

TASK	Observation/Rating					
Preparation and Planning	4	3	2	1	0	N/A
Information Gathering and Processing	4	3	2	1	0	N/A
Content	4	3	2	1	0	N/A
Collaboration and Teamwork	4	3	2	1	0	N/A
Information Sharing	4	3	2	1	0	N/A

STANDARD IS 2 IN EACH APPLICABLE TASK

Rating Scale

- 4 exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence.
- 3 meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are selected and used efficiently and effectively.
- 2 meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are selected and used appropriately.
- 1 meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately.
- 0 has not completed defined outcomes. Tools, materials and/or processes are used inappropriately.

N/A Not applicable

TASK CHECKLIST

The student:

Preparation and Planning

- sets goals and establishes steps to achieve them
- creates and adheres to useful timelines
- uses personal initiative to formulate questions and find answers
- plans and uses time effectively

Information Gathering and Processing

- accesses a range of relevant in-school/community resources
- uses a range of information-gathering techniques
- interprets, organizes and combines information into a logical sequence
- records information accurately with appropriate supporting detail and using correct technical terms
- determines accuracy/currency/reliability of information sources
- gathers and responds to feedback regarding approach to the task

Content

- identifies and describes indicators of health in a selected animal species; e.g.:
 - physical signs
 - normal/abnormal vital signs
 - symptoms of disease and parasites
 - behaviour

Content (continued)

- describes normal/abnormal animal physiology and anatomy
 - describes normal/abnormal feed sources, and the impact of nutrient deficiencies on animal health
 - identifies agents and sources of stress for animals, and their implications for health
 - describes characteristics of a healthful animal environment, and conditions that may place an animal's health or safety at risk; e.g.:
 - sanitation
 - housing
 - methods of restraint
- _____
- _____
- _____

Collaboration and Teamwork

- cooperates with group members
- shares work appropriately among group members
- negotiates solutions to problems

Information Sharing

- demonstrates effective use of two or more communication media:
e.g., written, oral, audio-visual
- communicates ideas in a logical sequence with sufficient supporting detail
- maintains acceptable grammatical and technical standards
- cites five or more relevant information sources

REFLECTIONS/COMMENTS:

<p style="text-align: center;">FEEDING</p> <p><i>The student:</i></p> <ul style="list-style-type: none"> <input type="checkbox"/> describes the role of protein, energy, vitamins, mineral and water in animal diet <input type="checkbox"/> monitors animals and pens for adequate water supply/consumption and ensures animals are properly watered <input type="checkbox"/> implements and monitors an appropriate feeding routine <input type="checkbox"/> explains rules of thumb for quantities/volumes consumed daily or weekly <input type="checkbox"/> identifies feed requirements for specific situations (e.g., growth/fattening, pregnant/lactating mothers) <input type="checkbox"/> feeds at correct times <input type="checkbox"/> operates required feeding equipment <input type="checkbox"/> performs routine health checks during feeding <input type="checkbox"/> performs routine inspection/cleaning/maintenance of feed boxes and troughs during feeding <input type="checkbox"/> identifies nutritional deficiencies, and explains the role of food additives and growth stimulants in animal diet <input type="checkbox"/> _____ <input type="checkbox"/> _____ 	<p style="text-align: center;">HANDLING AND RESTRAINT</p> <p><i>The student:</i></p> <ul style="list-style-type: none"> <input type="checkbox"/> describes normal animal behaviours in different situations (e.g., when eating, when confined, during breeding) <input type="checkbox"/> identifies factors that influence animal handling techniques (e.g., animal instincts, environmental factors, tameness, breed/gender/age differences) <input type="checkbox"/> demonstrates effective animal handling technique (e.g., body stance/movement, appropriate use of force, control of noise) <input type="checkbox"/> uses animal handling aids/facilities in a proper and safe manner (e.g., prods, canes, whistles, chutes, pens, gates) <input type="checkbox"/> uses animal restraint equipment in a proper and safe manner (e.g., cattle squeeze, hog crate, head gate) <input type="checkbox"/> demonstrates ability to handle animals in groups and/or in large areas (e.g., herding, droving, moving) <input type="checkbox"/> demonstrates techniques that minimize personal hazards associated with animal handling (e.g., protective gear, keeping alert) <input type="checkbox"/> _____ <input type="checkbox"/> _____
<p style="text-align: center;">HOUSING</p> <p><i>The student:</i></p> <ul style="list-style-type: none"> <input type="checkbox"/> demonstrates appropriate and safe use of confinement structures (e.g., buildings, fences, corrals) <input type="checkbox"/> monitors physical environment, ensuring appropriate light, temperature, air circulation and space variables <input type="checkbox"/> maintains and makes basic repairs to fencing and/or confinement structures to ensure animal safety <input type="checkbox"/> cleans and disinfects animal pens and other confinement/holding structures <input type="checkbox"/> ensures animal comfort through supply of appropriate bedding material <input type="checkbox"/> implements and maintains a manure handling system <input type="checkbox"/> _____ <input type="checkbox"/> _____ <input type="checkbox"/> _____ 	<p style="text-align: center;">HEALTH AND WELL-BEING</p> <p><i>The student:</i></p> <ul style="list-style-type: none"> <input type="checkbox"/> describes signs of animal health (e.g., movement, alertness, body appearance, eating habits) <input type="checkbox"/> identifies symptoms of ill health, parasites and/or disease (e.g., respiration, movement, eating habits, body appearance, animal sounds) <input type="checkbox"/> identifies symptoms and treatments for common pests, diseases and ailments that affect the health of animals <input type="checkbox"/> identifies common situations that may be confused with ill health (e.g., heat/cold, estrus cycle, stress) <input type="checkbox"/> administers basic treatments for common pests, diseases and/or ailments (e.g., injections, dusting, medication) <input type="checkbox"/> identifies and controls agents/sources of stress for the animal <input type="checkbox"/> _____ <input type="checkbox"/> _____ <input type="checkbox"/> _____

STANDARD: Achieve a minimum performance rating of 2 in each area of animal care as outlined on the checklist.

Rating Scale

4	exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence. Quality and productivity are consistent and exceed standards. Leads others to contribute to team goals. Analyzes and provides effective client/customer services beyond expectations.
3	meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are selected and used efficiently and effectively. Quality and productivity are consistent. Works cooperatively and contributes ideas and suggestions that enhance team effort. Analyzes and provides effective client/customer services.
2	meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are selected and used appropriately. Quality and productivity are reasonably consistent. Works cooperatively to achieve team goals. Identifies and provides customer/client services.
1	meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately. Quality and productivity are reasonable consistent. Works cooperatively. Provides a limited range of customer/client services.
0	has not completed defined outcomes. Tools, materials and/or processes are used inappropriately.

