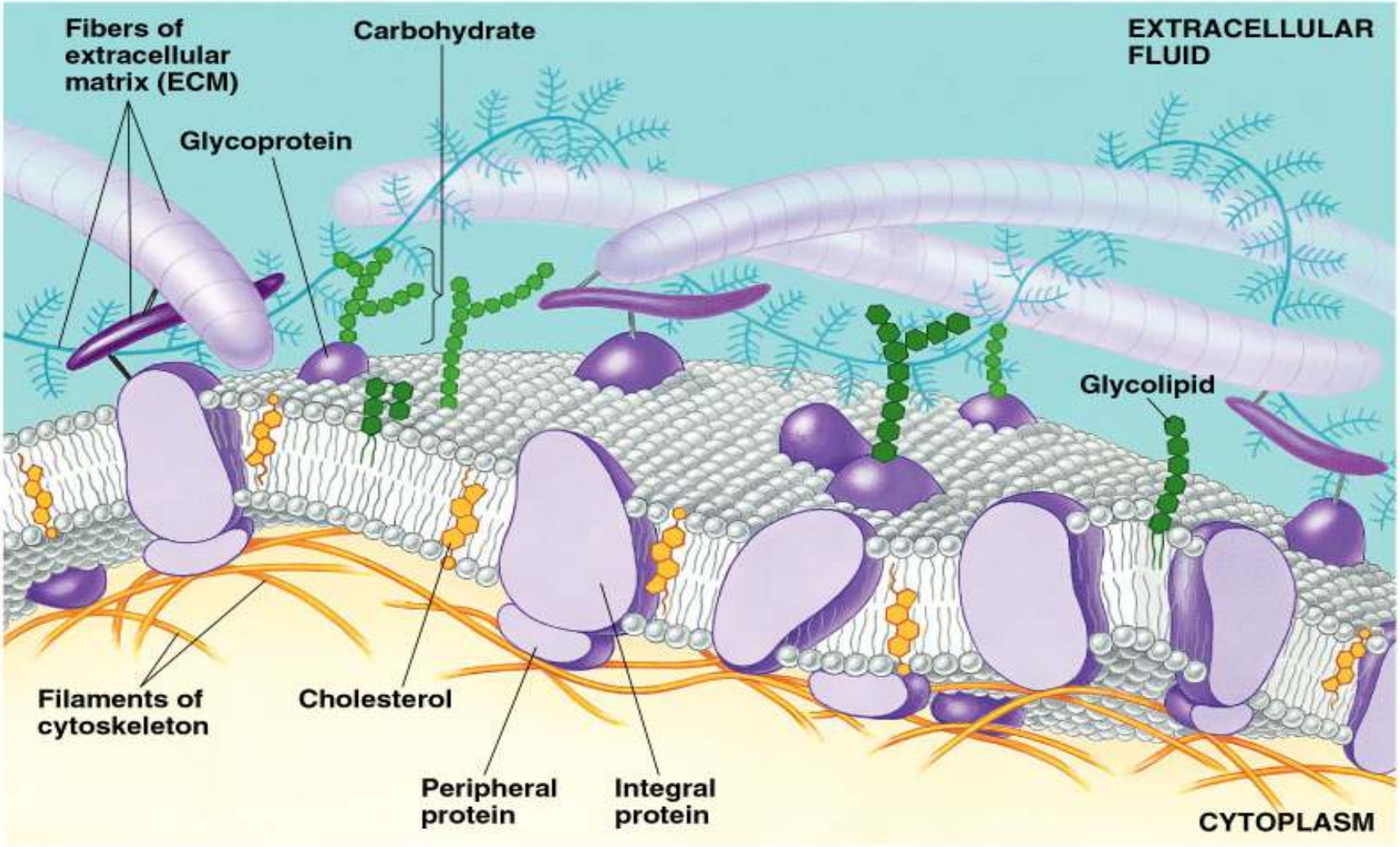
Pre – AP Biology

Cell Membrane Structure (1.2)

