

Name: \_\_\_\_\_

Date: \_\_\_\_\_

## Building Lipids Activity

### Purpose

To introduce students to the structure of lipids and the components in triglycerides and phospholipids

### Materials

- 3 different colours of pipe cleaners
  - o Two colours of pipe cleaners should be about 10 cm in length
  - o 1 colour of pipe cleaner should be about 5 cm in length
- Blue beads

### Procedure

1. The longer pipe cleaners represent fatty acid tails. The shorter pipe cleaner represents glycerol. The beads represent phosphorous.
2. To make a saturated triglyceride: Attach 3 longer pipe cleaners horizontally to the shorter pipe cleaner.
3. To make an unsaturated triglyceride: Attach 3 longer pipe cleaners horizontally to the shorter pipe cleaner. Bend the longer pipe cleaner multiple times to show double bonding.
4. Show how the fatty acid tails in unsaturated fatty acids cannot fit together as easily as in saturated fatty acids, and thus they are liquid at room temperature.
5. To make a phospholipid: Attach 2 longer pipe cleaners horizontally to the shorter pipe cleaner. Attach a single bead to the shorter pipe cleaner to represent a phosphorous group.
6. Get the class to play around with these materials to see the different structures.