

Welcome to Biology

Thursday 8/19/21

**Phones away and
things out of ears
please**



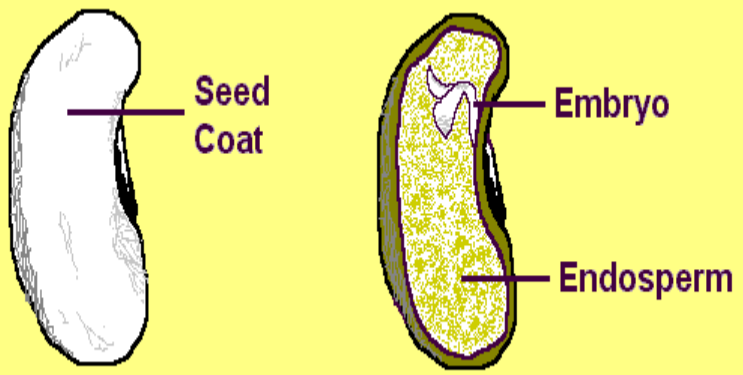
***Thank you to those who
turned in some form of the
Welcome Documents Form***

Daily Agenda

*1. Can Seeds
Germinate and
Grow in Saltwater?*



Can Seeds Germinate and Grow in Saltwater?



Seed germination – when the dormant embryo inside the seed starts to grow; all living seeds germinate

*Agricultural Extension Agent Mr. Fletcher
Pennsylvania (1988 – 1991)*

Each group will put seeds with a different saltwater concentration (along with freshwater) and we will combine our data regarding how well the seeds germinate and grow.

This is a slight variation on the controlled experiment we did with sea monkeys.

Now we are testing across a range of values in our experimental group.

A comparative controlled experiment.

Each group will test corn and pea seeds.



Prepare saltwater solutions and presoak seeds in fresh and saltwater

1. Obtain one cup (on tray) and two petri dishes (2 tops and 2 bottoms - from the cart). Wash out and dry each

2. Prepare your saltwater solution

A. On clean cup wrap tape all the way around directly below rim so that the tape overlaps.

Label "Period ____ Table ____ ____%" (see board for your lab station's percent concentration)

B. In your clean cup measure ____ grams of salt. (see board for amount for the different lab stations)

C. Add 300 milliliters of tap water to the salt in your cup. (measure in graduated cylinder – pour from the Erlenmeyer flask)

3. Prepare your presoak dishes

A. Cut out 8 paper towel circles so that these fit snugly within the bottom (smaller) petri dish

B. Place two circles in each bottom dish

C. Using the big transfer pipet moisten the towels in one dish with tap water so that there is a puddle of water covering the towels (keep track of which dish has freshwater)

D. Using the small transfer pipet moisten the towels in one dish with your saltwater so that there is a puddle of water covering the towels (keep track of which dish has saltwater)

E. Place two corn seeds and two bean seeds in the puddle of liquid in your freshwater petri dish

F. Place two corn seeds and two bean seeds in the puddle of liquid in your saltwater petri dish

G. Cover the seeds with the other two towel circles and dispense more liquid over the circles with the pipet so that the towels are very moist (big pipet = freshwater small pipet = saltwater)

H. Cover the bottom plate with the top plate; wrap tape around the dish across the top and bottom plate so the it tapes back on itself; label the tape with "P __, T __, ____%" (period, table and saltwater concentration – 0% for tap water)

Prepare saltwater solutions and presoak seeds in fresh and saltwater

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- 2. Prepare your saltwater solution**
 - A. On clean cup wrap tape all the way around directly below rim so that the tape overlaps.
Label “Period _____ Table _____ _____%” (see board for your lab station’s percent concentration)**
 - B. In your clean cup measure _____ grams of salt. (see board for amount for the different lab stations)**
 - C. Add 300 milliliters of tap water to the salt in your cup. (measure in graduated cylinder – pour from the Erlenmeyer flask)**

3. Prepare your presoak dishes

- A. Cut out 8 paper towel circles so that these fit snugly within the bottom (smaller) petri dish**
- B. Place two circles in each bottom dish**
- C. Using the big transfer pipet moisten the towels in one dish with tap water so that there is a puddle of water covering the towels (keep track of which dish has freshwater)**
- D. Using the small transfer pipet moisten the towels in one dish with your saltwater so that there is a puddle of water covering the towels (keep track of which dish has saltwater)**
- E. Place two corn seeds and two bean seeds in the puddle of liquid in your freshwater dish**
- F. Place two corn seeds and two bean seeds in the puddle of liquid in your saltwater dish**
- G. Cover the seeds with the other two towel circles and dispense more liquid over the circles with the pipet so that the towels are very moist (big pipet = freshwater
small pipet = saltwater)**
- H. Cover the bottom plate with the top plate; wrap tape around the dish across the top and bottom plate so the it tapes back on itself; label the tape with “P __, T __, ___%” (period, table and saltwater concentration – 0% for tap water)**

- 4. Cover your saltwater cup with plastic wrap and label (“P ___, T ___, ___%”); secure with rubber band*
- 5. Place dishes carefully in our storage box on the cart; place cup in storage box on cart*
- 6. Tidy up station and get cleanup OK*

Lab trays and cleanup!!