RATING	ASSESSMENT CRITERIA
<p>4 3 2 1 0</p> <p>4 3 2 1 0</p> <p>4 3 2 1 0</p>	<p><i>The student:</i></p> <p>Gathers Background Information</p> <ul style="list-style-type: none"> <input type="checkbox"/> defines the task <input type="checkbox"/> identifies task components and organizes them into a logical sequence <input type="checkbox"/> accesses basic in-school/community information sources regarding animal welfare <input type="checkbox"/> provides a review of historical concerns regarding animal welfare <input type="checkbox"/> compares animal welfare and animal rights <hr/> <p>Develops a Strategy for Maintaining Animal Welfare</p> <ul style="list-style-type: none"> <input type="checkbox"/> identifies ethical, economic and social perspectives that influence animal welfare <input type="checkbox"/> describes welfare needs of an animal; e.g.: <ul style="list-style-type: none"> - water and food - space, air quality, temperature and light - shelter and confinement structures - freedom from stress, hunger, disease, pain and abuse <input type="checkbox"/> describes indicators of health in the animal; e.g.: <ul style="list-style-type: none"> - physical signs of good and poor health - normal and abnormal vital signs - symptoms of disease and parasites - normal and abnormal behaviour <input type="checkbox"/> describes current codes of practice regarding animal care, handling and restraint <input type="checkbox"/> considers alternatives and consequences regarding different approaches to caring for the animal <input type="checkbox"/> develops a plan of action to address welfare needs of the animal <hr/> <p>Assesses and Communicates the Strategy</p> <ul style="list-style-type: none"> <input type="checkbox"/> presents the animal welfare plan in a logical sequence using one or more communication media <input type="checkbox"/> uses correct grammar and technical terms <input type="checkbox"/> make summative statements regarding strengths/weaknesses and general feasibility of the animal welfare plan <input type="checkbox"/> outlines a protocol for responding to an issue regarding animal welfare <hr/>

STANDARD IS 2 IN EACH APPLICABLE TASK

Rating Scale

- 4 exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence.
- 3 meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are selected and used efficiently and effectively.
- 2 meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are selected and used appropriately.
- 1 meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately.
- 0 has not completed defined outcomes. Tools, materials and/or processes are used inappropriately.

N/A Not applicable

REFLECTIONS/COMMENTS

TASK CHECKLIST: Field Crops 1

AGR2030-1

PRODUCTION TASK	Soil Preparation	Seeding/ Propagation	Crop Cultivation	Irrigation	Fertilizing	Pest/Weed/Disease Control	Harvesting
<i>The student:</i>							
A. performs routine checks on condition of crop plants/growth medium to determine crop production requirements	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B. selects, assembles and calibrates/adjusts appropriate equipment and/or materials as necessary to perform the production task	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C. performs the production task by following established procedures and using equipment/materials in an efficient manner	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D. follows established guidelines for the safe use of hand and/or power equipment in performing crop production tasks*	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E. disassembles, cleans and/or stores equipment and/or materials used in the course of performing the production task	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F. performs routine safety checks on hand and power equipment, and cleans/sharpens/lubricates/adjusts as required	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
G. demonstrates effective conservation practices and regard for the environment throughout crop production cycle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

STANDARD IS 2 FOR TASKS A, B, C, E, F AND G IN EACH OF TWO AREAS OF CROP PRODUCTION

*** STANDARD IS 3 FOR TASK D (SAFE USE OF HAND AND/OR POWER EQUIPMENT)**

Rating Scale

- 4 exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence. Quality, particularly details and finishes, and productivity are consistent and exceed standards. Leads others to contribute to team goals. Analyzes and provides effective client/customer services beyond expectations.
- 3 meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are selected and used efficiently and effectively. Quality and productivity are consistent. Works cooperatively and contributes ideas and suggestions that enhance team effort. Analyzes and provides effective client/customer services.
- 2 meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are selected and used appropriately. Quality and productivity are reasonably consistent. Works cooperatively to achieve team goals. Identifies and provides customer/client services.
- 1 meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately. Quality and productivity are reasonable consistent. Works cooperatively. Provides a limited range of customer/client services.
- 0 has not completed defined outcomes. Tools, materials and/or processes are used inappropriately.

HEAD AND NECK AREAS	Name of Structure	Basic Function
	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>

LEG AND FOOT AREAS	Name of Structure	Basic Function
	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>

BODY	Name of Structure	Basic Function
Basic Skeletal Structure:		
	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>
Digestive System:		
	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>
Respiratory System:		
	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>
Mammary/Reproductive System:		
	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>

STANDARD: Identify by name and function 15 basic structural parts of particular importance in the production system.
 Structural parts to include those located in the head/neck, body and leg/foot areas.

REFERENCE GUIDE: *Skill Training Profiles, Alberta Green Certificate Training Program*

Assessment Criteria and Conditions:

- explain vital life processes of respiration, digestion, excretion, growth and reproduction for a livestock species, and the significance of each in the production system

Suggested Reference(s):

- *Agriscience: Fundamentals and Applications*
- *Alberta Green Certificate Skill Profiles and Performance Standards*

STANDARD : Respond to a minimum standard of 2 on the rating scale

Rating Scale

- 4 meets project/task objectives in a self-directed manner. Provides explanations and critical judgements based on a superior knowledge base. Demonstrates an understanding of relevant concepts and related issues.
 - 3 meets project/task objectives in a self-directed manner. Provides explanations and comparisons of relevant concepts using precise terminology. Requires little or no prompting.
 - 2 meets project/task objectives with limited assistance in planning and in selecting and using resources. Applies knowledge of concepts in different situations using correct terminology. Requires occasional prompting.
 - 1 completes task as directed, demonstrating basic skills/completeness by following a guided course of action. Uses simple recall to demonstrate basic knowledge of concepts. Requires prompting.
 - 0 does not complete task, or is unable to provide a suitable response.
- N/A Not applicable

Background Information	Sample Questions/Activities
<p>See <i>Agriscience: Fundamentals and Applications</i>, Section 8 - Animal Sciences.</p> <p>See <i>Alberta Green Certificate Skill Profiles and Performance Standards</i> for:</p> <ul style="list-style-type: none"> • Beef • Dairy • Cow-Calf • Sheep • Swine. <p>Contact local industry organizations for information and resources specific to a livestock species. See the Learning Resource Guide (Section I) for a listing of industry contacts.</p>	<p>1. Explain vital life processes and terminology related to:</p> <ul style="list-style-type: none"> – respiration – digestion – waste excretion – growth – reproduction. <p>2. For a specific animal species, draw, label and explain the functions of structures within the:</p> <ul style="list-style-type: none"> – respiratory system – digestive system – reproductive system. <p>3. Compare the digestive systems of ruminants, nonruminants and poultry. Note the parts that are alike and those that are different.</p> <p>4. Explain the significance of animal physiology and related structures within a particular species to the production system; e.g.:</p> <ul style="list-style-type: none"> – cattle and sheep have rumens that enable them to digest grass and crop wastes – milk production is dependent on the udder of a dairy cow – muscling for meat production is important in beef, hog and poultry.

