

Growing Wheat in the Classroom

Wheat is an excellent seed for student experiments. It grows rapidly and quickly responds to experimental variables such as changes in light, water and nutrient availability. Wheat typically has a 6 to 8 month growing cycle with heads appearing, in an optimum environment, 3 months after planting. Wheat in California is planted in the fall (October through December) and harvested in late spring/early summer (June through July). The wheat kernels are checked periodically for moisture content and when the moisture level is between 7% and 11%, the wheat is harvested. The time of harvest can depend on the weather and climate of the growing region. In the classroom, if maintained at room temperature, the cycle can be significantly reduced. In the greenhouse in the spring/summer, the mature plants can be produced in 3 months, depending on the variety and temperature maintained.

MATERIALS NEEDED

- Soil – any type but for best results, it must include some nitrogen
- Wheat seeds – obtain wheat berries from health food stores or contact the California Wheat Commission for samples
- Paper cups, 4”- 6” planting pots or an outdoor growing plot
- Fertilizer high in nitrogen (if planning to grow wheat to full maturity)
- Water

SPECIAL NOTES

- For quicker results, you may wish to germinate seeds in a wet paper towel before planting. Germination usually takes six to eight days.
- You may choose to plant wheat in larger containers if you are growing the wheat to maturity. Paper cups have a tendency to tip when the wheat grows tall.
- You may choose to add fertilizer high in nitrogen, twice during the growing season, especially if the plants have minimal soil available to them.
- If growing wheat outdoors, plan to plant it in October through December for harvest in June – July.

PROCEDURE

- 1) Punch small drainage holes in the cups.
- 2) Fill cups about 2/3 full of moist soil leaving at least ½” of space below the lip of the cup.
- 3) Plant 2-3 wheat seeds in a paper cup at a depth of 1 ½”. If you are using 4”-6” pots, plant six to eight seeds in each pot. Place the cups or pots in a pan that will catch drainage water.
- 4) Water as needed to keep the soil moist, but not overly wet. Grow the wheat in a well-lit area (sunlight or artificial grow lights) and keep the wheat at room temperature.
- 5) In approximately 3 months, the properly cared for wheat plants should produce a head (spike). After the head is fully developed, stop watering the wheat and harvest it when the plant becomes dry and the wheat kernels are hard throughout.