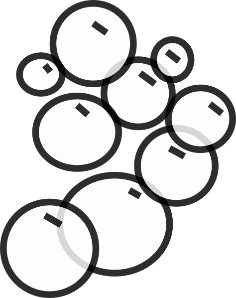
**The Cell Membrane Bubble Challenge Lab**

Challenge 1: Membrane Flexibility

* Figure out how you can create a film in the straw frame.
* Holding it parallel to the floor, how far can you bounce it up and down without the film breaking? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Challenge 2: Membrane Self- Repair

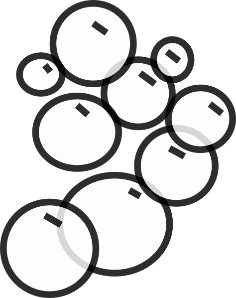
* Figure out how to pass a finger or hand (extra challenge!) through the membrane WITHOUT POPPING THE FILM.
* How’d you do it? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  
  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Challenge 3: Organelles Within the Cell

* Figure out how to get a bubble within a bubble. How many can you get in one bubble? (you may use a clean straw) \_\_\_\_

Challenge 4: Membrane Proteins Create Pores

* Figure out how to use a piece of yarn, tied in a circle, to get a **DRY** finger through the bubble membrane WITHOUT BREAKING THE MEMBRANE (and without soap).
* How’d you do it? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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