**Lipids concept map exercise: Use the internet as a resource to complete the packet.**

Under Structure be sure to include whether these fats are polar or nonpolar. Also include what saturated, unsaturated, and trans unsaturated fats look like at room temperature.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Fats:** | **Structure:** | **Function:** | **Benefits/Drawbacks** | **Examples:** |
| **Triglyceride** |  |  |  |  |
| **Saturated Fat** |  |  |  |  |
| **Unsaturated Fat** |  |  |  |  |

**Phospholipids:**

**Define:**

Hydrophilic:

Hydrophobic:

Draw the structure of a phospholipid below. Describe your structure. Be sure to identify how the two ends of the phospholipid behave in water. Make sure to include what part of the molecule is polar and what part is nonpolar. Include the terms above in your description.

Draw a diagram that could represent how phospholipids would assemble in an aqueous (water) solution. Label the hydrophilic and hydrophobic regions of your diagram. Justify your answer with specifics from your description above.

What is the function of a phospholipid in animal cells? Be sure to explain why phospholipids are essential.

**Steroids (**not the ones that Schwarzenegger used**):**

What is the common structure of steroids? Drawing a diagram may be helpful.

Fill in the following diagram:

|  |  |  |  |
| --- | --- | --- | --- |
| **Steroid:** | **Function in the Body:** | **Where is it made:** | **Benefits/drawbacks:** |
| **Cholesterol** |  | 1.  2.  Is Cholesterol made naturally in our bodies? |  |
| **Many hormones are steroids** | Chemical messengers  They tell our body what to do and when to do it | Hormones are synthesized in the body using cholesterol  Hormones are made in different glands throughout the body | **Steroid Hormone examples:**  Testosterone  Estrogen  Cortisol |

Explain why we don’t have to eat a diet high in cholesterol to reap the benefits of cholesterol?