

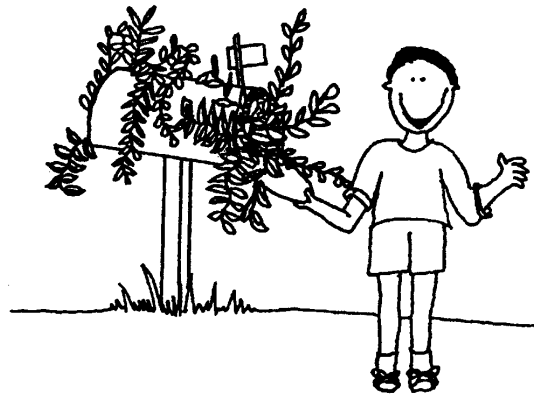
ZIP Code Seeds

Description

Students will choose a variety of seeds to order from catalogues based upon climate and food, and aesthetic preferences.

Objective

To learn to apply knowledge of climate, plant varieties, consumer preferences, and the ability to estimate quantities in compiling seed orders.



Teacher Background

It is less expensive to purchase seeds directly from seed companies, and it is fun for students to look through many beautiful seed catalogues. Order a variety of catalogues to include popular varieties as well as specialty seeds that grow well in your particular climate. Order catalogues from companies selling commercial hybrid seeds as well as open-pollinated seeds. Hybrid seeds have been bred for dominance of certain traits for one season only. The seeds from their mature plants will not reproduce well. Open-pollinated seeds will enable you to develop varieties that grow best in your particular region over successive seasons.

Materials

A variety of seed catalogues for groups of three
One Seed Ordering Chart per group of three, p. 397
Companion Planting Guide, p. 455
List of recommended vegetables and flowers (contact County Agricultural Ext.)

Preparation

Order and obtain catalogues at least six weeks in advance. (See Appendix, Seed Companies, p. 477.) Once you are on the mailing lists, you will automatically get catalogues every year.



How shall we choose what to grow in our garden? What flowers and vegetables grow best here? (Consult the list from Agricultural Extension or develop your own list by comparing your annual rainfall, average temperatures, type of soil, number of frost-free days, and amount of direct sun exposure with the needs recommended on seed catalogues or packets.) What vegetables do you like to eat? Which plants are companions to those we have listed? (See Companion Planting Guide.) Do we want to grow these vegetables also? Why are there so many varieties of one vegetable? How can we tell which will be best to grow in our conditions?

Should we grow seeds for next year's garden? If so, which seeds shall we grow? The ones we choose to grow for seeds must be open-pollinated seeds. Why? What do you think will be the easiest to grow? Fun? Challenging? Which season are we planting for, cold or warm? Do we want a variety of edible root/stem/leaf/flower/fruit/seed plants?



1. Divide the class into groups of three students.
2. Give each group a copy of the Seed Ordering Chart. Instruct them to fill in the specific characteristics with the answers from the class discussion. Using these characteristics, ask each group to go through their catalogue and compile their own list of seeds to grow. Encourage each group to use different criteria, such as variety, cost, open-pollination. (You may want to limit the number of vegetables, flowers, and herbs each group is to select.)
3. As a class, compile one master list of seeds to be ordered and indicate the particular catalogue or company to be used.
4. Ask the students in their small groups to fill out an order blank for their seed company. Obtain a check or money order and mail to the company. You may want to combine your order with another class to get a wholesale price. Allow sufficient time for the seeds to arrive.



Are there any seed companies located near here? Do you think their seeds may be better suited for our garden? Why? How could the class contribute to the development of varieties of vegetables that are especially suited for the region? (by letting the healthiest plant from a nonhybrid seed go to seed, collecting and storing the seeds, planting them next year, repeating this process over time. This is called artificial selection.)



1. Have students make a class collage by cutting pictures out of seed catalogues. Divide the collage by plant parts that you can eat.
 2. See the activity on plant varieties, What's in a Name? (p. 167).
 3. Have students keep a record of planting dates and days to maturity of plants in the garden and compare this information to that listed in the catalogues and seed packages.
 4. Have a speaker who knows about seeds, such as someone from a seed company or a gardener who grows his or her own seeds, come and talk to the class.
 5. Visit a nearby seed company's greenhouses, garden plots, or trial grounds.
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Seed Ordering Chart

ZIP Code Seeds

Catalogue			
Seasons we are ordering for:			
Hybrid or open-pollinated seeds:			
	Name of Seed	Amount	Cost
Grows Best Here			
I Like to Eat			
Best Variety for Our Soil and Climate			
Companion Plants			
Easiest to Grow			
Fun to Grow			
Challenging to Grow			
Edible Root Plant			
Edible Leaf Plant			
Edible Stem Plant			
Edible Flower Plant			
Edible Seed Plant			

