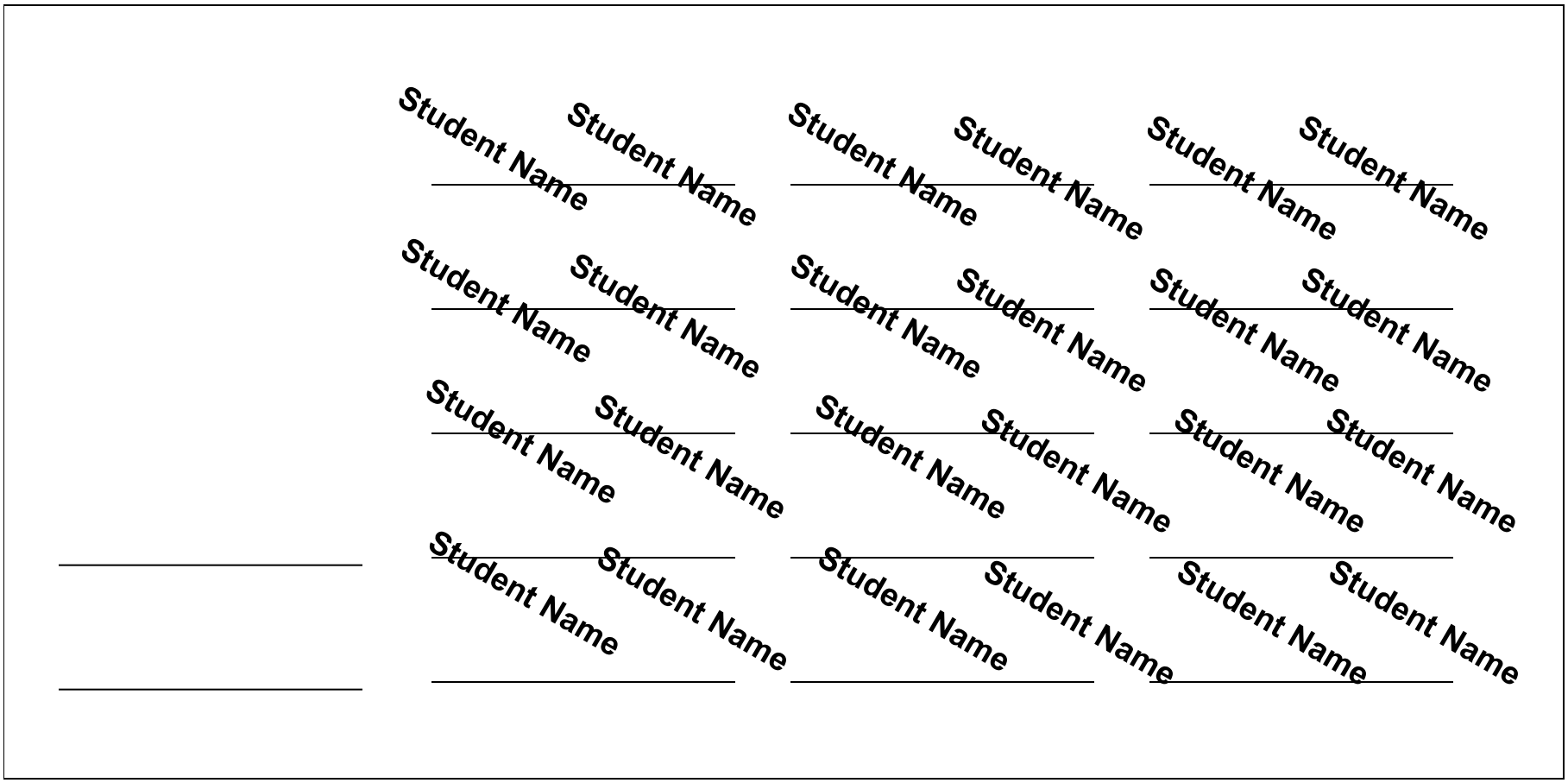
FRONT

Seating Chart



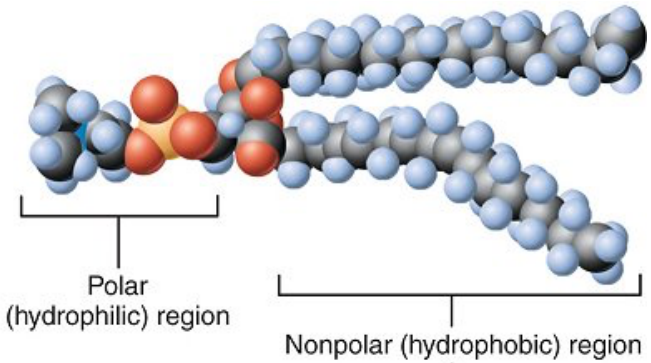
Welcome to Biology

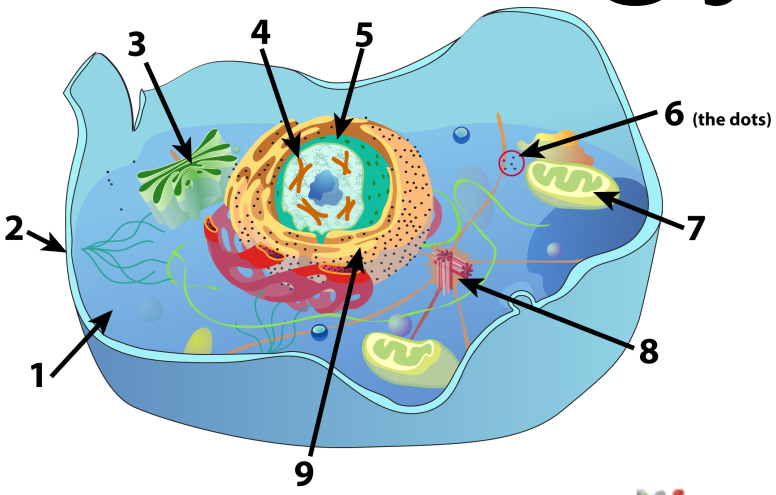
Please fill out a note card with the following information

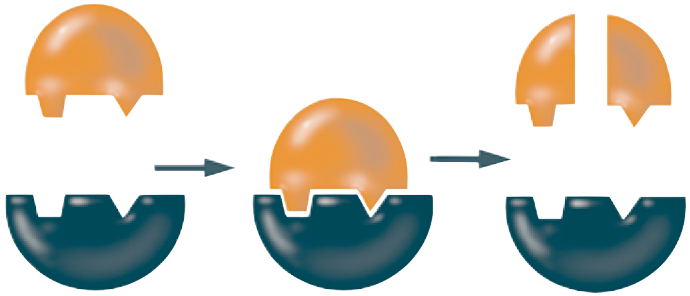
First Name Last Name Period _____
Street Address
Town, ZIP
Best phone number to reach you
1st Parent's name and best phone number
Parent's email (if you know it)
2nd Parent's name and best phone number
Parent's email (if you know it)
Special instructions for pronouncing your name:

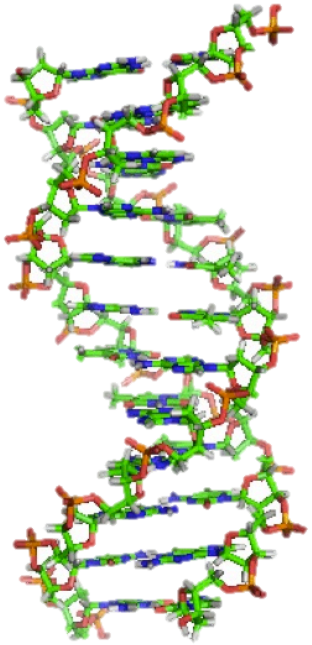
When you're finished, please silently read the handout.

Advanced Biology









Sentence Matching

- You have half of a sentence. Someone else has the other half.
- Your job:
  - Start meeting (and learning the names of) your classmates
  - Find the person who has the other half of your sentence.
- Greet someone, say your name, see if you have a match.
  - If no, say “it was nice to meet you, [name]” and find someone else.
  - If yes, go line up on the west side of the room, and find out two interesting thing your partner did during the summer so you can introduce him/her to the rest of the class.

