



# C·o·m·p·u·l·s·o·r·y C·o·u·r·s·e·s

## SCIENCE

### Academic Science, Grade 9 (SNC1D)

If you take **Academic Science** you can anticipate:

- learning abstract science concepts as well as some concrete applications;
- learning through inquiry-based problem solving;
- applying math knowledge and skills in a variety of situations;
- taking notes independently;
- completing lots of lab activities.

### Applied Science, Grade 9 (SNC1P)

If you take **Applied Science** you can anticipate:

- learning practical applications of science concepts as well as some abstract concepts;
- learning through inquiry-based, but guided problem solving;
- learning how to apply some math knowledge and skills to science;
- taking structured notes;
- completing lots of lab activities.

Read the questions in each of the **academic** and **applied** science quizzes below. You don't have to know the answers; instead, think about how the questions are *similar* and how they are *different*.

The following quiz on electricity is an example of the questions students in **SNC1D** can expect to answer:

1. List four different examples of electric devices and put them in order from low to high power usage.
2. Electric current can be deadly. Describe how electric current damages human tissue.
3. Describe the different methods of connecting an ammeter and a voltmeter into a circuit.
4. How does a defibrillator help to restart someone's heart that has stopped beating?

The following quiz on electricity is an example of the questions students in **SNC1P** can expect to answer:

1. List four different examples of an electric device.
2. Define the term "electric current."
3. Why is it necessary to consider the positive and negative terminals when you connect an ammeter to a circuit?
4. How do electronic air cleaners use the fact that a neutral dust particle can be attracted to a charged object to filter the air?

#### How do the questions differ?

One of the differences you may have noticed is that the **academic** questions ask you to link ideas together and are open-ended, allowing you to explain some of your thinking. The **applied** questions ask you to provide more focused answers, sharing more factual information.

If you enjoy linking concepts and considering how our world works in a big-picture kind of way *and* you enjoy higher-level math, **academic science** may be for you. **Academic math** is recommended for students taking **academic science**.

If you enjoy learning the facts about how specific things work, **applied science** may be for you.

# O·p·t·i·o·n·a·l C·o·u·r·s·e·s

## Open Level Courses

In most cases in Grade 9, you will take your three optional courses at the open level. A Grade 9 open course is appropriate for all students in Grade 9. The courses are designed to help provide a broad subject base that will enrich your education and prepare you for future studies. More information about optional courses will be provided at GCI's Grade 8 night in January and/or through the counselling department.



### Art

- Visual Arts



### Family Studies

- Food and Nutrition



### Technological Education

- Integrated Technologies



### Music

- Music - Band (Enhanced, Experienced, Beginner)
- Music - Vocal



### Health & Physical Education

- Healthy Active Living Education
- Hockey (Co-ed)



### Business

- Introduction to Business
- Intro. to Information Technology in Business

# C·o·u·r·s·e P·l·a·n·n·i·n·g

## Grade 9

Use the charts below to show the Grade 9 courses you would like to take:

### Compulsory Courses

	✓ Academic	✓ Applied
English		
French		
Geography		
Math		
Science		

Extended French

Yes

No

### Optional Courses

Option 1:	
Option 2:	
Option 3:	

If you have questions about changing from applied to academic or *vice versa* in Grade 10, please speak to a guidance counsellor.

### Requirements for the Ontario Secondary School Diploma (OSSD)

To earn an OSSD, you must:

- Earn 30 credits (18 compulsory; 12 optional)
- Complete 40 hours of community involvement activities
- Meet the provincial secondary school literacy diploma requirement.

### French Answers:

1. adore
2. jouons
3. pardons
4. finit
5. attends
6. arrivent
7. mangeons
8. parlons
9. nage

### Math Answers:

1. (a) ..... solution:  $(-4)^2 + (-1) - 4 = 11$
2. (c)  $12^2 = x^2 + 7^2$ ,  $144 = x^2 + 49$ ,  $95 = x^2$ ,  $x = \sqrt{95}$ ,  $\therefore x \approx 9.7 \text{ cm}$
3. (a) ..... solution:  $\$35.25 - \$12.50 = \$22.75$ ;  $\$22.75 \div \$1.75 = 13$
4. (a) and (c) ..... solution:  $\frac{1}{4} + \frac{1}{12} + \frac{1}{3} = \frac{3}{12} + \frac{1}{12} + \frac{4}{12} = \frac{8}{12} = \frac{2}{3}$ ;  $\frac{8}{12} - \frac{8}{12} = \frac{4}{12} = \frac{1}{3}$
5. (d) ..... solution:  $\$75 \times 25\% = \$18.75$ ;  $\$75 - \$18.75 = \$56.25$ ;  $56.25 \times 15\% = \$8.44$ ;  $\$56.25 + \$8.44 = \$64.69$ .

### Geography Answers:

1. (b)
2. (d)
3. (a)
4. (a)
5. (c)

