



Stage 1 - Becoming a Plant Expert

Learning Objectives



- Discuss where food comes from.
- Explore the many roles of plants in our lives.
- Identify and describe the major parts of plants, including root, stem, flower, stamen, pistil, leaf, seed, and fruit, and each one's contribution to the plant's survival.



Wonder Wall



- What would you like to know about your food and where it comes from?
- Write your questions down and add them to our Wonder Wall.
- We will find the answers to your questions during this project.



One is Different

Look at these photos.

Talk with your partner about which one is different from the others. Why?

There are many possible answers.



Where Does Our Food Come From?



- Let's learn about grains! They are a special type of plant used as ingredients in many foods.
- Oats are a kind of grain. Farmers plant oat seeds in soil and once the plants are grown, they harvest them with a large machine called a combine harvester.
- Can you think of other foods that are made from oats?





Your Challenge!

Ontario children need an exciting, innovative new snack option. In this project, you will design a brand-new granola bar to fuel our bodies for learning!

We will learn how to set up a granola bar business.

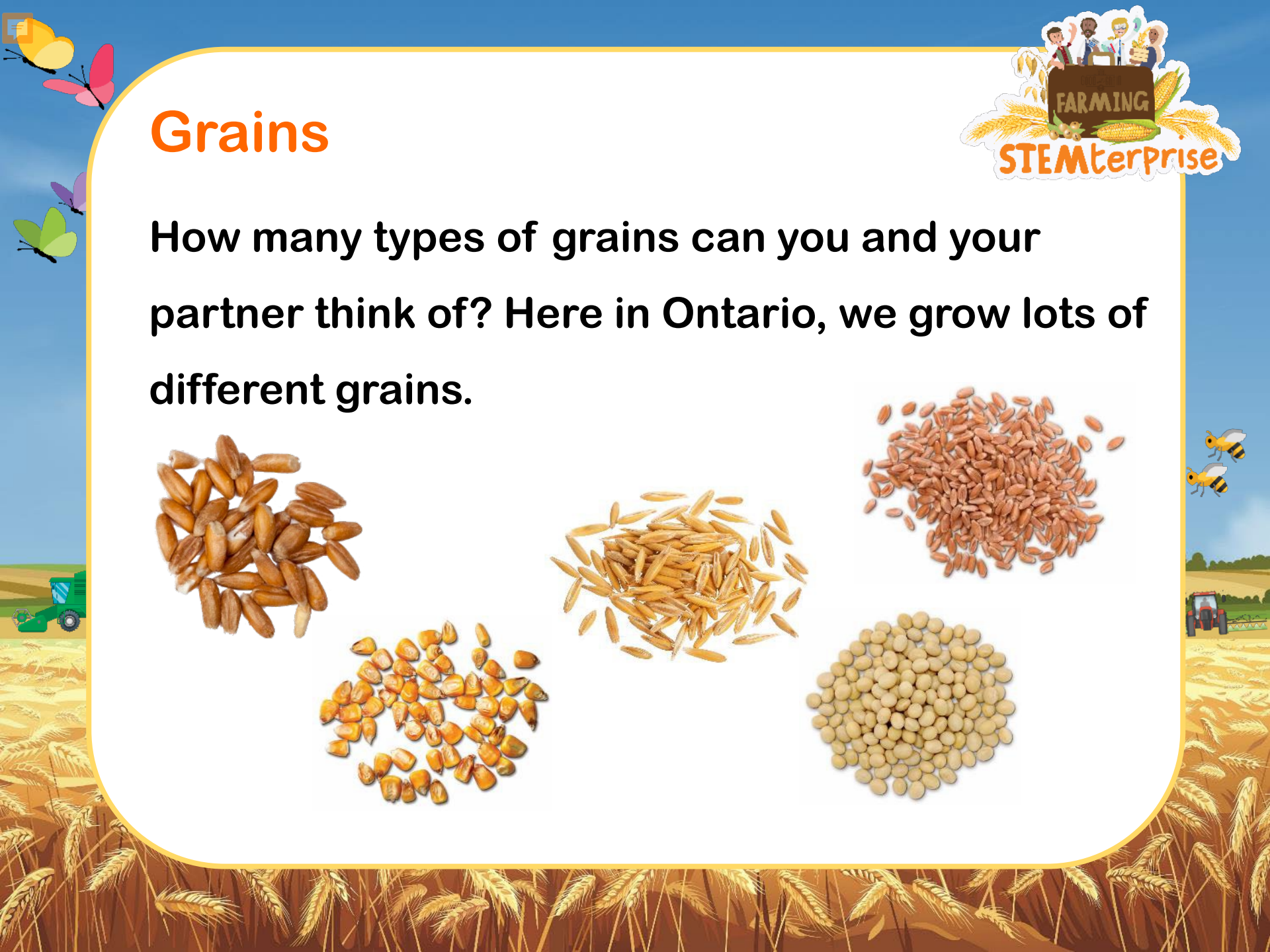


Step One: Become a plant expert. Your specialty will be grains, used as the main ingredient in granola bars.