Companion Planting Guide

Vegetable	Plant with	Don't plant with
Beans	Potatoes, carrots, cucumbers cauliflower, cabbage, summer savory, most other vegetables and herbs	Onion, garlic, gladiolus
Beans, Bush	Potatoes, cucumbers, corn, celery, summer savory, sunflowers, strawberries	Onions
Beans, Pole	Corn, summer savory	Onions, beets, kohlrabi, sunflower
Beets	Onions, kohlrabi	Pole beans
Cabbage Family (cabbage, cauliflower, kale, kohlrabi, broccoli)	Aromatic plants, potatoes, celery, dill, chamomile, sage, peppermint, rosemary, beets, onions, thyme, lavender	Strawberries, tomatoes, pole beans
Carrots	Peas, leaf lettuce, chives, onions, leek, rosemary, sage, tomatoes	Dill
Celery	Leek, tomatoes, bush beans, cucumbers, pumpkin, squash	
Corn	Potatoes, peas, beans, cucumbers, squash, pumpkin	
Cucumbers	Beans, corn, peas, radishes, sunflowers	Potatoes, aromatic herbs
Eggplant	Beans	
Leek	Onions, celery, carrots	
Lettuce	Carrots and radishes (lettuce, carrots, and radishes make a strong team grown together), strawberries, cucumbers	
Onion/Garlic	Beets, strawberries, tomato, lettuce, summer savory, chamomile, beans (protects against ants)	Peas
Parsley	Tomatoes, asparagus	
Peas	Carrots, turnips, radishes, cucumbers, corn, beans, most vegetables, herbs (adds Nitrogen to soil)	Onions, garlic, gladiolus, potatoes

Herbs	Companions and Effects
Hyssop	Companion to cabbage and grapes; deters cabbage moth; keep away from radishes.
Lamb's Quarters	This edible weed should be allowed to grow in moderate amounts in the garden, especially in the corn.
Lemon Balm	Sprinkle throughout garden.
Marigolds	The workhorse of the pest deterrents; plant throughout garden especially with tomatoes; it discourages Mexican bean beetles, nematodes, and other insects.
Mint	Companion to cabbage and tomatoes; improves health and flavor; deters white cabbage moth.
Marjoram	Plant here and there in garden; improves flavor.
Nasturtium	Companion to tomatoes and cucumbers.
Petunia	Protects beans; beneficial throughout garden.
Purslane	This edible weed makes good ground cover in the corn.
Pigweed	One of the best weeds for pumping nutrients from the subsoil, it is especially beneficial to potatoes, onions, and corn; keep weeds thinned.
Rosemary	Companion to cabbage, bean, carrots, and sage; deters cabbage moth, bean beetles, and carrot fly.
Rue	Keep it far away from sweet basil; plant near roses and raspberries; deters Japanese beetle.
Sage	Plant with rosemary, cabbage, carrots, beans, and peas; keep away from cucumbers; deters cabbage moth and carrot fly.
Summer Savory	Plant with beans and onions, improves growth and flavor; deters bean beetles.
Tansy	Plant under fruit trees; companion to roses and raspberries; deters flying insects, Japanese beetles, striped cucumber beetles, squash bugs, and ants.
Tarragon	Good throughout the garden.
Thyme	Plant here and there in the garden; it deters cabbage worm.
Yarrow	Plant along borders, paths, near aromatic herbs; enhances essential oil production.

Adapted from *Organic Gardening and Farming*, February 1972, pp. 32-33, 54, and *The Encyclopedia of Organic Gardening*, Rodale Press, Inc., 1978, pp. 233-235.

Vegetable	Plant with	Don't plant with
Potato	Beans, corn, cabbage, horseradish (should be planted at corners of patch), marigold, eggplant (as a lure for Colorado potato beetle)	Pumpkin, squash, cucumber, sunflower, tomato, raspberry
Pumpkin	Corn	Potato
Radish	Peas, nasturtium, lettuce, cucumbers	
Soybeans	Grows with anything; helps everything	
Spinach	Strawberries	
Squash	Nasturtium, corn	
Strawberry	Bush beans	
Sunflower	Cucumbers	Potato
Tomatoes	Chives, onion, parsley, asparagus, marigold, nasturtiums, carrots, limas	Kohlrabi, potato, fennel, cabbage
Turnip	Peas	

Herbs	Companions and Effects
Basil	Companion to tomatoes; dislikes rue intensely; improves growth and flavor; repels mosquitos and flies.
Beebalm	Companions to tomatoes; improves growth and flavor.
Borage	Companion to tomatoes, squash, and strawberries; deters tomato worm; improves flavor and growth.
Caraway	Plant here and there; loosens soil.
Catnip	Plant in borders; deters flea beetle.
Chamomile	Companion to cabbages and onions; improves growth and flavor.
Chervil	Radishes; improves growth and flavor.
Chives	Companion to carrots; improves growth and flavor; plant around base of fruit trees to discourage insects climbing trunks.
Dill	Companion to cabbage; dislikes carrots; improves growth and health of cabbage.
Fennel	Plant away from garden; most plants dislike it.
Garlic	Plant near roses and raspberries; deters Japanese beetle; improves growth and health; plant liberally throughout garden to deter pests.
Horseradish	Plant at corners of potato patch to deter potato bug.