



Foods of the Month
Fun, Experiential Activities

Cruciferous Vegetables

Grades 3-5



www.nrpa.org/CommitToHealth

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Budding Broccoli - life-cycle of a broccoli plant

LESSON ACTIVITY PLANS Age group: 5 - 11 years

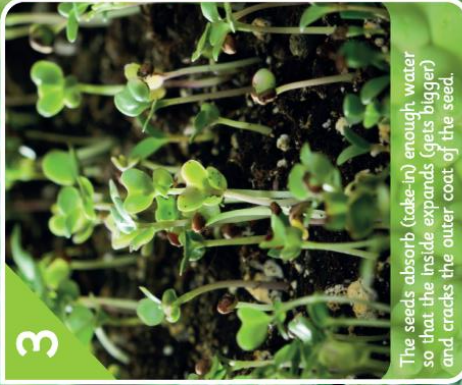
tesco.com/healthypproject



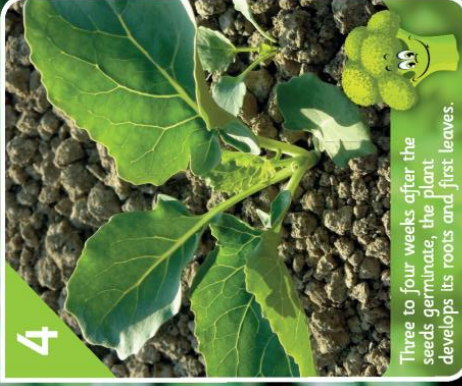
1 Broccoli seeds take one to two weeks to germinate (start to grow), and for this to happen they need water, oxygen and heat.



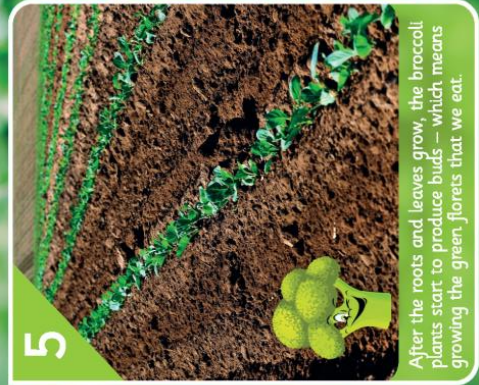
2 The seeds need to be placed quite close to the surface of the soil so that they can "breathe".



3 The seeds absorb (take-in) enough water so that the inside expands (gets bigger) and cracks the outer coat of the seed.



4 Three to four weeks after the seeds germinate, the plant develops its roots and first leaves.



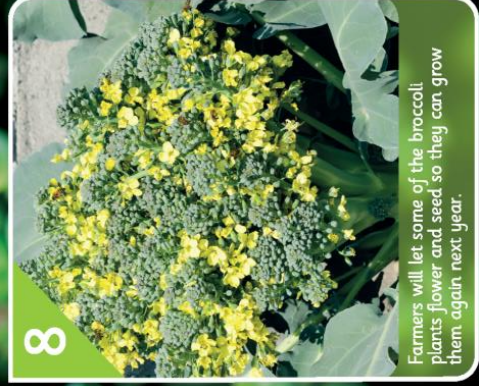
5 After the roots and leaves grow, the broccoli plants start to produce buds - which means growing the green florets that we eat.



6 50-65 days after the seeds have been planted, the broccoli plants are nearly fully developed and will soon be ready to be harvested (picked).



7 It is important to harvest them before the buds have started to turn yellow and begun to flower.



8 Farmers will let some of the broccoli plants flower and seed so they can grow them again next year.

Brussels Sprouts Stamped Snowman

Materials Needed:

