

# Introduction Exercises

## TRENT UNIVERSITY: PHYSICS 2093H

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

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

\_\_\_\_\_

\_\_\_\_\_

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

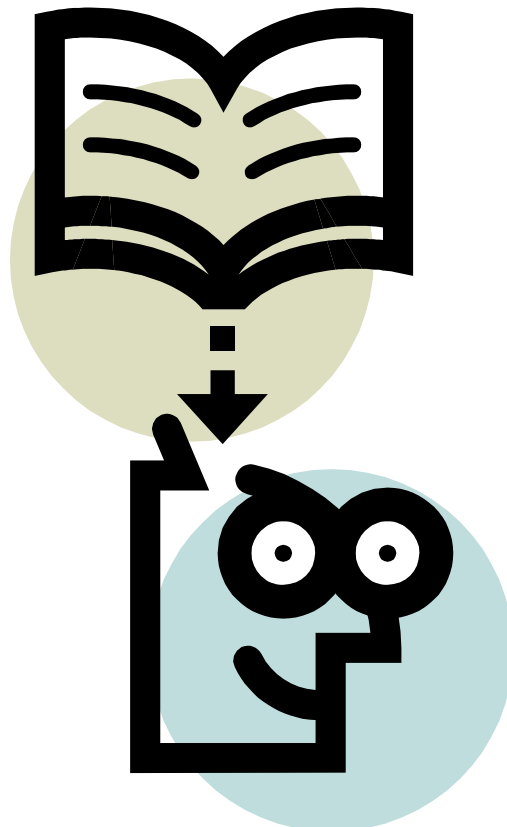
TA: \_\_\_\_\_

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: Three different cans of soup (i.e., chicken broth, chicken noodle, cream of chicken), ramp, ruler or stick to start them all rolling together.

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.



## 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 in one of the first few meetings of the course.

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 Cans?

(Demonstration)

1. **WHAT DO YOU THINK?** Your instructor will show you three different cans of soup. What do you think will happen when they are all allowed to roll down the ramp?
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 cans were allowed to roll down the ramp? 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 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: Read the Wired article "Everything You Thought You Knew About Learning Is Wrong" by By Garth Sundem and comment about what one thing you could change in your own schooling that would be most in line with the information from this article. 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 2093H Intro" be in the subject line.

## Homework I1.1: Tasks for Next Class

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

5) (2 points) 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) Bring \$20 to next class - make cheques payable to "Trent University Department of Physics and Astronomy".

**Reminder for First Assignment:** 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 different "strands" are there in the Ontario elementary school science curriculum? Which one do you think will have the most overlap with topics in the Physics 2091/2093 courses? Which do you think will have the least overlap?