

Welcome to PHYS 2015!

General Physics Lab I with a Life Science Focus

Please take a seat at the central tables and leave your backpacks in the cubbies.

Please take a name tag and write

- Your first preferred name
- Your major (if undecided your current intended career)

**Please write your name and UID
on the yellow sign-up sheet**



**No Food
or Drink**

While we wait for everyone to get started, turn around and get to you know the people sitting near you.
Discuss: How was your Summer?

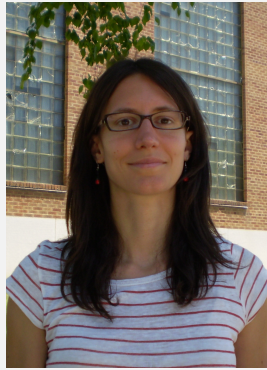
Today's menu

- Overview of course logistics
- Break with snacks
- Intro Lab Group Activity
- Consent Form and Data Analysis Assessment

Meet your Instructional Team

Instructor: Prof. Claudia De Grandi

- Email: degrandi@physics.utah.edu
- Phone: 801-581-4826
- Office: JFB 313



Graduate Teaching Assistants (TAs):

Jason May (head TA): jason.may@utah.edu

Mandefro Teferi: mandefero2002@yahoo.com

Sam Feldman: samfel997@gmail.com

Ricardo Gonzalez: u1272691@utah.edu

Observing Instructor:

Adam Beehler: a.beehler@utah.edu

Learning Assistants (LAs):

Dalley Cutler: cutler.dalley@gmail.com

Austin Cheeniyil: u1007623@utah.edu

Daniela Gonzalez: daniela.gonzpr@gmail.com

Tanner Maxfield: max08004@icloud.com

TAs and LAs are here to help you!
Please treat them with respect at all times!

Pair up-Talk to a neighbor

Move to another table if needed

Learn something about your partner's last name.

Identify who has more letters in their last name.

(If exactly the same then include first name)

Pair up-Talk to a neighbor

Move to another table if needed

More letters in last name:

Tell your partner which and how many courses are you taking this semester

Less letters in last name:

Tell your partner which class you are most excited about this semester.

The Lab Duck welcomes you

Each group has a yellow duck to signal when your group needs help from your TA/LA.

- Keep your Duck on your table if you do NOT need help.
- Put your Duck on top of your table-bar if you need help.



Last semester's answers to: What you have **learned** the most in this lab?



Last semester's answers to: What you have **enjoyed** the most in this lab?



Last semester's answers to: What you **will be missing** the most in this lab?



Student Quotes

Longer last name: What is something interesting you found from the student quotes?

Shorter last name: What is something surprising you learned from the student quotes?

Respect and Inclusivity

We expect that the entire PHYS 2015-2025 community – students, instructors, TAs, and LAs – will strive to be an inclusive and supportive community, appreciative of the many perspectives that come from us each bringing to the class different backgrounds and beliefs. We expect all members of this community to be respectful of each other, and to strive to create a community that facilitates self-expression, inquiry, and learning.

We welcome all forms of diversity and are supportive of each student regardless of race, ethnicity, color, national origin, sex, religion, age, sexual orientation, gender identities, gender expression, veteran's status, disability.

We will honor you by referring to you with the **name and pronoun that feels best for you** in class. Please advise us of any name or pronoun changes (and update CIS) so we can help create a learning environment in which you, your name, and your pronoun will be respected.

Meet **David Thomas**
Manager of Educational
Laboratory Facilities at the
Crocker Science Center



Introduction to CSC Laboratories

Lab Safety

- **No food or drink (including water) in the lab!** If need need to drink or eat something, you can keep it in your backpacks in the cubbies and then eat or drink in the hallway/lounge.
- Student materials (backpacks, notebooks, etc.) must be kept in lab cubbies.
- Closed toed shoes are required in the lab.
- Students are not allowed in the Lab Prep Room.
- All used solutions must be disposed of in properly labelled waste container.
- All materials that contained solutions must be placed in properly labelled dirty container when finished with.
- Evacuation plan posted near lab door.



