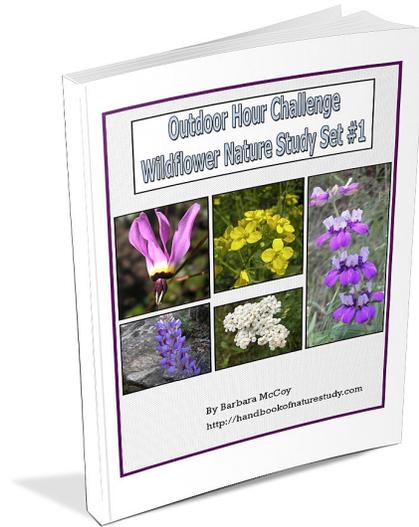


# Outdoor Hour Challenge

## Wildflower Nature Study Set #1

### Sample Challenge



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## Field Mustard and Wild Radish Study

### Brassicaceae or Mustard Family

Pronounced brahs-eh-KA-see-ee

**Patterns of the Mustard Family:** 4 petals in a cross shape, 4 sepals (usually green), 6 stamens (4 tall and 2 shorter), seed pods usually long and slender.

**General information about the mustard family:** There are at least 85 native and/or naturalized genera of the mustard family of plants in North America. Plants of the mustard family are important edibles like broccoli, cabbage, and brussel sprouts. Look up the mustard family of plants in your local field guide and make a short list of those that you think you may observe in real life. Look for the field mustard or the wild radish but also any other mustard family flowers you may come across during your outdoor time.

#### **Inside Preparation:**

- The two wildflowers in this challenge are usually considered weeds and grow along the roadside or in fields. They bloom in early spring and are easy to spot with their colorful blossoms. Look for the mustard and/or wild radish plants in the early spring and on through the summer months.
- Field Mustard (*Brassica rapa*)- Read about this plant. See the range: USDA.
- Wild Mustard (*Sinapis arvensis* )- Read about this plant.
- Wild Radish: (*Raphanus raphanistrum*)- Read about this plant. See the range: USDA.

#### **Outdoor Hour Time:**

##### **Look in fields and along roadsides.**

- The challenge this week is to get outside and look for wildflowers, especially those in the mustard family. If you made a list of plants to be on the lookout for in addition to the mustard or radish, keep those in mind as well.
- Make careful observations using the suggestions in this challenge.

#### **Follow-Up Activity:**

- Create a notebook page for the field mustard and the wild radish plants.
- Start a mustard family notebook page. Keep a running list over time of the flowers you observe and/or study in this plant family.
- Advanced study: Research how the wild radish was introduced and spread across a lot of the western U.S. landscape.
- Advanced study: Printable for field mustard.
- Advanced study: Research and list in your journal the many edibles found in the mustard family.
- Eat something with mustard!

## Suggested Observations

### Flower

- ◆ 4 sepals— color?
- ◆ 4 petals in a cross shape . Note color and shape. Note: If observing a wild radish—look for veins on the flower petals.
- ◆ Note the arrangement of the flowers on the stem. (Inflorescence=raceme)
- ◆ 6 stamens—4 tall and 2 short
- ◆ 1 pistil
- ◆ Do you see buds on your mustard plant?
- ◆ Look for cabbage white and checkered white butterflies feeding on the flower's nectar.

### Leaves and Stem

- ◆ Note the arrangement of the leaves and the leaf margin.
- ◆ Crush the leaves and note the fragrance. If you observe both the mustard and the radish, compare the aroma and try to describe it in your journal. The stem contains a watery juice and the sap often has a strong odor.
- ◆ Measure the height of the stem.

### Seeds

- ◆ Later in the season, look for the distinctive seed pods (radish seed pods are segmented and the mustard are not). The outer sides of the seed pods will split open to reveal the center of the pod and the seeds.
- ◆ Measure the length of seed pods & sketch!

### Things to Draw

Draw the whole flower.

Draw the flower from the side.

Draw one petal.

Draw the stem and the flower arrangement.

Draw the leaf.

Draw a bud.

Draw a seed pod if present.

Dissect the seed pod and draw an individual seed.