TASK	Observation/Rating					
Preparation and Planning	4	3	2	1	0	N/A
Information Gathering and Processing	4	3	2	1	0	N/A
Content	4	3	2	1	0	N/A
Collaboration and Teamwork	4	3	2	1	0	N/A
Information Sharing	4	3	2	1	0	N/A

STANDARD IS 2 IN EACH APPLICABLE TASK

Rating Scale

- 4 exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence.
 - 3 meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are selected and used efficiently and effectively.
 - 2 meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are selected and used appropriately.
 - 1 meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately.
 - 0 has not completed defined outcomes. Tools, materials and/or processes are used inappropriately.
- N/A Not applicable

TASK CHECKLIST

The student:

Preparation and Planning

- sets goals and establishes steps to achieve them
- creates and adheres to useful timelines
- uses personal initiative to formulate questions and find answers
- plans and uses time effectively

Information Gathering and Processing

- accesses a range of relevant in-school/community resources
- uses a range of information-gathering techniques
- interprets, organizes and combines information into a logical sequence
- records information accurately with appropriate supporting detail and using correct technical terms
- determines accuracy/currency/reliability of information sources
- gathers and responds to feedback regarding approach to the task

Content

- identifies and describes common classes and breeds of a livestock, poultry or speciality animal
- identifies positive and negative genetic traits of a livestock, poultry or speciality animal

Content (continued)

- identifies breeds of livestock, poultry or specialty animals suited to specific production and/or market applications
- explains principles of heredity and how animal characteristics are passed from generation to generation; e.g.:
 - dominant and recessive traits
 - selection criteria and procedures
- outlines record keeping systems for animal ancestry and history, and procedures used to maintain quality of the animal breed; e.g.:
 - pedigrees, breeding records, parturition records
 - breed standards, showing and judging systems

Collaboration and Teamwork

- cooperates with group members
- shares work appropriately among group members
- negotiates solutions to problems

Information Sharing

- demonstrates effective use of two or more communication media:
 - e.g., written, oral, audio-visual*
- communicates ideas in a logical sequence with sufficient supporting detail
- maintains acceptable grammatical and technical standards
- cites five or more relevant information sources.

REFLECTIONS/COMMENTS:

<p style="text-align: center;">FEEDING</p> <p><i>The student:</i></p> <ul style="list-style-type: none"> <input type="checkbox"/> monitors animals and pens for adequate water supply/consumption and ensures animals are properly watered <input type="checkbox"/> selects correct ration and quantity of food for animal <input type="checkbox"/> explains rules of thumb for quantities/volumes consumed daily or weekly <input type="checkbox"/> feeds at correct times <input type="checkbox"/> operates required feeding equipment <input type="checkbox"/> performs routine health checks during feeding <input type="checkbox"/> performs routine inspection/cleaning/maintenance of feed boxes and troughs during feeding 	<p style="text-align: center;">HANDLING AND RESTRAINT</p> <p><i>The student:</i></p> <ul style="list-style-type: none"> <input type="checkbox"/> demonstrates effective animal handling technique (e.g., body stance/movement, appropriate use of force, control of noise) <input type="checkbox"/> uses animal handling aids in a proper and safe manner (e.g., prods, whips, canes) <input type="checkbox"/> uses animal handling facilities in a proper and safe manner (e.g., chutes, pens, gates) <input type="checkbox"/> uses animal restraint equipment in a proper and safe manner (e.g., cattle squeeze, hog crate, head gate) <input type="checkbox"/> demonstrates ability to handle animals in groups and/or in large areas (e.g., herding, droving, moving)
<p style="text-align: center;">HOUSING</p> <p><i>The student:</i></p> <ul style="list-style-type: none"> <input type="checkbox"/> monitors physical environment, ensuring appropriate light, temperature, air circulation and space variables <input type="checkbox"/> provides appropriate fencing and shelter to ensure animal safety <input type="checkbox"/> cleans and disinfects trailers, pens and other animal holding structures <input type="checkbox"/> ensures animal comfort through supply of bedding material 	<p style="text-align: center;">CARE FOR YOUNG</p> <p><i>The student:</i></p> <ul style="list-style-type: none"> <input type="checkbox"/> demonstrates appropriate technique to catch/hold baby animals <input type="checkbox"/> cleans new born animals <input type="checkbox"/> assists new born animals to nurse
<p style="text-align: center;">HEALTH AND WELFARE</p> <p><i>The student:</i></p> <ul style="list-style-type: none"> <input type="checkbox"/> identifies basic symptoms of ill health/disorders in: <ul style="list-style-type: none"> - respiration - movement - eating habits - physical appearance (e.g., stomach, coat, eyes, ears) - sounds - manure and urine analysis <input type="checkbox"/> identifies symptoms and treatments for common pests, diseases and ailments that affect the health of animals within the industry <input type="checkbox"/> administers basic treatments for common pests, diseases and/or ailments (e.g., injections, dusting) 	<p style="text-align: center;">BREEDING OPERATIONS</p> <p><i>The student:</i></p> <ul style="list-style-type: none"> <input type="checkbox"/> explains reproductive processes characteristic of the animal: <ul style="list-style-type: none"> - estrus cycle - gestation period - natural service/artificial insemination - normal birth process - age criteria for breeding <input type="checkbox"/> identifies stages/signs of estrus <input type="checkbox"/> demonstrates appropriate care and handling of animals during the breeding season <input type="checkbox"/> explains/applies appropriate reproductive technologies (e.g., artificial insemination, embryo transfer, estrus manipulation, gender selection)

STANDARD IS 2 FOR THE ANIMAL CARE TASKS LISTED IN THREE AREAS OF ANIMAL PRODUCTION

Rating Scale

- 4** exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence. Quality and productivity are consistent and exceed standards. Leads others to contribute to team goals. Analyzes and provides effective client/customer services beyond expectations.
- 3** meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are selected and used efficiently and effectively. Quality and productivity are consistent. Works cooperatively and contributes ideas and suggestions that enhance team effort. Analyzes and provides effective client/customer services.
- 2** meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are selected and used appropriately. Quality and productivity are reasonably consistent. Works cooperatively to achieve team goals. Identifies and provides customer/client services.
- 1** meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately. Quality and productivity are reasonable consistent. Works cooperatively. Provides a limited range of customer/client services.
- 0** has not completed defined outcomes. Tools, materials and/or processes are used inappropriately.

TASK	OBSERVATION/RATING					
Allocating Time and Materials	4	3	2	1	0	N/A
Profiling the Industry	4	3	2	1	0	N/A
Presenting and Critiquing	4	3	2	1	0	N/A

STANDARD IS 2 IN EACH APPLICABLE TASK

Rating Scale

- 4 exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence.
- 3 meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are selected and used efficiently and effectively.
- 2 meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are selected and used appropriately.
- 1 meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately.
- 0 has not completed defined outcomes. Tools, materials and/or processes are used inappropriately.
- N/A Not applicable

TASK CHECKLIST

The student:

Allocating Time and Materials

- develops and follows a schedule of activities for preparing an agrifoods portfolio
- uses personal initiative to formulate questions and find answers
- accesses a range of relevant in-school and community resources
- interprets, organizes and combines information into a logical sequence
- records information accurately using appropriate technical terms and supporting detail
- selects and uses appropriate equipment/materials
- plans and uses time effectively
- assesses and refines approach to task and project status based on feedback and reflection

Profiling the Industry

- constructs flowcharts/diagrams that explain the stages and steps in processing the commodity and developing the value-added product or service
- constructs models/drawings of technological systems used in transportation, storage and processing
- assesses the benefits/costs of technological systems used and potential advantages of alternative technologies
- assesses the impact of transportation and storage requirements on industry location

