

## **Nursery and Landscape Career Development Event**

### **Skills Event # 2 – Basic Program Controller**

You have arrived at a client's home (judge) and discovered that the homeowner has changed the watering program on the controller. You must re-program this controller, including the correct date and time using the instructions provided by your company. You must also demonstrate and explain to the judge how to manually activate one zone. You will need to complete the controller programming and an irrigation repair in a 20-minute period.

**Study references:** PLANET's Landscape Training Manual for Installation Technicians, (Chapter 10) or PLANET's Landscape Training Manual for Irrigation Technicians, (Chapter 5) or PLANET's Landscape Training Manual for Maintenance Technicians, (Chapter 10)

**Procedure:**

1. Initial programming
  - a. Set to current day
  - b. Set to current time
  - c. Clear other programs of everything previously set up
2. Irrigation scheduling

**Program A**

- a. Station (zone) 1 is a planting bed in the shade  
Sprinklers are spray heads  
Watering run time shall be 10 minutes.
- b. Station (zone) 2 is a planting bed in the sun.  
Sprinklers are MP Rotators rotors  
Watering run time shall be 35 minutes.
- c. Station (zone) 3 is a turf area in the sun  
Sprinklers are gear driven rotors  
Watering run time shall be 45 minutes.
- d. One start time of 5:30 AM
- e. All zones will be watered every Tuesday, Thursday, and Saturday.

**Program B & C– Off**

3. Manual operation
  - a. Demonstrate and explain to the judge how to manually activate Station (zone) 2

**Time:** 20 minutes for completion for this skills event and an irrigation repair

## Skills Event # 2 – Basic Program Controller Score Sheet

State Name: \_\_\_\_\_

Team Member: \_\_\_\_\_

| Scoring Criteria                                        | Possible Points | Points Earned |
|---------------------------------------------------------|-----------------|---------------|
| 1. Initial programming                                  |                 |               |
| a. Set to current day                                   | 5               | _____         |
| b. Set to current time                                  | 5               | _____         |
| c. Clear other programs of everything previously set up | 5               | _____         |
| 2. Irrigation programming                               |                 |               |
| a. Station (zone) 1 watering run time: 10 minutes.      | 5               | _____         |
| b. Station (zone) 2 watering run time: 35 minutes.      | 5               | _____         |
| c. Start time: 5:30 AM                                  | 5               | _____         |
| d. All zones will be watered on designated days         | 5               | _____         |
| 3. Manual operation                                     |                 |               |
| Able to manually activate Station (zone) 2              | 10              | _____         |
| 4. Communication with judge                             | 5               | _____         |
| <b>Total Individual Points</b>                          | <b>50</b>       | <div></div>   |

Judges' Comments: \_\_\_\_\_

Judges' Initials: \_\_\_\_\_

## **Nursery and Landscape Career Development Event**

### **Skills Event # 4 – Line Trimmer**

You have arrived at a homeowner's property that needs some string trimming. The grass around sign posts at this site requires trimming. Watch out for pedestrians in the area. Sections of 6x6 timber (or similar) represents these posts. You will need to check the line trimmer prior to trimming the area. You will demonstrate how to operate this and one other piece of equipment during this 20-minute period.

**Study references:** PLANET's Landscape Training Manual for Maintenance Technicians, (Chapter 9)

#### **Procedure:**

##### **Pre-Operation Check**

1. Check air filter
2. Check oil level
3. Demonstrate fueling of tank
4. Discuss installation of string

##### **Equipment Operation**

1. Trimmer on ground when starting
2. Demonstrate how to start engine
3. Demonstrate how to trim around posts

##### **Safety Procedures**

1. Wear ear protection
2. Wear eye protection
3. Discuss avoiding pedestrian traffic

**Time:** 20 minutes for completion for this skills event and one other piece of equipment.

## Skills Event #4 – Line Trimmer Score Sheet

State Name: \_\_\_\_\_

Team Member: \_\_\_\_\_

| Scoring Criteria                          | Possible Points | Points Earned                                                                           |
|-------------------------------------------|-----------------|-----------------------------------------------------------------------------------------|
| <b>Pre-Operation Check</b>                |                 |                                                                                         |
| 1. Check air filter point out and explain | 5               | _____                                                                                   |
| 2. Check fuel level                       | 5               | _____                                                                                   |
| <b>Equipment Operation</b>                |                 |                                                                                         |
| 1. Trimmer on ground when starting        | 5               | _____                                                                                   |
| 2. Demonstrated how to start engine       | 5               | _____                                                                                   |
| 3. Demonstrated how to trim around posts  | 10              | _____                                                                                   |
| <b>Safety Procedures</b>                  |                 |                                                                                         |
| 1. Ear protection                         | 7               | _____                                                                                   |
| 2. Eye protection                         | 8               | _____                                                                                   |
| 3. Discussed avoiding pedestrian traffic  | 5               | _____                                                                                   |
| <b>Total Individual Points</b>            | <b>50</b>       | <div style="border: 1px solid black; width: 80px; height: 20px; margin: 0 auto;"></div> |

