

Seed Statistics

A lesson from the New Jersey Agricultural Society Learning Through Gardening Program

Objective: Grades 1-2

- The student will be able to write and solve number sentences showing the number of seeds that germinated compared to the number of duds planted in an egg carton. *(This activity can also be used as a learning center.)*



Objective: Grades 3-5

The student will be able to

- Depending on the grade level, calculate the fractions, ratios, and percentages of seeds that germinated in an egg carton versus seeds that were duds and did not sprout.

Materials:

empty egg cartons for each pair or small group of students – ask your parents to collect them for you at the beginning of the school year

potting soil

Any type of seeds

Note: If you use seeds that are a year or more old, you are more likely to get more duds.

plastic spoons

Procedure:

Explain that a seed “germinates” when it begins to push shoots up from the ground. Tell the students that some seeds, for unknown reasons, are duds and simply do not grow. Tell students that today we are going to do an experiment to see how many seeds germinate and how many seeds grow out of 12 seeds. (Older students can use a larger number or groups can vary the number they plant.) Explain that the time it takes for a seed to germinate can be found on the back of the seed packet.

In pairs or small groups, students use plastic spoons to scoop potting soil into each cup of an egg carton. Student plant just one seed in each cup and water the seeds lightly.

Students observe the growth of their seeds daily and water as needed. After a little more time has passed than the germination time noted on the seed packet, ask the students to take the egg cartons back to their desks and answer these questions:

Grades 1-2

How many seeds germinated?

How many seeds were duds?

How can we show in a number sentence how many seeds germinated?

How can we show in a number sentence how many were duds?

Grades 3-5, depending on grade level

How many seeds germinated?

How many were duds?

What is the fraction that shows how many germinated?

What is the fraction that shows how many were duds?

What is the ratio of germinated seeds to duds?

What percent of seeds germinated?

What percent were duds?

Evaluation: Students will be able to answer the questions asked about the seeds.

Extension:

Compare the germination rate of some new packages of seeds compared to some that have expired according to the date on the package. Do the “expired” seeds germinate? Is the germination rate the same as the new seeds?

Students can let the seedlings grow more in their egg cartons and plant them in the school garden, or students can split the egg cartons so that each partner or group member can take some seeds home.