**No Food
or Drink**

Lab Schedule and Topics

Week	Monday Dates	Lab Activity
1	Aug 19th	Off, No Lab This Week
2	Aug 26th	Lab Intro, Group Norms, Class Expectations
3	Sept 2nd	Off
4	Sept 9th	Lab 1
5	Sept 16th	Lab 1
6	Sept 23rd	Lab 2
7	Sept 30	Lab 2
8	Oct 7th	Off
9	Oct 14th	Lab 2
10	Oct 21st	Lab 3
11	Oct 28th	Lab 3
12	Nov 4th	Lab 3
13	Nov 11th	Lab 4
14	Nov 18th	Lab 4
15	Nov 25th	Lab 4
16	Dec 2nd	Make-up Lab

Attendance

- Arrive on time or early. **Attendance at every lab is required.**
- If you anticipate missing a lab session, try to arrange ahead of time to attend another lab section for the entire lab unit. [Contact Prof. De Grandi or Jason May \(Head TA\) as soon as you are aware of your impending absence.](#)
- You may make up a **maximum of one absence**. Any subsequent absences will be scored as a zero.
- If you miss more than two lab sessions, you may receive an incomplete or a failing grade for the entire class.



Grade components

Category	Percent of Final Score
Attendance	23%
Lab 1	13%
Lab 2	18%
Lab 3	18%
Lab 4	18%
Post-Lab Feedback	3%
Surveys and Reflections	7%

Lab groups

Group work and collaboration are essential tools to succeed in almost any career (research teams, firefighting personnel, nursing teams, committees, construction teams, etc.) and will be fundamental and invaluable tools for your learning in this lab.

Learning to work effectively **with a variety of people** will prepare you to work with your colleagues and collaborators at your work place, and will enhance and deepen your understanding of the material.

This is why Lab Groups will change for every Lab.

