

## Materials

- 2011 calendar print outs (attached)
- Seed packets with planting information: peas, turnips, and lettuce
- First and last frost date information
- Flip chart, markers, and colored pencils

## Preparation

- Calculate the number of students you anticipate working with during this lesson and divide them into manageably sized groups. For each group of students, make one copy of attached 12-month “at-a-glance” calendar sheet.
- Select a date for the late spring salad-making lesson and post it on the board. Students will count back from this date when calculating timing of plantings.

## PROCEDURE

### Introduction:

- “Engage” activity: brainstorm ingredients for a garden salad, classify each as either warm- or cool-season.

### Part 1: Consult seed packets

- Make a list of the lesson’s featured crops on the board. “All of these plants are cool-season crops that grow best in cooler springtime temperatures. We plant these crops at the start of the growing season because they can tolerate variable weather conditions.”
- Record regional first/ last frost dates on the board and explain their importance when planning a garden.
- Split students into groups and assign each group a cool-season garden crop to research.
- Define and explain the following terms: *days until germination* and *days to maturity*
- Pass out seed packets. Have students consult seed packets to collect data on their selected crop, such as when to seed outside (or start indoors), the plant’s requirements for healthy growth, and days to maturity. Have students record their plant’s information on a sheet of paper to reference during the next activity.

### Part 2: Determine timing of plantings

- Distribute calendar print outs and colored pencils to each group. Have students circle and label the first and last frost dates in different colors.
- Next, have students circle and label date of the salad-making lesson. “This is an important date to remember as we plan our garden. We need to time our plantings wisely so that we are around to enjoy our harvest while school is session.”
- Using the information they gathered during the previous activity, have students count back from the salad-making lesson to determine approximate planting date of their featured crop.
- Based on their calculations, have groups decide upon a specific date (or particular week) during which seeds from their selected crop should be started in the classroom or direct-seeded outdoors.
- Have groups share their results with the class. Record the data from each featured crop on a piece of flip chart paper. Review the data and discuss upcoming seed starting dates for the first round of plants.

# Determine Timing of Plantings

## Planning & Design

### ENGAGE

“Imagine that our class has been selected to create the ‘World’s Greatest Garden Salad’. Which fresh garden ingredients should we include in our salad?” As a class, generate a list of ingredients for your ultimate garden salad and record responses on the board. Then, create two new list headings on the board: “Warm-season” and “Cool-season”. Explain the difference between warm- and cool-season crops. As a class, work together to place each salad ingredient into its corresponding category.

### Objectives

- Students will understand the growing preferences of the following cool-season garden crops: peas, turnips, and lettuce
- Students will understand how to use a plant’s “days to maturity” information to calculate seed starting and transplanting dates in preparation for the spring salad-making lesson.

### EXPLAIN

Garden crops are classified as either warm-season or cool-season based on their unique growing preferences.

#### Cool-season crops:

Peas, turnips, and lettuce are all cool-season crops. Cool-season crops are hardy and fairly flexible in their preferences, making them ideal candidates for the first round of spring planting. These plants grow especially well in cooler temperatures and can tolerate the occasional frost or light freeze. They can also be grown in full sun during cooler weather or in partial shade as temperatures begin to warm. Consistently warmer temperatures cause these plants to slow production or “bolt” (go to seed), as is the case with lettuce. Additionally, lettuce tends to turn bitter under warmer growing conditions. Cool-season crops are best harvested in the early morning, when moisture content is at its highest. The result: plump pea pods and crisp leaves of lettuce for your enjoyment!

#### Warm-season crops:

Warm-season crops such as tomatoes, peppers, and cucumbers thrive in consistently warmer temperatures, making them summertime garden staples. Warm-season crops can be severely damaged by frosts or freezes, so it’s important to wait until all danger of frost has passed before seeding or transplanting. These crops require full sun and steadily hot temperatures to bear an abundance of fruit. Warm-season crops are generally planted out in late-spring/early-summer and produce fruit throughout the summer and fall.

### ADDITIONAL CONTENT INTEGRATION *(see previous page)*

Using their calculations, have students label seed starting and expected maturity dates for all featured crops on their calendars. Have students label seed starting dates for each crop in a different color and develop a “key” on separate piece of paper. Compile data from each group and record it in the class’ master garden calendar map. Have students sign up for seed starting responsibilities during selected weeks. .

#### Additional Materials

- Master garden calendar for the class

### EVALUATE

**Journal prompt:** Record three new things that you learned about your featured cool-season crop. For example, what is its preferred temperature range? How much space does it need between plants?