# A“Mazing” Plants

**Purpose:** Students will test to see if a bean plant can find its way through a maze.

## Background:

Although plants don’t have the ability to move from their rooted position, they do have the ability to respond to stimuli such as temperature, animals, moisture, gravity, and light. ***Tropisms*** are plant growth movements toward or away from a specific stimulus in nature. They help plants achieve optimal growth. ***Tropism*** comes from the Greek word, “to turn.”

***Phototropism***, photo meaning light, is the growth of a plant toward light. For plants, this light source is the sun, but artificial alternatives can also stimulate ***phototropism***. This ability is very useful for plants, enabling them to position their leaves and flowers to efficiently receive the light energy they need for photosynthesis.

## Florida Facts:

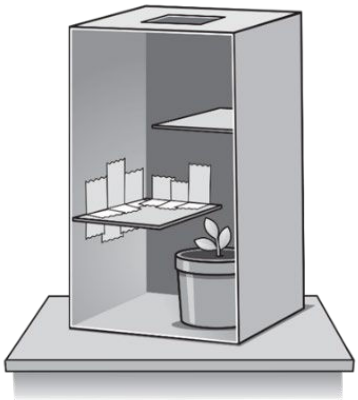
- Florida has three growing seasons: spring, summer, and winter. Florida is a big state, so the timing of these seasons can vary a bit.
- Florida can be broken into three growing regions: North, Central, & South. Each has a slightly different climate (mainly depending on possibility of freezing temperatures).

**Materials per box:** large shoe box or copy box, small pot or plastic cup, 3 pole bean seeds, 2 thick cardboard pieces, scissors, duct tape, potting soil, water

*Suggestion: Have students work in groups of 3-4 to create a maze.

## Activity:

1. Cut a hole near the top of the box.
2. Tape two pieces of cardboard inside, creating a maze for the bean plant to grow around.
3. Plant seeds about an inch deep in the pot of soil. Keep the soil moist so it can sprout.
4. Place the pot at the base of the box with the hole near the top.
5. Keep the box covered, with light entering only through the hole.
6. Observe the box every other day and watch to see if the plant can get through the maze.



## Resource:

- National Ag in the Classroom Matrix Lesson: Tropism Twist
  - https://agclassroom.org//matrix/lesson/352/