

THE CHALLENGE:



Did you know you could grow a garden without soil? This is called hydroponics. Growing plants hydroponically helps gardeners and farmers grow more food faster, in any season, and in smaller places, like your home.

Your challenge is to use the stem of lettuce or green onion and water to replenish your supply.

~Create, Test, Improve.

~STEAM TEAM

Learning Activities

Language Arts:

**Journaling is a great way to help keep your drawings and other observations in one place and to be able to ask questions about what you have found. Watch a video on being a Field Scientist [here](#).

In your journal, draw and label your plant each day. Remember to look for any changes you may see.

Listen to [The Tiny Seed](#) by Eric Carle [HERE](#)



Numeracy:

Find three different sized drinking glasses at your home. Predict which glass will hold the most amount of water and which holds the least amount of water and then test your predictions.



Science/Social Studies:

Plants need four basic things to help them survive. Does your plant have all it needs to grow? Click [here](#) to find out.

Take a walk around your neighborhood and count the signs of Spring.



The Arts:

The parts of a plant include root, stem, leaf, and flower. Create and label the parts of a plant using recyclables found at home.



Trivia

Name three vegetables that grow under soil.

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Your challenge is to germinate seeds using paper towel, water, and a baggie. (Examples seeds: Tomato, pepper, squash, chia, bean, lentil)

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Language Arts:

**Journaling is a great way to help keep your drawings and other observations in one place and to be able to ask questions about what you have found. Watch a quick video on being a Field Scientist [here](#).

In your journal, create a table with headings labelled observations, measurements, and pictures/drawings. Each day record data under each heading. Don't forget to write the date to help keep track of the growth of your seed.

Numeracy:

If one bee helps pollinate 10 plants or flowers in one minute, how many plants or flowers could the bee possibly help reproduce in one hour?

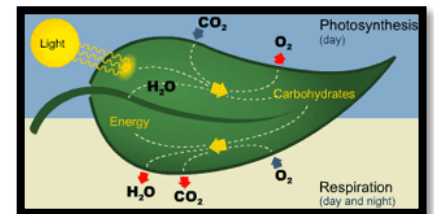


Use repeated addition to help you or build on a known multiplication fact.

Science/Social Studies:

The process of photosynthesis is how plants survive and thrive in the world. Explain the four needs of plants to survive.

Click [HERE](#)



The Arts:

Create an image using different kinds of seeds, pasta, rice, or beans.

Example [HERE](#)



What is New Brunswick's provincial flower?

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Did you know you could grow a garden without soil? This is called hydroponics. Growing plants hydroponically helps gardeners and farmers grow more food faster, in any season, and in smaller places, like your home.

Your challenge is to grow something in a mason jar or plastic bottle without soil.

A few ideas can be found below but be creative and crafty if you don't have the exact materials!

[2L Bottle Garden](#)
[Kratky Lettuce](#)
[Hydroponics](#)

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Learning Activities

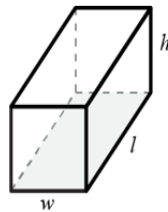
Language Arts:

**Journaling is a great way to help keep your observations and data in one place. It also helps you when asking questions and coming up with solutions and conclusions. Check out this resource for some help with journaling. [How to Keep a Science Journal](#)

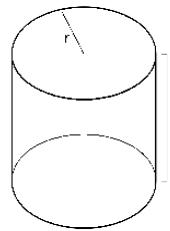
In your journal, create a day-by-day diary from the perspective of your plant during its life in your home. Don't forget to mention its five senses. What it hears, feels, smells, tastes and sees will keep it interesting and could add comic relief. Will your plant hear about this pandemic? Check out NASA's [Diary of a Zucchini](#) and aerponics from 2012.

Numeracy:

Find the volume of water your container holds for your hydroponics activity. Record in your journal.



$$V = (l) \times (w) \times (h)$$



$$V = \pi r^2 h$$

* $\pi = 3.14$

Science/Social Studies:

Community gardens are popping up everywhere. What positive impacts could this have on different communities? Your community? The healthcare system?

Check out the link below to help answer those questions in your journal and generate new ideas.

[How an Urban Farm in Philadelphia is Transforming Lives.](#)

#SDGs #zerohunger @connectSDGs

The Arts:

Use different kinds of seeds, beans, rice, or pasta to create a mandala.



Trivia

What is the purpose of chlorophyll in plants?