Judges' Comments: \_\_\_\_\_

Judges' Initials: \_\_\_\_\_

## **Nursery and Landscape Career Development Event**

### **Skills Event # 5 – Chain Saw**

You were not the last one to use the chain saw. You need to check everything to make sure it is safe to use. Safety is most important when using a chain saw. All safety equipment will be provided and needs to be worn. You will also demonstrate how to cut a section off a log. You will also explain the starting procedure and how to remove a lateral branch using the three-step cut method. You will demonstrate how to operate this and one other piece of equipment in this 20-minute period.

**Study references:** PLANET's Landscape Training Manual for Maintenance Technicians, (Chapter 9)  
PLANET's Landscape Training Manual for Installation Technicians, (Chapter 9)

#### **Procedure:**

##### **Pre-Operation Check**

1. Check air filter
2. Check chain tension
3. Check bar oil level
4. Demonstrate fueling of tank

##### **Equipment Operation** (on a pre-secured log/timber)

1. Chain saw on ground when starting
2. Prime the engine
3. Demonstrate how to start engine
4. Demonstrate how to cut a lateral branch
5. Demonstrate how to cut a log on a saw buck

##### **Safety Procedures**

1. Wear ear protection
2. Wear eye protection and face shield
3. Wear chaps
4. Wear gloves

**Time:** 20 minutes for completion for this skills event and one other piece of equipment

## Skills Event # 5 – Chain Saw Score Sheet

State Name: \_\_\_\_\_

Team Member: \_\_\_\_\_

| Scoring Criteria                                                       | Possible Points | Points Earned                                                                           |
|------------------------------------------------------------------------|-----------------|-----------------------------------------------------------------------------------------|
| <b>Pre-Operation Check</b>                                             |                 |                                                                                         |
| 1. Check air filter, locate                                            | 5               | _____                                                                                   |
| 2. Check chain tension with gloves on                                  | 5               | _____                                                                                   |
| 3. Check bar oil level ,explain its purpose                            | 5               | _____                                                                                   |
| 4. Demonstrated fueling of tank with proper fuel                       | 2               | _____                                                                                   |
| <b>Equipment Operation</b>                                             |                 |                                                                                         |
| 1. Chain saw on ground when starting                                   | 5               | _____                                                                                   |
| 2. Demonstrated how to start engine ,must choke<br>And set chain brake | 3               | _____                                                                                   |
| 3. Demonstrated how to cut a lateral branch                            | 5               | _____                                                                                   |
| 4. Demonstrate how to cut a log on a saw buck                          | 5               | _____                                                                                   |
| <b>Safety Procedures</b>                                               |                 |                                                                                         |
| 1. Ear protection                                                      | 5               | _____                                                                                   |
| 2. Eye protection                                                      | 5               | _____                                                                                   |
| 3. Chaps                                                               | 5               | _____                                                                                   |
|                                                                        | <b>50</b>       | <div style="border: 1px solid black; width: 80px; height: 20px; margin: 0 auto;"></div> |
| <b>Total Individual Points</b>                                         |                 |                                                                                         |

Judges' Comments: \_\_\_\_\_

Judges' Initials: \_\_\_\_\_

## Nursery and Landscape Career Development Event

### Skills Event #8 – Surveying Instrument

You have been asked to demonstrate your abilities to use a laser level instrument. An area has been set out to represent the front stoop and 3 other points in the landscape. Demonstrate how to handle and set up the equipment. Next record the benchmark elevation and the other three elevations. You will then need to calculate the difference in elevations and the amount of cut or fill needed between the benchmark and a point specified. The specific slope percent will be identified by the judge.

Study reference: PLANET's Landscape Training Manual for Installation Technicians (Chapter 3)

#### Procedure and Worksheet

1. Set up tripod at the locations specified by the judge.
2. Identify the instrument being used and explain the difference between a builder's level, laser and transit to the judge.
3. Properly remove the instrument that you have selected from the case, place on the tripod and level the instrument.
4. One member of the team should hold the rod at the various locations while the other team member runs the instrument and records the readings.
5. Take and record the following readings:

Point A (benchmark) \_\_\_\_\_

Point B \_\_\_\_\_

Point C \_\_\_\_\_

Point D \_\_\_\_\_

6. Calculate the elevation difference between point A & C \_\_\_\_\_.

8. Calculate the elevation difference between point A & D \_\_\_\_\_.

9. Calculate the percent slope between point A & D \_\_\_\_\_.

10. How much fill or cut would be needed between point A and Point D to create a slope? Note: The actual percentage of slope will be identified by the judge the day of the contest.

