

Lesson 4 Slide Presentation:

Mighty Microbes Lab

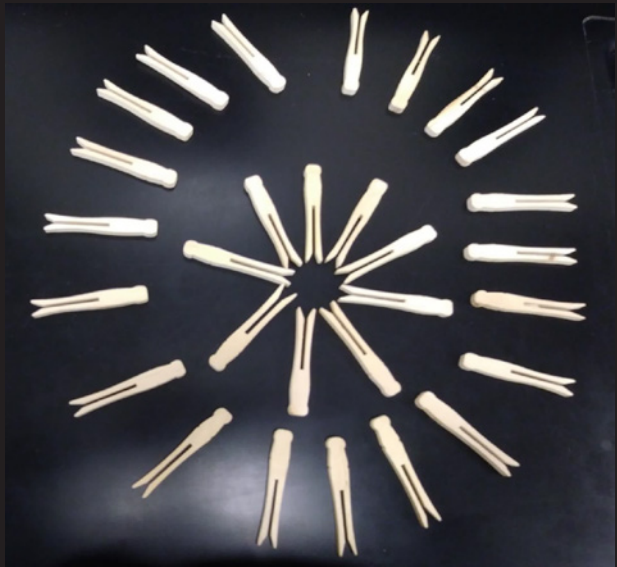


ACTIVITY 3: WHY ARE MEMBRANES SO IMPORTANT TO LIFE?

