Savings (for volunteers)

You can go through the scenarios below as a whole group or have half of the group working on the scenario while you show the other half how to seed save.

1. Saving seeds saves you money! If you wanted to plant 5 different plants and each seed packet costs $1.50, how much would you have to pay to buy those seeds? (*$7.50*) What if you wanted to plant 10 different things? *($15*) But if you decided to collect those seeds from your garden, how much money would you save? *($15)*

2. It's springtime and you're about to start your year's garden. You've decided to plant the things below. Look through the seed catalogues and figure out how much you will have to spend if you buy one packet of each. How much would you save by collecting those seeds yourself?

Lettuce	Spinach	Radish	Carrot	Sunflower
Artichoke	Tomato	Pepper	Broccoli	Beans

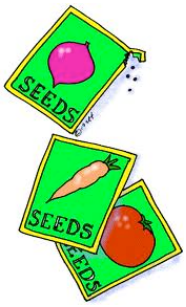
Genetic Diversity (for volunteers)

You can go through the scenarios below as a whole group or have half of the group working on the scenario while you show the other half how to seed save.

1. For each type of crop, there are many varieties.
What is a variety? (*It's a type of a plant. For example, dogs are all dogs. But there are many breeds or types of dogs. A variety of a plant is like a breed of dog.)* Look in a seed catalogue. How many different varieties of beans do you see? Why would it be good to have lots of different types of one crop? (*Because that way if a disease comes that kills all of one type of bean, you will still have other types of beans to eat. In the 1800's people in Ireland grew just one type of potato. When potato blight destroyed their crop, almost 1 million people died of starvation.)*

2. Around the world there used to be many different varieties of the same crops. Why do you think there were so many? (*Because the environmental conditions all over the world are very different. People have created, sometimes on purpose, sometimes accidentally, different varieties of plants that will grow well where they are. Also, you can do different things with different types of plants, like popcorn or sweet corn.)*
It's estimated that in recent years, we have lost about 75% of the world's crop varieties. This means that meaning that now we have fewer choices about what varieties of crops we can grow. Why do you think this might have happened? (*There are a few large companies that grow most of the world's seeds. It's cheaper and easier for them to only grow a few varieties of plants.)* What are some reasons why it would be a good idea to grow lots of different varieties of plants? (*To avoid situations like the Irish potato famine and to be able to grow plants that are well adapted for our own climate.)*
When you save seed you help to keep different plant varieties alive, and are creating new ones!

Better Adapted Plants (for volunteers)



You can go through the scenarios below as a whole group or have half of the group working on the scenario while you show the other half how to seed save.

1. Plants take after their parents, just like we do! If you have a plant that's growing well in your garden, it's a good bet the new plants from its seeds will likely grow in your garden too. Seeds from plants grown far away might not like the conditions in your garden as much. Look at these seed packets. Where are these seeds from? Do you think they will grow well in your garden?

2. What do plants need to grow? (*water, nutrients, sunlight)*

Plants are specially adapted to be able to survive in the environment they live in. Look at these two environments. What is different about them? Which one is closer to our climate here? Which of these lettuce plants would we want to take seeds from to grow in our garden? (*The one that's used to conditions that are more like what we have here. The other one, not being adapted for our environment will probably not grow well here.)*

When you buy seeds from stores or catalogues, you don't always know where those seeds came from. But you know that seeds from your own garden will grow well here because they're adapted to this environment.

Seed Saving Challenges (for volunteers)

You can go through the scenarios below as a whole group or have half of the group working on the scenario while you show the other half how to seed save.

1. Seed saving is really pretty easy but there are some things that might make it difficult. Make a list of all of the challenges you can think of to seed saving.
-The plants have to stay in the ground longer than usual so you have less space in your garden.
-For many plants, saving the seed means that you don't get to eat all or some of the plant.
-You have to time it right. If you don't get the seeds soon enough before the rains start in the fall, they can rot.
How can we avoid these problems.
-Once plants are starting to flower and seed, they don't need much water. You can transplant them into another spot until they seed or you can have one bed in your garden just for plants you want to save seed from.
-You can plant more than you want to eat, then just pick one of the best plants to leave for seeds
-If it's starting to rain, you can cut the stalks and leave them to dry inside.

