



# Producing Wheat and Sunflowers for Healthy Eating

## TEACHER GUIDE



FOUNDATION – YEAR 2

This resource has been developed by:












**GRDC**  
GRAINS RESEARCH  
& DEVELOPMENT  
CORPORATION

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## LEARNING AREA AND YEAR LEVEL

### Design and Technologies | Mathematics (Foundation – Year 2)

#### ATTRIBUTION, CREDIT & SHARING



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## AUSTRALIAN CURRICULUM CONTENT

- Explore how plants and animals are grown for food, clothing and shelter. (**AC9TDE2K03**)
- Explore how food can be selected and prepared for healthy eating (**AC9TDE2K04**)
- Acquire and record data for categorical variables in various ways including using digital tools, objects, images, drawings, lists, tally marks and symbols (**AC9M1ST01**)
- Acquire data for categorical variables through surveys, observation, experiment and using digital tools; sort data into relevant categories and display data using lists and tables (**AC9M2ST01**)

## LESSON OBJECTIVE

Students learn how wheat and sunflowers contribute to a healthy and balanced diet. They will understand what foods/products are made from these plants and gain skills in data collection and representation. Students will learn how wheat flour and sunflower oil are produced and also gain an appreciation of how different breads are produced using varied seed parts during processing.

## LESSON OVERVIEW

- **Activity 4.1 – Products of Winter Wheat and Summer Sunflowers** (30–40 minutes)
- **Activity 4.2 – Graphing Activity** (20 minutes)
- **Activity 4.3 – Media Watch: Making Wheat and Sunflower Products** (10–20 minutes)
- **Activity 4.4 – White, Wholemeal, and Wholegrain Bread** (20+ minutes)

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# Resources and Equipment

## > ACTIVITY 4.1 – Products of Winter Wheat and Summer Sunflowers

1. Butchers paper and markers
2. **Worksheet 4.1a – Healthy Wheat and Sunflower Products** (Literacy activity) or **Worksheet 4.1b – Healthy Wheat and Sunflower Products** (Literacy activity)
3. **Worksheet 4.1c – Have You Eaten These Foods?** (Data recording activity)
4. **Worksheet 4.1d – Have You Eaten These Foods? Class Tally** (Data collection activity)
5. **Worksheet 4.1e – Wheat and Sunflower Multiple Choice** (Multiple choice activity)
6. [The Australian Guide to Healthy Eating](#)

## > ACTIVITY 4.2 – Graphing Activity

1. Revise: **Worksheet 4.1d – Have You Eaten These Foods? Class Tally** (Data collection activity)
2. **Worksheet 4.2a – Have You Eaten These Foods?** (Teacher cut-outs)
3. Butchers paper or area for collation, scissors, glue/tape/pins

## > ACTIVITY 4.3 – Media Watch: Making Wheat and Sunflower Products

1. [Baked Bread: how flour is made](#) (2:48)
2. [Unboxing the museum: Bread samples](#) (1:16)
3. [How it's Made: Sunflower Oil](#) (3:13)
4. [How It's Done: From sunflower seeds to cooking oil](#) (4:58)
5. [How Sunflower Oil Is Made? | Amazing SUNFLOWER OIL Factory](#) (8:51)

## > ACTIVITY 4.4 – White, Wholemeal, and Wholegrain Bread

1. **Worksheet 4.4a – Odd One Out** (Brainstorm activity)
2. **Worksheet 4.4b – Parts of a Grain of Wheat** (Scientific colouring activity)
3. Brown, orange, and blue coloured pencils
4. Samples/slices of white, wholemeal, and wholegrain (multigrain) bread
5. **Worksheet 4.4c – The Difference Between Breads** (Literacy activity)
6. **Optional Extension Activities:**  
Bread ingredients and samples/slices of white, wholemeal, and wholegrain (multigrain) bread

# Resources and Equipment (cont'd)

## OTHER RESOURCES

### 1. [Super Seed Kit](#)



**SUPER SEED KIT**  
TEACHER INFORMATION

HOW TO USE THE  
SUPER SEED KIT  
IN YOUR CLASSROOM

**Grains Research and Development Corporation (GRDC), Australian Grain Technologies (AGT) and Primary Industries Education Foundation Australia (PIEFA) have partnered to create the Super Seed Kit.**

This kit aims to equip you with hands-on resources and engaging classroom activities to help your students develop an understanding of Australian cropping varieties. Designed with the Science, Design and Technologies and Agricultural student in mind, the kit provides teachers with lessons, resources and information to support experiential learning about grains, oilseeds and pulses.