Profiling the Industry (continued)

- explains quality control techniques, including methods used to inspect raw materials and test product quality and uniformity
- demonstrates one or more methods of preserving a perishable product; e.g.:
 - blanching and canning
 - dehydration and freeze-drying
 - fermentation
 - refrigeration and freezing
 - atmosphere control (vacuum seal, carbon dioxide seal)
- explains systems used to package, grade and label products within the industry
- identifies safety and environmental standards that influence industry operations
- develops a glossary of terms characteristic of the agrifood industry

Presenting and Critiquing

- demonstrates effective use of two or more communication media in presenting the portfolio: *e.g., written, oral, audio-visual*
- communicates ideas in a logical sequence with sufficient supporting detail
- maintains acceptable grammatical and technical standards
- provides an introduction that describes the purpose and scope of the portfolio
- relates final outcomes and products to original purpose, identifying strengths and areas for improvement
- cites five or more relevant information sources

REFLECTIONS/COMMENTS

TASK CHECKLIST: Landscape/Turf Management 1

AGR2060-1

MAINTENANCE TASK	Watering and Fertilizing (measurement, application)	Cultivation and Mulching of Plants	Mowing, Trimming and Edging of Turfgrass	Pruning of Plants (corrective pruning, heading back, thinning, jump cutting)	Control of Pests/Disease	Spring/Winter Preparation (clean-up, repair, dethatching, aeration)	Installation of Plant Material (planting, transplanting, turf establishment, staking, guying)
<i>The student:</i>							
A. performs routine checks on plants/growth medium to determine the need for service	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B. selects, assembles and calibrates appropriate equipment and/or materials as necessary to perform the maintenance service	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C. performs the maintenance service by safely following established procedures	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D. follows established guidelines for the safe use of hand and/or power equipment relevant to the service*	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E. disassembles, cleans and/or stores equipment and/or materials used in the course of performing the service	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F. performs routine safety checks on hand and power equipment, and cleans/sharpens/lubricates as required	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
G. demonstrates effective conservation practices and regard for the environment in providing the service	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

STANDARD IS 2 FOR TASKS A, B, C, E, F AND G IN EACH OF FOUR AREAS OF LANDSCAPE/ TURFGRASS SERVICE

*** STANDARD IS 3 FOR TASK D (SAFE USE OF HAND AND/OR POWER EQUIPMENT)**

Rating Scale

- 4 exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence. Quality, particularly details and finishes, and productivity are consistent and exceed standards. Leads others to contribute to team goals. Analyzes and provides effective client/customer services beyond expectations.
- 3 meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are selected and used efficiently and effectively. Quality and productivity are consistent. Works cooperatively and contributes ideas and suggestions that enhance team effort. Analyzes and provides effective client/customer services.
- 2 meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are selected and used appropriately. Quality and productivity are reasonably consistent. Works cooperatively to achieve team goals. Identifies and provides customer/client services.
- 1 meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately. Quality and productivity are reasonable consistent. Works cooperatively. Provides a limited range of customer/client services.
- 0 has not completed defined outcomes. Tools, materials and/or processes are used inappropriately.

TASK	Observation/Rating					
Preparation and Planning	4	3	2	1	0	N/A
Information Gathering and Processing	4	3	2	1	0	N/A
Content	4	3	2	1	0	N/A
Collaboration and Teamwork	4	3	2	1	0	N/A
Information Sharing	4	3	2	1	0	N/A

STANDARD IS 2 IN EACH APPLICABLE TASK

Rating Scale

- 4 exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence.
- 3 meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are selected and used efficiently and effectively.
- 2 meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are selected and used appropriately.
- 1 meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately.
- 0 has not completed defined outcomes. Tools, materials and/or processes are used inappropriately.

N/A Not applicable

TASK CHECKLIST

The student:

Preparation and Planning

- sets goals and establishes steps to achieve them
- creates and adheres to useful timelines
- uses personal initiative to formulate questions and find answers
- plans and uses time effectively

Information Gathering and Processing

- accesses a range of relevant in-school/community resources
- uses a range of information-gathering techniques
- interprets, organizes and combines information into a logical sequence
- records information accurately with appropriate supporting detail and using correct technical terms
- determines accuracy/currency/reliability of information sources
- gathers and responds to feedback regarding approach to the task

Content

- identifies and describes different types of benefits associated with horses; e.g.:
 - pleasure
 - companionship
 - performance
 - breeding

Content (continued)

- describes the origin and history of horses, and factors that led to their domestication
- describes the characteristics and functions of basic external parts of the horse
- analyzes and explains conformational features of major body parts; e.g.:
 - head and neck
 - fore limb and hind limb
- identifies factors determining a horse's balance
- _____
- _____
- _____

Collaboration and Teamwork

- cooperates with group members
- shares work appropriately among group members
- negotiates solutions to problems

Information Sharing

- demonstrates effective use of two or more communication media:
e.g., written, oral, audio-visual
- communicates ideas in a logical sequence with sufficient supporting detail
- maintains acceptable grammatical and technical standards
- cites five or more relevant information sources

REFLECTIONS/COMMENTS:

<p style="text-align: center;">FEEDING PRACTICES</p> <p><i>The student:</i></p> <ul style="list-style-type: none"> <input type="checkbox"/> monitors for adequate supply and consumption of water, roughage and concentrate <input type="checkbox"/> selects correct ration and quantity of food <input type="checkbox"/> explains rules of thumb for quantities/volumes consumed daily or weekly <input type="checkbox"/> calculates and recognizes weights/volumes of feeds <input type="checkbox"/> explains the importance of a regular feeding schedule <input type="checkbox"/> establishes, implements and maintains a regular feeding schedule <input type="checkbox"/> operates required feeding equipment <input type="checkbox"/> performs routine health checks during feeding <input type="checkbox"/> performs routine inspection/cleaning/maintenance of feed boxes and troughs during feeding <input type="checkbox"/> _____ <input type="checkbox"/> _____ 	<p style="text-align: center;">HEALTH CARE PRACTICES</p> <p><i>The student:</i></p> <ul style="list-style-type: none"> <input type="checkbox"/> identifies and compares characteristics/symptoms of a health and ill horse <input type="checkbox"/> monitors and assesses vital signs of a horse, recognizing abnormalities <input type="checkbox"/> identifies basic symptoms of ill health (e.g., respiration, movement, eating habits, physical appearance) <input type="checkbox"/> demonstrates appropriate care for leg wounds on a horse <input type="checkbox"/> describes appropriate care of a horse with: <ul style="list-style-type: none"> – colic – respiratory disease <input type="checkbox"/> identifies health factors that indicate the need for veterinarian services <input type="checkbox"/> _____ <input type="checkbox"/> _____
<p>HANDLING AND RESTRAINT</p> <p><i>The student:</i></p> <ul style="list-style-type: none"> <input type="checkbox"/> demonstrates effective handling technique (e.g., body stance/movement, appropriate use of force, control of noise) demonstrates appropriate techniques for approaching a horse <input type="checkbox"/> uses handling aids in a proper and safe manner (e.g., prods, canes, whistles) <input type="checkbox"/> demonstrates appropriate techniques for leading a horse <input type="checkbox"/> uses animal handling facilities in a proper and safe manner (e.g., chutes, pens, gates) <input type="checkbox"/> demonstrates appropriate techniques for tying a horse <input type="checkbox"/> uses animal restraint equipment in a proper and safe manner <input type="checkbox"/> demonstrates appropriate techniques for: <ul style="list-style-type: none"> – cleaning a horse’s feet – grooming a horse <input type="checkbox"/> _____ <input type="checkbox"/> _____ 	

