

# AGRICULTURE

## SECTION J: SAMPLE STUDENT LEARNING GUIDES

The following pages provide background information, strategies and a template for developing student learning guides. Also included at the end of this section are several sample student learning guides for Agriculture.

A student learning guide provides information and direction to help students attain the expectations defined in a specified CTS module. It is designed to be used by students under the direction of a teacher.

Many excellent student learning guides (SLGs) are available for use and/or are in the process of being developed. While Alberta Education provides a development template accompanied by some samples, most student learning guide development is being done by individuals and organizations across the province (e.g., school jurisdictions, specialist councils, post-secondary organizations). Refer to the *Career & Technology Studies Manual for Administrators, Counsellors and Teachers* (Appendix 11) for further information regarding student learning guide developers and sources.

**Note:** A student learning guide is not a self-contained learning package (e.g., Distance Learning Module), such as you might receive from the Alberta Distance Learning Centre (ADLC) or Distance Learning Options South (DLOS).

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## BACKGROUND INFORMATION

A Student Learning Guide (SLG) is a presentation of information and direction that will help students attain the expectations defined in a specified CTS module. It is designed to be used by students under the direction of a teacher. A SLG is not a self-contained learning package such as you might receive from the Alberta Distance Learning Centre (ADLC) or Distance Learning Options South (DLOS).

Each SLG is based on curriculum and assessment standards as defined for a particular CTS module. Curriculum and assessment standards are defined in this document through:

- module and specific learner expectations (Sections D, E and F)
- assessment criteria and conditions (Sections D, E and F)
- assessment tools (Section G).

The SLG is written with the student in mind and makes sense to the student in the context of his or her CTS program. SLGs are designed to guide students through modules under the direction of the teacher. They can be used to guide:

- an entire class
- a small groups of students
- individual students.

In some instances, the Student Learning Guide may also be used as teacher lesson plans. When using SLGs as teacher lesson plans, it should be noted that they tend to be:

- learner-centred (versus teacher-directed)
- activity-based (versus lecture-based)
- resource-based (versus textbook-based).

### Components of a Student Learning Guide

The student learning guide format, as developed by Alberta Education, typically has *seven* components as described below.

#### 1. *Why Take This Module?*

This section provides a brief rationale for the work the student will do, and also establishes a context for learning (i.e., in relation to the strand, a life pursuit, a specific industry, etc.).

#### 2. *What Do You Need To Know Before You Start?*

In this section, prerequisite knowledge, skills and attitudes considered necessary for success in the module are identified. Prerequisites may include other modules from within the strand or from related CTS strands, as well as generic knowledge and skills (e.g., safety competencies, the ability to measure/write/draw, prior knowledge of basic information relevant to the area of study).

#### 3. *What Will You Know And Be Able To Do When You Finish?*

This information must parallel and reflect the curriculum and assessment standards as defined for the module. You may find it desirable to rewrite these standards in less formal language for student use.

#### 4. *When Should Your Work Be Done?*

This section provides a timeline that will guide the student in planning their work. The timeline will need to reflect your program and be specific to the assignments you give your students. You may wish to include a time management chart, a list of all assignments to be completed, and instructions to the student regarding the use of a daily planner (i.e., agenda book) to organize their work.

#### 5. *How Will Your Mark For This Module Be Determined?*

This section will interpret the assessment criteria and conditions, assessment standards, assessment tools and suggested emphasis as defined for the module within the context of the projects/tasks completed. Accepted grading practices will then be used to determine a percentage grade for the module—a mark not less than 50% for successful completion. (**Note:** A module is

“successfully completed” when the student can demonstrate ALL of the exit-level competencies or MLEs defined for the module.)

#### 6. *Which Resources May You Use?*

Resources considered appropriate for completing the module and learning activities are identified in this section of the guide. The resources may be available through the Learning Resources Distributing Centre (LRDC) and/or through other agencies. Some SLGs may reference a single resource, while others may reference a range of resources. Resources may include those identified in the Learning Resource Guide (Section I) as well as other sources of information considered appropriate.

