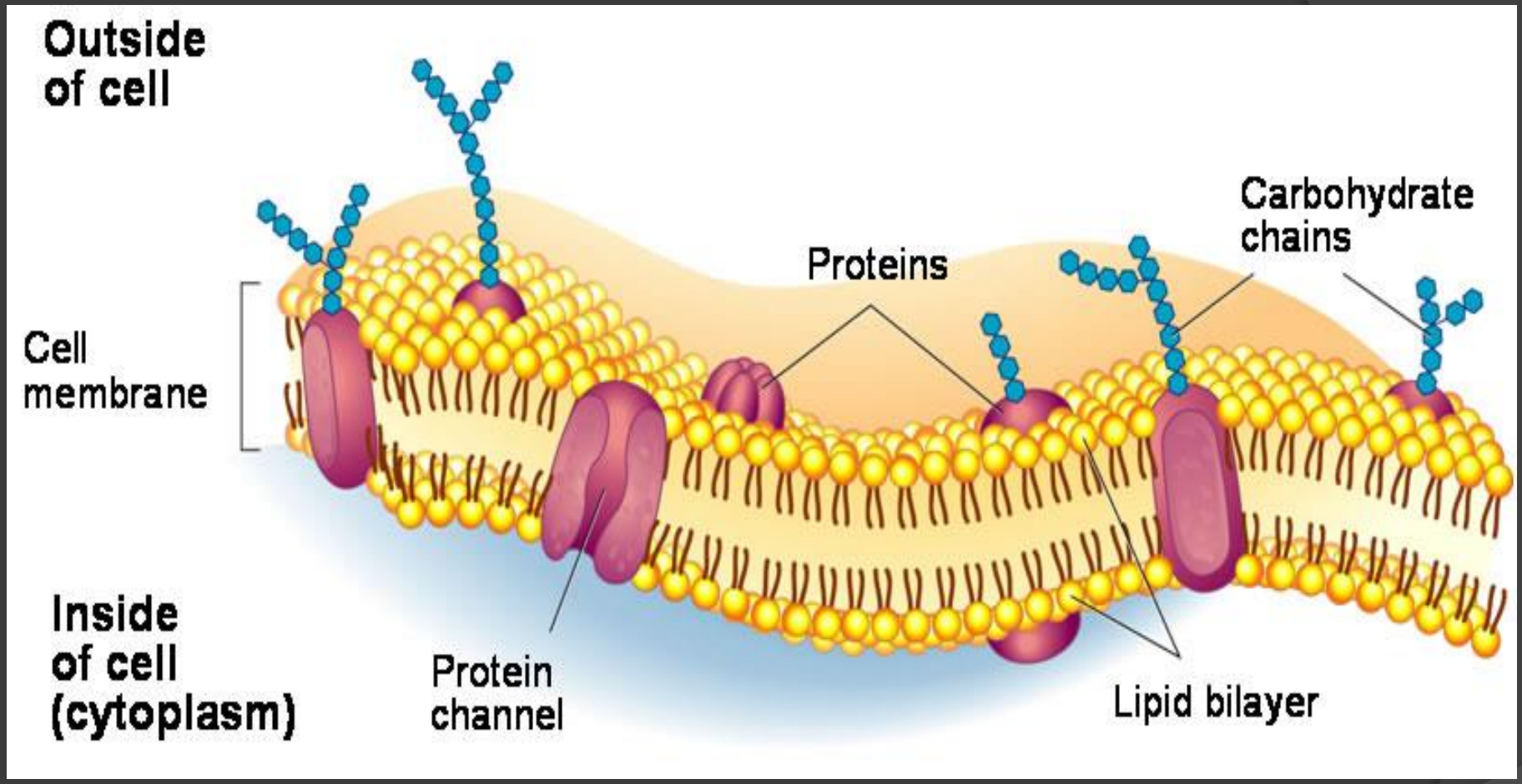
Warm-up: pick up a cell structure sheet (blue), paste it into your notebook, and get started!

Warm-up: Answers


Outside of cell
Carbohydrate chains
Proteins
Cell membrane
Inside of cell (cytoplasm)
Protein channel
Lipid bilayer

Cell Membrane

- All cells are surrounded by a thin, flexible barrier called the cell (plasma) membrane.