## Skills Event #8 – Surveying Instrument Score Sheet

State Name: \_\_\_\_\_

Team Members: 1. \_\_\_\_\_ 2. \_\_\_\_\_

| Scoring Criteria                                                                   | Possible Points | Points Earned                                                                                  |
|------------------------------------------------------------------------------------|-----------------|------------------------------------------------------------------------------------------------|
| <b>Instrument Set Up &amp; Knowledge</b>                                           |                 |                                                                                                |
| Instrument Set Up                                                                  | 10              | _____                                                                                          |
| Knowledge of builder's level, transit, laser                                       | 10              | _____                                                                                          |
| Determining the benchmark (Point A)                                                | 10              | _____                                                                                          |
| <b>Elevation Readings &amp; Calculations</b>                                       |                 |                                                                                                |
| Point B                                                                            | 5               | _____                                                                                          |
| Point C                                                                            | 5               | _____                                                                                          |
| Point D                                                                            | 5               | _____                                                                                          |
| Calculate the elevations difference between point A & C                            | 7               | _____                                                                                          |
| Calculate the elevations difference between point A & D                            | 7               | _____                                                                                          |
| <b>Cut &amp; Fill Problems</b>                                                     |                 |                                                                                                |
| Calculate the percent slope between A & D                                          | 15              | _____                                                                                          |
| How much fill or cut would be needed between point A & D to create a _____% slope? | 10              | _____                                                                                          |
| Explain the marks on a grade stake                                                 | 5               | _____                                                                                          |
| Explain the difference between an architect's and engineer's story pole            | 6               | _____                                                                                          |
| Properly tear down and store equipment                                             | 5               | _____                                                                                          |
| <b>Total Team Points</b>                                                           | <b>100</b>      | <div style="border: 1px solid black; width: 80px; height: 20px; display: inline-block;"></div> |

**Note: Communication skills are considered in the above scoring.**

**Judges' Comments:** \_\_\_\_\_

**Judges Initials:** \_\_\_\_\_

## **Landscape & Nursery Career Development Event**

### **Skills Event #13 – Tree Planting**

You are working on a job for a municipality and must follow job specifications carefully. This municipality has had a problem of too many trees dying due to improper planting. The city forester will first test your skills while leaving the tree in the pot. The specifications for this municipality might be different from what you are used to, but you need to demonstrate that you can follow these instructions. You will need to give verbal explanations for root bound conditions and watering. Explain staking the tree when you are finished planting paying attention to the direction of the prevailing wind.

**Study Reference:** PLANET's Landscape Training Manual for Installation Technicians (Chapter 6)

**Procedure:**

1. Review the drawing of the tree planting detail
2. Plant the tree according to the detail drawing
3. Explain to the judge the proper method of relieving root bound condition
4. Backfill as per detail, use proper backfill compacting practices.
5. Explain proper watering method for new plantings
6. Explain staking
  - a. Review drawing
  - b. Stake tree according to detail, describe proper stake placement
  - c. Align tree stake in consideration of wind direction
  - d. Use proper safety equipment when staking a tree (hard hat, safety glasses, gloves)
7. Mulch to specification
8. After judge has observed, remove stakes, wires, ties and plant from hole and re-grade area.

**Time:** 20 minutes are allowed for completion of this challenge.

### **Skills Event #13 – Tree Planting Score Sheet**

State Name : \_\_\_\_\_

Team Members: 1. \_\_\_\_\_ 2. \_\_\_\_\_

| Scoring Criteria                                   | Possible Points | Points Earned |
|----------------------------------------------------|-----------------|---------------|
| <b>Hole dimension according to detail</b>          |                 |               |
| Width –                                            | 10              | _____         |
| Depth –                                            | 10              | _____         |
| <b>Planted according to detail</b>                 |                 |               |
| Root pruning –                                     | 5               | _____         |
| Handled correctly                                  | 5               | _____         |
| Soil berm                                          | 5               | _____         |
| Tamped properly                                    | 5               | _____         |
| Mulched properly                                   | 5               | _____         |
| <b>Explained watering method for new tree</b>      | 15              | _____         |
| <b>Explain stakes and wire installation</b>        |                 |               |
| Stakes at correct depth                            | 5               | _____         |
| Stakes straight and plumb                          | 5               | _____         |
| Stakes placed per prevailing wind                  | 5               | _____         |
| Straps installed at correct height                 | 5               | _____         |
| <b>Safety</b>                                      |                 |               |
| Proper lifting techniques                          | 10              | _____         |
| Gloves                                             | 5               | _____         |
| Eye protection                                     | 5               | _____         |
| <b>Safety Violations</b>                           |                 |               |
| Deduct 3 points for each observed safety violation |                 | - _____       |

