

### 3 Major Components of a Cell

**Plasma Membrane--** *the outermost boundary of the cell.*

**Nucleus--** *functions to direct the activities of the cell.*

**Cytoplasm--** *between the plasma membrane and the nucleus; where most cell activities take place.*

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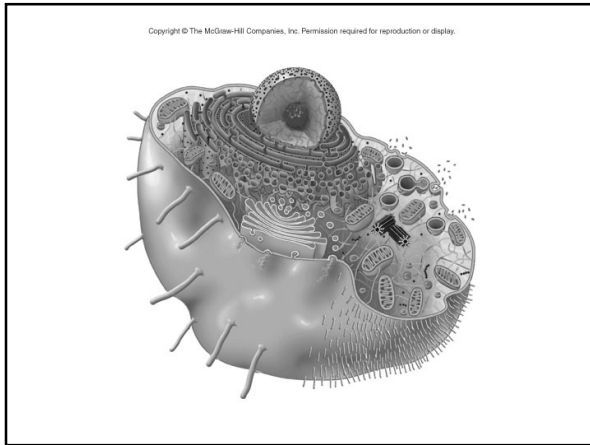
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### Plasma Membrane

- regulates what enters or leaves the cell.

extracellular (intercellular) v. intracellular

**Components:**

- lipid bilayer
- proteins
- cholesterol
- glycoproteins & glycolipids

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## Plasma Membrane

### Lipid Bilayer

- head is *hydrophilic*
- tail is *hydrophobic*

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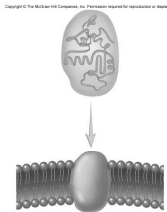
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## Plasma Membrane

Proteins-- “float” in the lipid bilayer.

### Functions:

- membrane channels
- carrier molecules
- marker molecules
- enzymes
- structural components



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## Plasma Membrane

Cholesterol-- contributes to the fluidity of the cell.

Glycoproteins & Glycolipids-- act as markers & communicators between cells.

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## Plasma Membrane

### *“Fluid Mosaic Model”*

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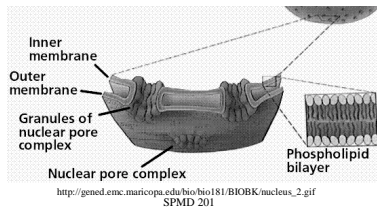
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## Nucleus

- Nuclear envelope
- Nucleoli
- DNA (deoxyribonucleic acid)



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## Cytoplasm

### Cytoskeleton

--supports the cell and permits cell movements.

--cell proteins

--microtubules, actin, & other protein filaments.

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## Cytoplasm Organelles

- Ribosomes
- Endoplasmic Reticulum (rough & smooth)
- Golgi Apparatus
- Secretory Vesicles
- Lysosomes
- Peroxisomes
- Mitochondria
- Centrioles
- Spindle Fibers
- Cilia & Flagella
- Microvilli



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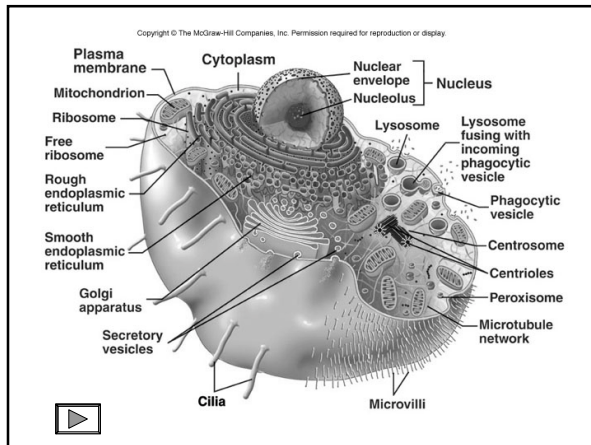
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