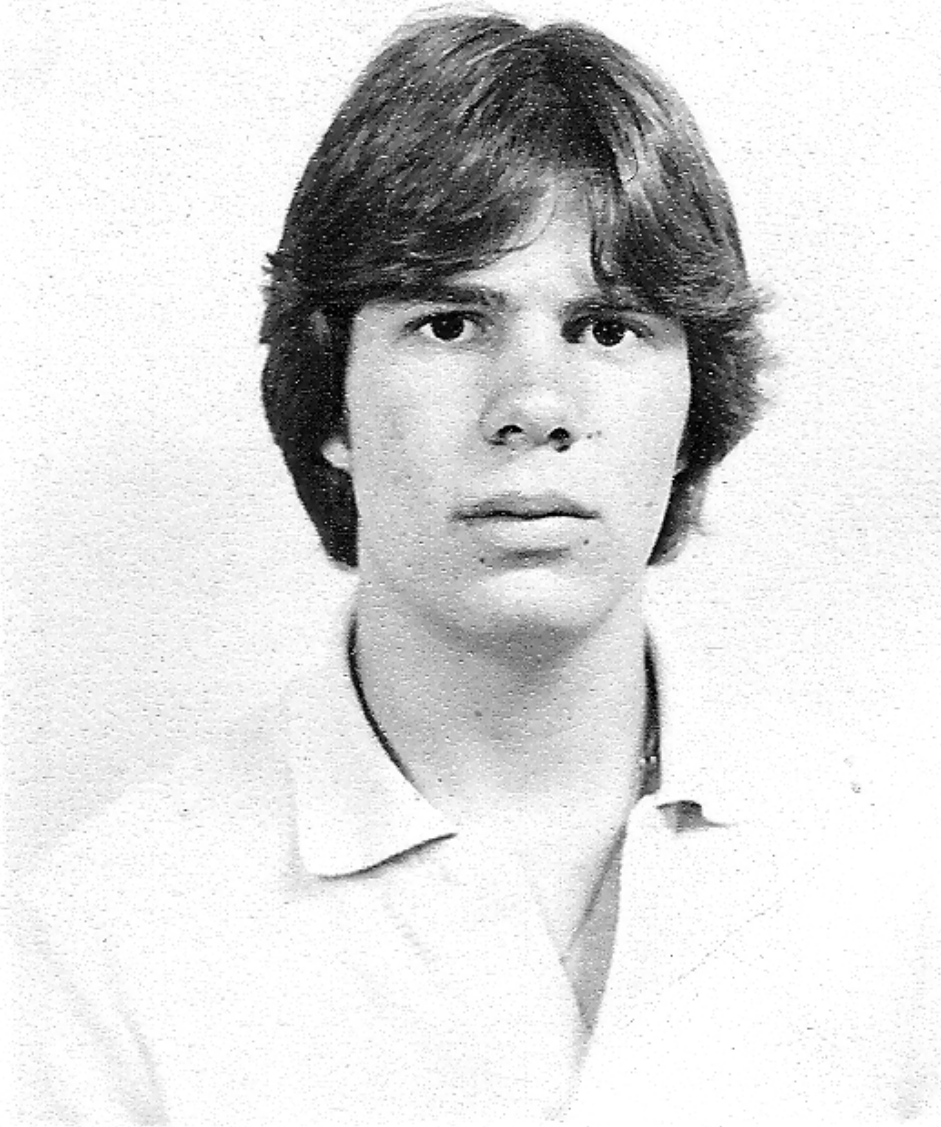
Classroom procedures and tonight's homework

(parent/guardian contact information)

Radish Seedling Observation Set-up

1. Work with your table partner
2. Use a sharpie to write your names (1st and last), and class period on the plastic bag.
3. Take the paper towel. Fold it in quarters (small enough to fit in the baggie)
4. Put the paper towel in the bag.
5. Saturate the paper towel with water
6. Put four radish seedlings between the bag and the paper towel.
7. Fold back the top of the bag so air can get in (Don't seal it)
8. Bring the bags to the green tray on the side of the room.
9. Reassemble your kit and return it to the side table

About Your Teacher



Welcome! Sit where you sat yesterday

1) Pick up the two handouts.
2) On the “Biology Catalysts” handout, copy what’s in blue in the correct spaces, and RESPOND as needed.
3) Place the “parent information sheet” on your desk.”

Date: 9/3. Number: 1-1. Title: **What is Science?**

OBJECTIVE: I can explain why some topics can be studied by science, and why other’s can’t.

HOMEWORK : None!

COPY AND COMPLETE: What makes a scientific idea different from a non-scientific one is…

Setting up your binder, other procedures

Charlie, Charlie
are you there?

Reading: What Science is… and Isn't

1. Circle key terms
2. Underline definitions
3. Annotate!
    1. Left Margin: briefly summarize
    2. Right margin: question, respond

Article of the Week #6

Mark the text

1. Number each paragraph
2. Chunk: 1-3 / 4 / 5-6 / 7-8 / 9-11 / 12-13 / 14-15
3. Circle key terms
4. Underline the claims
5. Left margin: What is the author SAYING?
6. Right margin: What is the author DOING? (POWER VERBS)

Saying?

Doing?

What NBA Stars and Occupy Wall Street protestors have in common

Source: Paul Frymer and Dorian T. Warre, Bangor Daily News, November 2, 2011

Lebron has little in common w/ the 99%

1 LeBron James is as far as you can get from the 99 percent.

2 The NBA superstar is paid more than $16 million a year as a forward for the Miami Heat and has a $90 million contract with Nike. After his team lost the NBA finals to Dallas in June, he told griping fans to go back to the humdrum reality of "the real world," while he retreated to his recently purchased $9 million home in South Beach.

Contrasting Lebron James to the 99%

3 So James may seem to share nothing with the 99 percent — to Occupy Wall Street in terms, the vast majority of American workers, who suffer in a culture of unabashed greed that has created a historic gulf of inequality between the richest Americans and everyone else.