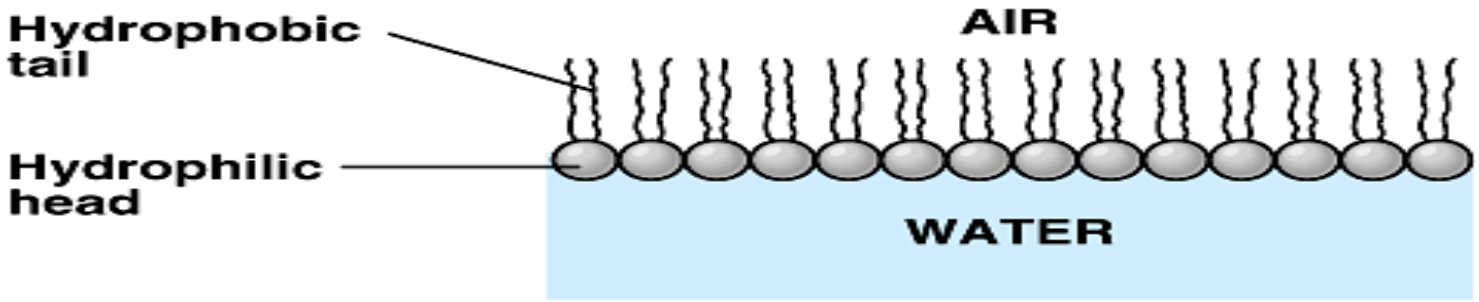
Cell Membrane Structure

The “selectively” permeable barrier



Homeostasis

Phospholipid Membrane component

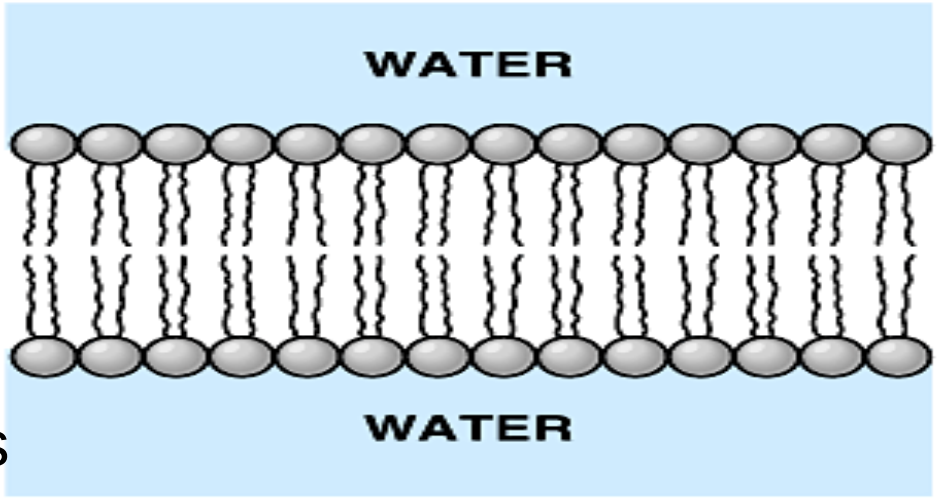


(a)

Amphipathic

Held together by the presence of H2O inside and outside membrane

Phosphorus has - charge and line up and create a barrier, preventing H2O from forming Hydration Shell around phospholipids



