**IB Biology Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Cell Membrane Bubble Lab Period \_\_\_\_\_\_ Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Procedure:** Mix 50 mL Joy liquid soap, 500mL water and 2 mL Karo Syrup in a large, shallow dish. Use two straws and 100% cotton thread to complete the activity. **Do not dump out the solution or throw away the props at the end of this lab unless instructed to do so by the teacher.**

**Properties of Cell Membranes:** fluid, flexible, self-sealing, integral proteins, pores

1. Make a film of bubble solution using your straw device and move the device from side to side to bend the film. What property of a cell membrane does this illustrate?
2. Wet a piece of thread (tied into a circle) in the solution and gently place it on the cell membrane. Make sure your fingers are wet when doing this. Now pop the bubble inside the thread. Move the circle around. Write down your observations.

What property of a cell membrane does this illustrate? (The empty circle of thread.)

1. Gently remove the circle of thread from the bubble. What happens?

What property of a cell membrane does this illustrate?

Why is this a necessary property of the cell membrane?

1. Try inserting your wet finger or wet pencil halfway through the membrane. Move the finger or pencil around. Describe what happens.

What property of a cell membrane does this illustrate?

1. Wet another straw in the bubble solution. Gently blow bubbles onto the membrane. What could the bubbles represent?
2. Using the soapy solution, form a prokaryotic cell on the surface of your lab table. Be sure to include chromatin (DNA) in your model. Show your teacher your model. Teacher's initials \_\_\_\_\_\_
3. Evolve your prokaryotic cell into a eukaryotic cell. Be sure to include membrane-bound organelles and an organized nucleus with chromatin. Show your teacher your model. Teacher's initials \_\_\_\_\_\_
4. Describe what was different in your prokaryotic and eukaryotic cells.