LJ is like the 99% b/c he is controlled by an owner

4 But he and the other NBA players have something important in common with the 99 percent. James is an employee of the Miami Heat. Despite his recent tweet hinting that he will try to join the National Football League if the NBA lockout continues, he finds himself, like most Americans, beholden to the owners and managers who control his workplace and industry. If the owners want to lock out the workers, or leave the country in search of greater profits, he — like American workers whose jobs have disappeared overseas — is left with few options. He is beholden to team owners who are not always upfront about their revenue and profits, and who are claiming a right to make more money without equitably sharing it with the workers who make the huge windfalls possible.

Comparing NBA players to the 99%

Players are accusing the owners of shady business

5 In the split between NBA players and owners, the players are voicing frustrations that may seem awfully similar to what the Occupy Wall Street protesters are saying. The players are accusing the owners — who keep recording yearly profits as a group while claiming hardship and the need for belt-tightening — of playing by different rules, avoiding public scrutiny; and benefiting from a range of insider deals, bailouts and protections without sharing the profits.

Explaining the issues between the NBA players + owners

6 At issue in this dispute is whether the league can impose a tighter salary cap on the teams, which would effectively lower the salaries of the players. The other major conflict is over how "basketball-related income" — which includes revenue from the sale of tickets, parking, food at concession stands, player jerseys and broadcast rights — will be split between players and owners. Until now, players got a slight majority of this revenue. This made sense, since it was superstars such as Michael Jordan and Magic Johnson, and now Kobe Bryant and LeBron James, who brought the league to new heights in popularity and profits. The owners, however, say it is unsustainable to maintain high salaries and existing profit margins. They want a 50-50 split of the basketball-related income.

conflict over revenue split

---

7 The players have remained united and responded angrily to NBA Commissioner David Stern's initial threats of canceling the season. Dwyane Wade, James' teammate and one of the league's biggest stars, yelled at the commissioner in a heated meeting, saying: "You're not pointing your finger at me. I'm not your child." Steve Nash, two-time NBA most valuable player, questioned the owners' representation of their finances, tweeting, "Why are the owners unwilling to negotiate in

Grab your binder. Pick up today's handout (1-3). Turn to handout 1-2 in your binder, and and use it to complete this catalyst.

Date: 9-4. Number: 1-2. Title: **Scientific explanations**

OBJECTIVE: Distinguish between qualitative and quantitative observations

HOMEWORK : NONE!

COMPLETE, USING 1-2: For an explanation to be scientific, it has to…

Charlie, Charlie, Challenge (10 minutes)

1. Use the back of 10-2.
2. Work in assigned groups of four. Sit correctly!
3. Design a way to test “Charlie, Charlie are you there?” Include the key elements from our reading (especially *on demand observation*)
4. Write a few sentences explaining what your group agreed to do.
5. Do it!
6. Record your results in a Data Table so you can share them.

Trial	**Result**
1	
2	
3	
4	
5	

Checking our Raddish Seedlings(10 min)

1) make qualitative observations and record
2) Draw a detailed sketch of your plant
3) Make quantitative measurements of the root and stem

WHEN YOU'RE FINISHED

1. Return plant to tray on light table (water as needed)
2. Return rulers
3. Answer the questions on page 3 of 10-2.

Grab your binder. No new handout today. Turn to handout 1-3 in your binder, and and use it to complete today's catalyst.

Date: 9-8. Number: 1-3. Title: **Qualitative v. Quantitative**

OBJECTIVE: Identify some things that science is *not*.

HOMEWORK : Finish all questions on p. 3 of 1-2.

COMPLETE, using handout 1-3: The difference between qualitative and quantitative data is…

What science *is not*

- Let's
  - skim the front page of 1-2 (for review)
  - read and annotate (circle, underline, they say, I say) the second page
- When you're done, write a brief summary

Grab your binder. Pick up the handout (1-4). As you complete the catalyst, have the homework on your desk (p. 3 of 1-2) so I can stamp it.

Date: 9-9. Number: 1-4. Title: **What science is not**

OBJECTIVE: Describe the parts of an experiment

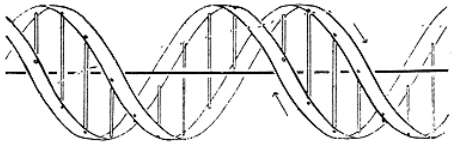
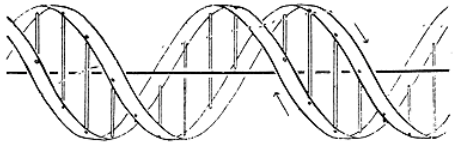
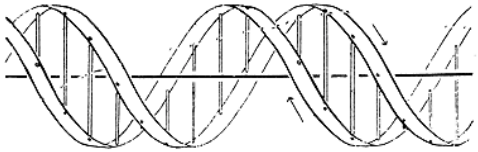
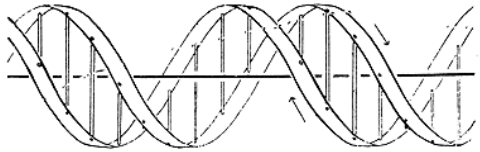
HOMEWORK: None.