Grains



How many types of grains can you and your partner think of? Here in Ontario, we grow lots of different grains.



Barley

- Farmers grow barley by planting seeds in soil. The seeds are also the grains we use to make food. Barley is mostly used to make beer, a type of drink for adults. It can also be ground into flour and used to make flatbread and breakfast oatmeal.
- Barley plants can also be used to make food for farm animals, while the plant stems can be used as bedding for these animals.



Corn

- Farmers grow corn by planting seeds in soil. The seeds are the kernels on the cob. There are many types of corn used in different ways. Farmers harvest the seeds (or kernels) differently depending on what they will be used for.
- Most corn grown in Ontario is grain corn. We use it to feed animals, and to make other things like cereal, gasoline, diapers, and toothpaste.



Oats

- Farmers plant oat seeds in soil to grow into plants. When plants are fully grown and ready for harvest, the farmer harvests them with a big machine called a combine harvester or combine for short.
- Oats are processed and made into food products such as oatmeal, pancakes, and granola bars. Oat plants feed farm animals and stems are used for bedding on farms.



Soybeans

- Farmers plant soybean seeds in the soil. The seeds are the beans found in the pod. When they change from green to brown, they are fully grown plants. Then the farmer harvests the soybeans with a combine harvester.
- We make lots of different things from soybeans, like tofu, soy drinks, mayonnaise, crayons, and even candies!



Wheat

- Farmers plant wheat seeds in the soil and then look after the plants for almost a whole year before the wheat can be harvested.
- At harvest time, wheat grains are sent away to a mill to be ground into flour. The flour can be used to make lots of foods such as bread, pasta, and cookies. Parts of the wheat plant are used as straw for animal bedding.