Lab Schedule and Topics

NEW
GROUP



NEW
GROUP

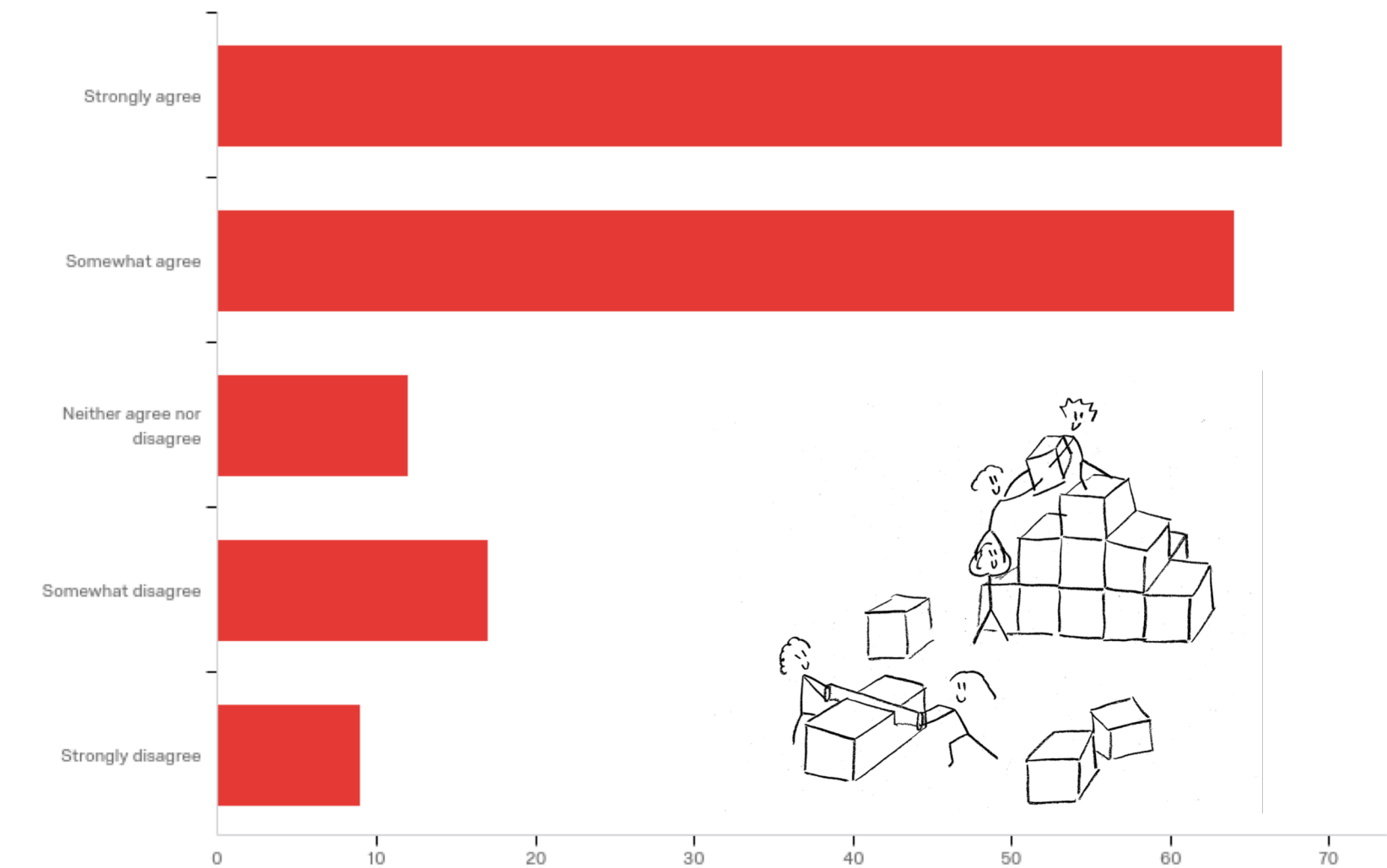


NEW
GROUP



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15	Nov 25th	Lab 4
16	Dec 2nd	Make-up Lab

Please choose to what degree you agree or disagree with the following statement: "Despite challenges that may arise from changing to a new group, I understand how switching groups is beneficial for everyone's learning experience."



Answer	%
Strongly agree	39.64%
Somewhat agree	37.87%
Neither agree nor disagree	7.10%
Somewhat disagree	10.06%
Strongly disagree	5.33%

77%
strongly or somewhat
agrees with this statement

CHECK YOUR Umail

Set up Forwarding to your preferred email

Make sure you see Individual Messages sent through Canvas to you

Make sure your Instructor & TA can reach out to you!

Your Questions!



Let's have a break!

Go around and introduce yourself to all your classmates. Mingle and chat!

There are some snacks just outside the door, help yourself! (Recall food is not allowed in the lab, only eat in the space outside).

Find the restrooms just straight outside.

Today's menu

- Overview of course logistics
- Break with snacks
- Intro Lab Group Activity
- Consent Form and Data Analysis Assessment

Group formation activity

Make sure you have a name tag with your first name and your major.

Go around and introduce yourself to all of your classmates. Your goal is to create a group of 4 people that fulfills the following criteria:

- There should **be at least one** person in each group, and no more than two, whose major is **biology or biomedical engineering**.
- There should **NOT** be more **than two people** in a group that come from the same sport team, dance group or other social/recreational group.
- There should be **at least one person** in each group, and no more than two, that took PHYS 2010 prior to this semester (already completed).

The Lab Duck welcomes you

Have the person closest to the door grab your group's blue bin on the counter nearest the door.

Have the person closest to the cubbies grab a whiteboard from above the cubbies.

Each group has a yellow duck to signal when your group needs help from your TA/LA.

- Keep your Duck on your table if you do NOT need help.
- Put your Duck on top of your table-bar if you need help.



Group formation activity

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Once you have found your group of 4, seat at one of the 6 group locations.

Introduce yourself to the members of your group, tell them a bit about yourself, your interests, your hobbies, your favorite things, etc. anything that you feel characterizes you.

Group Warm-up

In your group, find **one thing that ALL of you have in common.**

(Of course trivial facts as: *we are all students at the U, we are all pre-med, we all work in a research lab*, do not count, you have to come with something more interesting and that people wouldn't be able to guess).

Take one **blue container** and one whiteboard and write that ONE THING you have in common, BIG on the whiteboard.