COMPLETE, using handout 1-2:

Science is not …

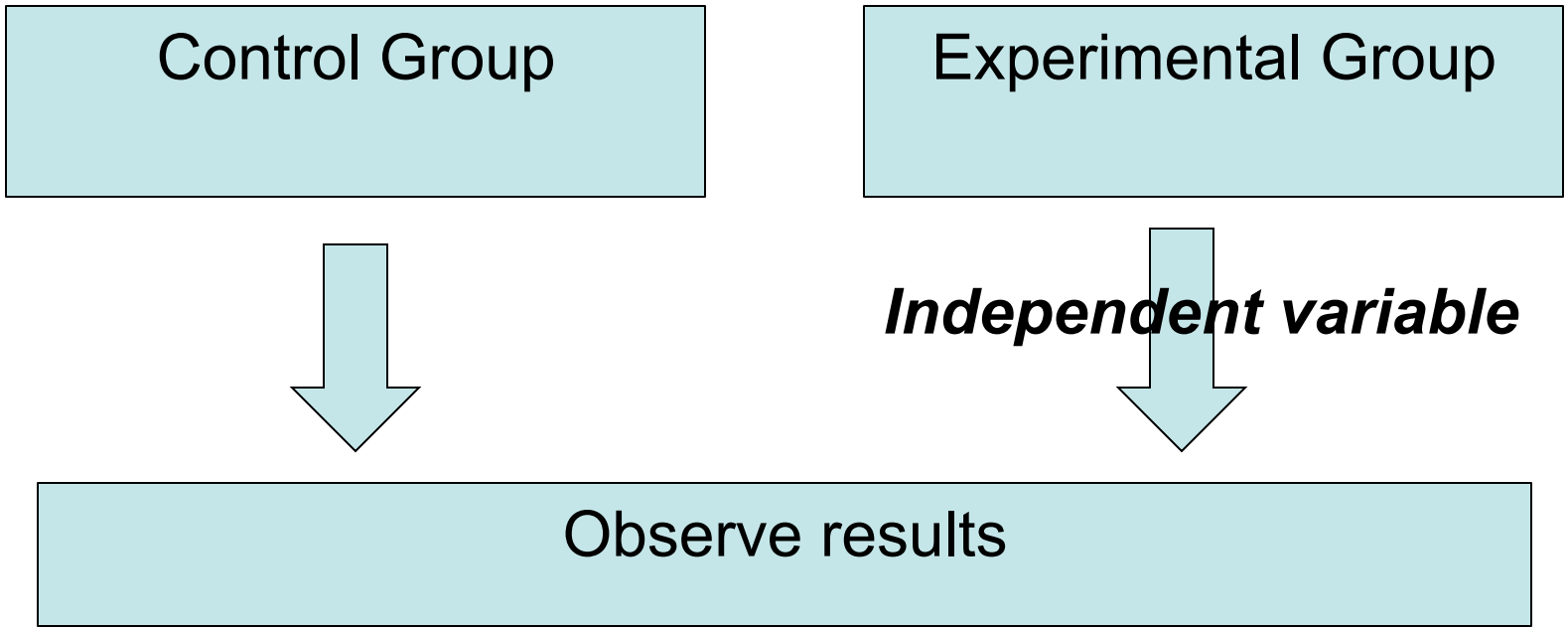
- **1:**
- **2:**
- **3:**

Hall pass vouchers

Hall Pass Voucher for Wolkenfeld's Advanced Biology Class, G212 **Owner:_____**  **Valid only for Semester 1, 2015-16** **Redeemable for extra credit at end of semester 1**	***Hall Pass Voucher for Wolkenfeld's Advanced Biology Class, G212*** **Owner:_____**  **Valid only for Semester 1, 2015-16** **Redeemable for extra credit at end of semester 1**
Hall Pass Voucher for Wolkenfeld's Advanced Biology Class, G212  **Owner:_____** **Valid only for Semester 1, 2015-16** **Redeemable for extra credit at end of semester 1**	***Hall Pass Voucher for Wolkenfeld's Advanced Biology Class, G212***  **Owner:_____** **Valid only for Semester 1, 2015-16** **Redeemable for extra credit at end of semester 1**