#### 7. *Activities/Worksheets*

This section provides student-centred and activity-based projects and assignments that support the module learner expectations. When appropriately aligned with curriculum and assessment standards, successful completion of the projects and assignments will also indicate successful completion of the module.

### **Strategies for Developing Student Learning Guides**

Prior to commencing the development of a student learning guide, teachers are advised to obtain:

- the relevant Guide to Standards and Implementation
- the student learning guide template.

Information communicated to the student in the SLG must parallel and reflect the curriculum and assessment standards as defined for the module. Therefore, critical elements of the Guide to Standards and Implementation that need to be addressed throughout the SLG include:

- module and specific learner expectations
- assessment criteria and conditions
- assessment standards
- assessment tools.

Additional ideas and activities will need to be incorporated into the student learning guide. These can be obtained by:

- reflecting on projects and assignments you have used in delivering programs in the past
- identifying human and physical resources available within the school and community
- networking and exchanging ideas (including SLGs) with other teachers
- reviewing the range of resources (e.g., print, media, software) identified in the Learning Resource Guide (Section I) for a particular module/strand.

Copyright law must also be adhered to when preparing a SLG. Further information and guidelines regarding copyright law can be obtained by referring to the:

- *Copyright Act*
- *Copyright* and the *Can Copy Agreement*.

A final task in developing a student learning guide involves validating the level of difficulty/challenge/rigour established, and making adjustments as considered appropriate.

A template for developing student learning guides, also available on the Internet, is provided in this section (see “Student Learning Guide Template,” pages J.5–10). Several sample student learning guides are also provided in this section (see “Sample Student Learning Guides,” starting on page J.11).

# CAREER & TECHNOLOGY STUDIES



## SAMPLE STUDENT LEARNING GUIDE TEMPLATE



# WHY TAKE THIS MODULE?



# WHAT DO YOU NEED TO KNOW BEFORE YOU START?



# WHAT

**WILL YOU KNOW AND  
BE ABLE TO DO  
WHEN YOU FINISH?**

- 
- 
- 
- 
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- 
- 

# WHEN

**SHOULD YOUR WORK BE DONE?**

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# HOW WILL YOUR MARK FOR THIS MODULE BE DETERMINED?