SLIDE 1

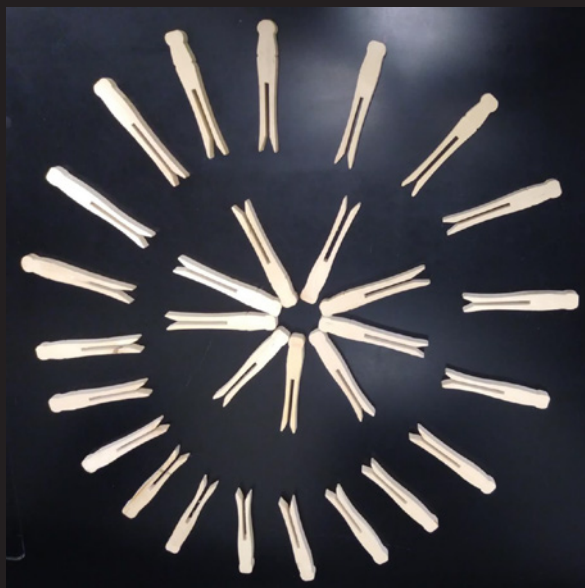


Soap bubble membrane



SLIDE 2

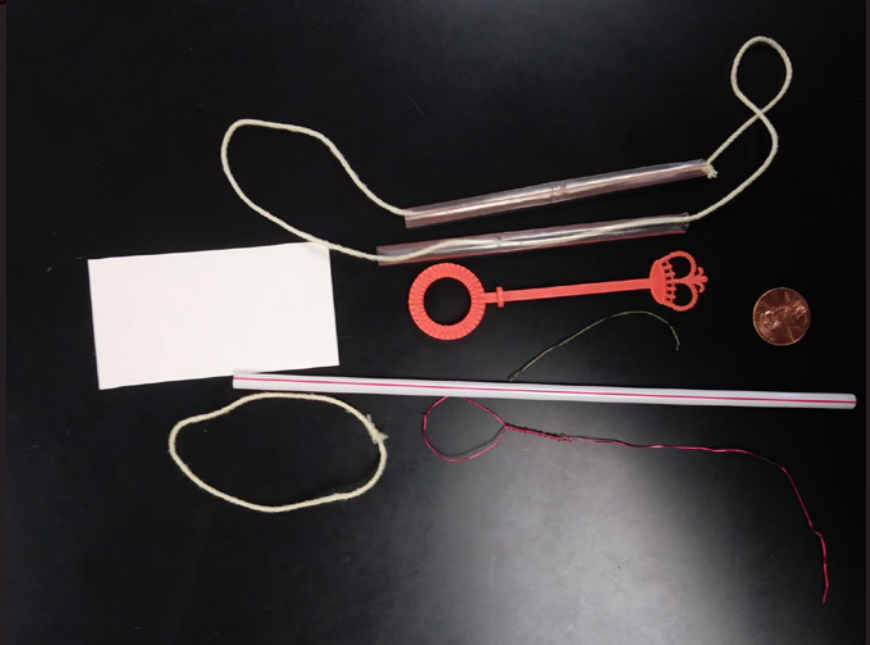
PLASMA MEMBRANE



SLIDE 3



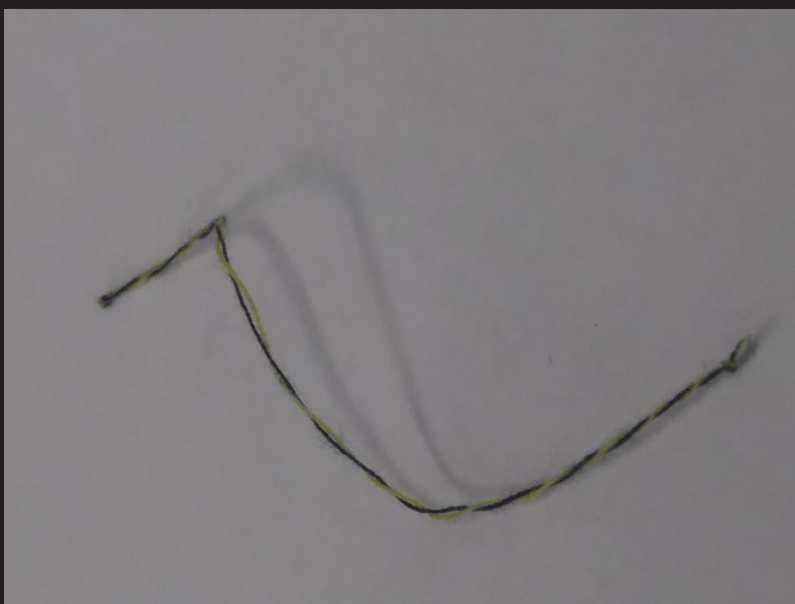
Materials needed



SLIDE 4



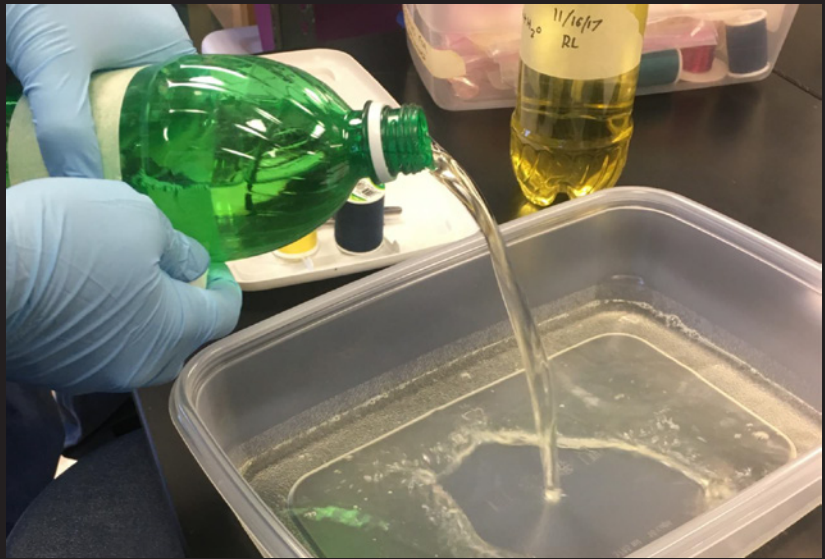
Close up of DNA
string model



SLIDE 5

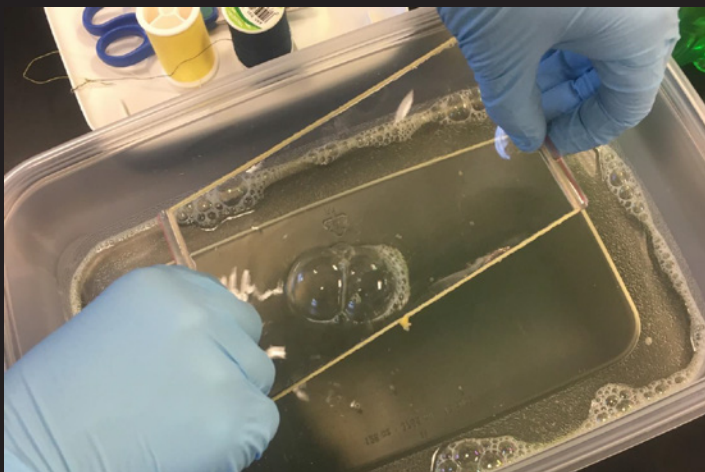


Soap is placed in a plastic tray.