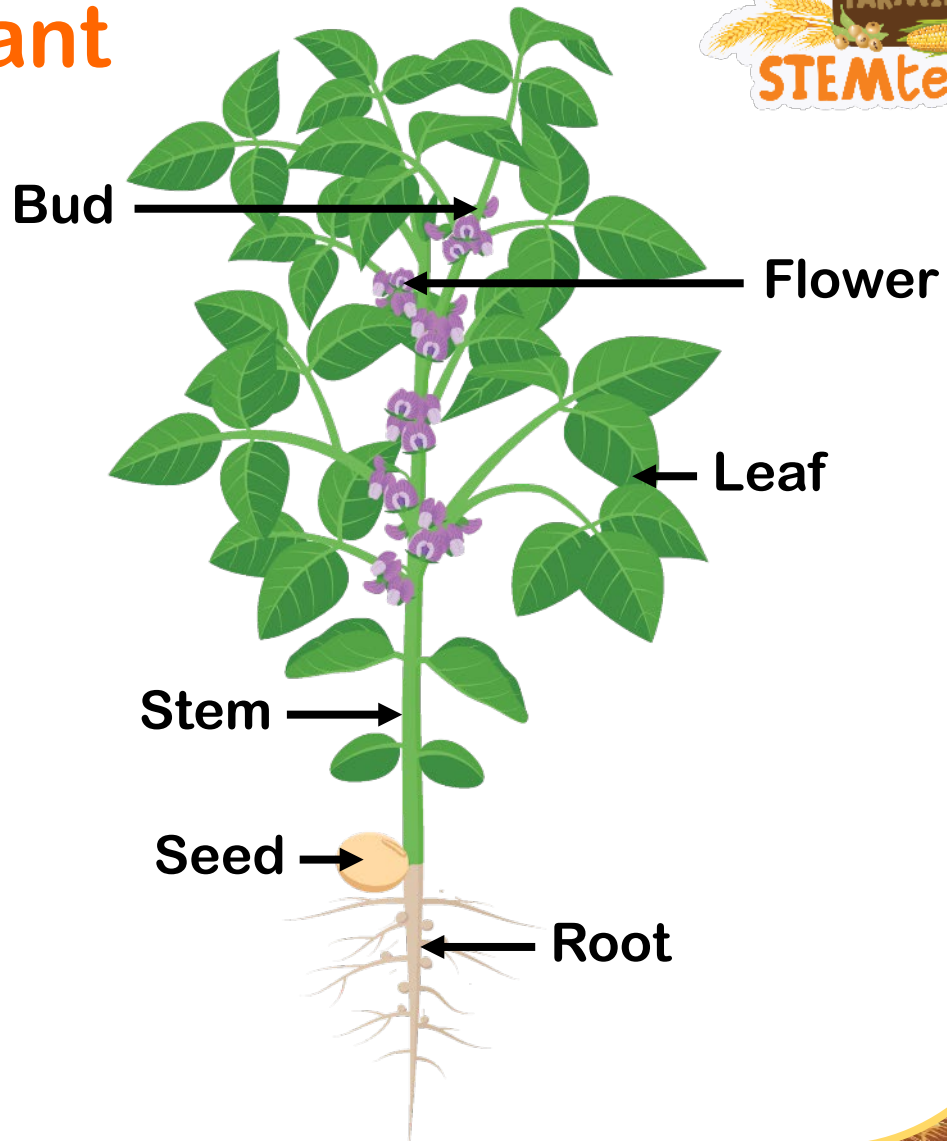
Vertical Relay

- We need to become plant experts to have a successful business making granola bars! We must know how to grow, nurture, and harvest the plant ingredients we need.
- Let's find out what we already know about the parts of a plant!



Parts of a Plant

- How many parts did you label correctly?



Plant Research



- We are going to find out more plant facts and learn about jobs that each part of a plant does!
- Work in your business groups to research one part of a plant, its functions and uses.
- You will need to work as a team to ensure that facts are not repeated.
- This is a challenge to collect as much good quality information as you can!



Presenting your Research

Your team will now have two minutes to summarize and present all your findings for the rest of the class.



Roots

They act as an anchor to hold the plant in the soil.

They take up water and dissolved minerals from the soil.

Can you think of any examples of plant roots that we eat?



Leaves

Plants need leaves to make their own food.

Leaves trap energy from the sun to produce sugars. The plant breaks down these sugars to give it energy. This process is called photosynthesis.

Can you think of any examples of plant leaves that we eat?

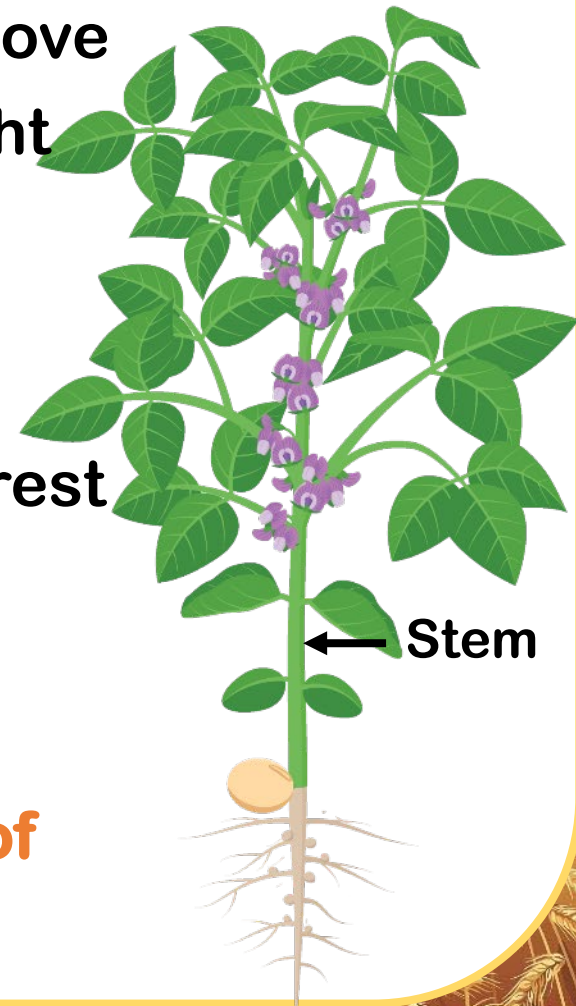


Stems

They hold leaves and flowers above ground so leaves can get sunlight and flowers can attract insects.

They help to transport minerals and water from the roots to the rest of the plant. They help to carry sugars away from the leaves.

Can you think of any examples of plant stems we eat?

