

## **Nursery and Landscape Career Development Event Team Skills Challenge Event # 1 – Plant Layout**

Your planting area provided is 15' X 20'. An architect scale will be the only tool you need. Tape measures will be provided. Take note of the side plants will be viewed. The judge will provide you with a copy of the plan. Your task is to set the plants out according to the plan. You may make all your measurements first and write them on the plan provided to you by the judge. You may use a temporary marker to mark the plant locations first. Poly line or tape will be used to mark out the edge of the annual bed. Proper plant handling is also important. You will explain to the homeowner (judge) what material is being installed and your plan to execute the project. Allow time to dismantle at the end of the period after the judges evaluate the layout.

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

### **Procedure:**

1. Using an architect scale, spot the plants and annual bed according to the plan the judge provides you.
2. Face plants to the front of the project as indicated by the viewpoint on the plan.
3. Place 4" annual plants 4" from the straight bed edges. Space remaining plants evenly to conform with plan.
4. Return plants to location as indicated by judge.

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

## Team Skills Challenge Event # 1 – Plant Layout Score Sheet

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

Team Members: 1. \_\_\_\_\_ 2. \_\_\_\_\_  
3. \_\_\_\_\_ 4. \_\_\_\_\_

| Scoring Criteria                                                                                                                   | Possible Points | Points Earned |
|------------------------------------------------------------------------------------------------------------------------------------|-----------------|---------------|
| Placement of Plant Material<br>Deduct 5 points/plant not placed within 6 inches +/- of correct placement to a maximum of 25 points | 25              | _____         |
| Facing of Plant Material<br>Deduct 3 points/plant not faced properly to a maximum of 25 points                                     | 25              | _____         |
| Handling of Plant Material<br>Deduct 10 points/plant not handled properly to a maximum of 20 points                                | 20              | _____         |
| Safe/Proper Lifting of Plants<br>Deduct 15 points when safely/properly lifted procedures are not followed                          | 15              | _____         |
| Correct view point                                                                                                                 | 5               | _____         |
| Communicating the plan to judge                                                                                                    | 10              | _____         |
| <b>Total Team Points</b>                                                                                                           | <b>100</b>      | <div></div>   |

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

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

## Nursery and Landscape Career Development Event

### Problem Solving Event #10 – ZTR Mower Operation

You have been asked by your supervisor to demonstrate and discuss your understanding and proficient operation of a ZTR mower. Please complete a pre-operation inspection and demonstrate operating the mower through a designed course. The course will simulate job conditions that could include inspection of the work area, identification of potential hazards, and operation of the mower in close proximity to sidewalks, curbs, flower beds and other objects. You will have 20 minutes to demonstrate how to operate this and one other piece of equipment.

**Study Reference:** PLANET's Training Manual for Maintenance Technicians (Chapter 8) and PLANET's *ZRT Riding Mower Resource Guide and DVD*.

**Procedure:**

1. Complete a pre operation check of the mower.
2. Demonstrate changing mower heights.
3. Discuss starting the engine.
4. Discuss driving the mower through a designated area with a sidewalk and tree.

**Time:** 20 minutes for completion for this skills event which will include one other piece of equipment

## Skills Event #10 – ZTR Mower Score Sheet

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

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

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

### Pre-Start Procedures

|                                                |   |       |
|------------------------------------------------|---|-------|
| Oil Level and Hydraulic System oil level check | 5 | _____ |
| Air Cleaner                                    | 5 | _____ |
| Grease Fittings                                | 5 | _____ |
| Belts, Pulleys, Guards                         | 2 | _____ |
| Adjusting mower height                         | 3 | _____ |

### Safety Procedures

|                                                  |   |       |
|--------------------------------------------------|---|-------|
| Ear protection                                   | 5 | _____ |
| Eye protection                                   | 5 | _____ |
| Seat belt used                                   | 2 | _____ |
| Clean up hazards before mowing                   | 5 | _____ |
| Observe pedestrian traffic while operating mower | 5 | _____ |

### Equipment Operation

|                                 |   |       |
|---------------------------------|---|-------|
| Two times outside area          | 3 | _____ |
| Mow trees on left side of mower | 3 | _____ |
| Discuss letting mower warm up   | 2 | _____ |

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

|                                |           |             |
|--------------------------------|-----------|-------------|
| <b>Total Individual Points</b> | <b>50</b> | <div></div> |
|--------------------------------|-----------|-------------|

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

## Nursery and Landscape Career Development Event

### Skills Event #12 – Sod Installation

You have been asked by a customer to install sod in a square raised box. Establish the proper grade first. Remember to allow for the thickness of the sod. Calculate the amount of fertilizer needed based on the size of the box and then spread the fertilizer. Install the sod following the procedure listed below. Instruct the customer (judge) on how to water the new sod. Please allow enough time to dismantle the station at the end of the time period.