	PERCENTAGE

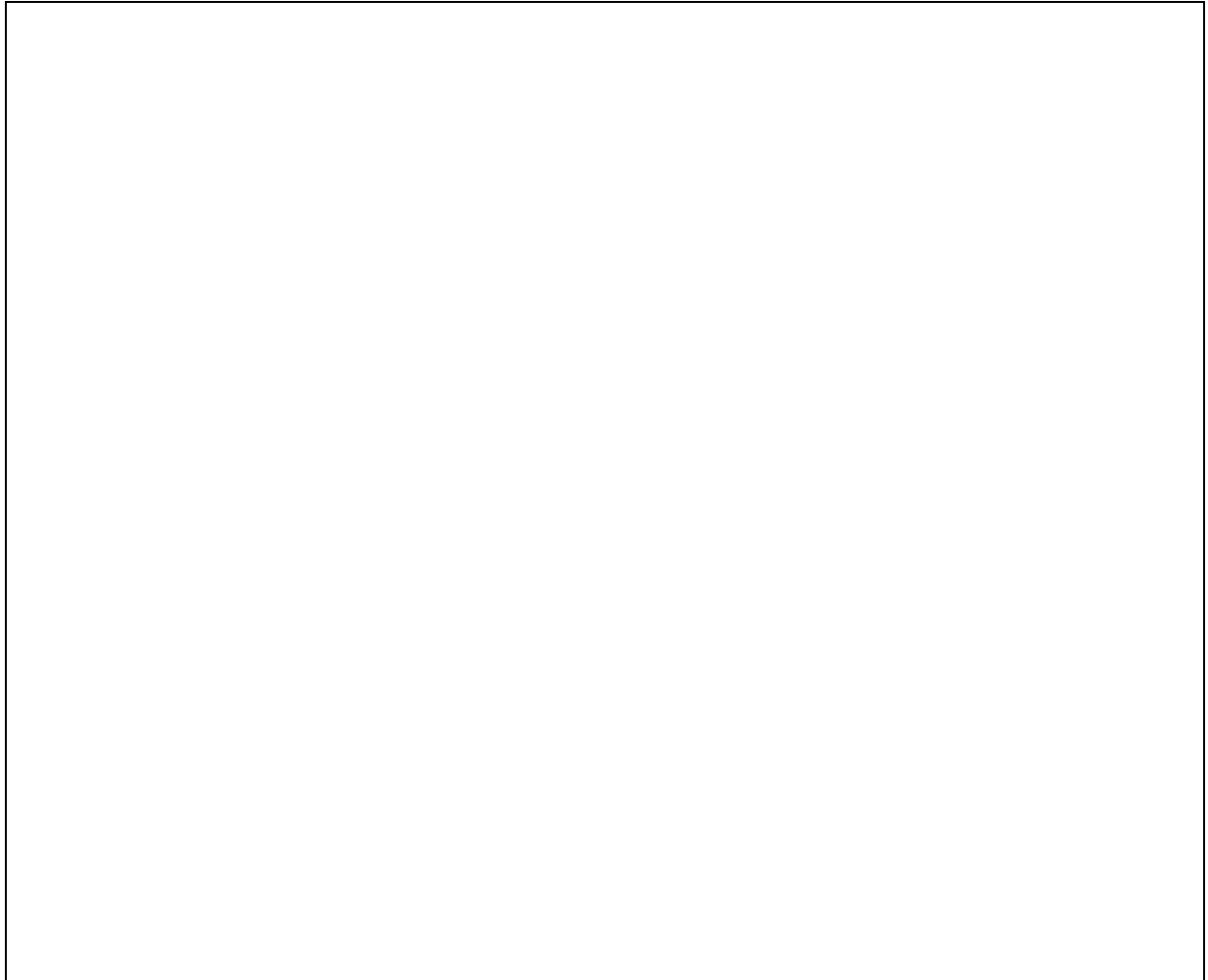


# WHICH RESOURCES MAY YOU USE?



<ul style="list-style-type: none"><li>•</li><li>•</li><li>•</li><li>•</li><li>•</li><li>•</li><li>•</li></ul>
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# ACTIVITIES/WORKSHEETS



# CAREER & TECHNOLOGY STUDIES

## AGRICULTURE

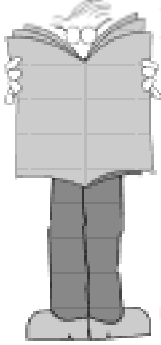
### SAMPLE STUDENT LEARNING GUIDE

#### **AGR1030 Production Basics**

# AGRICULTURE

## AGR1030 Production Basics

# WHY TAKE THIS MODULE?



- This module is designed to allow you to explore techniques used in plant growth or animal production. Skills learned in this module can be applied to future studies and to produce a commodity for sale.

# WHAT DO YOU NEED TO KNOW BEFORE YOU START?

There are no prerequisites identified for this module.



# WHAT WILL YOU KNOW AND BE ABLE TO DO WHEN YOU FINISH?

Upon completion of this module you will be able to:

- identify and demonstrate the basic steps and procedures involved in producing a plant or animal commodity
- describe technological systems used within a plant or animal production enterprise
- identify career opportunities relevant to plant or animal production
- demonstrate basic competencies.

# WHEN SHOULD YOUR WORK BE DONE?

Your teacher will give you a timeline for completing tasks and assignments within this module.