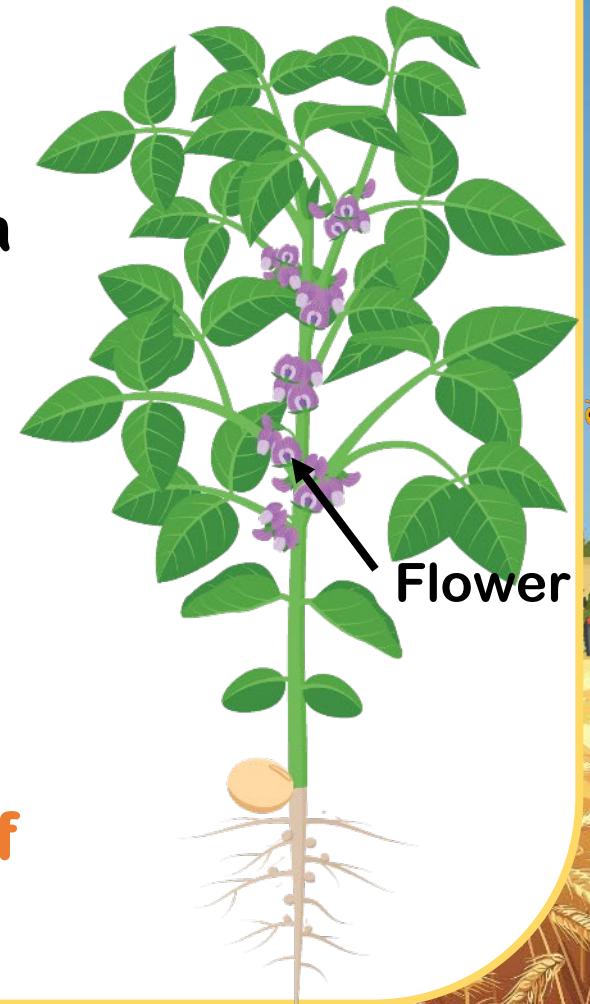


Flowers

They are often brightly coloured and smell attractive to insects. Insects help to pollinate plants, a very important part of plant reproduction.

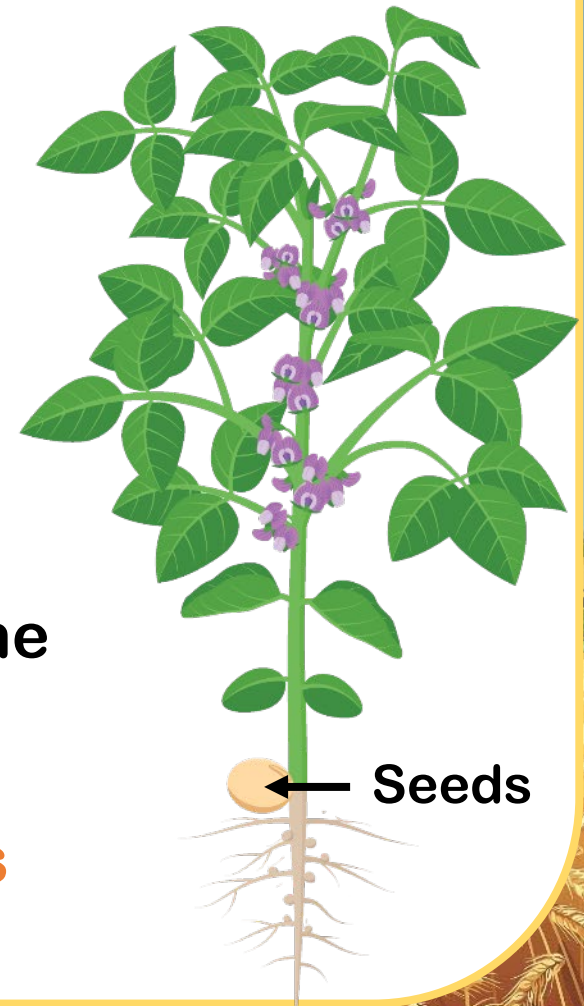
Flowers make the seeds that will grow into new plants.

Can you think of any examples of flowers we eat?



Seeds

- Seeds are tiny packets of new life. Plants need seeds to reproduce or make more of themselves.
- We will learn all about how plants make them later on in the project.
- **Can you think of any examples of seeds we eat?**



Vertical Relay

- Let's find out much you have learned about the parts of a plant and their functions in today's lesson.



Wonder Wall Recap

Have we answered any
of your questions
today?