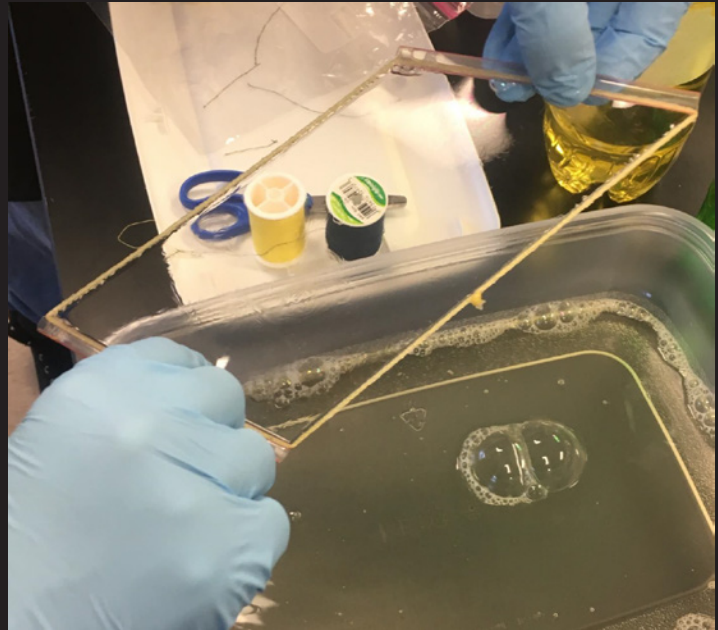
SLIDE 6

The bubble maker, composed of two short straws and a loop of string which forms an enclosed rectangle, is placed in the plastic tray of soap. When pulled up it forms a bubble which can be easily manipulated.