**Study reference:** PLANET's Landscape Training Manual for Installation (chapter 8)

#### Procedure

1. Establish correct finished grade so the sod is level with the top of the frame.
2. Rake lightly to level irregularities.
3. Roll with a water filled roller.
4. Broadcast fertilizer at a rate specified on the fertilizer bag. Students will need to calculate the amount. Calculators will be provided.
5. Lay the first row of sod parallel to a side of the frame. Continue along perimeter of the frame. Lay remaining rows parallel to the first side and stagger each row.
6. Butt seams tightly and trim as necessary (sprinkler head, valve box, and edges)
7. Roll with a water filled roller.
8. Explain proper watering procedure for newly installed sod.
9. Upon judges' approval, roll up full pieces of sod and return to pallet
10. Judge will determine the amount of soil to be removed.

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

## Skills Event #12 – Sod Installation Score Sheet

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

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

| Scoring Criteria                                       | Possible Points | Points Earned |
|--------------------------------------------------------|-----------------|---------------|
| Graded area according to problem description           | 10              | _____         |
| Rolled area (pre sod) according to problem description | 5               | _____         |
| Rolled sod after installation                          | 7               | _____         |
| Calculated & weighed proper amount of fertilizer       | 10              | _____         |
| Applied Fertilizer evenly                              | 10              | _____         |
| Sod strips adjacent to edges full width                | 5               | _____         |
| Stagger seams on sod rolls                             | 8               | _____         |
| Knit seams tightly                                     | 10              | _____         |
| Made cuts accurately                                   | 5               | _____         |
| Explained watering of new sod                          | 10              | _____         |

### Safety Procedures

|                                        |    |       |
|----------------------------------------|----|-------|
| Eye Protection                         | 10 | _____ |
| Demonstrated proper lifting techniques | 10 | _____ |

**Safety Violations:** Deduct 3 points for each observed safety violation,  
Such as tools used improperly etc. - \_\_\_\_\_

**Gross violation:** A judge may stop a contestant from competing based  
upon safety violations. In such cases, the contestant will earn zero points. - \_\_\_\_\_

**Note:** Communication skills are considered in the above scoring.  
Time is only used as a tie breaker

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

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

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

## **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** \_\_\_\_\_

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

### **Skill Event #17 – Pruning**

You are meeting with a client to discuss pruning. You will need to demonstrate your abilities and knowledge of plants and demonstrate the use of hand pruners, loppers, and a hand saw using the three-point cut method. A tree will be marked with flaggers tape/clothes pins and you will need to identify if the designated area should be pruned and, if so, with what pruning tool. You will also demonstrate how to operate a gas-powered hedge shears and explain how they are to be used.

**Study Reference:** PLANET's Landscape Training Manual for Installation Technicians (Chapter 7)

#### **Procedure:**

##### **Tree Structure**

Point out the trunk, leader, and lateral branches.

##### **Pruning Tools and Methods**

1. Demonstrate how to properly handle and use a hand pruner using the sample branches provided.
2. Demonstrate how to properly handle and use loppers using the sample branches provided.

##### **Tree Pruning**

1. Point out at least three types of problems in the tree provided that requires pruning.
2. Identify to the judge which potential cuts as identified by flaggers tape/clothes pins should be made and what tool should be used.

##### **Shrub Pruning**

1. Point out at least three types of problems in the shrub provided that require pruning.
2. Demonstrate how to operate a gas-powered hedge shears.
3. With the hedge shears off, demonstrate how to properly handle them as if you were to prune the shrub provided.

##### **Safety Equipment**

1. Wear eye protection.
2. Wear ear protection.
3. Wear gloves.

Time: 20 minutes for completion of this skill event.

## Skill Event #17 – Pruning Score Sheet

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

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

| Scoring Criteria                                                       | Possible Points | Points Earned |
|------------------------------------------------------------------------|-----------------|---------------|
| <b>Tree Structure</b>                                                  |                 |               |
| Identify trunk                                                         | 5               | _____         |
| Identify leader                                                        | 5               | _____         |
| Identify lateral branches                                              | 5               | _____         |
| <b>Pruning Tools and Methods</b>                                       |                 |               |
| Properly used hand pruners                                             | 10              | _____         |
| Properly used loppers                                                  | 10              | _____         |
| Demonstrate the 3-point cut method and rationale                       | 5               | _____         |
| <b>Tree Pruning</b>                                                    |                 |               |
| Point out three potential problems                                     | 5               | _____         |
| Identify 5 appropriate cuts and proper tool to use                     | 15              | _____         |
| <b>Shrub Pruning</b>                                                   |                 |               |
| Point out three potential problems                                     | 5               | _____         |
| Demonstrate how to operate gas-powered hedge shears                    | 5               | _____         |
| Demonstrate how to properly handle gas-powered hedge shears            | 10              | _____         |
| <b>Safety</b>                                                          |                 |               |
| Use of eye protection                                                  | 5               | _____         |
| Use of ear protection                                                  | 10              | _____         |
| Use of gloves                                                          | 5               | _____         |
| <b>Note: Communication skills are considered in the above scoring.</b> |                 |               |
| <b>Total Individual Points</b>                                         | <b>100</b>      | <div></div>   |

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

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