Curriculum linked lessons will be generated on an ongoing basis to support the **Super Seed Kit** and inspire you with new ideas. Keep up with new lessons by visiting the Primezone website.

**PRIMEZONE WEBSITE:**  
 [primezone.edu.au](http://primezone.edu.au)

**GRAINS EDUCATION – PRIMEZONE WEBSITE:**  
 [primezone.edu.au/grains-education/](http://primezone.edu.au/grains-education/)

**GRAINS RESEARCH AND DEVELOPMENT CORPORATION WEBSITE:**  
 [grdc.com.au](http://grdc.com.au)

**AUSTRALIAN GRAIN TECHNOLOGIES WEBSITE:**  
 [agtbreeding.com.au](http://agtbreeding.com.au)






### 2. [Growing and Changing STEM Challenge](#)

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# Lesson Guide

## ▶ ACTIVITY 4.1 – Products of Winter Wheat and Summer Sunflowers (30–40 minutes)

Students will learn about the products made from wheat and sunflowers and understand how these products contribute to healthy eating. They will understand where these foods are positioned in The Australian Guide to Healthy Eating and have the opportunity to answer questions about the products to demonstrate their knowledge.

1. Divide students into groups of four and provide them with a piece of butchers paper and markers. Ask students to write down any foods they know of that are made from wheat and/or sunflowers. After a period of time, ask students to share their ideas.
2. Select either **Worksheet 4.1a – Healthy Wheat and Sunflower Products** (Literacy activity) or **Worksheet 4.1b – Healthy Wheat and Sunflower Products** (Literacy activity) to read with the class (depending on literacy ability and/or year level) to introduce how these food products are important to health.
3. Display [The Australian Guide to Healthy Eating](#) website image. Explain that The Australian Guide to Healthy Eating shows people which foods they should eat as part of a balanced diet. A balanced diet means eating a variety of foods that allow people to receive all of the nutrients needed to grow, be healthy, and have the energy needed to think and be active. People need to eat more from some food groups and less from others. The larger sections of the chart show the foods that people should eat more of, and the smaller sections show the foods people should eat less to be healthy. The foods on the outside of the chart should only be eaten occasionally and in small amounts.
4. Highlight that wheat belongs in the Grain (cereal) foods mostly wholegrain and/or high cereal fibre varieties group, and sunflower seeds belong in the Lean meats and poultry, fish, eggs, tofu, nuts and seeds and legumes/beans group.
5. Distribute or project **Worksheet 4.1c – Have You Eaten These Foods?** (Data recording activity) and ask students to circle any food or products they have eaten made from wheat and sunflowers in the last day/week/month/year/ever (teacher discretion).
6. Collate the class results in a central area using **Worksheet 4.1d – Have You Eaten These Foods? Class Tally** (Data collection activity) to record the most- to least-consumed products.
7. **Optional:**  
Provide students with **Worksheet 4.1e – Wheat and Sunflower Multiple Choice** (Multiple choice activity).