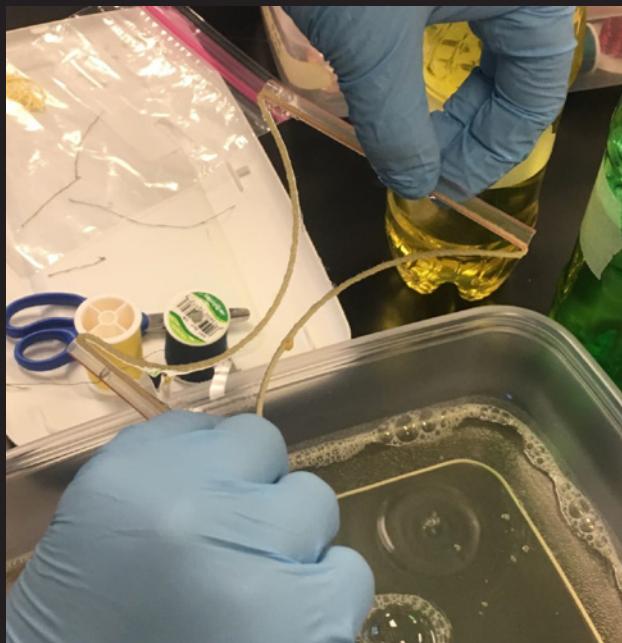
SLIDE 7

Start twisting the bubble



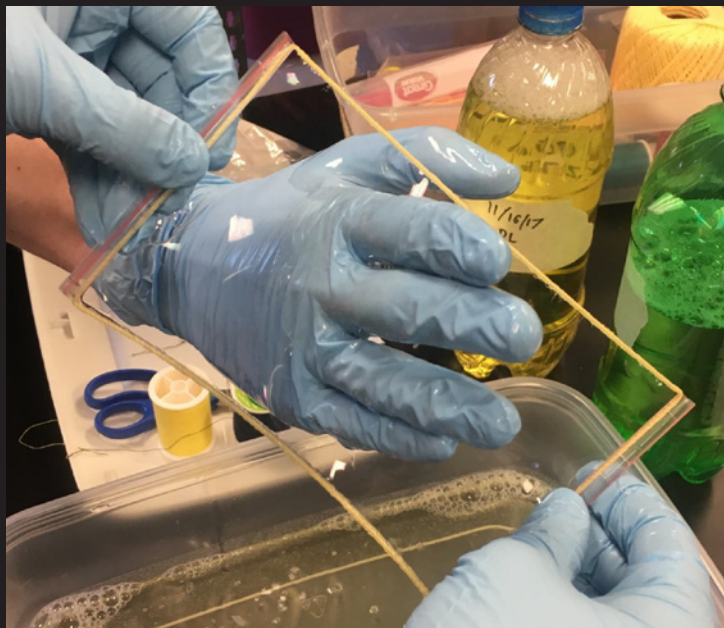
SLIDE 8

The bubble is formed into an hourglass shape.



