

# Introduction Exercises

## TRENT UNIVERSITY: PHYSICS 2091H

NAME: \_\_\_\_\_

LAB PARTNER(S): \_\_\_\_\_

\_\_\_\_\_

SECTION: \_\_\_\_\_ LAB GROUP: \_\_\_\_\_

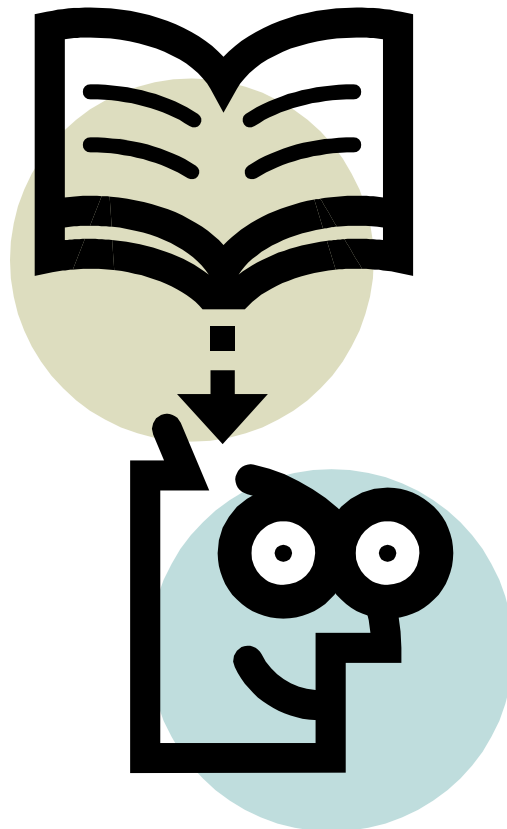
TA: \_\_\_\_\_

DATE: \_\_\_\_\_

If needed by your TA, please record:

E-MAIL ADDRESS: \_\_\_\_\_ @TRENTU.CA

ADDITIONAL INFORMATION: \_\_\_\_\_



## **Introduction**

### Equipment List

#### **I1.1:**

Per class:

Per group: whiteboard, pens, eraser

#### **I1.2:**

Per class: Something on a string, like a metal ball, something to use as a pin (marker pen), stand and clamp

Per group:

## Activity I.1: Who Are You?

(Activity)

**Goals:** Explore some thoughts on how you might think about your participation in this course. Learn about your classmates.

1. **WHAT DO YOU THINK?** Write down a few ideas about what type of person would get the most out of this class. How would they behave? What would they do?
2. **WHAT DOES YOUR GROUP THINK?** Share your list with your group for a few minutes. Record any interesting information that gets shared.
3. **WHAT DO YOU THINK?** Think of a name (any name! famous, infamous, mythical, or mundane!) of someone who would be successful in this course; someone who you want to be like in this class. Record it here, on the front of this booklet, and on your Journal cover.
4. **WHAT DO YOU THINK?** Write down three or four bits of information about yourself... anything you think might interest others.

5. **WHAT DOES YOUR GROUP THINK?** Share your list (and your new name) with your group for a few minutes. Meet some classmates! Record any interesting information that gets shared. Put your group mates' course names on the front of this booklet
  
  
  
  
  
  
  
  
  
  
6. **WHAT DO YOU THINK?** Write down three or four things that you expect or hope to get from Physics 2091H.
  
  
  
  
  
  
  
  
  
  
7. **WHAT DOES YOUR GROUP THINK?** Share your list with your group for a few minutes. Are your items the same as theirs?
  
  
  
  
  
  
  
  
  
  
8. **WHAT DOES YOUR LAB CLASS THINK?** Share your group's list with the class. Are your items the same as theirs?
  
  
  
  
  
  
  
  
  
  
9. **WHAT DOES YOUR INSTRUCTOR THINK?** Does your instructor's list have anything in common with anything previously mentioned? Are there any new items?

