**Day 1 Magic Sidewalk Worksheet**

Time of Day \_\_\_\_\_\_\_\_\_\_\_ Temperature \_\_\_\_\_\_\_\_\_\_\_ Humidity \_\_\_\_\_\_\_\_\_\_\_ Dew Point \_\_\_\_\_\_\_\_\_\_\_

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

1. **List the types of materials used to create a concrete sidewalk.**

|  |  |  |  |
| --- | --- | --- | --- |
| **Material 1** | **Material 2** | **Material 3** | **Material 4** |

**2. What material from the list above would you remove to create a magic sidewalk?** \_\_\_**\_\_\_\_\_\_\_**\_\_\_

**3. Magic Sidewalk Mix Trial 1**

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

**Observe** Does Magic Sidewalk Trial 1 stick together? \_\_\_\_\_  
Does Magic Sidewalk Mix Trial 1 look magical? \_\_\_\_\_

**4. Magic Sidewalk Mix Trial 2. What material would you remove?** \_\_\_\_\_\_\_\_**\_\_\_\_\_\_\_\_\_**\_\_\_\_\_\_\_\_\_\_\_\_

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

**Observe** Does Magic Sidewalk Trial 2 stick together? \_**\_\_**\_   
Does Magic Sidewalk Mix Trial 2 look magical? \_\_**\_\_**\_\_

**5. Magic Sidewalk Mix Trial 3. What material would you remove?** \_\_\_\_\_\_\_\_\_\_\_\_\_**\_\_\_\_\_\_**\_\_\_\_\_\_\_\_\_\_

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

**Observe** Does Magic Sidewalk Trial 3 stick together? \_\_\_\_\_  
Does Magic Sidewalk Mix Trial 3 look magical? \_\_\_\_\_

**Day 2 Magic Sidewalk Worksheet**

Time of Day \_\_\_\_\_\_\_\_\_\_\_ Temperature \_\_\_\_\_\_\_\_\_\_\_ Humidity \_\_\_\_\_\_\_\_\_\_\_ Dew Point \_\_\_\_\_\_\_\_\_\_\_

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

**Magic Sidewalk Infiltration Testing**

1. **Infiltration Rate**

Use the same amount of water for each trial and keep track of the time it takes for the water to disappear.

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Volume of water (ml)** | **Time to drain (sec)** | **Infiltration rate (ml/sec)** |
| **Trial 1** |  |  |  |
| **Trial 2** |  |  |  |
| **Trial 3** |  |  |  |

1. ***Observations*:   
   Describe what happens to the water when you pour it onto the surface of your “magic” sidewalk.**
2. **What magic sidewalk mix would you recommend for reducing the amount of stormwater runoff?**