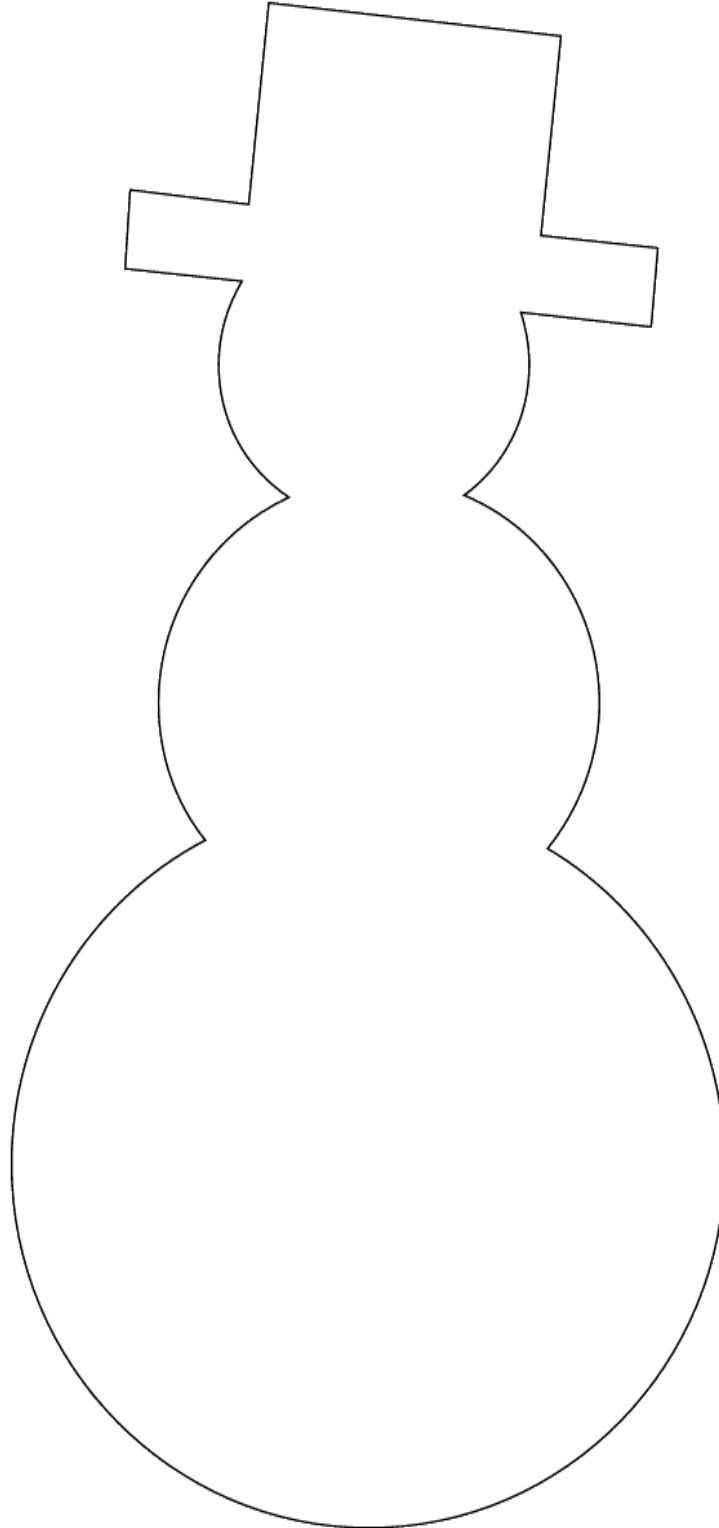
- snowman template
- Brussels Sprouts
- knife (for adult use only)
- colored cardstock or construction paper
- white paint (black also if want to stamp the hat of snowman)
- small paper plate
- small googly eyes & other decorations for snowman
- tacky glue
- scissors
- crayons or markers



Directions:

1. Print snowman template
2. Trace snowman onto colored paper
3. Cut the tip off of your Brussels Sprout (adult only). Pour a small amount of white paint onto your small paper plate and rub your Brussels Sprout around in it coating the bottom of it completely. (Note: Try not to over-saturate the Brussels Sprout, you only need a small amount on it to get the fun texture.)
4. Press your Brussels Sprout onto the snowman's body (not the hat), and continue stamping it until it is covered. Add more paint to your plate during stamping as needed.
5. Once the snowman is dry, color the hat with crayons or markers or stamp it with black paint.
6. After hat is dry, cut out the snowman and add eyes, nose, mouth, buttons, etc.

Adapted from: <http://iheartcraftythings.com/brussels-sprouts-stamped-bunny-craft.html>



How Cabbage Absorbs Water

Supplies:

- Cabbage leaves – Wombok (chinese cabbage) shown here
- Food coloring
- Water
- Large clear jars or drinking glasses

Directions:

1. First add some water to each jar.
2. Then add a different colored food dye to each jar. Use about 10 drops per jar to make sure the water is nice and vibrant!
3. Next add a separate cabbage leaf to each jar/glass.
4. Leave your cabbage over night to achieve the full effect of this experiment.
5. Notice how the color traveled up into the leaves. This is how a cabbage plant absorbs its water and nutrients!



Adapted from: <http://pagingfunmums.com/2013/07/09/fun-science-experiment-learning-how-plants-absorb-water/>



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Legumes

Grades 3-5



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Bean Mosaic

Materials:

- glue
- paintbrushes
- cardboard or any sturdy backing
- dried beans (kidney, black beans, peas, lentils, etc.) of different colors and sizes
- pencils
- crayons



Directions:

1. Draw a simple shape or figure on the cardboard. Keep the details down to a minimum. Simple is good for this project OR
2. Print the winter penguin template on page 2, cut it out and glue to cardboard.
3. Students can “pre-color” the picture (or parts of it) with crayons, using colors similar to the beans they will use for each area of the picture.
4. Paint glue in a small portion of the design. Note: Do not use too much glue if your cardboard is not sturdy. It will curl.
5. Place beans in the portion with glue.
6. Repeat for the entire picture.
7. The result is quite beautiful and the students will have a piece of art they are proud to display.

Adapted from: <http://www.kinderart.com/sculpture/beanmosaic.shtml>



Bean Shekere

Have you ever seen a shekere from Africa? It is a beautiful musical instrument made from a dried gourd that is shaken, tossed or moved from hand to hand creating wonderful rhythms and songs. Here is a simplified version of this musical craft that uses recycled milk jugs and dried beans. You will have an instrument that is fun to play along with African songs or any uptempo music.