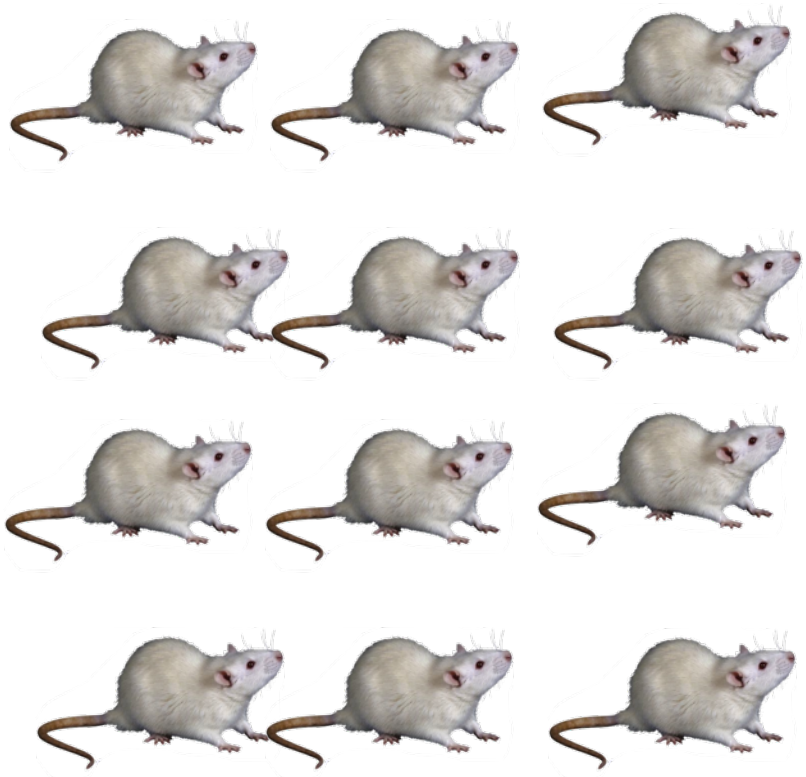
Partner share: How do you think the connection between lung cancer and tobacco smoke was discovered?

Flow chart of experimental design



The difference is the ***dependent variable***

Controlled Experiment

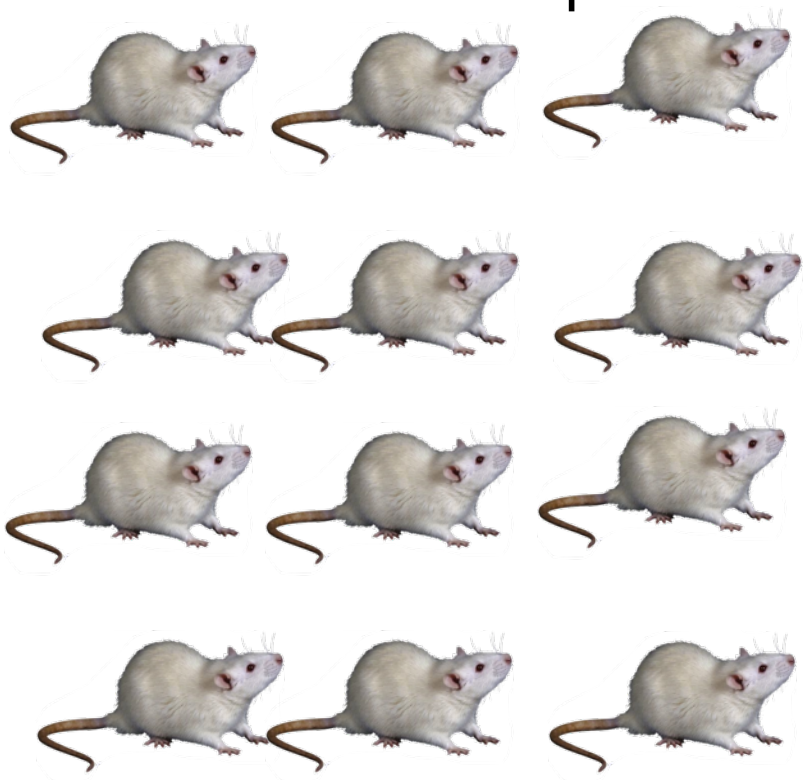
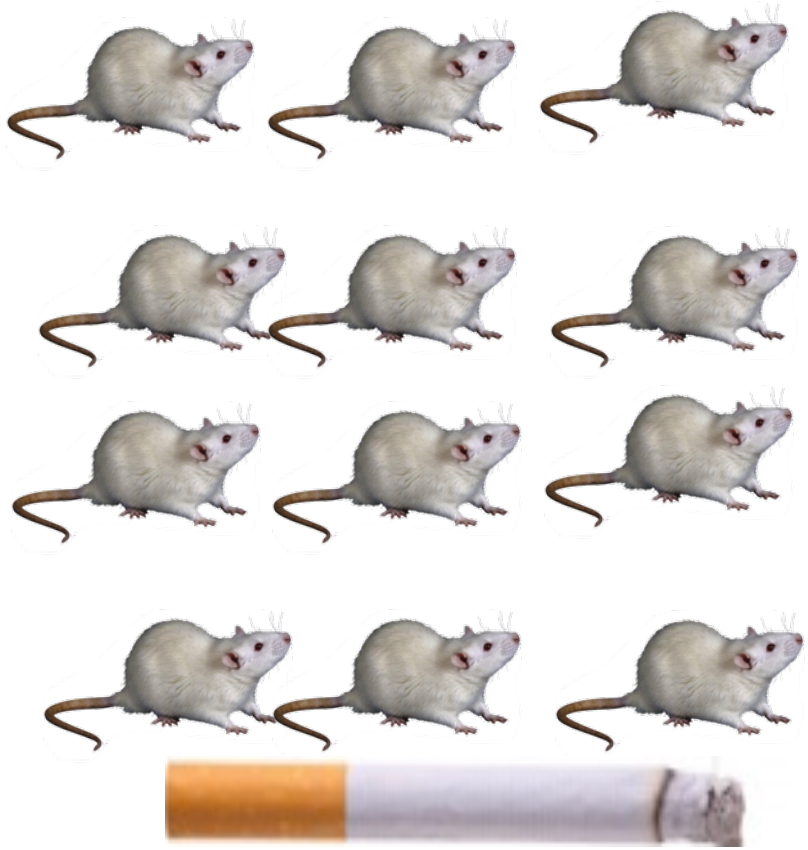