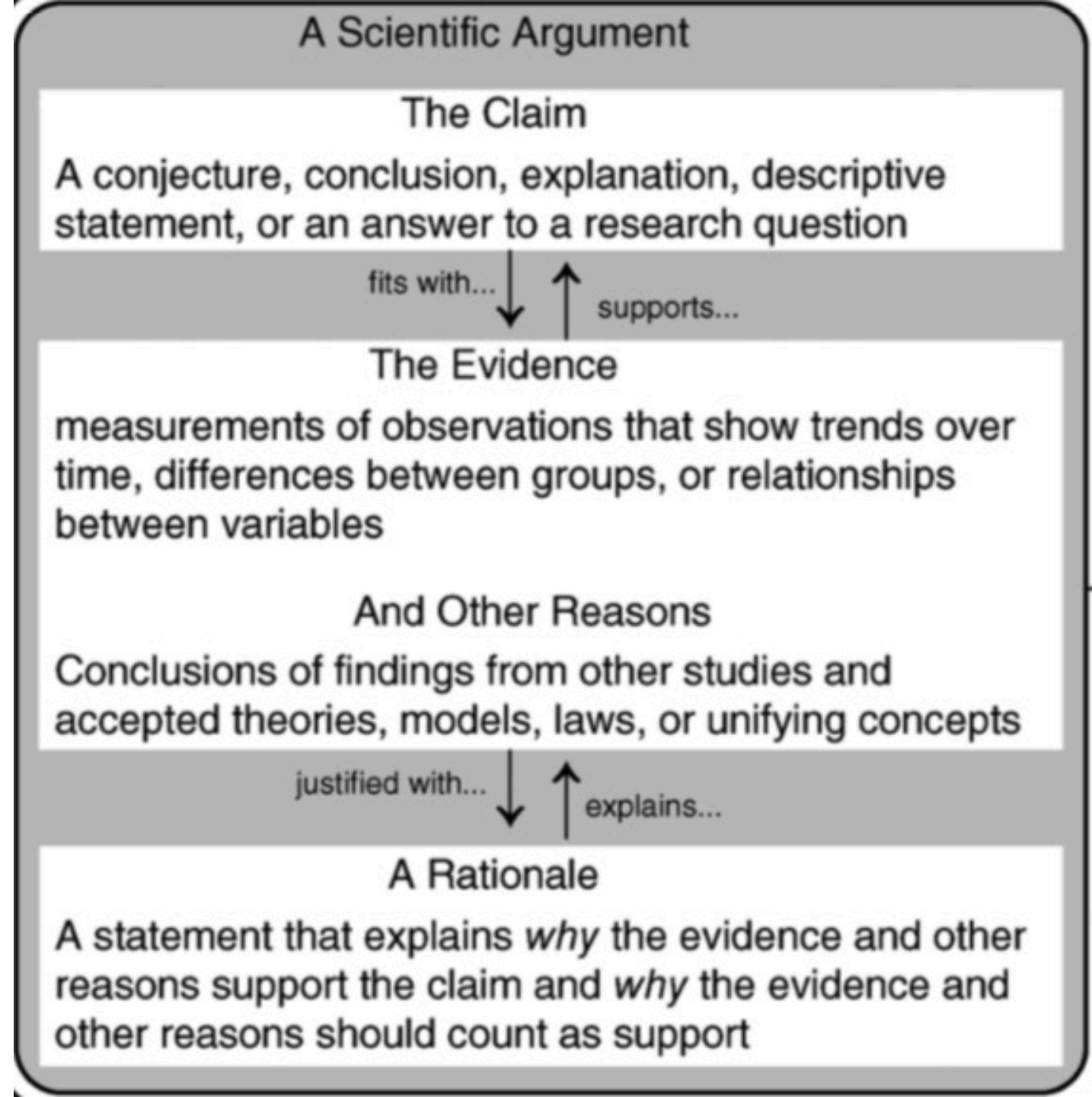
When you get to this step put your duck up on the bar and we'll know you arrived here. **DON'T ERASE YOUR BOARDS!**