## Focus on Science I1: Physics Course Information

This course is largely based upon and influenced by the Text/Workbook: "*Powerful Ideas in Physical Science*", or PIPS, produced by the American Association of Physics Teachers (AAPT). The various course handouts and materials will cost each student \$20, collected as part of the course registration

PIPS presents activities that will allow you to clarify things that you already know, reveal differences among the class, get you to predict outcomes, lead you to experiment and discover, document what you have discovered, and throughout these activities examine scientific learning processes.

In Physics 2091H we will be examining some aspects of Light and Colour, while in Physics 2093H we will be examining some aspects of: Electricity; Motion; Pulleys, Levers and Gears.

Other aspects of this course include: journals; Ontario's grade 1-8 Science Curriculum; how do we (and others) learn most effectively; electronic tools such as e-mail and the web as tools for communication and learning.

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## Activity I.2: What's up With the Pendulum?

(Demonstration)

1. **WHAT DO YOU THINK?** Your instructor will show you an object on a string, and a freestanding peg. What do you think will happen when the object is able to swing? Why?
2. **WHAT DOES YOUR GROUP THINK?** Compare your idea with the ideas of others in your group. Record those that are different from yours. Can you reach a consensus?
3. **MAKING OBSERVATIONS:** What did you observe when the object was allowed to swing? Did this confirm your prediction? If not, how was it different from your prediction?
4. **MAKING SENSE:** Look back at your original idea in step one. What new understanding of the initial situation can you create that is consistent with the observations that you made? What were the limits of your original ideas? How do they need to be expanded or modified in order to fit the observations?

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## Homework I1.1: Tasks for Next Class

NAME: \_\_\_\_\_ SECTION: \_\_\_\_\_  
 DATE: \_\_\_\_\_ TA: \_\_\_\_\_

Your first assignment is to complete six preparatory tasks:

1) Get your accounts working:

a) Get your "trentu.ca" email account activated - you may have to log on to <http://www.trentu.ca/claimid>. Since all official course email will go to your "trentu.ca" email account, if you want to use another one you will have to set your "trentu.ca" email to be automatically forwarded.

b) Access your MyLearningSystem/Blackboard account: Log on to <http://www.trentu.ca/mytrent/> and make sure that you can access the course. Look at the "Discussions" items on MyLearningSystem and see if anyone has started any interesting discussions.

Note that your MyLearningSystem and your "trentu.ca" email accounts have the same password.

2) (1 point) Complete the demographics survey on myLearningSystem.

3) (4 points) Complete "Assignment 0" on MyLearningSystem. In brief: discover what you can about "constructivist learning" and the meaning of the word "pedagogy". Upload a computer file to the "electronic drop-box" on MyLearningSystem with this information (limit yourself to 100 words or so). See MyLearningSystem's "Assignment 0" for detailed instructions about formatting, content, electronic file format, and grading.

4) (2 points) Send me (jbeda@trentu.ca) a short email message (under 100 words) introducing yourself, and telling me your expectations for the course. Send this message from your "trentu.ca" email account, and have "Physics 2091H Intro" be in the subject line.

## Homework I1.1: Tasks for Next Class

NAME: \_\_\_\_\_ SECTION: \_\_\_\_\_  
DATE: \_\_\_\_\_ TA: \_\_\_\_\_

5) (1 point) Post a message in the class MyLearningSystem discussion topic "Homework 01/Assignment 0" in the category "Homework and Assignments". Make the posting (under 100 words), with the subject "HW01 - Intro Messages". Include something interesting - maybe your favourite cookie recipe or a non-offensive science joke. Bring the cookies to the next class.

6) (1 point) MyLearningSystem has a folder called "Academic Skills Tool Kit". Watch the 1.5 minute intro video. Have you seen any of these resources in your other classes? Which one of the topics do you think would have the most benefit to your academic or social well being? Look at the sessions in "Academic Skills Learning Labs" – are there any sessions that would fit into your schedule? Write these answers in your Journal at the start of next class.

7) (1 point) Information about Assignment 1 is available online, and your first draft is due in a very short time. Here are simple questions to show that you have at least looked at it: How many people are involved in the conversation? Who are they? What are they talking about? Write these answers in your Journal at the start of next class.