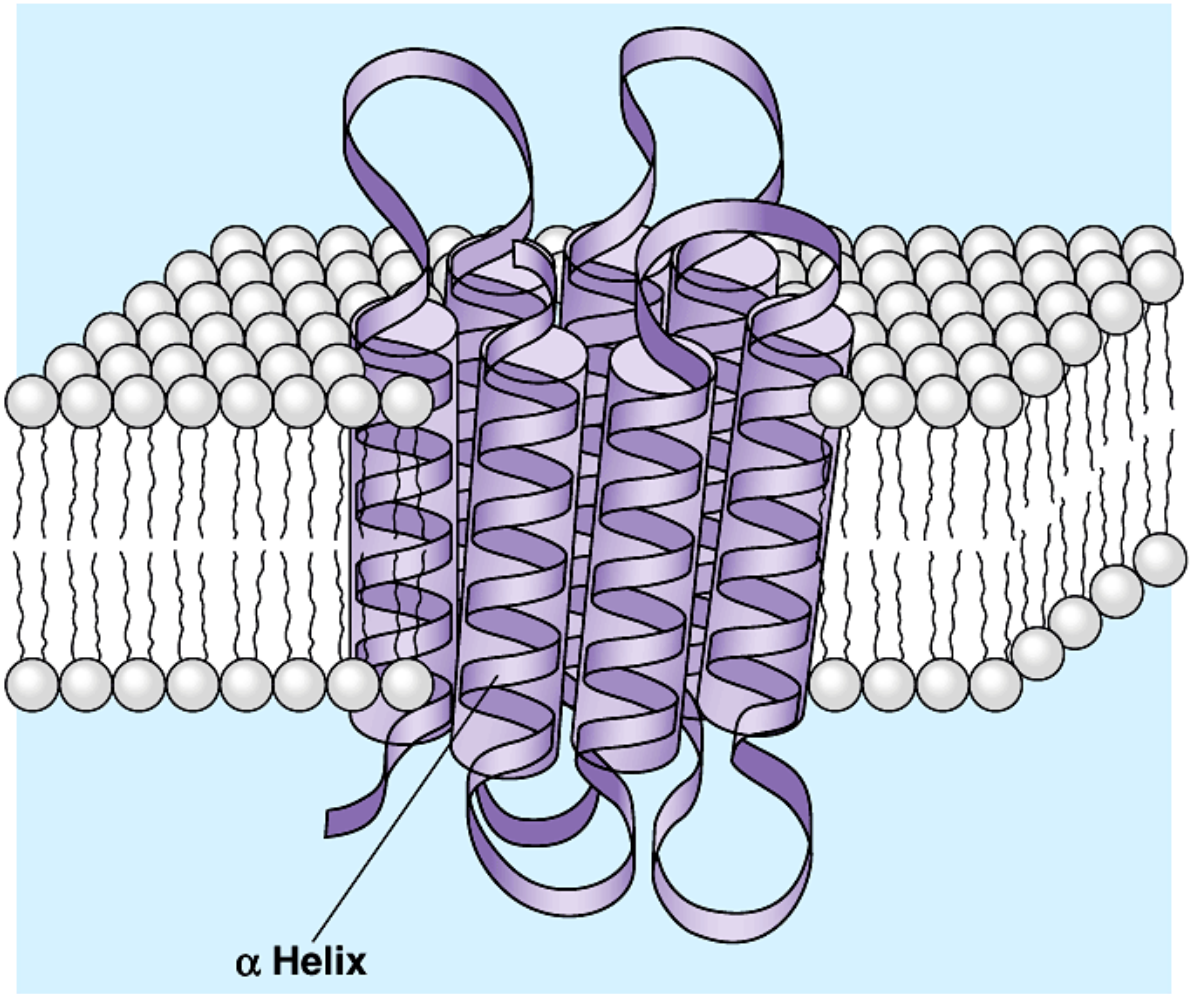
(b)