Controlled Experiment

Control Group	Experimental Group
	

Controlled Experiment

Expose to Cigarette Smoke

Control Group	Experimental Group
	

Controlled Experiment

Expose to Cigarette Smoke

Control Group	Experimental Group
	

Look for a difference between the two groups

1. What's the control group?
2. What's the experimental group?
3. What's the dependent variable?
4. What's the independent variable?

Controlled Experiment

Expose to Cigarette Smoke

Group 1	Group 2
	

What's wrong with this design (one rat/group)?

Control Group	Experimental Group
	

Grab your binder. Pick up the handout (1-5).

Date: 9-10. Number: 1-5. Title: **What science is not**

OBJECTIVE: Describe the key parts of an experiment (2nd day)

HOMEWORK: None.

COMPLETE, using handout 1-4

The difference between a control group and an experimental group is …

Working on Biology180

- Work in pairs.
- Sharing and discussing.
- Computer is in *the middle of the desk.* Share the typing
- You're very focused. Voices are quiet.
- You've very careful with equipment. No liquid or food around the computers.
- Getting wrong answers is OK, and encouraged. Prediction and recall is how you learn. You get feedback from the program.
- On flashcards, be very strict with yourself. If you don't know it, then you have to review it ("need more practice."

Grab your binder. Pick up the handout (1-6).

Date: 9-11. Number: 1-6. Title: **The parts of an experiment**

OBJECTIVE: Apply what we've learned about experiments to our radish seedlings.

HOMEWORK: None.

COMPLETE, trying first to NOT look at your notes (see if you can do it from memory)

The set up for a well-designed experiment involves two groups and two types of variables: these are…

Getting Data from our Radish Seedlings

1. Measure the root and stem for your seedling.
2. Put your day 3, day 7, and day 10 data into our shared class spreadsheet using one of the computers around the room.

Grab your binder.

About yesterday…

Date: 9-15. Number: 1-7. Title: **Many experimental subjects: Why?**

OBJECTIVE: Apply what we've learned about experiments to our radish seedlings (day 2)

HOMEWORK: *If you were absent yesterday,* complete p. 3, 4, 5 on 1-4.