2. There are three main types of seeds: Open pollinated (OP), Hybrid (F1) and Heirloom. Look in the seed catalogues. See if you can find one of each of these types of plants. Why would you want to know about this for seed saving? *Because when you save seed from hybrids you have no idea what you're going to get. OP's are more likely to turn out like their parents, but not always. Heirlooms have been known to breed true for generations and are the easiest to save.*
Which garden plants do you think are most likely to breed "true" (turn out like their parents)? (*breed true- tomatoes, beans, peas, lettuce, peppers, spinach; don't- squash, corn, brassicas- broccoli, kale, cabbage, kohlrabi)* Which of these three types do you think we should grow in our garden? *Heirlooms are easy to save seed from and are known to be tasty, so that's a good bet. But hybrids are often bred to produce more and can be fun and interesting new plants.*

Savings

1. Saving seeds saves you money! If you wanted to plant 5 different plants and each seed packet costs $1.50, how much would you have to pay to buy those seeds? What if you wanted to plant 10 different things? But if you decided to collect those seeds from your garden, how much money would you save?

Savings

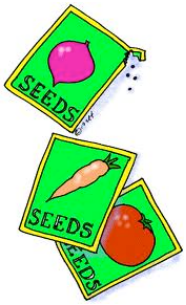
2. It's springtime and you're about to start your year's garden. You've decided to plant the things below. Look through the seed catalogues and figure out how much you will have to spend if you buy one packet of each. How much would you save by collecting those seeds yourself?

Lettuce	Spinach	Radish	Carrot	Sunflower
Artichoke	Tomato	Pepper	Broccoli	Beans

Genetic Diversity

1. For each type of crop, there are many varieties. What is a variety?
   Look in a seed catalogue:
   How many different varieties of beans do you see?
   Why would it be good to have lots of different types of one crop?
   Saving seeds is a way that you can help keep different varieties of plants alive.

Better Adapted Plants

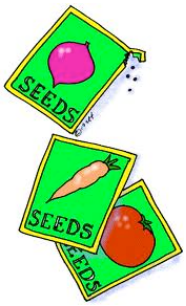


2. What do plants need to grow?

Plants are specially adapted to be able to survive in the environment they live in. Look at these two environments. What is different about them? Which one is closer to our climate here? Which of these lettuce plants would we want to take seeds from to grow in our garden?

When you buy seeds from stores or catalogues, you don't always know where those seeds came from. But you know that seeds from your own garden will grow well here because they're adapted to this environment.

Better Adapted Plants



1. Plants take after their parents, just like we do! If you have a plant that's growing well in your garden, it's a good bet that its seeds will likely grow in your garden too. Seeds from plants grown far away might not like the conditions in your garden as much. Look at these seed packets. Where are these seeds from? Do you think they will grow well in your garden?

Genetic Diversity

2. Around the world there used to be many different varieties of the same crops. Why do you think there were so many?
    - It's estimated that in recent years, we have lost about 75% of the world's crop varieties. This means that now we have fewer choices about what varieties of crops we can grow. Why do you think this might have happened?
    - What are some reasons why it would be a good idea to grow lots of different varieties of plants?
    - When you save seed you help to keep different plant varieties alive, and are creating new ones!

Seed Saving Challenges

1. Seed saving is really pretty easy but there are some things that might make it difficult. Make a list of all of the challenges you can think of to seed saving.

How can we avoid these problems?

Seed Saving Challenges

2. There are three main types of seeds:
   Open pollinated (OP)- Plants that are pollinated and can make new seeds without human help.
   Hybrid (F1)- Plants that were pollinated and created by humans. Their seeds will turn into something very different than their parent.
   Heirloom- Open pollinated plants that have been grown for many generations and are known to breed "true".