STANDARD:
ACHIEVE A MINIMUM PERFORMANCE RATING OF 2 IN EACH AREA OF TASK ASSESSMENT

REFLECTIONS/COMMENTS

Rating Scale

- 4** exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence. Quality and productivity are consistent and exceed standards. Leads others to contribute to team goals. Analyzes and provides effective client/customer services beyond expectations.
- 3** meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are selected and used efficiently and effectively. Quality and productivity are consistent. Works cooperatively and contributes ideas and suggestions that enhance team effort. Analyzes and provides effective client/customer services.
- 2** meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are selected and used appropriately. Quality and productivity are reasonably consistent. Works cooperatively to achieve team goals. Identifies and provides client/ customer services.
- 1** meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately. Quality and productivity are reasonably consistent. Works cooperatively. Provides a limited range of customer/client services.
- 0** has not completed defined outcomes. Tools, materials and/or processes are used inappropriately.

TASK	Observation/Rating					
Preparation and Planning	4	3	2	1	0	N/A
Information Gathering and Processing	4	3	2	1	0	N/A
Content	4	3	2	1	0	N/A
Collaboration and Teamwork	4	3	2	1	0	N/A
Information Sharing	4	3	2	1	0	N/A

STANDARD IS 2 IN EACH APPLICABLE TASK

Rating Scale

- 4 exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence.
- 3 meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are selected and used efficiently and effectively.
- 2 meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are selected and used appropriately.
- 1 meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately.
- 0 has not completed defined outcomes. Tools, materials and/or processes are used inappropriately.
- N/A Not applicable

TASK CHECKLIST

The student:

Preparation and Planning

- sets clear goals and establishes steps to achieve them
- creates and adheres to detailed timelines
- uses personal initiative to formulate questions and find answers
- plans and uses time effectively, prioritizing tasks on a consistent basis

Information Gathering and Processing

- accesses a range of relevant information sources and recognizes when additional information is required
- demonstrates resourcefulness in collecting data
- interprets, organizes and combines information in creative and thoughtful ways
- records information accurately with appropriate supporting detail and using correct technical terms
- recognizes underlying bias/assumptions/values in information sources
- assesses and refines approach to the task and project status based on feedback and reflection

Content

- explains and illustrates basic principles of:
 - arrangement and composition
 - balance and symmetry
 - proportion and scale
 - rhythm
 - harmony
 - depth and line
 - texture and focal emphasis

Content (continued)

- explains applications of colour to create mood and develop theme in floral arrangements
- uses the colour wheel to explain relationships among colours in the spectrum
- provides examples of:
 - monochromatic colour schemes
 - complementary colour schemes
 - analogous colour schemes
 - triadic colour schemes

Collaboration and Teamwork

- cooperates with group members
- shares work appropriately among group members
- negotiates solutions to problems
- displays effective communication and leadership skills

Information Sharing

- demonstrates effective use of a variety of communication media:
 - e.g., written, oral, audio-visual*
- communicates thoughts/feelings/ideas clearly to justify or challenge a position
- maintains acceptable grammatical and technical standards
- gives evidence of adequate information gathering by citing relevant information sources

REFLECTIONS/COMMENTS

**CONDITIONING FRESH CUT FLOWERS AND GREENERY
(PERFORMANCE STANDARD IS 2 IN EACH TASK AREA)**

The student:

- unpacks incoming stock and inspects for disorders/irregularities

- prepares containers for incoming stock

- mixes preservatives

- uses correct water temperature to condition materials

- cuts stems under water

- cuts stems to correct length

- stores materials at correct temperature

- incorporates recutting of stems and replacement of solutions as part of regular work routine

- handles and cleans emergency spills, and maintains facilities in a sanitary condition

-

-

-

**HANDLING DRIED AND FABRIC FLOWERS AND GREENERY
(PERFORMANCE STANDARD IS 2 IN EACH TASK AREA)**

The student:

- bundles materials correctly

- hangs/boxes materials in a manner that prevents breaking, soiling and fading

- organizes materials in an effective manner

-

-

**PACKAGING CUT FLOWERS, INTERIOR PLANTS AND FLORAL ARRANGEMENTS
(PERFORMANCE STANDARD IS 2 IN EACH TASK AREA)**

The student:

- packages materials to protect, stabilize and preserve during transport

- packages materials without causing damage to floral stock

- packages materials to withstand adverse weather conditions

PACKAGING CUT FLOWERS, INTERIOR PLANTS AND FLORAL ARRANGEMENTS (continued)

- includes care tags, preservatives, etc., in packaging

- keeps packaging neat and clean in appearance

- performs tasks in order of priority

-

-

**USING CONSTRUCTION MATERIALS
(PERFORMANCE STANDARD IS 2 IN EACH TASK AREA)**

The student:

- ties floral bows using ribbons of different width

- wraps wires of different gauge using floral tape

-

-

CONSTRUCTING FLORAL ARRANGEMENTS (PERFORMANCE STANDARD IS 2 IN EACH TASK AREA)	
<i>The student:</i>	
<input type="checkbox"/>	identifies and distinguishes between symmetrical and asymmetrical triangular arrangements
<input type="checkbox"/>	identifies and distinguishes between horizontal and pyramidal centrepieces
<input type="checkbox"/>	identifies different types of European arrangements: <ul style="list-style-type: none"> <input type="checkbox"/> presentation-style bouquet <input type="checkbox"/> cluster arrangement <input type="checkbox"/> vegetative arrangement <input type="checkbox"/> parallel arrangement <input type="checkbox"/> horgarth curve
<input type="checkbox"/>	follows and implements a plan for constructing a symmetrical triangular arrangement
<input type="checkbox"/>	follows and implements a plan for constructing an asymmetrical triangular arrangement
<input type="checkbox"/>	follows and implements a plan for constructing a horizontal centrepiece
<input type="checkbox"/>	follows and implements a plan for constructing a pyramidal centrepiece
<input type="checkbox"/>	follows and implements a plan for constructing a European-style arrangement (e.g., presentation, cluster)

CONSTRUCTING FLORAL ARRANGEMENTS (continued)	
<input type="checkbox"/>	follows and implements a plan for constructing a second European style arrangement (e.g., vegetative, parallel)
<input type="checkbox"/>	

STANDARD IS 2 AS INDICATED IN EACH APPLICABLE TASK AREA

4	exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence. Quality, particularly details and finishes, and productivity are consistent and exceed standards. Leads others to contribute to team goals. Analyzes and provides effective client/customer services beyond expectations.
3	meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are selected and used efficiently and effectively. Quality and productivity are consistent. Works cooperatively and contributes ideas and suggestions that enhance team effort. Analyzes and provides effective client/customer services.
2	meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are selected and used appropriately. Quality and productivity are reasonably consistent. Works cooperatively to achieve team goals. Identifies and provides customer/client services.
1	meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately. Quality and productivity are reasonable consistent. Works cooperatively. Provides a limited range of customer/client services.
0	has not completed defined outcomes. Tools, materials and/or processes are used inappropriately.

