



# 1st Grade Tulip Test Garden



This past fall, people across the northern hemisphere planted Red Emperor tulip bulbs in Journey North Test Gardens to monitor seasonal change in a scientific way. This spring, when plants emerge and bloom, our students will report their observations and data. One garden at a time, the relationship between climate, geography, and the arrival of spring is revealed.

Ms. Garbade's class planted their tulips on November 28, 2016. **It had been more than 30 days since the garden had rain** when they planted, so the soil was very dry. It had to be watered down so that we could dig the 6" holes necessary for planting.

Between November 29-December 1, the garden received 2.95" of rain. Between December 2 - December 6, the garden received 1.52" of rain. **A total of 4.47" of rain in just over a week!**



Because of the rain, all the other classes planted in very wet soil that was easy to dig in. However, they planted later than planned because of all the rainy days.

Class	Date Planted	Air Temperature	Soil Temperature
Garbade	November 28, 2016	54°-61°F	51°- 52°F
Slayton	December 1, 2016	46°-54°F	51°F
Overbye* (planted on 2 different days in the afternoon)	December 1, 2016 December 7, 2016	58°-68°F 64°-70°F	53°F 51°F
Johnson	December 7, 2016	40°-58°F	51°F
Mainland	December 8, 2016	44°-48°F	50°F

*\*All classes planted in the morning between 9am-11:30am except for Ms. Overbye's, which planted between 12:30pm and 1:30pm*

*What is the range of temperatures on the days they planted the bulbs? Is it a large range or small range? Why?*

*What is the range of soil temperature? Is it a large or small range? Why?*



*Which class had they highest air temperature? Why do you think it was warmer when they planted?*



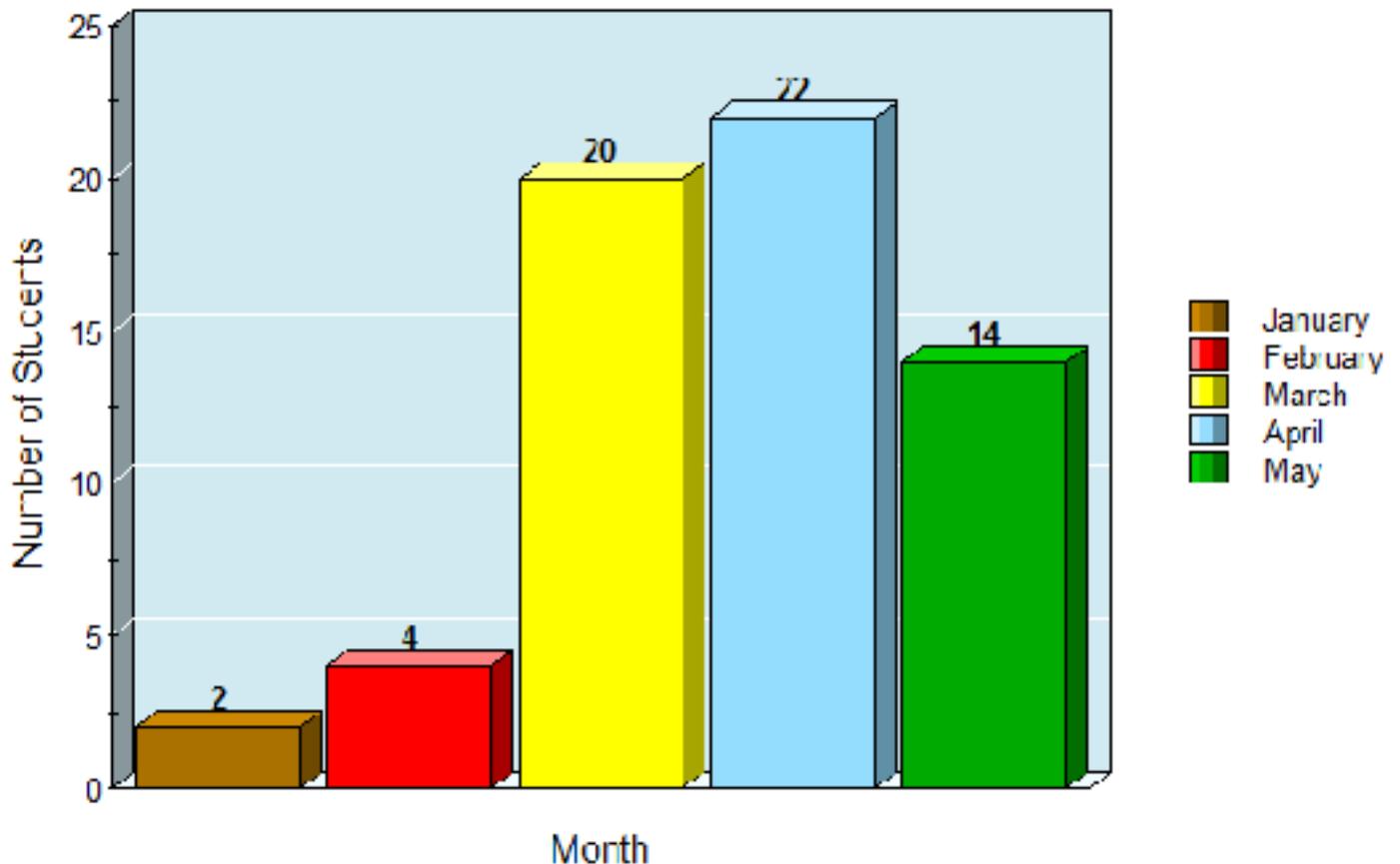


Students predicted when they thought their bulbs would emerge. See the graph below for their predictions. Teachers reported the date planted to Journey North, and will report again once the bulbs emerge and bloom.

Scan the QR code to see the Journey North map of all the test gardens in the Northern Hemisphere.



### Which Month Will Tulips Emerge? Predictions



*Which month did the greatest number of students predict the tulips would emerge?*