- Functions:
  - regulate what enters and leaves the cell
  - Provide structure and support to the cell

Cell Membrane Composition

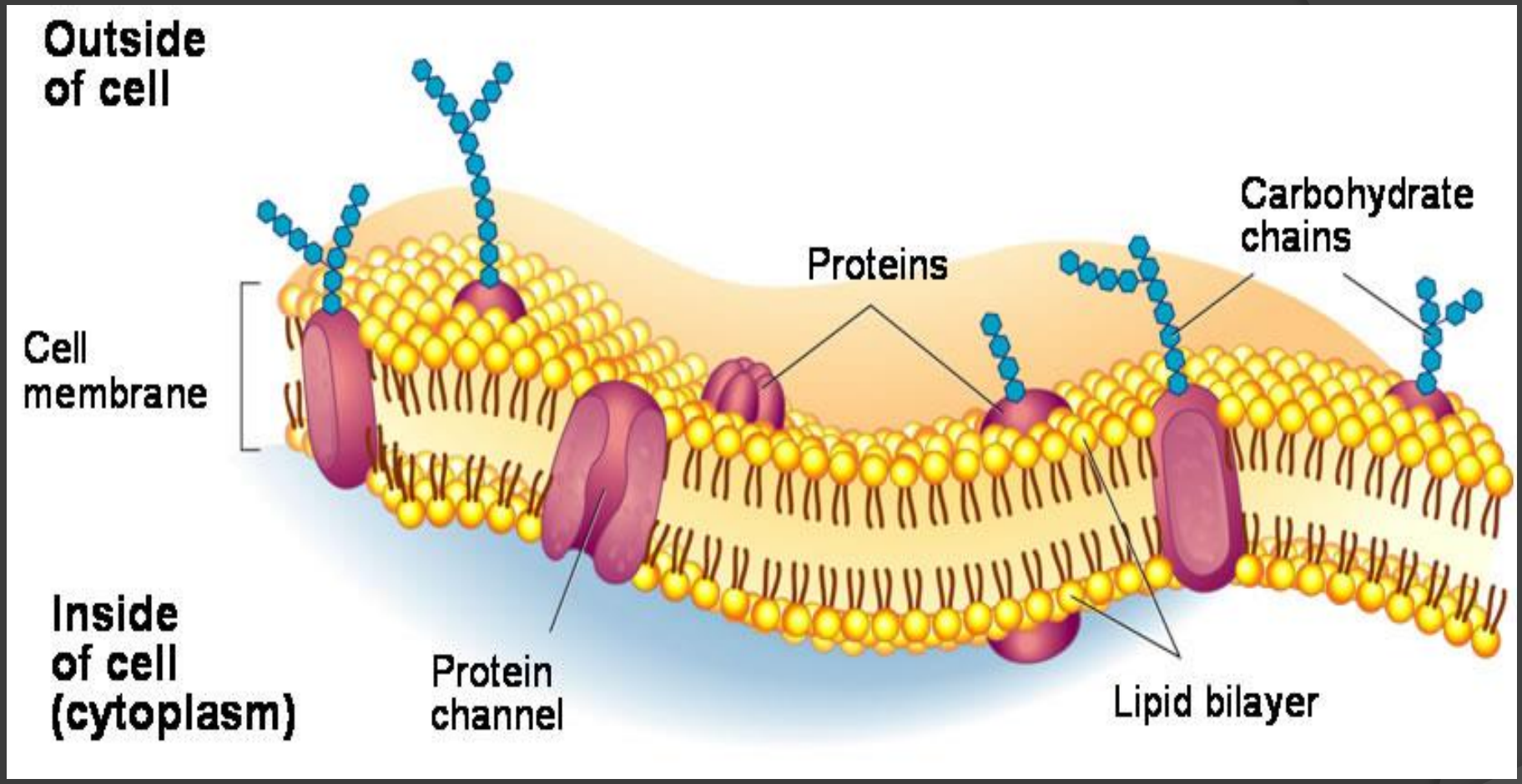
- Mostly Lipids and Proteins
  - Some carbohydrates

Cell Membrane Composition

- Phospholipid Bilayer (lipid bilayer)
  - 2 layers of lipids
- Proteins are embedded in the bilayer
- Carbohydrate chains are attached to the proteins