REFLECTIONS/COMMENTS:

PROJECT STANDARDS	PROJECT: Triangular Arrangement (symmetrical)	PROJECT: Triangular Arrangement (asymmetrical)	PROJECT: Horizontal Centrepiece	PROJECT: Pyramidal Centrepiece	PROJECT: European Arrangement (e.g., presentation, cluster)	PROJECT: European Arrangement (e.g., vegetative, parallel)	PROJECT:
Application of Design Principles <ul style="list-style-type: none"> • colour harmony is appropriate • composition and arrangement are correct • balance and symmetry are achieved • proportion and scale are evident • rhythm and harmony are achieved • depth and/or line are evident • texture and/or focal emphasis are evident 	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Quality of Workmanship <ul style="list-style-type: none"> • materials used were appropriate and consistent with design concept • secure in construction and finished on all sides • construction is concealed • all floral materials placed at proper height, depth and/or angle • wrapping is smooth, snug and tight • performs check on final product for quality, quantity and/or appeal 	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
PROJECT RATING							

STANDARD IS 2 IN EACH APPLICABLE TASK.

Rating Scale

- 4 exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence. Quality, particularly details and finishes, and productivity are consistent and exceed standards. Leads others to contribute to team goals. Analyzes and provides effective client/customer services beyond expectations.
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- 0 has not completed defined outcomes. Tools, materials and/or processes are used inappropriately.

REFLECTIONS/COMMENTS

MONITORING GROWTH MEDIA	
<i>The student:</i>	
<input type="checkbox"/>	maintains appropriate depth of growth media
<input type="checkbox"/>	top dresses and conditions growth media as required
<input type="checkbox"/>	
<input type="checkbox"/>	

WATERING AND FERTILIZING	
<i>The student:</i>	
<input type="checkbox"/>	performs checks to determine appropriate moisture for plant growth
<input type="checkbox"/>	applies required water when necessary
<input type="checkbox"/>	drains excess water from plant
<input type="checkbox"/>	identifies fertilizer components and their function
<input type="checkbox"/>	suggests appropriate fertilizers for selected species and/or situations
<input type="checkbox"/>	
<input type="checkbox"/>	

CONTROLLING PESTS	
<i>The student:</i>	
<input type="checkbox"/>	identifies and practices effective strategies for pest prevention
<input type="checkbox"/>	identifies common plant pests; e.g.: <input type="checkbox"/> spider mite <input type="checkbox"/> mealy bug <input type="checkbox"/> scale <input type="checkbox"/> aphid <input type="checkbox"/> fungus gnats
<input type="checkbox"/>	suggests appropriate eradication treatments
<input type="checkbox"/>	
<input type="checkbox"/>	

PRUNING AND WASTE REMOVAL	
<i>The student:</i>	
<input type="checkbox"/>	maintains clean plants and display areas
<input type="checkbox"/>	performs corrective pruning as required; e.g.: <input type="checkbox"/> removal of dead and/or broken branches <input type="checkbox"/> removal of dead or damaged leaves <input type="checkbox"/> removal of dead flowers
<input type="checkbox"/>	

PLANT ROTATION	
<i>The student:</i>	
<input type="checkbox"/>	identifies appropriate plant locations for maintenance and health reasons; e.g.: <input type="checkbox"/> consider temperature requirements <input type="checkbox"/> consider light requirements

PLANT ROTATION (continued)	
<input type="checkbox"/>	replaces plants as required
<input type="checkbox"/>	identifies appropriate plant locations for sales promotion; e.g.: <input type="checkbox"/> display purposes <input type="checkbox"/> stock storage <input type="checkbox"/> sales promotion
<input type="checkbox"/>	

STANDARD IS 2 IN EACH APPLICABLE TASK

Rating Scale

4	exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence. Quality, particularly details and finishes, and productivity are consistent and exceed standards. Leads others to contribute to team goals. Analyzes and provides effective client/customer services beyond expectations.
3	meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are selected and used efficiently and effectively. Quality and productivity are consistent. Works cooperatively and contributes ideas and suggestions that enhance team effort. Analyzes and provides effective client/customer services.
2	meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are selected and used appropriately. Quality and productivity are reasonably consistent. Works cooperatively to achieve team goals. Identifies and provides customer/client services.
1	meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately. Quality and productivity are reasonable consistent. Works cooperatively. Provides a limited range of customer/ client services.
0	has not completed defined outcomes. Tools, materials and/or processes are used inappropriately.

RATING	ASSESSMENT CRITERIA
<p>4 3 2 1 0</p> <p>4 3 2 1 0</p> <p>4 3 2 1 0</p> <p>4 3 2 1 0</p>	<p><i>The student:</i></p> <p>Scheduling Tasks</p> <ul style="list-style-type: none"> <input type="checkbox"/> defines the task <input type="checkbox"/> sets goals and establishes steps to achieve them <input type="checkbox"/> plans and uses time effectively <input type="checkbox"/> _____ <p>Gathering Information</p> <ul style="list-style-type: none"> <input type="checkbox"/> poses important questions regarding a new (or altered) product/service <input type="checkbox"/> accesses a range of relevant in-school/community resources <input type="checkbox"/> interprets, organizes and combines information into a logical sequence <input type="checkbox"/> determines accuracy/currency/reliability of information sources <input type="checkbox"/> _____ <p>Developing the Plan</p> <ul style="list-style-type: none"> <input type="checkbox"/> designs and conducts a survey of consumer preferences for a new (or altered) product/service <input type="checkbox"/> develops/packages/labels the product/service to address consumer preferences <input type="checkbox"/> identifies local, national and/or international markets for the product/service <input type="checkbox"/> establishes a viable marketing alternative(s) for the product/service; e.g.: <ul style="list-style-type: none"> - extensive (open) - selective (niche) <input type="checkbox"/> establishes one or more strategies for promoting the product/service; e.g.: <ul style="list-style-type: none"> - advertising through the media - in-store samples/displays - trade shows <input type="checkbox"/> summarizes opportunities and challenges relevant to the product and markets <input type="checkbox"/> _____ <p>Presenting and Assessing the Plan</p> <ul style="list-style-type: none"> <input type="checkbox"/> presents the plan in a logical sequence using two or more communication media: <ul style="list-style-type: none"> - market conditions that led to product development - steps involved in product development - recommended marketing alternatives and promotional strategies <input type="checkbox"/> uses correct grammatical convention and technical terms <input type="checkbox"/> makes summative statements regarding strengths/weaknesses and general feasibility of the plan for product and market development <input type="checkbox"/> _____

STANDARD IS 2 IN EACH APPLICABLE TASK

Rating Scale

- 4 exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence.
- 3 meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are selected and used efficiently and effectively.
- 2 meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are selected and used appropriately.
- 1 meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately.
- 0 has not completed defined outcomes. Tools, materials and/or processes are used inappropriately.