You may also wish to use a time-management planning chart to preplan the work that needs to be done in this module. Plan how you will use your class time as well as extra time needed to complete the assignments in this module.



# AGRICULTURE

## AGR1030 Production Basics

### HOW WILL YOUR MARK FOR THIS MODULE BE DETERMINED?

	PERCENTAGE
You must first demonstrate <b>all</b> of the competencies required for this module.	
When you have done this, your percentage mark for the module will be determined as follows:	
<ul style="list-style-type: none"><li>• Demonstration of production skills</li></ul>	40%
<ul style="list-style-type: none"><li>• Assignments from each section</li></ul>	40%
<ul style="list-style-type: none"><li>• Test</li></ul>	20%



### WHICH RESOURCES MAY YOU USE?



- *Agriscience*: Fundamentals and Applications
- Seed catalogues.
- Nurseries catalogues.
- Equipment catalogues.

# ACTIVITIES/WORKSHEETS

**Section 1**

This section deals with an evaluation of the facilities and equipment that you have available for your use. This information is important for estimating the number of plants or animals that can be maintained within these areas. With your teacher's help, determine the equipment and areas, both indoors and outdoors, that will be available to you.

1. Draw a diagram of these areas. Include measurements in your drawing and calculate the available space in square metres.
2. Make a list of the equipment available and describe the function of each piece of equipment. It would be useful to include a drawing of the items you are not familiar with.

**Section 2**

With your teacher's help, decide which commodities you would like to produce.

If you choose INDOOR PLANTS, design a chart with the following categories and complete it as you carry out the project.

Name of Plant	Seeding Instruction	Transplanting Date
Size of Pot Used	Dates Fertilized	

If you choose OUTDOOR PLANTS, design a chart with the following categories and complete it as you carry out the project

Name of Plant	Seeding Instructions	Germination Date
Dates Fertilized	Date of Maturity	

As you carry out this project, keep a record of expenses. They will probably include:

1. seed cost
2. cost of growing medium
3. fertilizer cost
4. price of pots.

If you choose to RAISE ANIMALS, design a chart with the following categories and complete it as you carry out the project.

Name of Animal	Food Required	Frequency of Feeding
Dates for Cleaning Enclosure	Dates Exercised	

As you raise the animals, keep a record of the expenses. They will probably include:

1. initial cost of animals
2. food costs
3. cleaning costs
4. veterinary charges.

# **AGRICULTURE**

## **AGR1030 Production Basics**

### **Section 3**

1. Calculate the costs for producing your plant or animal.
2. Calculate how much you will have to charge for each plant or animal in order to cover costs.
3. Find out how much professionals charge for similar plants or animals.
4. If appropriate, sell your commodity.

### **Section 4**

The purpose of this section is to research and present certain aspects of a career involving plant or animal production. This information may be obtained from Alberta Agriculture, industries and businesses that are involved in these fields, and from career-related computer programs, government publications and periodicals. Your presentation should describe the nature of work usually performed, where it is done, and the skills you need for this type of work.

# CAREER & TECHNOLOGY STUDIES

## AGRICULTURE

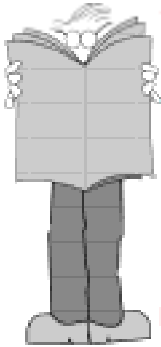
### SAMPLE STUDENT LEARNING GUIDE

#### **AGR2060 Land/Turf Management 1 (Maintenance Practices)**

## **AGRICULTURE**

### **AGR2060 Landscape/Turf Management 1 (Maintenance Practices)**

## **WHY TAKE THIS MODULE?**



Successful landscape maintenance depends on the safe use of equipment and a basic knowledge of landscape plant materials. This module will give you experience with the tools and equipment used to maintain a landscape and the basic requirements of plant material in the landscape. Skills will be developed by providing practical on-site landscape services. You will also learn about lawn installation techniques.