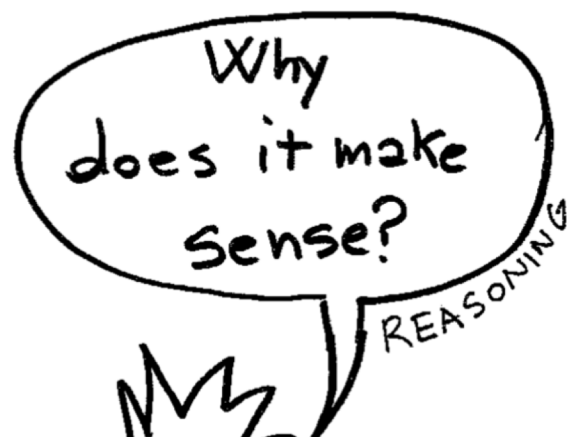
Claim

Evidence

Reasoning

CER-Framework





Mystery Box Intro “Lab”

STEP 1: **Warm-up activity** (at the beginning of Week 1 of each lab)



Warm-Up Activity



Useful

Not helpful

Warm-Up Activity (individual)

Useful

LIST here 3 things each member of your team can do to help working together effectively as a group

Not helpful

LIST here 3 things each member of your team can do
That is NOT helpful for your group

Warm-Up Activity: Decide on your “group norms”

- Find out whose birthday is the closest to today’s date (either in the past or in the future). That person will be the note-taker.
- Go around and share your 3+3 things in your group. Note-taker takes notes and start identifying common themes.
- With the help of the note-taker, the group identify and finalize the a few Common Things the the group decide are helpful for effective group work.
- This list of best group “norms” are now what you will commit to adhere for the remaining of the semester, and to which you will be kept accountable for.

Mystery Box Intro “Lab”



STEP 1: **Warm-up activity** (at the beginning of a Week 1 of each lab)

Log into Canvas and complete **individually** the Lab 0 Warm-up

Check out the “How to Complete and Submit a Warm-up/Tutorial Activity” page on Canvas

Mystery Box Intro “Lab”



STEP 1: **Warm-up activity** (at the beginning of Week 1 of each lab)

STEP 2: **TA Introduction to the experiment:** posing the Guiding Question

What's inside the box?!

STEP 3: **Design Plan:** In your group discuss and create a plan for your investigation.

How are you going to proceed to answer the guiding question? Which steps will you conduct? How will these steps help answering the guiding question?

Log into Canvas and complete as a group the Lab 0 Design Plan

Check out the “How to Write and Submit a Design Plan” page on Canvas

Mystery Box Intro “Lab”



STEP 1: **Warm-up activity** (at the beginning of Week 1 of each lab)

STEP 2: **TA Introduction to the experiment:** posing the Guiding Question

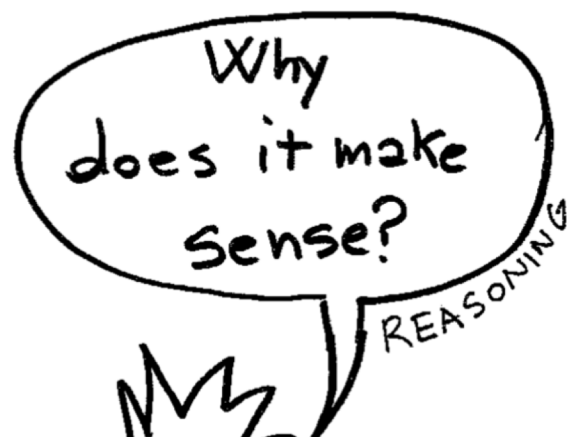
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STEP 4: **Investigation:** Experimentation, data collection and analysis to answer the Guiding Question.

STEP 5: **Argumentation Whiteboard Session:** Collect your result on a whiteboard, clearly state your Claim, Evidence and Reasoning. Use graphs, tables, sketches. Etc. Discuss with another group, compare, ask questions, share feedback.



Mystery Box Intro “Lab”



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STEP 4: **Investigation:** Experimentation, data collection and analysis to answer the Guiding Question.

STEP 5: **Argumentation Whiteboard Session:** Collect your result on a whiteboard, clearly state your Claim, Evidence and Reasoning. Use graphs, tables, sketches. Etc. Discuss with your across-table group, compare, ask questions, share feedback.