Can you find one of each of these types in the seed catalogues?
Why would you want to know about this for seed saving?
Which garden plants do you think are most likely to breed "true" (turn out like their parents)? Hint- Plants with smaller flowers breed "true" more often. Plants with larger, open flowers and those that are wind pollinated are less likely to breed "true".
Which of these three types do you think we should grow in our garden?

Squash, Pumpkin

Need: knife, spoons for scooping, water and strainer for cleaning seed, plate to lay out seeds to dry

To Save: Cut the squash open yourself. Let the students scoop out seeds into the strainer, making sure that everyone gets a turn. Then wash the seeds with water to get all the goop off them. Lastly, put them out onto a plate to dry.

Hint: These plants do not self-pollinate. That means that whatever seeds you save are going to be a cross of whatever squash you happened to have in your garden or your neighbors had in their garden. These aren't the best seeds to save because you never know what you're going to get.

Tomatoes

Need: glass jar for the tomato seeds, already fermented seeds (must be done at least 2-7 days in advance), spoon, water and strainer, small knife, plate

To Save*:* Cut the bottom of really ripe but not moldy tomatoes and squeeze them into the jar. (Or you can just squeeze them but cutting them first will cut down on tomato guts squirting everyone's clothes.) Let each student squeeze one or two cherry tomatoes into a jar. Close up that jar and then turn to the already fermented seeds. Let a student scoop out the fermented/moldy top. Then dump the rest of the seeds in a small strainer and rinse. Lastly, put the seeds, as flat as possible, on a plate to dry.

Hint: Tomato seeds germinate better if they ferment first. This mirrors the natural process of dispersal where they would be eaten by an animal and then pooped out in a new place. By putting them in a jar in a warm place and letting the seeds ferment, we mirror an acidic stomach. The seeds that float to the surface in the mold that forms are bad, which is why we remove them. The seeds that stay at the bottom of the jar have a much better chance of germination. The fermenting process usually takes from 2 days to a week.

Greens and Flowers

Need: a paper bag to put them in, plate, (for artichokes, you may need clippers to take off the heads and gloves so students can beat or pick out the seeds)

To Save: Spinach, mustard, chard, lettuce and most flowers (including artichokes) are really easy to save. You just have to wait until the seeds are brown and dry. Then pull the seeds off the stalk and put them in a bag to save them. Once you have a good bag full, have the students put some seeds out on a plate and either pick out the bits of stalks or gently blow them away.

Hint: If rain is threatening, you can also cut seed stalks that are mostly, but not quite dry, and hang them up or put them in a warm place (window seal or the dash of a car) to dry completely.

Beans and Peas

Need: a paper bag to put them in

To Save: Beans and Peas are very easy to save. Find the pods that are dry and pick them first. Then you can bring all the pods over to an area, have the students sit down and break open the pods. The individual seeds can go in the paper bag but if they aren't completely hard and dry you'll need to put them somewhere they can dry before storing them.

Hint: The seeds won't last long if it starts to rain. At that point you'll want to pull up the plants and hang them to dry. You can do this by tying them to a length of string. Or you can string the individual pods with a large needle.

Sunflowers

Need: clippers, wire mesh, bags to store seeds, jar with water and salt if desired

To Save: Be sure to show the students that the yellow flowers are not seeds. They need to pull those off. The seeds are underneath. The easiest thing to do is to have the students clip off the heads that are dry then sit down somewhere and start either picking through the heads or rubbing them against a wire screen. Then they should pick out just the seeds and put them in a paper bag. The seeds will probably still need to be put somewhere to dry out completely.

Hint: If you want to let them eat toasted seeds, put half of the seeds they collect into a jar with salt water to soak.

Peppers

Need: a paper bag to store them in, knife, plate to dry them on

To Save: Cut the peppers in half and let the students pick out the seeds and lay them on a plate to dry.

Hint: Be careful if you're working with hot peppers. Make sure that the students all wash their hands really well with soap after saving the seeds.