

# Winter Growing

Students at Jefferson Elementary in New Ulm, Minnesota, wanted to grow carrots to eat in the spring. But if they waited to plant until the ground was not frozen, the carrots would not be ready until July or August.

So they came up with ideas to grow crops like carrots in the winter. The students learned that they would have to:

- Use soil that was not frozen.
- Trap sunlight to give warmth to the plant.
- Protect the plant from the wind.

They made special winter growing jugs. They planted seeds in the jugs. Then they watched how the seeds grew in the cold months.



## What Would You Do?

Would you like to try growing vegetables in the winter? Look at what the New Ulm students learned. How could you plant winter seeds? What would you need? How would it work? Discuss with your classmates. Come up with several ideas.

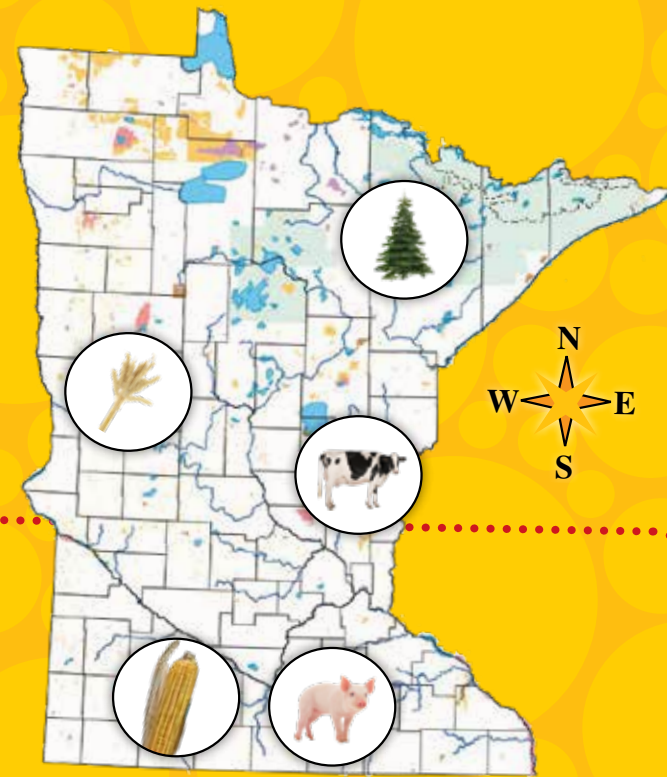
## Seed Packet Math

Look at this seed packet. It tells you many things about seeds. One thing it tells is how long it takes to grow once planted. If you planted the seeds on March 1, when would the carrots be ready to eat? What if you planted on May 7?



# Minnesota

Minnesota is a great place for agriculture. But not all things grow everywhere in Minnesota. Weather and soil are different across the state. That is why there are different things grown across the state.



## Color the Direction

Where in Minnesota will you find lots of:

wheat		east	west
cows		east	west
pigs		north	south
corn		north	south
trees		north	south

## Map It!

1. Put a dot ● where you live.
2. What agriculture plants and animals grow in your part of Minnesota?
3. Where is Minnesota weather the...

coldest		north	south
warmest		north	south

### Joke?

Q: What do you get when you cross a robot and a tractor?

A: A transfarmer!

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# AgMag 2

Agriculture: Helping you every day!

Fall • Grade 2



## Agriculture is Everywhere!

Your day may have started with agriculture! Think about waking up this morning. Your bedding and pajamas probably had fibers from cotton plants. Here are some other things that come from agriculture:

- Soap is made from fat from cattle and oil from plants such as palm, corn, and soybeans.
- Cereal, eggs, milk, bacon, pancakes, buttered toast, and juice are all from agriculture!
- Paper for lunch bags and notebooks comes from another agricultural crop—trees.
- Tires on your bus, car, or bike can be made from plants and animal fat.

Agriculture brings us almost everything we eat, wear, or use each day.



Find teacher guide and student resources at [www.mnagmag.org](http://www.mnagmag.org)



# Plant Power

Plants are an important part of agriculture.



## How do we use plants?

Look at each plant. Then draw a line from the plant to the product it makes.



Strawberries



Cotton



Flowers



Trees



Aloe

Decoration



Buildings, Paper, Pencils



Health and Wellness Products



Food



Clothing



## Why are plants important?

They provide needed nutrition for humans and animals.  
They are important for the air we breathe.  
They can help nourish soil and prevent erosion.  
They are used for shelter by animals.

# Plants Have Many Parts

Every part of a plant is important. Each part helps the plant grow and become food for people and animals.



Fruit



Seeds



Stems



Leaves



Flowers



Roots



## Which Plant Part Does What?

Can you guess what each plant part (above) does?

1. These move water from the roots up to the other parts of the plant.

2. These hold the plant in the soil and help bring in nutrients.

3. These can be used to grow new plants.

4. These hold and protect the seeds.

5. These are the parts of the plant bees look for so they can help seeds form.

6. These help the plant collect sunlight so it can make food.

# What Plants Need to Grow

Plants help many things grow—including us! What do plants need to grow?



## Air

Humans need air to breathe. But plants need air too! Plants take carbon dioxide out of the air. The plants use the carbon dioxide to make sugars and starches that the plant uses as food.



## Light

Plants use energy from sunlight to help them make sugars and starches. These sugars and starches are used by the plant to grow and be healthy.



## Water

Have you ever seen a plant that wilted? It probably needed water. Like humans, plants need water to grow and be healthy.

## Plant Challenge!

How much air, light, and water is needed for plants to grow? How could you test this out?

## Carbon Dioxide

Carbon dioxide is a gas that is found in the air and in the ocean. When there is too much of it, it is bad for humans. But carbon dioxide is good for plants. Plants take it in and turn it into oxygen. Oxygen is good for humans. Plants and people work together!