N/A Not applicable

REFLECTIONS/COMMENTS

TASK CHECKLIST: Controlled Growing Environments

AGR2100-1

PRODUCTION TASK	Temperature/ Humidity Control	Ventilation	Lighting/Shade Control	Use of Watering Systems	Use of Feeding Systems	Pest/Disease Control	Waste Disposal
<i>The student:</i>							
A. performs routine checks on crop/livestock to determine production requirements	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B. selects, assembles and adjusts appropriate equipment and/or materials as necessary to perform production tasks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C. performs production tasks by following established procedures and using equipment/materials in an efficient manner	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D. follows established guidelines for the safe use of hand and/or power equipment in performing production tasks*	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E. sanitizes the growing/living environment and disassembles/cleans/stores equipment and materials used in the course of performing production tasks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F. demonstrates effective conservation practices and regard for the environment throughout the crop/livestock production cycle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**STANDARD IS 2 FOR TASKS A, B, C, E,
AND F IN ALL OF THE IDENTIFIED
AREAS OF ENVIRONMENTAL
CONTROL/MANAGEMENT**

*** STANDARD IS 3 FOR TASK D (SAFE
USE OF HAND AND/OR POWER
EQUIPMENT)**

Rating Scale

- 4 exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence. Quality, particularly details and finishes, and productivity are consistent and exceed standards. Leads others to contribute to team goals. Analyzes and provides effective client/customer services beyond expectations.
- 3 meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are selected and used efficiently and effectively. Quality and productivity are consistent. Works cooperatively and contributes ideas and suggestions that enhance team effort. Analyzes and provides effective client/customer services.
- 2 meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are selected and used appropriately. Quality and productivity are reasonably consistent. Works cooperatively to achieve team goals. Identifies and provides customer/client services.
- 1 meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately. Quality and productivity are reasonable consistent. Works cooperatively. Provides a limited range of customer/client services.
- 0 has not completed defined outcomes. Tools, materials and/or processes are used inappropriately.

TASK	Observation/Rating					
Management	4	3	2	1	0	N/A
Teamwork	4	3	2	1	0	N/A
Equipment and Materials	4	3	2	1	0	N/A
Investigative Techniques	4	3	2	1	0	N/A

STANDARD IS 2 IN EACH APPLICABLE TASK

Rating Scale

- 4 exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence.
- 3 meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are selected and used efficiently and effectively.
- 2 meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are selected and used appropriately.
- 1 meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately.
- 0 has not completed defined outcomes. Tools, materials and/or processes are used inappropriately.
- N/A Not applicable

TASK CHECKLIST

The student:

Management

- prepares self for task
- organizes and works in an orderly manner
- interprets and carries out instructions accurately
- plans and uses time effectively
- adheres to routines procedures

Teamwork

- cooperates with group members
- shares work appropriately among group members
- negotiates solutions to problems

Equipment and Materials

- selects and uses appropriate equipment/materials
- models safe procedures/techniques
- weighs and measures accurately
- practises proper sanitation procedures
- minimizes waste of materials
- advises of potential hazards and necessary repairs

Investigative Techniques

- gathers and applies information from a variety of sources
- describes the general characteristics of each horizon in a soil profile
- describes the parent materials for soil in each horizon, how it was formed, and how the soil changed over time

Investigative Techniques (continued)

- describes the influence of the five soil-forming factors on soil formation within each horizon; e.g.:
 - climate
 - living organisms
 - parent materials
 - topography
 - time
- relates the thickness of each horizon to drainage, vegetation and climatic factors
- identifies the fundamental components of soil and explains the relationship of each to soil productivity; i.e.:
 - minerals
 - organic matter
 - air
 - water
- identifies and locates soil zones of Alberta, and the characteristics of soils within each zone; i.e.:
 - grey
 - black
 - dark brown
 - brown
- observes relationships between vegetation type and soil characteristics on vegetation and soil zone maps of the prairies; i.e.:
 - Grassland
 - Aspen Parkland
 - Boreal Forest
 - Mixed Forest and Tundra

REFLECTIONS/COMMENTS:

TASK	Observation/Rating					
Management	4	3	2	1	0	N/A
Teamwork	4	3	2	1	0	N/A
Equipment and Materials	4	3	2	1	0	N/A
Investigative Techniques	4	3	2	1	0	N/A

STANDARD IS 2 IN EACH APPLICABLE TASK

Rating Scale

- 4 exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence.
 - 3 meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are selected and used efficiently and effectively.
 - 2 meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are selected and used appropriately.
 - 1 meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately.
 - 0 has not completed defined outcomes. Tools, materials and/or processes are used inappropriately.
- N/A Not applicable

TASK CHECKLIST

The student:

Management

- prepares self for task
- organizes and works in an orderly manner
- interprets and carries out instructions accurately
- plans and uses time effectively
- adheres to routine procedures

Teamwork

- cooperates with group members
- shares work appropriately among group members
- negotiates solutions to problems

Equipment and Materials

- selects and uses appropriate equipment/materials
- models safe procedures/techniques
- weighs and measures accurately
- practises proper sanitation procedures
- minimizes waste of materials
- advises of potential hazards and necessary repairs

Investigative Techniques

- gathers and applies information from a variety of sources
- identifies the three soil separates (i.e., sand, silt, clay) and describes the characteristics of each as they relate to the soil's:
 - suitability for plant growth
 - potential for erosion
 - ease of handling

Investigative Techniques (continued)

- manually estimates the relative percentages of sand, silt and clay in a soil sample; e.g.:
 - dry consistence test
 - moist cast test
 - ribbon test
- given the relative percentages of separates in a soil sample, uses the soil texture triangle to determine soil texture classification
- demonstrates relationships between soil texture and:
 - water-holding capacity
 - nutrient-holding capacity
 - use capability
- describes types of soil structure and their influence on:
 - soil tilth
 - seed germination and seedling development
 - root growth and penetration
 - water infiltration and soil aeration
 - susceptibility to erosion
 - soil compaction
- demonstrates procedures for protecting and building favourable soils structure
- explains effects of parent material and organic matter on soil colour
- relates soil colour parameters to:
 - textural and structural properties
 - soil productivity
- uses the Munsell colour chart to identify the colour name and notation for a soil sample

REFLECTIONS/COMMENTS:

TASK	Observation/Rating					
Management	4	3	2	1	0	N/A
Teamwork	4	3	2	1	0	N/A
Equipment and Materials	4	3	2	1	0	N/A
Investigative Techniques	4	3	2	1	0	N/A

STANDARD IS 2 IN EACH APPLICABLE TASK

Rating Scale

- 4 exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence.
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 - 0 has not completed defined outcomes. Tools, materials and/or processes are used inappropriately.
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TASK CHECKLIST

The student:

Management

- prepares self for task
- organizes and works in an orderly manner
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Equipment and Materials