**Note: Communication skills are considered in the above scoring.**

**Total Individual Points** **100**

Time is only used as a tie breaker

Judges' Comments: \_\_\_\_\_

Judges Initials \_\_\_\_\_

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***Landscape & Nursery Career Development Event  
Skills Event # 14 – Grading & Drainage***

You have been provided a wooden frame that is partially filled with sand. Add or remove sand as necessary to create contours to match the details. Take note of the front of the box. You will be provided a working copy of the plan and all of your measurements can be written down on the working copy. A long straight edge is provided for you. You will need to provide your own architects/engineers' scale and tape measure. Please remember that this is also a drainage assessment. All areas of the box must drain to the catch basin you have installed.

**Study Reference: Instrument, Grading and Drainage in the Landscape Training Manual for Installation Technicians.**

**Procedure:**

1. Using sand in a raised box approximately 6ftx 6ft, grade the sand into a mound that closely resembles the scale drawing.
2. Finish grade to a smooth and even appearance at elevations specified on drawing.
3. Place catch basin correctly at proper elevation.
4. Finished project must drain all areas to catch basin.

**Time:** 20 minutes allotted for the completion of this challenge

## **Nursery and Landscape Career Development Event**

### **Skills Event # 15 – Paver Installation**

Your crew has been given a baseline (string line) to work off of. Using 3-4-5 method, install 2 paver patterns with each one measuring 3 foot by 4 foot pad. One pattern will use the running bond pattern, one will use the basket weave pattern. Pads are to be perpendicular to one another and will be laid on concrete, so no leveling ,excavation, etc. will be needed. A diagram will be given to the students to follow. You will have to explain to the judge the steps involved in laying a paver patio from start to finish.

**Study Reference:** PLANET's Training Manual for Installation Technicians (Chapter 4).

**Procedure:**

1. Set a square string line perpendicular to the base line, and leave it as a reference point
2. Install the 2 pads  
One Basket weave pattern approx. 3ft x 4ft  
One Running bond pattern approx. 3ft x 4ft
3. These will be laid on concrete, so it is with the assumption that the base has been tamped and properly leveled. No sand sweep is necessary.
4. Explain the steps involved in installing a paver patio

**Time:** 20 minutes allotted for completion of this challenge.

## Skills Event # 15 -- Paver Installation Score Sheet

State Name: \_\_\_\_\_

Team Members: 1. \_\_\_\_\_ 2. \_\_\_\_\_

| Scoring Criteria | Possible Points | Points Earned |
|------------------|-----------------|---------------|
|------------------|-----------------|---------------|

**Procedure:**

|                                               |    |       |
|-----------------------------------------------|----|-------|
| Set string line 90 degrees with the base line | 10 | _____ |
| Install running bond paver pad                | 10 | _____ |
| Install a basket weave pattern pad            | 10 | _____ |

**Explain to the judge the steps involved in laying pavers**

|                                                        |   |       |
|--------------------------------------------------------|---|-------|
| Using paint or stakes lay out the area to be installed | 5 | _____ |
| Determine finish grade                                 | 5 | _____ |
| Excavate a minimum of 6 inches for a solid base        | 5 | _____ |
| Create a 2% min slope                                  | 5 | _____ |
| Add base, compact no more than 4" at a time            | 5 | _____ |
| Base to be 6" beyond finished detentions               | 5 | _____ |
| Install edging                                         | 5 | _____ |
| Install sand and screed                                | 5 | _____ |
| Lay Pavers                                             | 5 | _____ |
| Cut pavers                                             | 5 | _____ |
| Sand sweep and compact                                 | 5 | _____ |

**Safety Equipment;**

Discuss when it is necessary to use

|                |   |       |
|----------------|---|-------|
| Ear protection | 5 | _____ |
| Eye protection | 5 | _____ |
| Gloves         | 5 | _____ |

**Safety Violations**

Deduct 5 points for each observed Safety problems \_\_\_\_\_ x 5 = - \_\_\_\_\_

**Total Team Points**

**100**

**Note:** Communication skills are considered in the above scoring.

**Judges' comments** \_\_\_\_\_

**Judges Initials** \_\_\_\_\_