Proteins of the Membrane

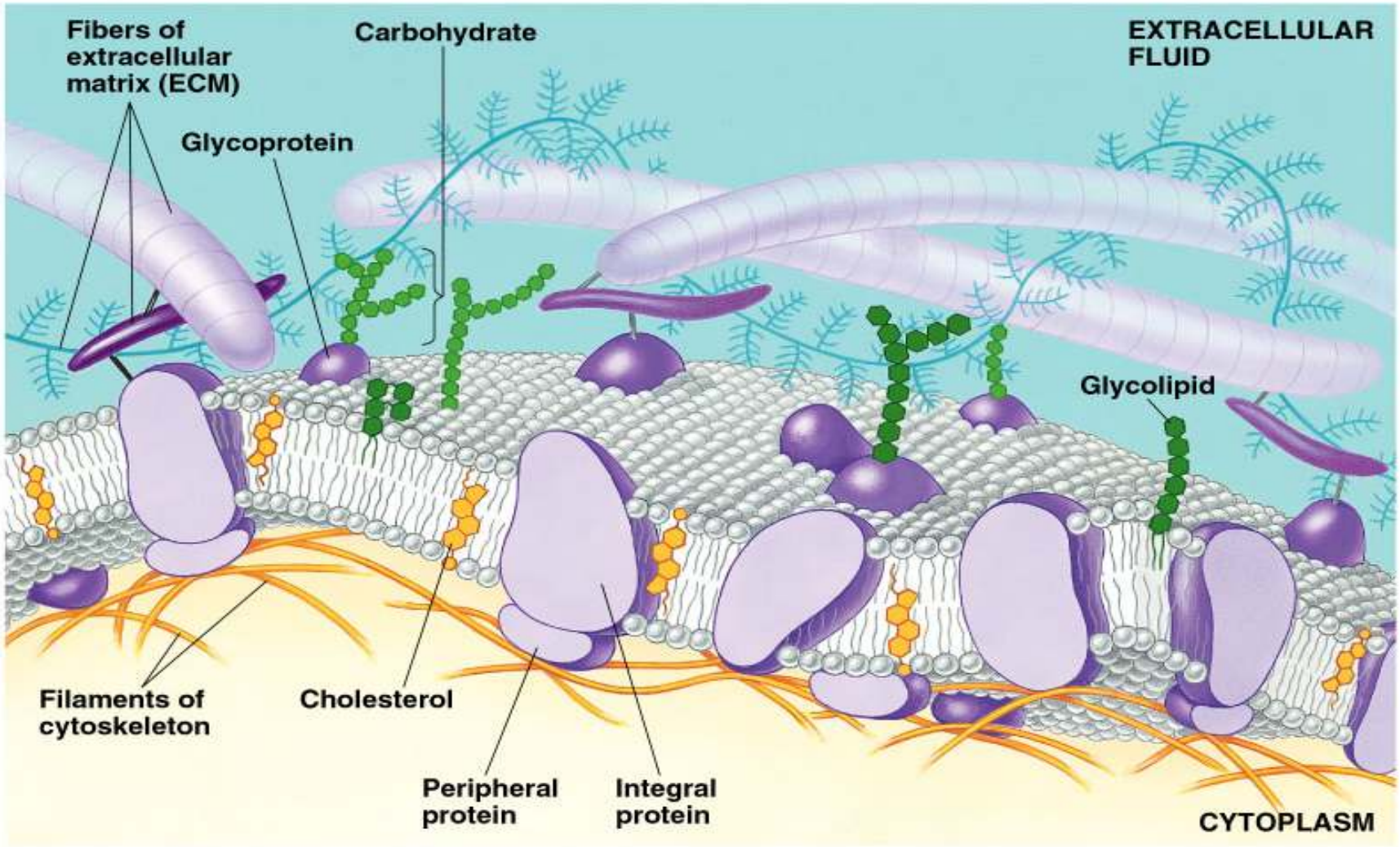
Made of Amino Acids

Amphipathic.

Proteins fold into 3D shapes

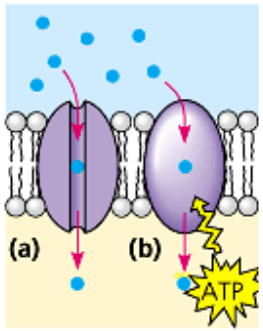


Integral and Peripheral proteins

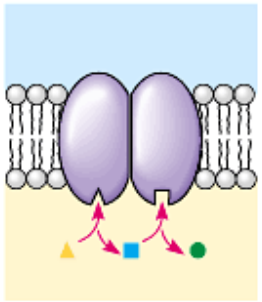


Peripheral acts as site of attachment for Cytoskeleton ECM (outside of cell)