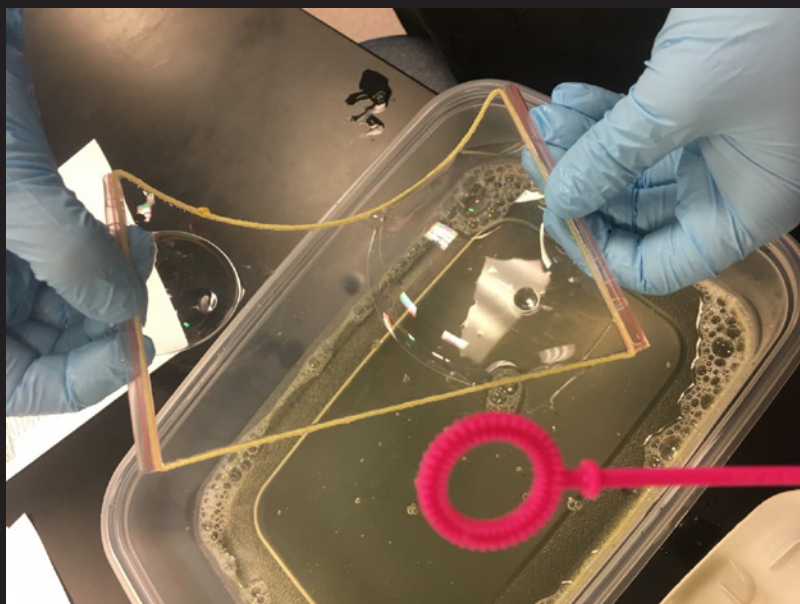
SLIDE 9

Place a hand into the
soap solution, then push
through the membrane



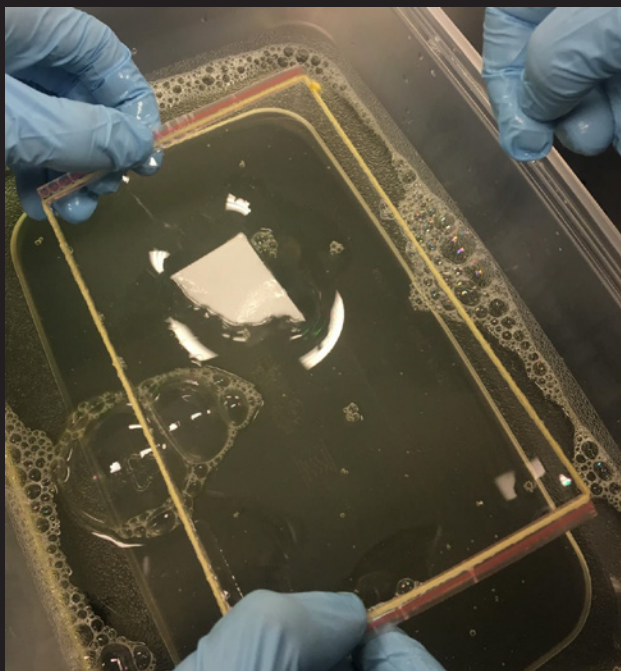
SLIDE 10

Blow at least one
bubble onto the
membrane without
popping the
membrane



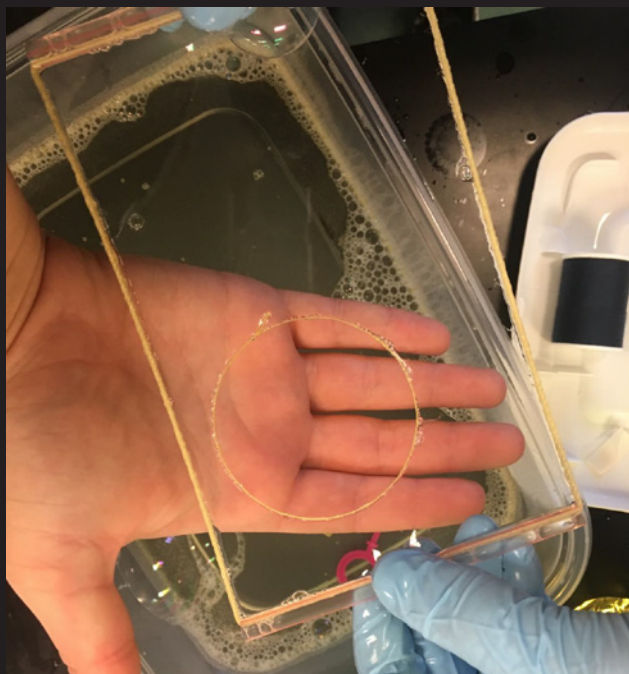
SLIDE 11

Pieces of an index card can float on the membrane or within the bubble



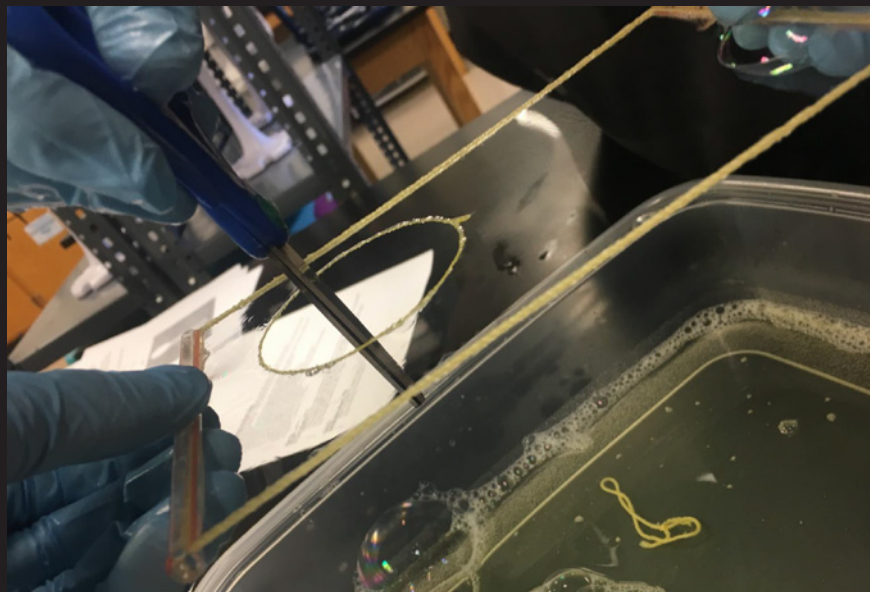
SLIDE 12

A circle of cotton
thread forms a pore
in the membrane



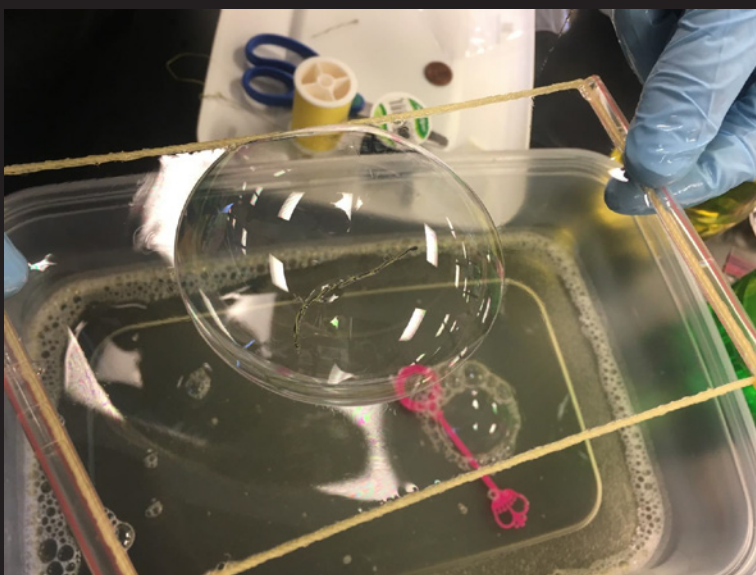