- selects and uses appropriate equipment/materials
- models safe procedures/techniques
- weighs and measures accurately
- practises proper sanitation procedures
- minimizes waste of materials
- advises of potential hazards and necessary repairs

Investigative Techniques

- gathers and applies information from a variety of sources
- explains the acid and alkaline concept, and the importance of soil pH to plant growth
- draws and labels the pH scale
- states the standard pH ranges for field soils and container media
- describes the characteristics of carbonated and disturbed soils as they relate to soil pH
- identifies chemical and physical amendments used in modifying soil pH in field and container media
- measures soil pH using a pH test kit, and makes recommendations for media improvement based on measurement results
- describes the process of cation exchange in soil
- identifies common soil salts and explains their effect on plant growth
- measures the electrical conductivity of a soil sample (correct to 0.1 unit) and interprets results relative to soil salinity and productivity
- provides recommendations for the management and reclamation of soil with salinity problems

REFLECTIONS/COMMENTS:

<p>A. CHEMICAL AND BIOLOGICAL CONTROL AGENTS</p> <p><i>The student:</i></p> <ul style="list-style-type: none"> <input type="checkbox"/> identifies examples of major types of chemical control agents; e.g.: <ul style="list-style-type: none"> - emulsifiable concentrates - liquids - wettable powders - dusts - granules - fumigation materials <input type="checkbox"/> identifies legislation and policy regarding the safe handling, storage and use of chemical control agents <input type="checkbox"/> identifies examples of major types of biological control agents; e.g.: <ul style="list-style-type: none"> - predatory insects - infectious organisms - resistant plants <input type="checkbox"/> identifies legislation and policy regarding the safe handling, storage and use of biological control agents <input type="checkbox"/> reads and interprets label information for chemical and biological control agents regarding: <ul style="list-style-type: none"> - safe handling and storage - intended application and use 	<p>B. IMPLEMENTING AN INTEGRATED PEST MANAGEMENT PROGRAM</p> <p><i>The student:</i></p> <ul style="list-style-type: none"> <input type="checkbox"/> identifies two or more pest problems within an agriculture, horticulture or forest industry <input type="checkbox"/> performs pest sampling and monitoring procedures in order to determine: <ul style="list-style-type: none"> - the presence of each pest - their stage of development - the nature/extent of damage caused <input type="checkbox"/> establishes threshold levels that determine when pest-control measures should be implemented for each pest <input type="checkbox"/> identifies and applies pest management procedures for each pest that are based upon: <ul style="list-style-type: none"> - pest/host biology - consideration of the ecosystem <input type="checkbox"/> explains safe techniques for the application of chemical and/or biological control agents: <ul style="list-style-type: none"> - use of equipment and supplies - mixing and application techniques - clean-up and disposal <input type="checkbox"/> assesses the impact of pest-control practices on: <ul style="list-style-type: none"> - human and environmental health - the health of crops and/or livestock
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REFLECTIONS/COMMENTS:

STANDARD: Achieve a minimum performance rating of 3 for the tasks identified in Section A (Chemical and Biological Control Agents) and a rating of 2 for tasks identified in Section B (Implementing an Integrated Pest Management Program).

Rating Scale

- 4** exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence. Quality, particularly details and finishes, and productivity are consistent and exceed standards. Leads others to contribute to team goals. Analyzes and provides effective client/customer services beyond expectations.
- 3** meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are selected and used efficiently and effectively. Quality and productivity are consistent. Works cooperatively and contributes ideas and suggestions that enhance team effort. Analyzes and provides effective client/customer services.
- 2** meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are selected and used appropriately. Quality and productivity are reasonably consistent. Works cooperatively to achieve team goals. Identifies and provides customer/client services.
- 1** meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately. Quality and productivity are reasonable consistent. Works cooperatively. Provides a limited range of customer/client services.
- 0** has not completed defined outcomes. Tools, materials and/or processes are used inappropriately.

SOIL PREPARATION	
<i>The student:</i>	
<input type="checkbox"/>	identifies major soil components
<input type="checkbox"/>	selects an appropriate growing medium
<input type="checkbox"/>	moistens growing medium as necessary
<input type="checkbox"/>	evenly mixes growing medium given a recipe materials
<input type="checkbox"/>	identifies and safely uses appropriate tools and equipment
<input type="checkbox"/>	

CULTIVATION	
<i>The student:</i>	
<input type="checkbox"/>	removes weeds and other debris
<input type="checkbox"/>	adds/mixes amendments as required
<input type="checkbox"/>	smoothes soil for planting and/or rough digs for winter preparation
<input type="checkbox"/>	identifies and safely uses appropriate tools and equipment
<input type="checkbox"/>	

PROPAGATION	
<i>The student:</i>	
<input type="checkbox"/>	identifies basic germination requirements
<input type="checkbox"/>	germinates seeds using row, broadcast or plug patterns
<input type="checkbox"/>	performs stem cuttings of different plants (e.g., hardwood, softwood)
<input type="checkbox"/>	performs simple leaf cuttings
<input type="checkbox"/>	performs simple division
<input type="checkbox"/>	identifies and safely uses appropriate tools and equipment
<input type="checkbox"/>	
<input type="checkbox"/>	

TRANSPLANTING	
<i>The student:</i>	
<input type="checkbox"/>	identifies plant material in need of transplanting
<input type="checkbox"/>	transplants rooted seedlings and cuttings

TRANSPLANTING (continued)	
<input type="checkbox"/>	replants pot-bound plants to containers of appropriate size
<input type="checkbox"/>	identifies and safely uses appropriate tools and equipment
<input type="checkbox"/>	
<input type="checkbox"/>	

WATERING AND FERTILIZING	
<i>The student:</i>	
<input type="checkbox"/>	checks growing medium for moisture content
<input type="checkbox"/>	applies moisture to plants as required
<input type="checkbox"/>	identifies fertilizer components and function
<input type="checkbox"/>	mixes and applies fertilizer as required
<input type="checkbox"/>	identifies and safely uses appropriate tools and equipment
<input type="checkbox"/>	

CONTROL OF PESTS AND DISEASE	
<input type="checkbox"/>	recognizes common plant pests/diseases and their symptoms: <input type="checkbox"/> aphid <input type="checkbox"/> fungus gnat <input type="checkbox"/> mealy bug <input type="checkbox"/> spider mite <input type="checkbox"/> scales <input type="checkbox"/> damping-off <input type="checkbox"/> botrytis
<input type="checkbox"/>	performs preventive measures for common plant pests and diseases
<input type="checkbox"/>	performs eradication procedures for common plant pests and diseases
<input type="checkbox"/>	uses nontoxic and safe materials
<input type="checkbox"/>	identifies and safely uses appropriate tools and equipment
<input type="checkbox"/>	
<input type="checkbox"/>	
<input type="checkbox"/>	

**STANDARD IS 2 IN EACH APPLICABLE
AREA OF PLANT PRODUCTION AND
3 IN THE SAFE USE OF EQUIPMENT AND
SUPPLIES**

Rating Scale

- 4** exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence. Quality and productivity are consistent and exceed standards. Leads others to contribute to team goals. Analyzes and provides effective client/customer services beyond expectations.
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REFLECTIONS/COMMENTS