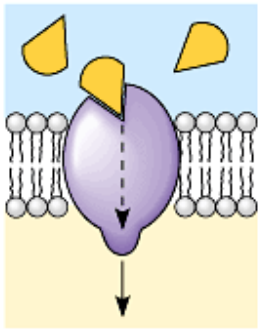
Membrane Protein functions



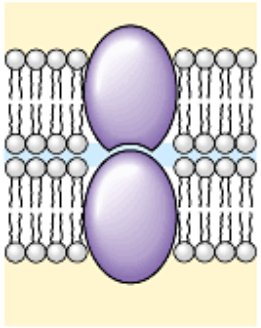
Transport



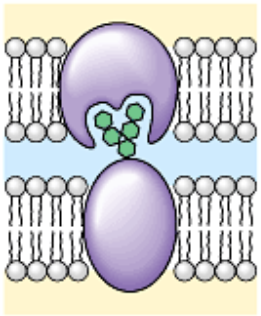
Enzymatic activity



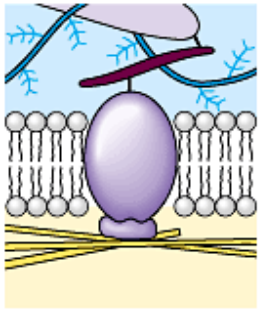
Signal transduction



Intercellular joining



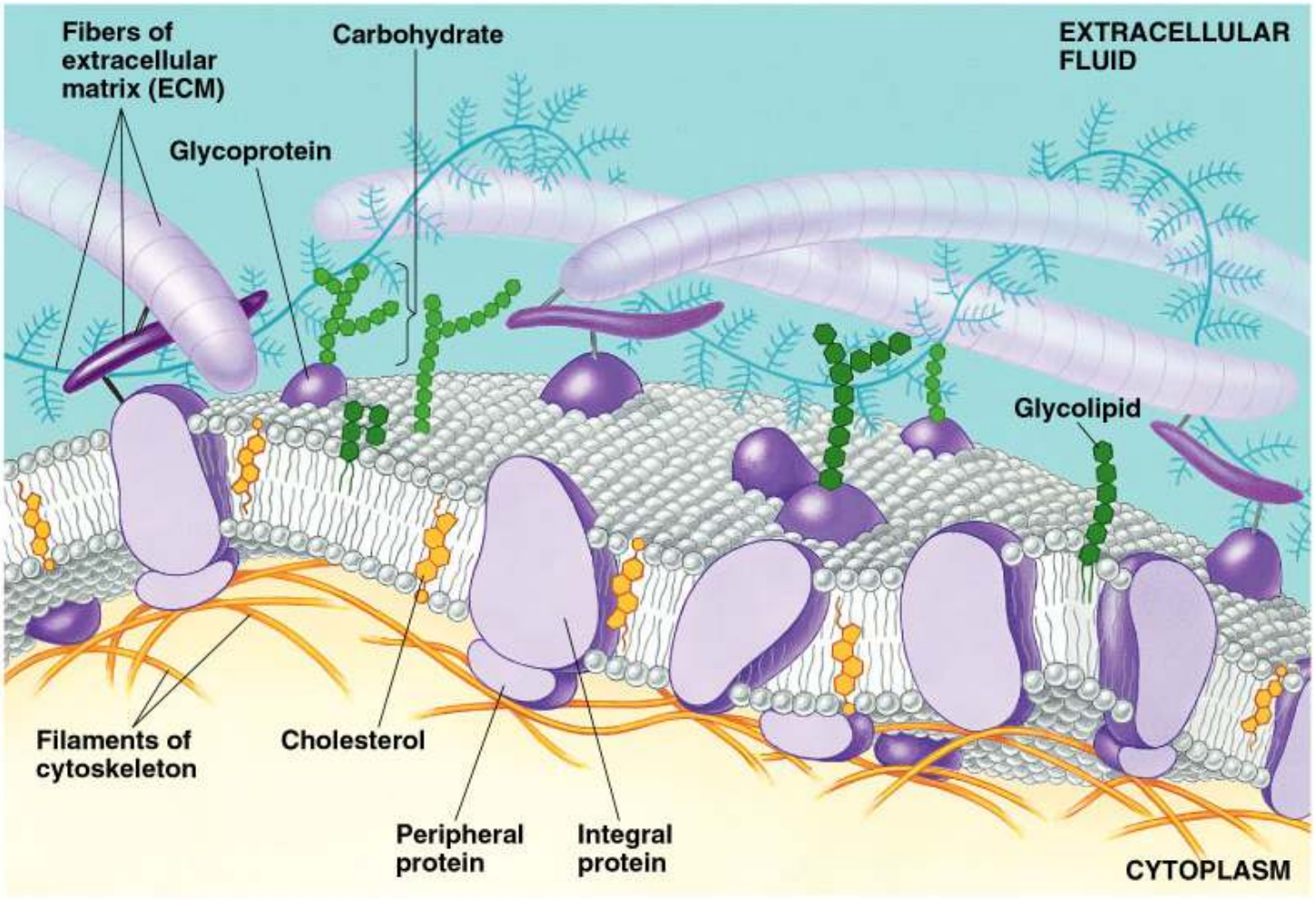
Cell-cell recognition



Attachment to the cytoskeleton and extracellular matrix (ECM)