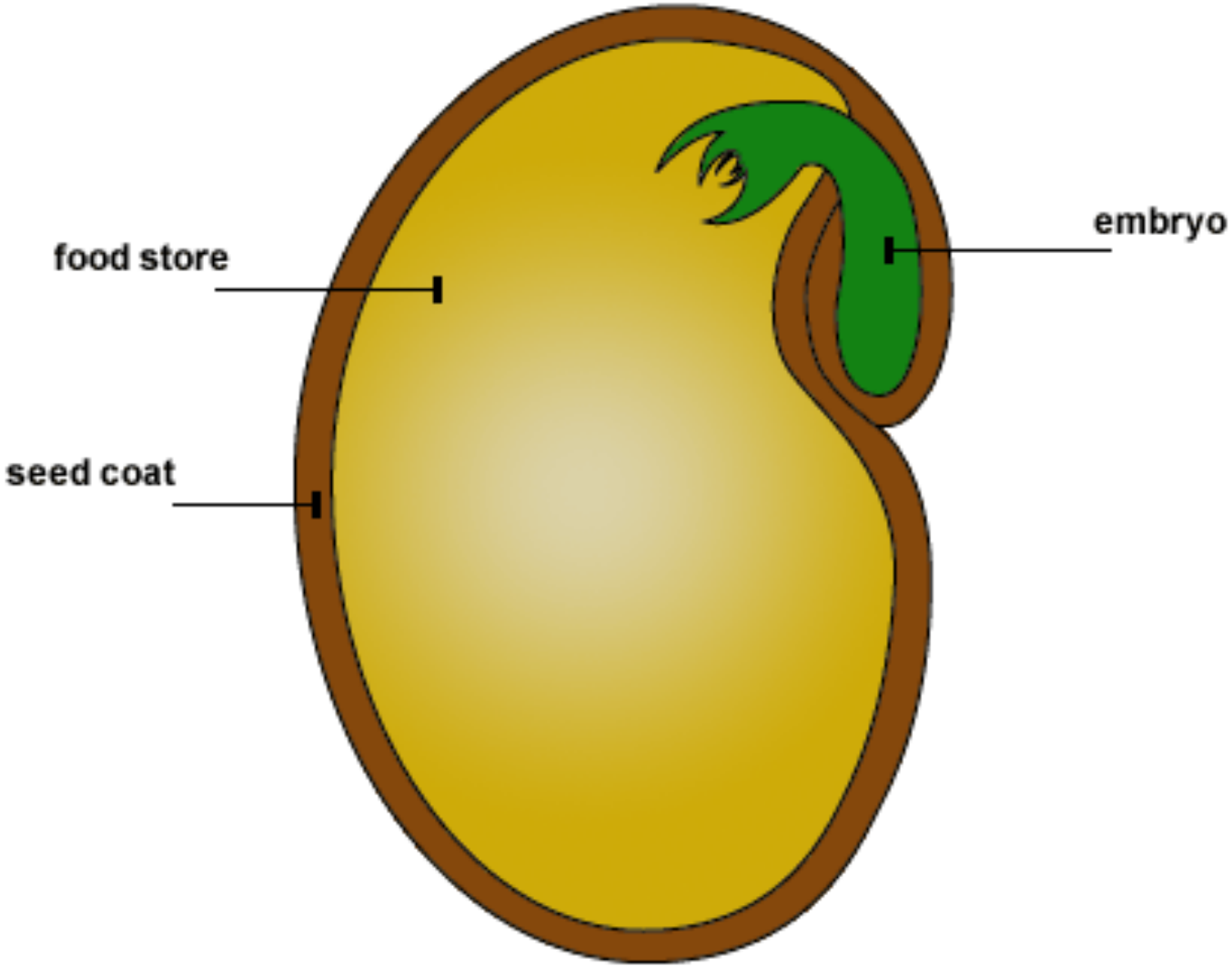
COMPLETE (Note that a "subject" is "an individual that you're testing.")

In experiments we use large numbers of subjects so that….

5. Interpretation

- Unlike our hypothesis, plants in the dark …. The stems in the dark grew to ….by day 10. By contrast, in the control group the stems [....]. In the root, growth was ….in the dark, and ____ in the light.

6.c. Our explanation



Grab your binder. Pick up today's handout (1-7)

Date: 9-16. Number: 1-8. Title: **Placebos**

OBJECTIVE: Explain the difference between a theory and a hypothesis

HOMEWORK: *NONE*

COMPLETE, using the last page of 1-4.

When doing experiments on new medicines, placebos are used so that…

Placebo

Grab your binder. Pick up today's handout (1-8)

Date: 9-17-15. Number: 1-9. Title: **Theory v. Hypothesis**

OBJECTIVE: Review first unit

HOMEWORK: ***1) Review for a quiz tomorrow (see 1-8) 2) Finish Biology180***

COMPLETE, using 1-7

Whereas a hypothesis is …., a theory….

Agenda, 9/17

1. Answer questions on 1-7 (theory v. hypothesis)
2. Go over and work with partner on 1-8 (review sheet)
3. Finish biology180
    1. Log in and “see scores”
4. Complete crossword puzzle on 1-8

Grab your binder. Pick up today's handout (no number: notebook cover sheet)

Date: 9-18-15. Number: 1-10. Title: **What I learned**

OBJECTIVE: Show what you've learned.

HOMEWORK: ***If you've completed everything on Biology180, and your notebook packet is handed in, then NO HOMEWORK***

COMPLETE: use the catalyst sheet to prompt your memory as you respond

The most important things we've learned in biology are…They're important because…

Notebook 1 Walkthrough

QUIZ

- WRITE NEATLY!
- Keep your test covered up (except for the part that you're writing on!)
- Stay silent
- After the test
  - 1. Hand in your test and bubble sheet. Paper clip the bubble sheet to the front of your test
  - 2: Assemble your notebook by stapling it together and handing it in.
    - Cover sheet
    - Catalyst
    - 1-1
    - 1-2
    - Etc.
  - Stay silent until the last person is finished!