SLIDE 13

The pore permits material to pass through the membrane, as demonstrated by the scissors



SLIDE 14

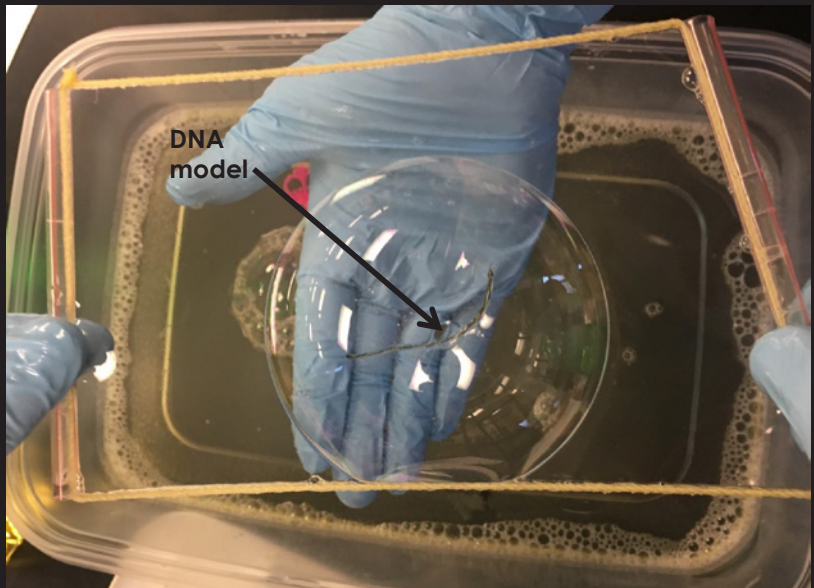
Bubbles are placed on the membrane; one encloses the DNA string model



SLIDE 15

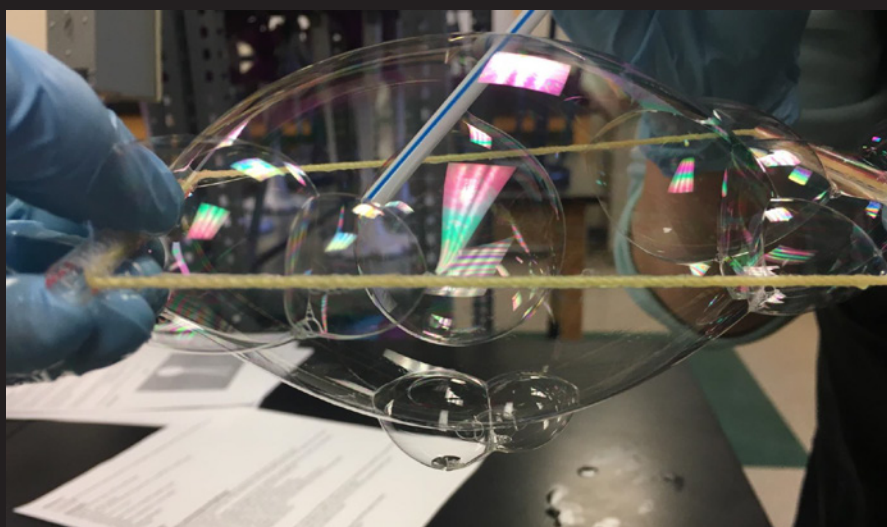


The DNA string model
can be seen enclosed
within the bubble



SLIDE 16

Many membranes
come together to
form a complex
structure



SLIDE 17



Slides created with the assistance of
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SLIDE 18