Materials:

- Plastic milk jug, (rinsed out, with lid)
- Stickers (such as paper reinforcements or the little round stickers used to price items at garage sales).
- Permanent marker, if you wish to draw string patterns on the plastic jugs
- Colorful yarn or string for handle
- Filling for the shekere – different sized dried beans
- Electrical tape – for sealing the instrument and keeping the contents inside

Directions:

1. First, wash and clean your milk jug and keep the lid or cap. If you are working with many children, you may wish to put each child's name on their milk jug for identification. Next, allow your students to do their beading, either free form by applying stickers anywhere on the milk jug or you can draw string patterns for them to show where a bead or sticker would go.
2. Once your shekere is "beaded", add the filling.
3. Seal the instrument with sturdy electrical tape by wrapping it around the lid and the top section of the plastic jug. This way the contents are secure inside, especially if working with younger children. If you can find colorful electrical tape, it adds a nice design element.



A HANDLE FOR YOUR SHEKERE : If you like, add colorful yarn or pipe cleaners to create a handle for your milk jug shekere.

Playing the Shekere

- The shekere can be played like a rattle, simply shaking it around.
- It can also be held in one hand and then tapped on the other hand, like you might play a tambourine.
- It can be tossed gently from one hand to the other. It can be played by tossing gently from one person to another and works well in a circle.
- Some players “burp” their shekere. They hold it in one hand and tap the bottom with the other hand. On gourds, this creates not only a rattling but an “ah” sound. If you try this with your milk jug shekere, you’ll get a rattle and a tap, a nice percussive effect.
- What other sounds can your sticker shekere make? Explore it and find out.

Adapted from: <http://www.kinderart.com/across/stickershakere.shtml>

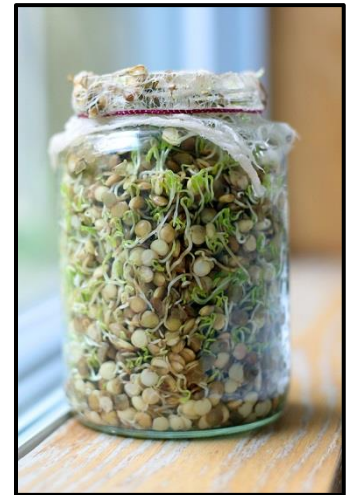
Grow Lentil Sprouts

A garden in a jar can give you crisp lentil sprouts for your hamburger or salad in 4 to 5 days.

Materials:

- Quart jar with a wide mouth
- A square of cheesecloth
- A rubber band
- A quarter cup of lentils

1. Wash quarter cup of lentils in a colander or strainer. Put in a washed wide mouth quart jar. Add 2 cups of lukewarm water. Fasten the cheesecloth over the top with a rubber band. Let stand overnight.
2. Drain off water. Turn jar upside down until all the water is drained out.
3. Hold jar on its side. Shake it so that the lentils are scattered along one side of the jar. Lay the jar (on its side) in a dark place like a cupboard or closet. This will give you light-colored sprouts. If you put the jar in a warm and light (but not sunny) spot, the sprouts will grow little green leaves.
4. Each morning put the jar under the sink faucet and let lukewarm water run into it. Leave the cloth cover on. Stand the jar upside down until every bit of the water is drained out. Shake so that the sprouting lentils lie along one side. Return to the spot you have selected.
5. Watch it! Every day your little garden will look different. In about 4 days, the sprouts will be about 1 or 1 1/4 inches long and will nearly fill the jar. If you want the sprouts to have little green leaves, put the jar in a sunny window.
6. Take off the cheesecloth. Put on the jar's cap. Keep in the refrigerator. The sprouts taste best when they are eaten within a week.



With the leftover lentils, you can make more sprouts or help your parents make tasty chili.

Adapted from: <http://www.cookingwithpulses.org/activities.html>

Photo Source: <http://honestfare.com/wp-content/uploads/2011/02/sprouted-lentils.jpg>

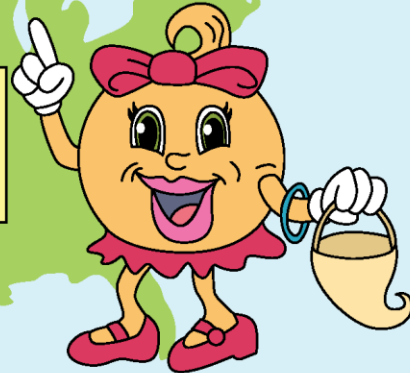
Around the World

#1

Montana

North
Dakota

We Are # 1 - Did you know Montana and North Dakota farmers are the top producers of peas and lentils in the United States. They grow over **80%** of all pulse crops grown in the entire U.S.!
That would make a lot of soup!



UNITED STATES

SPAIN

INDIA

CHINA

EXPORTS

World Travelers – They travel the world, pea by pea – lentil by lentil.
Did you know: India and China are major importers of Montana and North Dakota peas, whereas India and Spain are major importers of Montana and North Dakota lentils.

6

Source:

<http://www.cookingwithpulses.org/uploads/5/6/0/0/56009909/2011-childrens-activity-book-final-proof.pdf>