**Answers** 

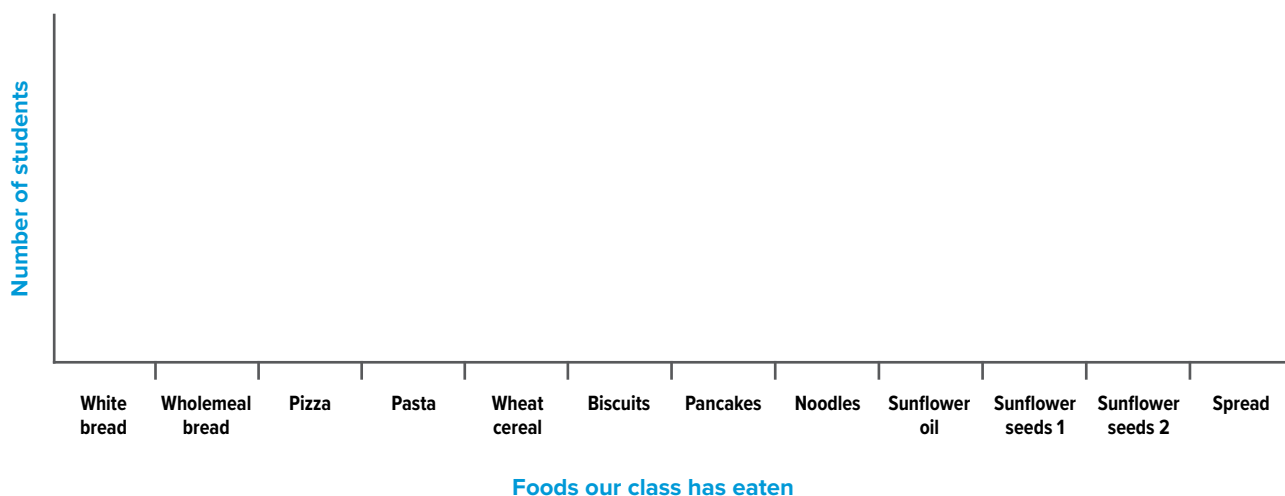
## ➤ ACTIVITY 4.2 – Graphing Activity (20 minutes)

Students use the collated data focused on foods and products they have eaten from Activity 4.1 to create a graphical representation of the tallied information.

*Note: Teachers will need to print Worksheet 4.2a – Have You Eaten These Foods? (Teacher cut-outs) prior to this activity.*

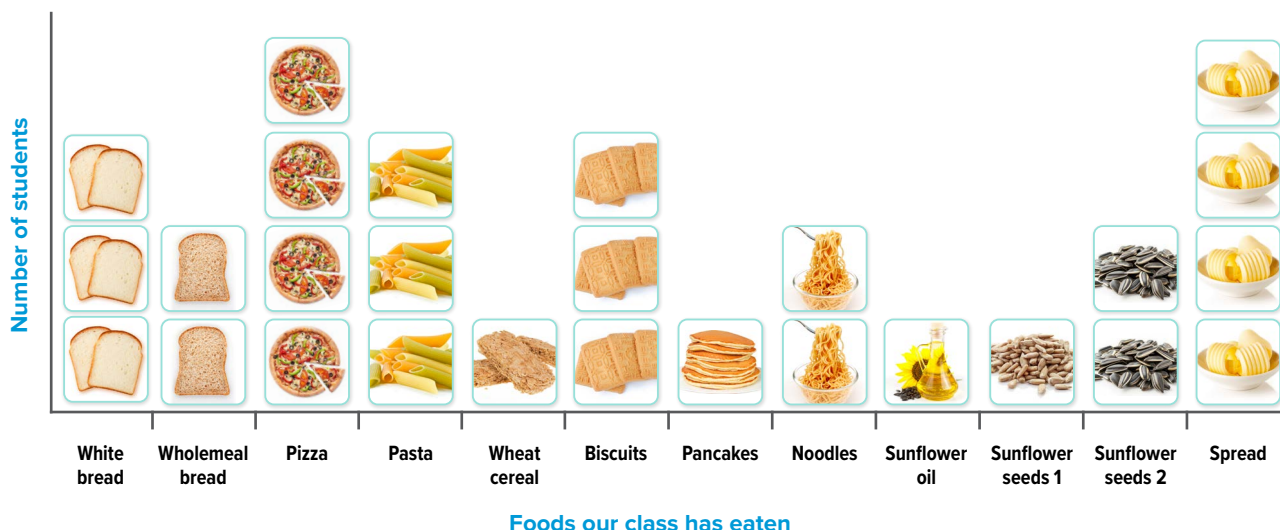
1. Project the class results of Worksheet 4.1d – Have You Eaten These Foods? Class Tally (Data collection activity) in a central area.
2. Explain to students that an alternative way of collecting and displaying tallied information is to use a graph. A pictorial graph is a fun and colourful way to show information. It uses pictures or symbols to represent data. Each picture or symbol in the graph represents a certain number of things.
3. Distribute one of each image from Worksheet 4.2a – Have You Eaten These Foods? (Teacher cut-outs) to students and ask them to create two piles based on a nominated time period of the last day/week/month/ever.
  - Foods I **HAVE** eaten
  - Foods I have **NOT** eaten
4. Using a piece of butchers paper or an appropriate area (large pinboard, etc), divide the area into 12 even columns (a column for each product). Create an Y-axis and label it 'Number of students' and on the X-axis, list each food product (see below).

