**Personal Rain Garden Worksheet**

Time of day \_\_\_\_\_\_\_\_\_\_\_\_ Temperature \_\_\_\_\_\_\_\_\_\_\_ Humidity \_\_\_\_\_\_\_\_\_\_\_ Dew point \_\_\_\_\_\_\_\_\_\_\_

Weather \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Personal Rain Garden Properties**

1. From the ***Does Media Matter? Worksheet***, list the media mix combination materials and ratio, and its average infiltration rate.

|  |  |  |  |
| --- | --- | --- | --- |
| **Material 1** | **Material 2** | **Material 3** | **Material 4** |
| **Volume/ratio of material 1** | **Volume/ratio of material 2** | **Volume/ratio of material 3** | **Volume/ratio of material 4** |
|  | **Average infiltration rate** |  |

1. From the ***Magic Sidewalk Worksheet***, list the types of materials used to create the concrete mix combination, and the ratio.

|  |  |  |
| --- | --- | --- |
| **Material 1** | **Material 2** | **Material 3** |
| **Amount (volume/ratio) of material 1** | **Amount (volume/ratio) of material 2** | **Amount (volume/ratio) of material 3** |

1. From the ***Magic Sidewalk Worksheet***, list the infiltration rates.

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Volume of water (ml)** | **Time (sec)** | **Infiltration rate (ml/sec)** |
| **Trial 1** |  |  |  |
| **Trial 2** |  |  |  |
| **Trial 3** |  |  |  |
|  | **Calculated average infiltration rate** |  |

1. From top to bottom, what are the four zones that make up a typical rain garden?

|  |  |
| --- | --- |
| **Zone 1** |  |
| **Zone 2** |  |
| **Zone 3** |  |
| **Zone 4** |  |

1. **Select an appropriate location on the school campus to construct a rain garden and describe characteristics of the runoff area in terms civil engineers would use (infiltration, percolation, permeability, bioretention, green infrastructure, low-impact development, transpiration rate, etc.).**

Measure the rainfall runoff area: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ft2.

Determine the rain garden area, usually 2% to 5% of the runoff area: \_\_\_\_\_\_\_\_ft2 and \_\_\_\_\_\_\_\_\_ ft2.

1. **Make a sketch of the rainfall runoff area. Include labels, measurements and rain garden location.**

|  |
| --- |
|  |

1. From the ***Just Breathe Green Worksheet***,select native plants to grow in your personal rain garden.

|  |
| --- |
| Plant speciesCommon name: *Scientific name:*  |
| Light requirements |  |  |
| Height |  |
| Soil conditions |  |
| Transpiration rate (ml/min) |  |

|  |
| --- |
| Plant SpeciesCommon name: *Scientific name:*  |
| Light requirements |  |  |
| Height |  |
| Soil conditions |  |
| Transpiration rate (ml/min) |  |

|  |
| --- |
| Plant SpeciesCommon name: *Scientific name:*  |
| Light requirements |  |  |
| Height |  |
| Soil conditions |  |
| Transpiration rate (ml/min) |  |

1. **Plant, mulch and water.**
2. **Mark and label on the sketch (#6) the location of your team’s personal rain garden, as well as the locations of other groups’ personal rain gardens.**