



# Struggling first-year science students – who's gonna fix them?

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### Session outline

- Explore the skills students need to succeed in first year
- Highlight two University of Guelph initiatives that address the skills gap
- Discuss current ways universities support the academic skills transition
- Brainstorm support models

# Identifying key skills

What key skills do first-year science students need to develop in order to be successful?

## Academic skills we address

### Activities are designed to develop:

- Information literacy
- Critical reading
- Paraphrasing and citing
- Data analysis
- Self-management and learning behaviours

### How we address these skills

- SPOT (Science Portal for Ontario Teachers)
- Academic Skills Triathlon event within campus wide Science Olympics

### SPOT

- Outreach to upper-year science teachers
- Two components:
  - 1. Grade 12 science lesson plans
  - 2. Academic skills resources

http://www.lib.uoguelph.ca/first/resources\_for\_teachers/spot

# SPOT – lesson plans

- Customized to Ontario Science Curriculum
  - Grade 12 university preparation courses
  - Specific curriculum expectations met
- Lesson plans require students to:
  - Find, critically read and analyze scientific journal articles, and summarize their understanding
  - Guided by questions posed in student worksheet

### Academic skills resources

- Downloadable modules
  - Searching for scientific journal articles using Open Access Journals
  - Paraphrasing
- Links to related resources
  - Academic Integrity
  - Guide for University Learning
  - Guide for Time Management





### ACADEMIC INTEGRITY at the University of Guelph

Home | Understanding Academic Integrity | Understanding Plagiarism | Glossary of Terms

**Academic Integrity** 

#### Have you ever been:

- ⊞ confused about how to cite your sources properly?
- ⊞ worried you might be unfairly accused of academic misconduct?
- ⊞ tempted to borrow from someone else's work?

If you answered "yes" to any of these questions, or if you have other questions about the academic code of ethics, then this site is meant for you.

#### What you can expect to find in this tutorial is:

- **⊞** Definitions of Academic Integrity and Plagiarism
- B A Video vignette depicting an issue of academic misconduct involving U of G students
- B Rules, Regulations, and Penalties for Academic Misconduct at the University of Guelph
- B Illustrations of how to avoid unintentional academic misconduct and plagiarism
- B Short quizzes and exercises to test your understanding of the rules governing academic work



Video Clip:

A letter from the Dean

By the time you've completed this tutorial, you should have a better understanding of how to avoid academic misconduct and why academic integrity is so important. We hope that this will make you feel more secure when you complete your assignments.

There are two sections to the tutorial. The first discusses the more general topic of academic integrity; the second focuses on plagiarism. We suggest that you follow the tutorial in this order, but you can do them independently.

Begin tutorial>

http://www.academicintegrity.uoguelph.ca/





#### A Guide for Time Management

#### **Before You Begin**

Can You Relate to these Issues? Time Management Introduction Coping with a 12 Week Semester Analyzing your Need for Structure Is Change Possible?

#### **Planning Your Time**

Goal Setting
Getting the Big Picture
Creating a Master Plan
Making a Task List
Finding your Best Time of Day
Break It Up & Spread It Out
Flexible Time
Coping with Info-Heavy Courses
Coping with Multiple Deadlines

#### **Staying On Track**

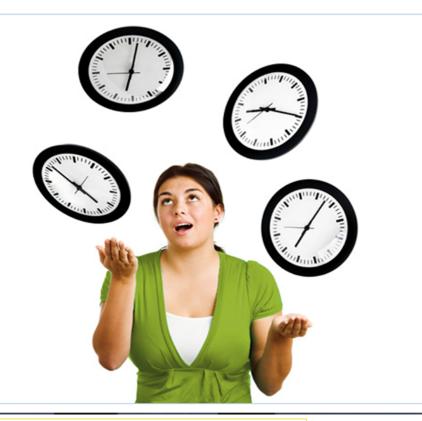
Having Fun Effectively
Managing Distractions
Breaks and Rewards
Issues with Concentration
Using Weekday Time Effectively
Using Weekend Time Effectively
20 Ways for Playing Catch-Up
Coping with Burnout
Time-Effective Writing Strategies

#### **Controlling Procrastination**

Understanding Procrastination Band-Aid Solutions Getting Started: Just Do It Death by Deadline Effective Procrastination

#### The Time is Now.

A Guide for Time Management has been designed to resolve the persistent time management issues commonly faced by undergraduate and graduate students. It is a vast resource for information, ideas, strategies, and advice about time management and related topics like procrastination and concentration.



http://www.learningcommons.uoguelph.ca/guides/time\_management/

# **Science Olympics**

- Academic Skills Triathlon:
  - Memorizing and Recalling Content
  - Critical Reading
  - 3. Data Analysis and Writing

# Who's gonna fix them?

How is your institution currently introducing university level academic skills into the high school setting?

# What would you like to see?

What would you like to see in a support model that would help high school students develop the academic skills needed in first year?