## **WHAT DO YOU NEED TO KNOW BEFORE YOU START?**

Prerequisite: AGR1070: Basic Landscape/Turf Care



**AGR2060 Landscape/Turf Management 1 (Maintenance Practices)**

**WHAT WILL YOU KNOW AND BE ABLE TO DO WHEN YOU FINISH?**

Upon completion of this module you will be able to:

- identify plants suitable for use in Alberta landscapes
- perform routine maintenance and safety checks on equipment used in landscape practices
- demonstrate practical skills in installing and maintaining landscape plants and turfgrass
- explain techniques used to cost landscape and turfgrass services
- demonstrate basic competencies.

**WHEN SHOULD YOUR WORK BE DONE?**

Your teacher will give you a timeline for completing tasks and assignments within this module.

You may also wish to use a time-management planning chart to preplan the work that needs to be done in this module. Plan how you will use your class time as well as extra time needed to complete the assignments in this module.



# AGRICULTURE

## AGR2060 Landscape/Turf Management 1 (Maintenance Practices)

### HOW WILL YOUR MARK FOR THIS MODULE BE DETERMINED?

	PERCENTAGE
You must first demonstrate <b>all</b> of the competencies required for this module.	
When you have done this, your percentage mark for the module will be determined as follows:	
<ul style="list-style-type: none"><li>• Practical</li></ul>	50%
<ul style="list-style-type: none"><li>• Theory</li></ul>	40%
<ul style="list-style-type: none"><li>• Work ethic</li></ul>	10%



### WHICH RESOURCES MAY YOU USE?



- *Ornamental Horticultural Principles and Practices* (Ingels)
- University of Alberta Home Gardening Course (John Harapiak)
- *Alberta Horticulture Guide* (Alberta Agriculture)
- *The Lawn Expert* (Dr. D.G. Hessayon)
- *The Tree and Shrub Expert* (Dr. D.G. Hessayon)
- *The Bedding Plant Expert* (Dr. D.G. Hessayon)

**AGR2060 Landscape/Turf Management 1 (Maintenance Practices)**

# ACTIVITIES/WORKSHEETS

Before beginning any practical work in this module, set up a number of pages in a logbook. The logbook pages are provided. Horticulturists in most areas keep daily records of activities and you will be required to fill in a space in the logbook for each activity that you complete.

- **Power Machines**
  - Obtain the owner’s manuals from the power machines you will be using. Read the manuals and use the information to fill in the “Maintenance Equipment Information Chart.”
  - Observe a demonstration of the use of the machine and make a check in the chart indicating that you have seen the demonstration.
  - Complete the “Lawn Maintenance Hand Tools Chart.”
- **Turf Maintenance**
  - Complete the worksheets on mowing, watering, trimming and edging.
  - While working on the maintenance worksheets or after completing them, practise using the machines you researched to provide basic maintenance for the lawns either around the school or for a private residence. Include mowing, trimming, edging, weed removal, sweeping and raking. You should provide the service through at least two mowings.
  - If you provide the service to a private residence, have the resident fill out a “Service Sheet” for you outlining what work was done and on what dates.
  - Have your use of power machines evaluated. You must be able to demonstrate proper and safe use of a mower, power edger and power trimmer. Any other machines that you may have learned may also be evaluated at this time.
  - Observe a demonstration of a drop spreader and/or a broadcast spreader.
  - Complete the questions on lawn fertilizers.
  - Complete the questions and activities on lawn weeds. To do the lawn weeds chart you may be assigned an areas around the school or a residential area.
  - Provide basic maintenance requirements as necessary to a lawn area, including manual weed removal, removal of leaves and debris, application or fertilizer, watering, re-edging planting beds and use of hand trimmers in areas where power trimmers may be too damaging. The practice of these tasks will require you to use a number of hand tools you researched. You should be able to choose the correct tools necessary.