[Log into Canvas and complete the Lab 0 Argumentation Session](#)

[Check out the “How to Participate in the Argumentation Whiteboard Session” page on Canvas](#)

Mystery Box intro “Lab”



STEP 1: **Warm-up activity** (at the beginning of Week 1 of each lab)

STEP 2: **TA Introduction to the experiment:** posing the Guiding Question

What's inside the box?!

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How are you going to proceed to answer the guiding question? Which steps will you conduct? How will these steps help answering the guiding question?

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STEP 6: **Final Report:** Submit Individual Final Report

Intro “Lab”

STEP 6: **Final Report:** Submit Individual Final Report

Log into Canvas and complete **individually** the Lab 0 Final Report

*“How to Write and Complete the Final Investigation Report”
page is coming soon!*

Steps of a 2-3 weeks lab

- **Week 1: Warm-up activity** to introduce techniques and concepts to help in completing investigations
- **Week 1: Design plan** for groups to outline what they expect to do in their investigation
- **Week 1 & 2: Data collection and analysis** based on design plan
- **Week 2: Argumentation whiteboard session** to share your investigation methods and results with peers
- **Week 3: Investigation report peer review and submission**
 - Writing of Individual Lab report, Double-blind peer review, and final submission

What's next

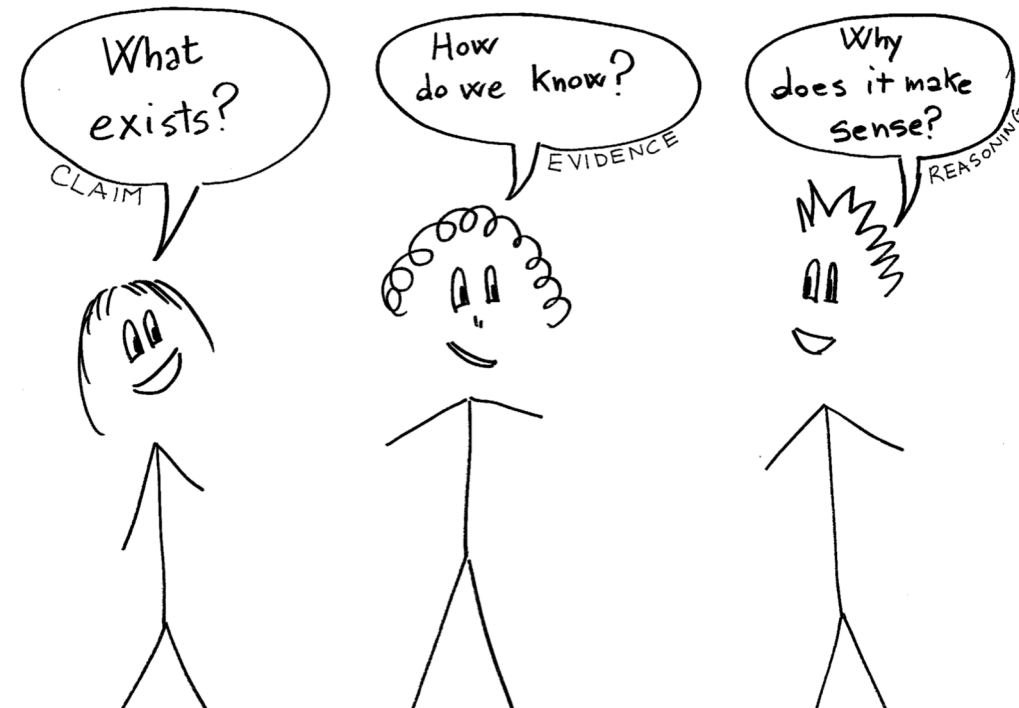
Share contacts with your group members today

Submit Post-Lab Feedback: by Friday at midnight.

No Lab next week (Labor's Day week), come back the week of September 9 for Lab 1

Be Prepared: before the next lab

- Review all the information on Canvas
- Keep in mind the Claim Evidence Reasoning (CER) framework and be ready to apply it.



Break!

Group members should exchange contact info (phone number, email, Google Drive info, etc.)

Today's menu

- Overview of course logistics
- Break with snacks
- Intro Lab Group Activity
- Consent Form and Data Analysis Assessment

