

Definitions activity

Match the terms to their definitions.

*Use lines. Go to 'Insert' -> 'Shapes' in Word.

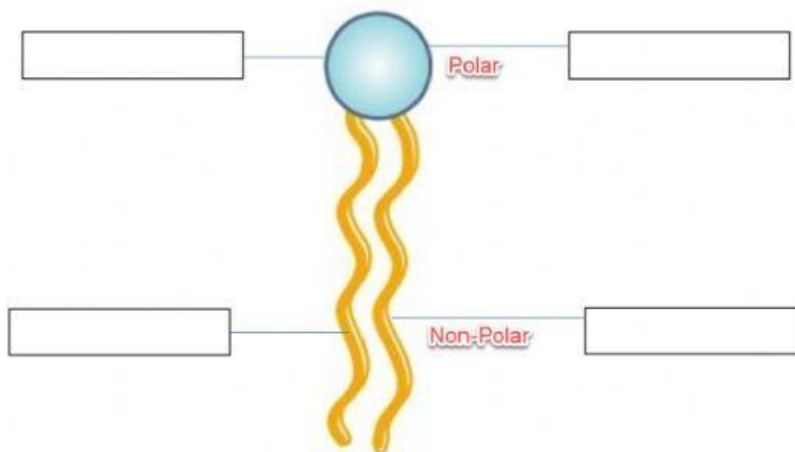
Phospholipid *Phospho = Phosphate *Lipid = Fatty Acid
Hydrophobic *Hydro = Water *Phobic = Fearing
Hydrophilic *Hydro = Water *Philic = Loving
Cholesterol

Water attracting. Caused by being non-polar.
Molecule with a fatty acid tail. Stabilises membrane fluidity.
Molecule with a phosphate head and two fatty acid tails.
Water repelling. Caused by being polar.

Phospholipids

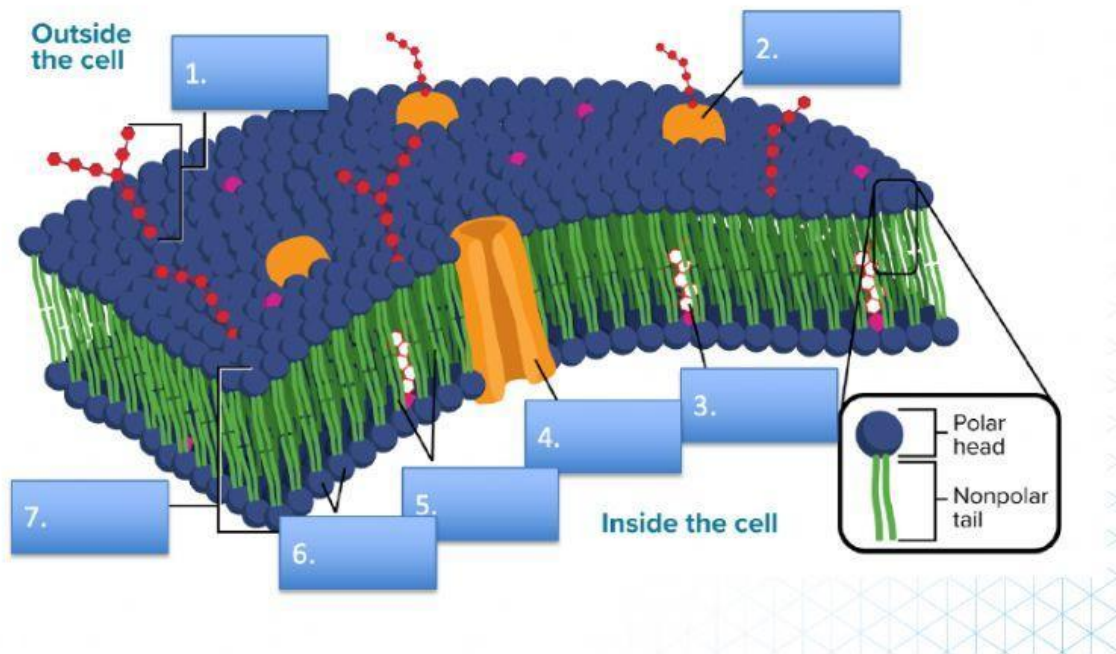
Use your definitions task to label the diagram of the phospholipid.
Include: Phosphate head; lipid tails; hydrophobic; hydrophilic

*If distance, use text boxes. Go to 'Insert' in word.



Part 1: Label the different components of the plasma membrane

Structure of the Plasma Membrane



8. where will we find the extracellular fluid _____

9. where will find the cytoplasm _____

Phospholipid bilayer

Membrane protein

Polar heads

cholesterol

Carbohydrate chain

Non-polar tails

Transport protein

Module 7 – Lesson 2: the plasma membrane

Part 2:

Match each of the following molecule with its correct function:

Carbohydrates

Receptor proteins

Transport proteins

Phospholipid

Phospholipids

Phospholipid heads

Phospholipid tails

Cholesterol

1. The plasma membrane is composed of _____
in which two layers of phospholipids are arranged tail-to-tail
2. _____ are arranged where the polar heads are closest to the water molecules on either side of the membrane and the fatty acid (nonpolar) tails forming the interior of the membrane.
This orientation means the tails are farthest away from water molecules on either side of the membrane.
3. This part has a phosphate group that makes it polar or attracted to water:

4. These are two fatty acid chains that are non-polar – or repelled by water

5. This molecule helps to prevent the fatty-acid tails of the phospholipid bilayer from sticking together, which contributes to the fluidity of the plasma membrane.

6. These molecules stick out from the plasma membrane. They define the cell's characteristics and help cells identify chemical signals. _____
7. They span the entire membrane and create tunnels through which certain substances enter and leave the cell. They move needed substances or waste materials through the plasma membrane and therefore contribute to the selective permeability of the plasma membrane. _____
8. _____ are found on the outer surface of the plasma membrane, they transmit signals to the inside of the cell.

Proteins at the inner surface anchor the plasma membrane to the cell's internal support structure, giving the cell its shape

Proteins – hydrophobic hydrophilic

In the same way as before, match the protein types to their descriptions.

Peripheral Protein *Peri = Near
Integral Protein
Transmembrane Protein *Trans = Across
Glycoprotein *Glyco = Sugar

Extends through both phospholipid layers.
Bonded to a carbohydrate present on the outer membrane.
On the surface of the phospholipid bilayer.
Embedded in the phospholipid bilayer.