**AGR2060 Landscape/Turf Management 1 (Maintenance Practices)**

- Lawn Establishment
  - View the sections of the *Growing Beautiful Lawns* video dealing with site preparation, seeding, and sodding, and answer the questions on lawn establishment. Complete the small calculation activity.
  - Write the lawn maintenance quiz.
- Landscape Tools
  - Complete the landscape tools information page. Note that pruning tools will be added to this information.
- Landscape Plants
  - Using the references provided, research the following four types of landscape plants: annuals, perennials, trees, shrubs and ground covers. For each type give a definition, tell how it is used in a landscape and give at least three examples. You may present your information in chart form, as information sheets or any other manner that neatly displays the material.
  - Research and complete the plant identification assignment. You may do this all at once or a bit at a time, but you must complete the plant ID and write an identification quiz to complete this module. Plants are suggested with the assignment, but your instructor may choose other plants depending on what is available to you.
- Landscape Maintenance
  - Complete the pruning tools chart.
  - Complete the information on time to prune, parts of the tree and shrub as well as corrective pruning techniques.
  - After observing a demonstration of corrective pruning techniques for trees and shrubs, practise these techniques on plantings at the school or at a residential site.
  - Complete a pruning evaluation.
  - Use your references to research information on seasonal requirements of annual and perennial plantings. Research for the season you are in. This information should include preparation techniques such as cultivating and weeding, soil amending, planting or plant removal and general care of plantings including watering and fertilizing. This assignment should be in conjunction with a planting bed that you are working on and may be presented in chart form, report form, or any other appropriate method of communicating the information.
  - Provide the appropriate seasonal maintenance practices to annual and/or perennial planting at your school and/or a private residence. Choose a small area as your time may be limited.
  - Write the landscape quiz.

# CAREER & TECHNOLOGY STUDIES

## AGRICULTURE

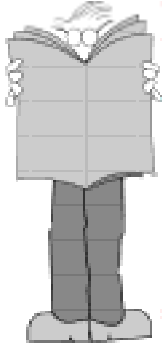
### SAMPLE STUDENT LEARNING GUIDE

#### **AGR3080 Floral Design 2 (Creative Design & Display)**

## AGRICULTURE

### AGR3080 Floral Design 2 (Creative Design & Display)

# WHY TAKE THIS MODULE?



The floristry industry is an interesting and creative field that offers a wide range of both artistic and business opportunities. This module will explore the industry of floristry and build on the basic skills acquired in AGR2080: Floral Design 1. In this module you will use design principles and skills to create different styles of floral arrangements. Uses of flowers for different occasions will be an underlying focus and the production of wedding flowers will also be incorporated.

*Note: This module can be taken at any time of the year but production of seasonal-type items should be coordinated with the calendar if you plan to market and sell the items.*

# WHAT DO YOU NEED TO KNOW BEFORE YOU START?

Prerequisite: AGR2080: Floral Design 1 (Projects for All Occasions)



## **AGRICULTURE**

### **AGR3080 Floral Design 2 (Creative Design & Display)**

# WHAT WILL YOU KNOW AND BE ABLE TO DO WHEN YOU FINISH?

Upon completion of this module you will be able to:

- identify and explain the cultural requirements of cut flowers, foliage and interior plants
- construct fresh, dried and/or artificial floral arrangements for special occasions
- calculate the cost and selling price of floral products and services
- demonstrate techniques used to promote products and services within the floral industry
- demonstrate basic competencies.

# WHEN SHOULD YOU WORK BE DONE?

Your teacher will give you a timeline for completing tasks and assignments within this module.

You may also wish to use a time-management planning chart to preplan the work that needs to be done in this module. Plan how you will use your class time as well as extra time needed to complete the assignments in this module.



