

# Time to Plant

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## Overview

In this activity students will observe the growth of a bean plant and record their observations using Timeliner XE.

## Time Needed

45 minutes for the first lesson and then 10 minutes per day for 30 days

## Materials

Bean seeds (soaked in water overnight)

Soil

Clear plastic cup

White paper towels

Spray bottle of water

Ruler

Timeliner XE

Digital camera

Plant observation worksheet (multiple copies)

## Grade Range

Grades K - 2

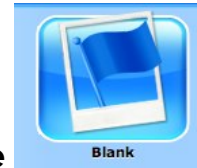
## Learning Objectives


- Observe and describe the life cycle of a seed as it grows into a plant.
- Identify the basic needs of a plant – air, water, nutrients, and light.
- Take digital photographs and upload them to Timeliner XE.
- Record observations in Timeliner XE.
- Create a one month standard timeline using Timeliner XE.

## Directions

1. Divide students into pairs.
2. Have students observe their bean seed, draw a picture and write their observations on the **Plant Observation Worksheet**.
3. Have students fold their paper towel in half and place the bean seed on the paper towel. Using their ruler, students should measure the bean seed and record its length on the plant observation worksheet.

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4. Explain to students that they are going to plant their seed, photograph, and observe its growth over the next 30 days. Open Timeliner XE, Click on **Open a Project**, choose **Science & Math**, open the **Life Science** folder and choose the **Plant Life Cycle** file. Discuss the life cycle of a plant. Ask students to make predictions about the life cycle of their bean seed. You may choose to add their predictions to the sequence and look back at them at the end of the project.
  5. Have students take a digital photograph of their seed lying on the paper towel next to the ruler.
  6. Next, tell students to place the folded paper towel around the inside of the paper cup and then place the bean seed in the cup between the paper towel and the side of the cup. Carefully add soil to the cup inside the paper towel. Fill the cup about  $\frac{3}{4}$  full. Spray the cup with water.
  7. Have students download the image of the bean seed to a file on their computer.



8. Have students launch Timeliner XE, click on the **Blank Timeline** and choose **OK** .

9. Title the timeline "Growth of a Bean Plant" and click on **One Month**  **One Month** and then click **OK**.

10. Under **When**, have student type **1**, for day 1. Under **What**, students should describe the what they did with the bean on that day (observed it, measured it, planted it). Under **Notes**, students should describe their observations of the bean seed using their Plant Observation Worksheet for reference. Tell students to hit **Return** or **Enter** on the keyboard to create their first flag on the timeline.



11. Tell students to click on the **Media button** to open the Media Palette and then click on **Browse**. Students should navigate to their saved photo and click **OK**.
  12. Tell students they will be observing, photographing and adding to their timeline each day for the next 30 days.
  13. Have students take a photograph, measure their plant and draw and write their observations on the **Plant Observation Worksheet** at the same time each day.
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14. Repeat steps 7 – 11 to add observations and images to the timeline. You may choose to add to the timeline once each day, or save up the observations and photographs and add all of them at once.

## Extensions

- For more advanced students, you may want to use more than one plant, change a variable (such as amount of light, water, or soil) and use categories in Timeliner XE to compare the seeds.
- For younger students, you don't need to include the written observations. Have students discuss the changes that they see in the seed. You could also record their observations as an audio file and upload the audio file to Timeliner XE.
- You might give different types of seeds to each group and have the groups compare their observations.

## Assessment

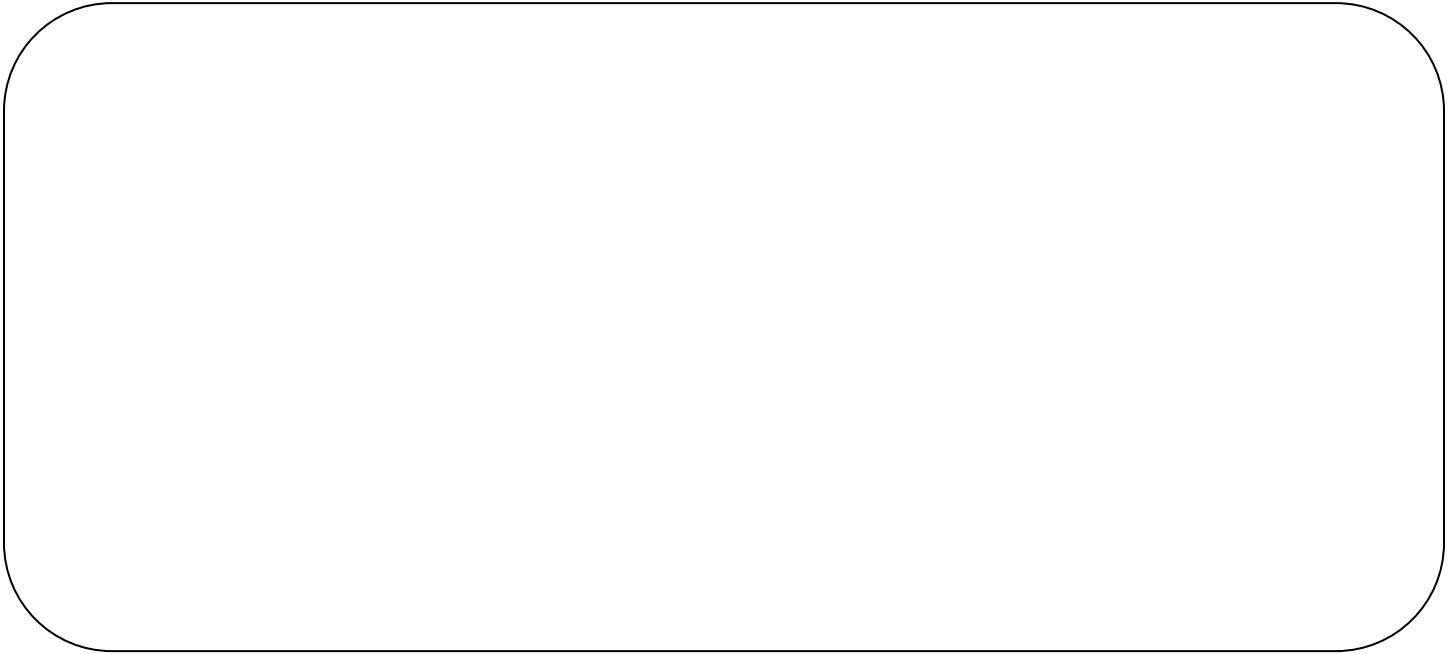
- Have students write a summary of their observations. They might also present their timeline as a slideshow and describe their observations to the class.
  - Ask students to describe the sequence of a plant's growth. Remind students of the predictions they made at the beginning of the project. Ask students to compare their predictions with what actually happened.
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# Plant Observation Worksheet

Day \_\_\_\_\_ Height of plant \_\_\_\_\_

Draw a picture



Describe your observations.

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