

# DON'T TOSS IT —GROW IT!



## Transform vegetable scraps into thriving plants

### What you'll need:

- Vegetable scraps, such as lettuce, bok choy, celery, scallions, root vegetables, herbs or potatoes
- Containers, such as recycled food containers, glass jars or cups
- Toothpicks
- Water

### Create:

1. Follow Step 1 in the chart below to separate the different parts of each scrap depending on the type of vegetable.
2. Follow Step 2 in the chart below to place the different parts of each scrap in various containers with water.
3. Place all of your containers near a window where they will get lots of sunshine.
4. Leave your containers in the window for about three weeks, and be sure to keep an eye on the water. Add more water when needed, and change the water if it becomes cloudy or green.
5. Observe the food scraps to see what happens. Consider drawing your observations in a notebook to keep track of the changes!


Type of Vegetable	Step 1	Step 2
<b>Lettuce, Bok Choy and other Leafy Greens</b>	Remove the leaves from the head, leaving a few centimetres of leaf still attached.	Place the leaves in one container with water, stem-side down. Place the head in a shallow dish, bottom-side down.
<b>Celery</b>	Remove the stalks from the head, leaving a few centimetres of stalk still attached.	Place a stalk in a tall container. Place the head in a shallow container, bottom-side down.
<b>Scallions</b>	Remove the white part of the scallion from the green part.	Place a white piece in a tall container, root-side down. Place a green piece in another container with the end you cut facing down.
<b>Root Vegetables (e.g., Carrots, Beets, Turnips or Radishes)</b>	Remove the top of the vegetable. If there are still leaves attached, cut them off, leaving a few centimetres of stem still attached.	Place the top of each vegetable in a shallow container. Stick three toothpicks through the sides of the root and balance it in a tall container, root-tip down.
<b>Herbs (e.g., Basil or Mint)</b>	Cut off the bottoms of the stems and remove any leaves that are close to where you've cut.	Place each piece in a container, stem-side down.
<b>Potatoes</b>	Cut into small pieces. Make sure some pieces have bumps and others don't.	Put the pieces together in one dry container. No water is needed.



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### Play:

Check on your vegetable scraps once a day to observe how they have changed. Keep an eye out for new leaves sprouting or tiny white roots growing into the water. If you have a magnifying glass, use it to take a closer look. Are your vegetables growing? Consider recording your observations in a notebook to keep track of the changes. Don't forget to draw pictures!

 Just like you, vegetables need water to stay hydrated, so make sure there is always fresh water in your containers. After about three weeks, your food scraps should have grown into edible vegetables! What will you do with your new veggies? Can you create a new dish using the food you've grown?

What other vegetable scraps can you experiment with? Save some new scraps from the green bin and start the process over to see what happens!



### Learn:

Unlike animals, plants can grow throughout their lives. As long as they have the right amount of water, sunshine and nutrients, they can continue to make new roots, stems and leaves.

Plants have special **meristematic cells** that grow into different types of plant tissues. Some meristematic cells tell the plant to make stems and leaves, some tell it to make new roots, some tell it to grow its stems outward—and some even do all three!

These cells aren't found in every part of the plant. Instead, they're located in small areas at the tips of the plant's stem and roots. The location of each cell determines which part of the plant it will become. For example, when you placed the bottom of a head of lettuce or celery in water, the cells located there told the plant to grow new roots. And when you placed the top of a root vegetable in water, those cells told the plant to grow new leaves!

Your vegetable scraps can't grow forever, though. Eventually, they will run out of essential nutrients usually found in soil, like nitrogen, phosphorus and potassium.

Want to keep growing your plants? Remove the vegetable scraps that have sprouted roots and plant them in soil!