- So many kinds of molecules =

FLUID MOSAIC MODEL


Outside of cell
Carbohydrate chains
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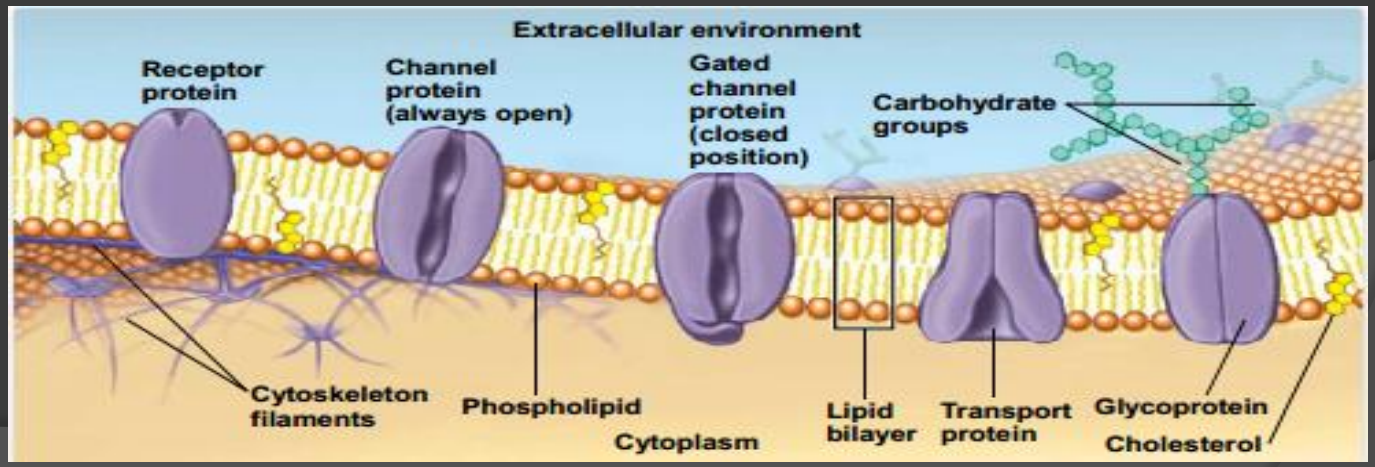
Cell Membrane Properties/Functions

- Selectively permeable = only certain molecules can free pass across the membrane
  - Only small, uncharged, polar molecules can pass freely
    - E.g. Water, carbon dioxide, oxygen
  - Large molecules and ions are impermeable = they can't cross freely
    - E.g. Glucose, Ca^{2+}

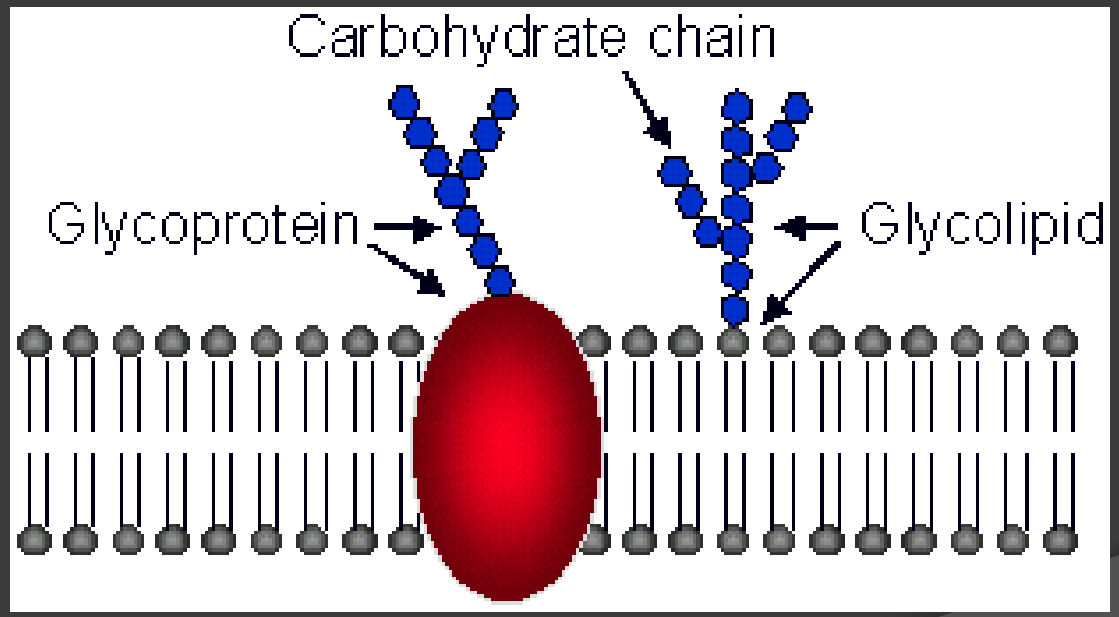
Protein Function in Cell Membrane

1. Surface Proteins – receptors that provide binding sites for hormones or trigger molecules
2. Transport Proteins – help transport large molecules or ions across the membrane



Carbohydrate Function in Cell Membrane

- Serves as identifiers allowing individual cells to identify one another



Next Steps...

- Cell Membrane Poster
- Review of Cells sheet
- Quiz tomorrow!
  - Prokaryotic vs. Eukaryotic Cells
  - Animal Cells vs. Plant cells
  - Cell Structure (Organelles and their functions)