Cholesterol of the Membrane

Cholesterol keeps cells flexible and keeps cells from freezing



Fluid – Mosaic Model

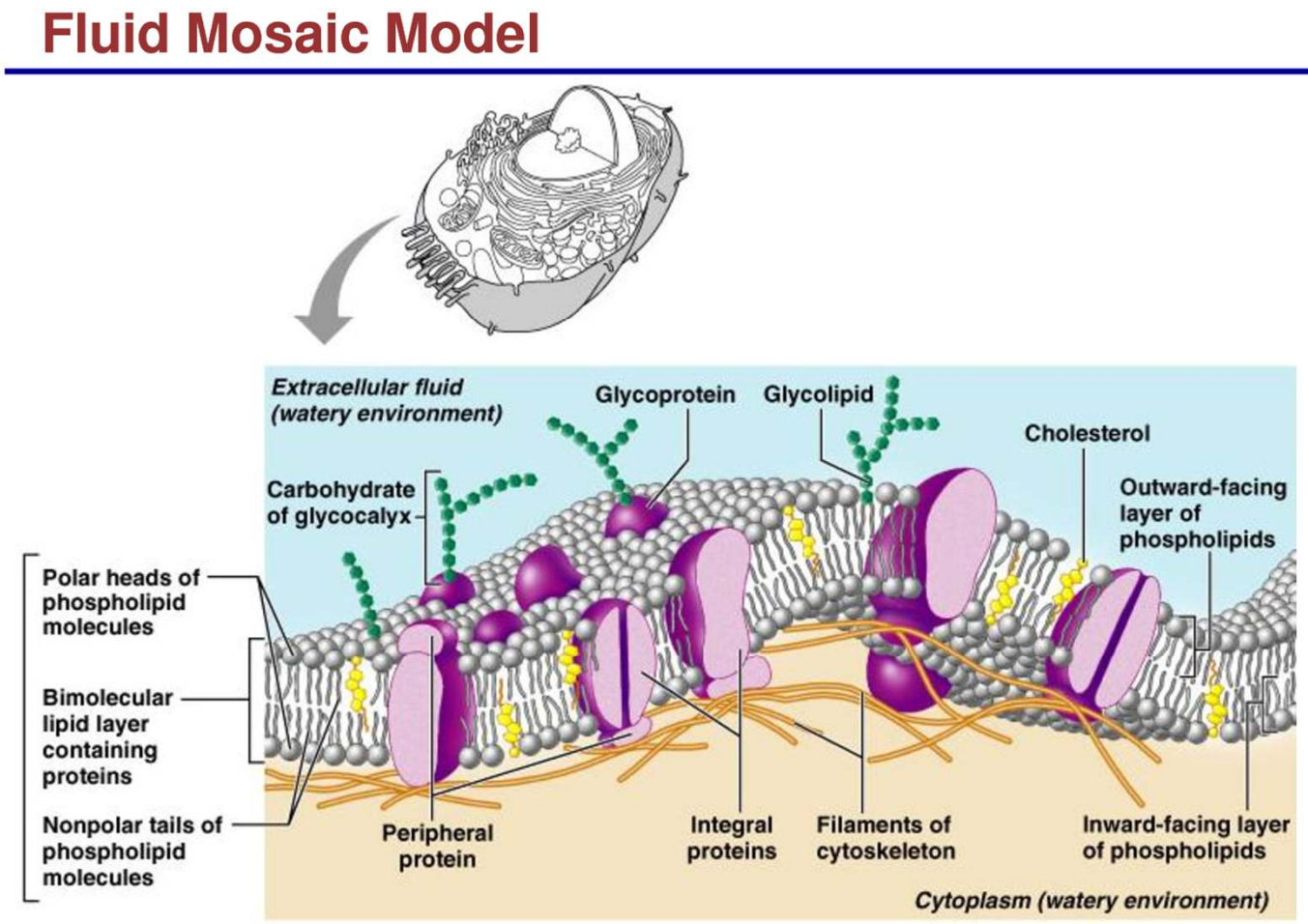
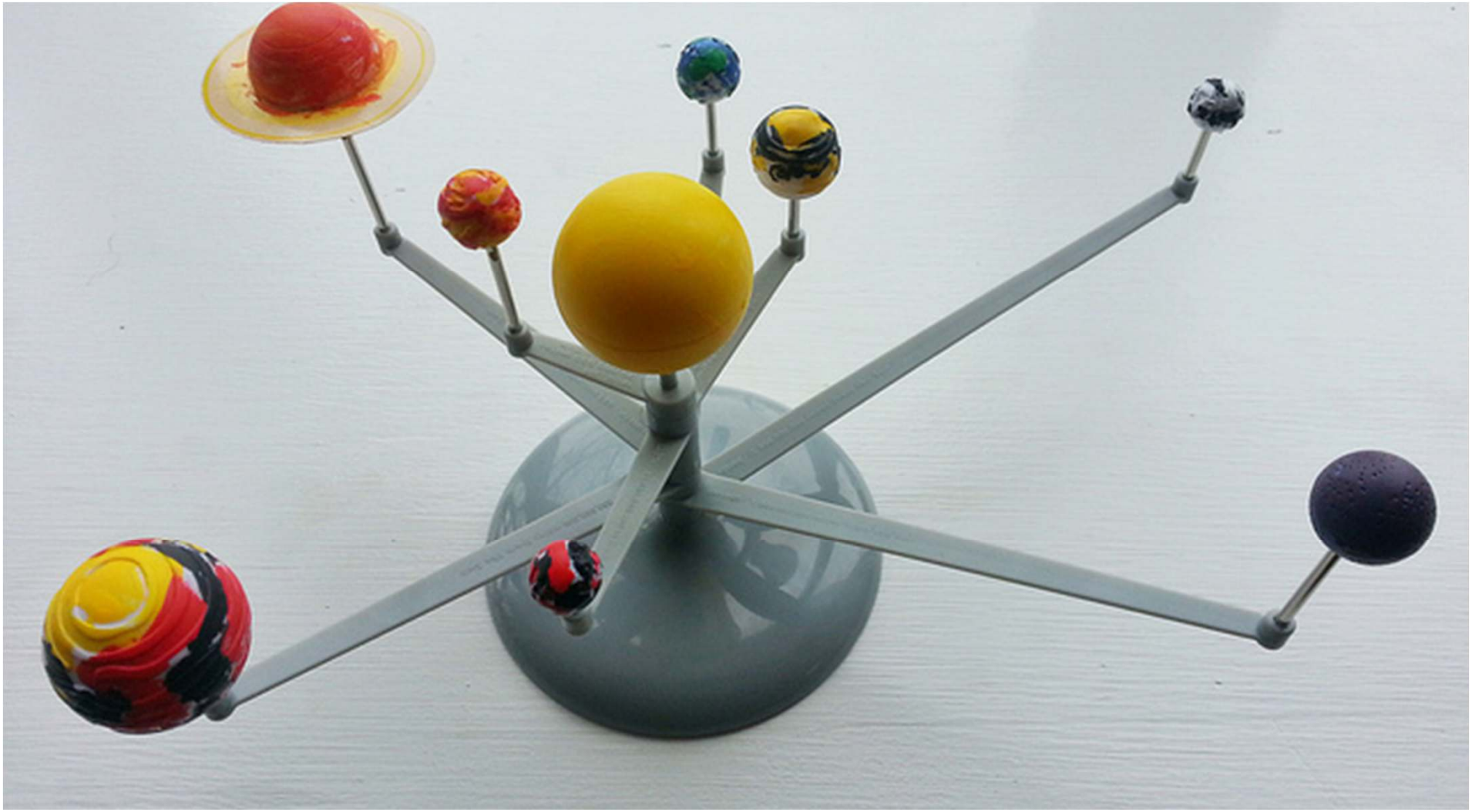


Figure 3.3

Model of the Solar System



Cell models help to explain what we can not see

Cell – to – Cell Recognition

Cells need to communicate.

Can you see the green cell “hands”?