

**GLOBAL GARDENERS
IEARN DAFFODILS AND TULIPS**

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Introduction: Students in different parts of the world plant bulbs together and collect data on various parameters (latitude, longitude, seasons, sunlight, temperature etc.) and track when they blossom. Classrooms around the world choose daffodil and/or tulip bulbs to plant during the same week in November. Students will be asked to collect temperature data throughout the experiment and report to the online learning group. In addition, they will report when the blooms appear and other variable factors. The project can be as involved or as simple as your class needs it to be. The online interaction takes place through the global learning website www.iearn.org.

NOTE: As this project may take several months to complete, the project is divided up into learning themes that will be addressed over the course of the project. These themes relate to TECHNOLOGY, GLOBAL CONNECTIONS, GEOGRAPHY and SCIENCE. Guiding questions for each theme are indicated in the project outline below. Educators will need to address all of these themes, but the order and process will vary. This project serves as an outline to the process.

Geographic Connections: Students will learn how to use technology to communicate with students from other parts of the world, record and share data using technology, locate places on different types of map, and appreciate the similarities and differences in our environments.

Vocabulary: latitude, longitude, country name, climate, precipitation, Fahrenheit, Celsius shovel, trowel, ruler, thermometer, increase, decrease, flower bed, seasons, winter, spring, fall, autumn, perennials, labels, centimeters, data, metric, hypothesis, tulip, daffodil, Holland, Dutch, dormant, roots, stem, bud, flower, emerge

Concepts: metric conversion, using key and coordinates to read traditional map, locate on a globe, on-line etiquette, turn taking, creating scientific questions, hypothesis, computer skills, recording data, reading a thermometer, creating a graph of temperature; digital and on paper, using Evernotes app on iPad to record observations, create a power point or video,

Actors: 2nd, 3rd and 4th grade students, parent volunteers, staff

Stage 1 – Desired Results

Common Core Content Standard(s):

- [CCSS.ELA-Literacy.W.2.7](#) Participate in shared research and writing projects (e.g., read a number of books on a single topic to produce a report; record science observations).
- [CCSS.ELA-Literacy.W.2.8](#) Recall information from experiences or gather information from provided sources to answer a question.
- [CCSS.ELA-Literacy.SL.2.1a](#) Follow agreed-upon rules for discussions (e.g., gaining the floor in respectful ways, listening to others with care, speaking one at a time about the topics and texts under discussion).

- [CCSS.ELA-Literacy.SL.2.1b](#) Build on others' talk in conversations by linking their comments to the remarks of others.
- [CCSS.ELA-Literacy.SL.2.1c](#) Ask for clarification and further explanation as needed about the topics and texts under discussion.

<p>Understanding (s)/Goals: Students will understand that:</p> <ul style="list-style-type: none"> • <i>Plants and people need certain elements in their environment in order to bloom and although the bulbs may all be planted the same day they may all bloom on different day. In the same way children may all learn the letters the same way but they all don't read on the same day.</i> • <i>Technology can connect people all over the world</i> • <i>Although people live all over the world, children in other places have similar likes and dislikes.</i> 	<p>Essential Question Related to Theme:</p> <ul style="list-style-type: none"> • How could this project help us achieve peace in the world?
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<p>Student Objectives (Outcomes): Students will be able to:</p> <ul style="list-style-type: none"> • To access the computer and or iPad to record observations, data and share the results with our partner class. • Create a final project (video, book, power point) that will demonstrate understanding of the planting process from start to finish.

Stage 2 – Assessment Evidence

<p>Performance Task(s):</p> <ul style="list-style-type: none"> • Students will be asked to create an on-line journal to record discoveries, make predictions, and form conclusions. 	<p>Other Evidence:</p> <ul style="list-style-type: none"> • Pre and posttest on basic science, geography and tech skills and concepts. (need to create) • Video and *Evernote app
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Stage 3 – Learning Plan

Learning Activities:
First, the teacher must seek permission to plant on school property from administration. Teacher must also become familiar with iEARN site and make contact with coordinator. Determine time difference and the best way to communicate. Teacher may want to have students

create letters asking for donations of bulbs from local nursery, business or garden center. Need to discuss how to connect with Skype in school because of server controls.

Technology:

- Students in this project would need to be assessed and instructed in skills before beginning this project (see attached pretest)
- After assessing the basic skills instruction would be tailored to needs of students. Links are provided to guide the conversation and instruction of internet etiquette.

Global Connections:

- How do you think we could communicate with another school in another country?
- What questions would you like to ask our planting partners?
- How do you think our foreign friends will look and sound like?

Students will write responses and we will share answers. Discussion would include understanding appropriate and inappropriate comments and questions.

Geography:

- How do you think we got these bulbs in our country?
- Why do you think people around the world plant food and flowers?

Students would record results and the group would have an opportunity to share thoughts.

Teacher would guide discussion

Science:

Teacher introduces the topic of planting spring bulbs in fall and asks the students to tell you what that means to them. Record responses. Students are then asked to answer questions (pretest)

- What do you think will happen to these bulbs if we....?
- What do you think these bulbs need to grow and bloom?
- Do you think all of the bulbs planted on the same day will bloom on the same day? Why? Why not?
- What do you think happens to the bulb after we plant it?
- Why do you think the bulbs bloom at different times?

Resource List/Bibliography:

www.iEARN.org

www.buggyandbuddy.com (worksheet)

http://www.educationworld.com/a_tech/tech/tech055.shtml etiquette discussion)

[https://teachingdigitalcitizenship.wikispaces.com/Cyberbullying+%26+Ethics\(rules](https://teachingdigitalcitizenship.wikispaces.com/Cyberbullying+%26+Ethics(rules) to guide

discussion)

<http://pinterest.com/search/pins/?q=bulb%20planting> (visuals and steps)

<http://www.youtube.com/watch?v=fa4Y0oRW8As> (video of mass planting)

<http://www.learner.org/jnorth/tm/tulips/Planting.html> (could combine efforts with iEARN)

How Are You Going to Use This Unit?

This unit will be an integration of all disciplines; language arts, social studies, math, technology, art and science. The unit will include a multisensory approach which should meet the needs of all students. The unit will be started in October and conclude with blooming approximately May 2014. The bulbs will be planted in the school garden and bulbs will also be planted in pots, soil, and rocks sand or with other variables decided by the students. I am hoping to use this project, if possible, for our school science fair. The students would need to form a scientific question that they could pursue through the scientific process.

Attachments:

1. Science Pre-test
2. Technology/Geography Pre-test

Name _____

Date _____

Science Pre-Test

1. Tell me what you know about gardening?

2. If we went outside and looked under a log or rock and there were bugs what should we do?

3. Draw a picture of a trowel and a spring bulb:

4. Draw a plant and label: roots stem, bud ,flower ,leaves, and stamen:

5. How do you read a thermometer?

6. Name the four seasons of the year:

7. Name or draw a picture of four kinds of weather.

Name _____ Date _____

Technology/Geography Pre-Test

Please show me how to start the computer_____

Open a word document and type: "I am showing what I know!" Then save it to your documents or folder.

Have you ever Skyped? _____

Show me how you would search for: iEARN or open a bookmark

Show me how to turn the volume down: _____

Draw a picture of a globe and label north, south, east, and west:

Name two other languages besides Spanish and English:

Name two oceans and two countries:

What would you like to know about life in another country?
