

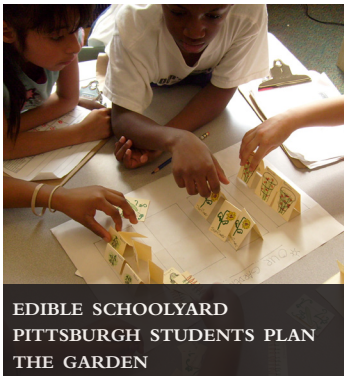


How-To: CROP ROTATION

Crop rotation, the practice of shifting types of crops from one location to another from year to year, benefits the garden in many ways. Learn which families your crops belong to, in order to create a crop rotation that will make your garden healthier over the long term.



THE SHILOH PEACE GARDEN IS PLANTED IN BLOCKS OF CROPS IN THE SAME FAMILY, TO MAKE CROP ROTATION SIMPLE



EDIBLE SCHOOLYARD PITTSBURGH STUDENTS PLAN THE GARDEN

BENEFITS OF ROTATING CROPS

- KEEPS THE SAME NUTRIENTS FROM BEING DEPLETED FROM THE SOIL, YEAR AFTER YEAR
- BREAKS PEST AND DISEASE CYCLES
- CAN INCREASE SOIL FERTILITY, AS SOME CROPS FEED THE SOIL
- BENEFITS SOIL STRUCTURE BY ALTERNATING SHALLOW AND DEEP ROOTED PLANTS

CROP FAMILIES

In order to rotate crops, you'll need to know what plant "family" each crop belongs to. Crops in the same family extract similar nutrients, draw similar pests, and get the same diseases. To rotate crops, group plants together that are in the same family, then move that whole group to a new location the following season. On a small scale, paying attention to plant families can mean simply avoiding placing a crop directly where one in the same family grew the previous year.

Plant families have scientific names that can be hard to remember. It's not important that you remember the scientific name of each family – just keep in mind which crops are grouped together. Here's a list of common garden crops and their crop family names:

- APIACEAE: CARROT, CELERY, CILANTRO, DILL, PARSLEY
- ASTERACEAE: LETTUCE
- BRASSICACEAE: ARUGULA, BROCCOLI, BRUSSELS SPROUTS, CABBAGE, CAULIFLOWER, COLLARDS, KALE, RADISHES
- CHENOPODIACEAE: BEETS, CHARD, SPINACH
- CUCURBITACEAE: CUCUMBERS, SUMMER AND WINTER SQUASH, MELONS
- FABACEAE: BEANS, PEAS
- LILIACEAE: LEEKS, ONIONS, SCALLIONS
- SOLANACEAE: PEPPERS, POTATOES, TOMATOES

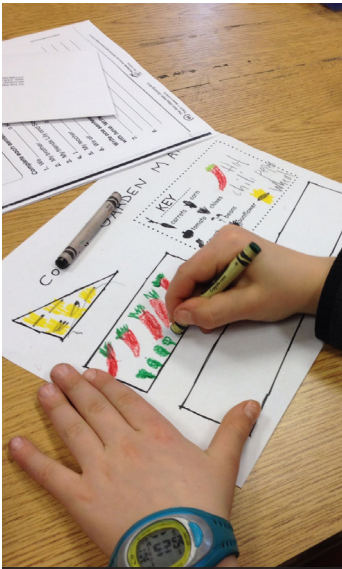
SPECIAL CASES

Small Gardens

A clear crop rotation is easiest to design in gardens with plenty of space to move crops from year to year. In smaller gardens, it can be difficult to keep track of the exact location of previous crops. It can also seem somewhat pointless to attempt to shift crops in a tiny space. For instance, does moving your tomatoes one foot away from where they were last year really benefit the garden in any way? As far as disease and pest problems go, probably not. But planting a crop with a different type of root growth could benefit the soil structure in that spot. No matter what size garden you have, paying attention to what crops have been growing where can benefit the garden as a whole, even if you don't make a formal crop rotation.



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DRAWING A MAP OF THE GARDEN HELPS WITH PLANNING A CROP ROTATION

Perennial Plants

Some crops, like certain herbs and berries, come back year after year in the same place. How do they fit into the rotation? Perennial plants should stay in their spots from year to year. Perennials are a great addition to a garden; their roots break through compacted earth and help keep soil from eroding. Perennial herbs and flowers draw beneficial insects, and interspersed with annuals, they can create an especially healthy diversity of plants. Just rotate crops around them.

Companion Planting

Some gardeners use companion planting as a method for balancing nutrient uptake, pest and disease management, and soil fertility in their gardens. This type of gardening intersperses various crops, focusing on crops that are beneficial “neighbors” to others. Companion planting can be used in place of, or as a compliment to crop rotation.