**GERMINATION RACE**

Start your engines! Students will track the germination of multiple different varieties of a crop (i.e. 3 different varieties of bean) and see which wins!

Students will record the date of first planting and then make daily observations to determine how many, if any, seeds have germinated each day for approximately 2 weeks or until all seeds have emerged. For the purposes of this experiment a seed will be determined to have germinated when students see the first evidence of the sprout emerging from the ground. These observations can be made individually, in small groups or as an entire class. When all of the seeds have germinated students can answer the questions that follow. Here is what a completed observation sheet might look like:

**SAMPLE: Germination Race: Observation Sheet**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Crop** | **Variety**  **(total number of seeds planted)** | **Date (Enter your own observation dates below)** | | | | | | | | | | | | |
| *(Start Date)*  *April*  *7* | *April*  *8* | *April*  *9* | *April*  *10* | *April*  *11* | *April*  *14* | *April*  *15* | *April*  *16* | *April*  *17* | *April*  *18* | *April*  *21* | *April*  *22* | *(End Date)*  *April*  *23* |
| **Total number of seeds germinated** | | | | | | | | | | | | |
| *Bean* | *Red Burgundy (10)* | *0* | *0* | *0* | *0* | *0* | *2* | *4* | *5* | *10* | *10* | *10* | *10* | *10* |
| *Bean* | *Dragon Tongue (10)* | *0* | *0* | *0* | *0* | *0* | *0* | *1* | *5* | *8* | *8* | *8* | *8* | *8* |
| *Bean* | *Blue*  *Jay (10)* | *0* | *0* | *0* | *0* | *1* | *1* | *3* | *9* | *9* | *9* | *9* | *9* | *9* |

**SAMPLE: Germination Race: Observation Sheet Questions**

1. Which variety was the first to germinate? \_\_\_\_\_\_\_*Blue Jay*\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Which variety had the most seeds germinate in total? This is called germination success \_\_\_\_\_\_\_*Red Burgundy*\_\_\_\_\_\_\_

**Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Germination Race: Observation Sheets**

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Crop** | **Variety** | **Date**  **Record observation dates below. The first date is your planting date** | | | | | | | | | | | | |
| Start Date |  |  |  |  |  |  |  |  |  |  |  | End Date |
| **Total number of seeds germinated** | | | | | | | | | | | | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

**Germination Race: Observation Sheet Questions**

Use your germination observation sheet to answer the following questions after all seeds have germinated.

1. Which variety was the first to germinate? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Which variety had the most seeds germinate in total? This is called germination success \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_