# AGRICULTURE

## AGR3080 Floral Design 2 (Creative Design & Display)

### HOW WILL YOUR MARK FOR THIS MODULE BE DETERMINED?

	PERCENTAGE
You must first demonstrate <b>all</b> of the competencies required for this module.	
When you have done this, your percentage mark for the module will be determined as follows:	
<ul style="list-style-type: none"><li>• Practical</li></ul>	50%
<ul style="list-style-type: none"><li>• Theory</li></ul>	40%
<ul style="list-style-type: none"><li>• Work Ethic</li></ul>	10%



### WHICH RESOURCE MAY YOU USE?



- *Ornamental Horticulture Principles and Practices* (Ingels)
- *Home Floral Design* (The John Henry Co.)
- *Flowers Canada Accreditation Manual Level I* (Flowers Canada)
- *The Houseplant Expert* (Dr. D.G. Hessayon)
- *Florist Review* (periodical)

# ACTIVITIES/WORKSHEETS

## 1 The Floristry Industry

1.1 Using your references, research and perform the following activities related to the floristry industry:

- create a chart that shows the top 10 flower-producing countries with the flowers they produce
- give reasons why cut flower production has grown dramatically in developing countries and give two examples of countries where this has happened
- using the Yellow Pages, find the names of your local wholesale outlets. If possible, visit a wholesale organization.

1.2 Create a chart that shows the major differences between a wholesale operation and a retail florist shop.

**Note:** You may use some of the information gathered about florist shops from AGR2080: Floral Design 1.

## 2. Identification

2.1 Complete the flower and plant identification assignment. You will require a number of copies of flower and plant identification pages. You should be able to recognize the specimens on-site and know the main features of the specimen. Be prepared to write an identification quiz at the end of the assignment.

You may do this assignment all at once or as part of activities throughout the module.

## 3. Flowering Plants and Foliage Plants

3.1 Use the *Houseplant Expert* and the information provided to research the basic care of these plants. Complete the questions in the package provided.

3.2 Care for a group of interior plants by applying moisture, fertilizer and pest control as necessary for a minimum of two weeks. You may care for a group of plants in the school or use plants in your home. If you use a group of plants in your home, be prepared to list the plants and/or provide a picture. Keep a record of your maintenance activities in your logbook.

## 4. Design Principles

4.1 Research the design principles of rhythm and harmony, depth and line, and texture and focal point. These principles are in addition to the ones used in Floral Design 1. For each principle, tell how it is achieved in floral design and give an example in the form of a sketch. **Note:** You may demonstrate these principles using one sketch that shows all of them.

**AGR3080 Floral Design 2 (Creative Design & Display)****5. Design Skills**

After viewing a demonstration and filling out a design plan-page, complete the following designs:

- horizontal table arrangement with candle — should be made to fit a specific season
- choose two types of triangular arrangements. Create both types using the same materials for comparison
- hand-tied bouquet. This should be free standing. This skill will take time and practice. Students can use twigs or sticks to practise the technique before using floral material
- presentation bouquet. Discuss its merits and uses
- cascade bouquet. Most popular type of bouquet. Often over-used. Discuss possible alternatives
- complete one European-style, showing parallelism, cushion or vegetative style. This project should be carefully presented ahead of time and will require approval of your instructor.

**6. Costs**

Obtain a form used by a local flower shop for calculating costs of arrangements and/or design your own to fit the needs of your class. Remember to include the following items when calculating costs:

- flower and foliage materials (you will need the price per stem)
- hard goods prices, including containers, foam, wrapping, bows
- materials such as glue, wire, floral tape, and pins are usually added into the price as part of the mark-up. You will want to establish a constant amount
- labour will not be counted as much in the classroom as it would be in a flower shop, but you should note how long each arrangement takes and use this as a guide for establishing a labour cost
- overhead is not an issue in the classroom, but would be calculated as part of the mark-up in a flower shop
- price of delivery and GST should also be part of your calculation.

Once you have a form that addresses your needs, calculate the cost and possible price for the items you create in this module.