*Note: Teachers can choose to use fewer foods/products if this amount of data is unsuitable for their classes.*



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- Read out the first product, e.g. 'White bread', and ask students to stand if they have eaten this product in the chosen time period. One student at a time moves to the graph and sticks (glue, tape, pins, etc) the correct picture of the food above the name of the food/product. For example, a column of white bread images will be placed above the title to show how many students have consumed this product.
- Repeat this process for each food product. A sample graph is shown below.



- After all products have been placed into position and counted, as a class, discuss:
  - What foods have been eaten by most class members?
  - What foods have not been eaten by most of the class?
  - Is a graph a good way to collect information? Why or why not?

**Answers**

### **ACTIVITY 4.3 – Media Watch: Making Wheat and Sunflower** (10–20 minutes)

Students will learn how wheat grain is turned into flour and how sunflower seeds are processed into oil by viewing a selection of videos.

- As a class, brainstorm how wheat is turned into food products and how sunflower seeds are turned into sunflower oil. List the keywords/ideas in a central area.
- To learn about how wheat is turned into the flour that is used to make many products, view [Baked Bread: how flour is made](#) (2:48).
- View the short video explaining how First Nations people made bread from native Australian seeds, [Unboxing the museum: Bread samples](#) (1:16).

(Activity 4.3 continued following page...)

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4. To learn how sunflower seeds are turned into oil, view one of the video options. Teachers choose the video most suitable for their own students based on the timings and content.
  - [How it's Made: Sunflower Oil](#) (3:13)
  - [How It's Done: From sunflower seeds to cooking oil](#) (4:58)
  - [How Sunflower Oil Is Made? | Amazing SUNFLOWER OIL Factory](#) (8:51)
5. Revisit the keywords/ideas from 1) and ask students to add additional words to the original list to describe how wheat flour and sunflower oil are made.

Answers 

## **ACTIVITY 4.4 – White, Wholemeal, and Wholegrain Bread** (20+ minutes)

Students will learn about three different types of bread that are produced from wheat. They will understand how the types are similar and different and learn about how the anatomy of the grain/seed contributes to these differences.

1. Divide the class into groups of three to four students. Distribute **Worksheet 4.4a – Odd One Out** (Brainstorm activity) and ask students to collaborate and discuss which bread slice does not belong in the series (note: there is no correct answer). Allocate groups to contribute their ideas.
2. Project and distribute **Worksheet 4.4b – Parts of a Grain of Wheat** (Scientific colouring activity) and introduce the terms white bread, wholemeal bread, and wholegrain bread as well as bran, germ, and endosperm. Ask students to colour in the bran with a brown coloured pencil, the endosperm with an orange coloured pencil, and the germ with a blue coloured pencil.

Answers 

3. Keeping students in their groups, provide each group with a sample/slice of white, wholemeal, and wholegrain (multigrain) bread. Ask groups to think about how the slices are similar and different and share their ideas.
4. Distribute **Worksheet 4.4c – The Difference Between Breads** (Literacy activity) and read and complete the answers on the worksheet focused on the parts of the grain that are included in each type of bread.

Answers 

5. **Suggested extension activities:**

**Observation and comparison** – As a class, make the three types of bread and observe differences in the dough's texture, colour, and consistency among all three.

**Tasting and sensory evaluation** – Organise a tasting session for all three types of bread. Students can compare the taste, texture, appearance, and overall preference.

# Answers

## ACTIVITY 4.1 – Products of Winter Wheat and Summer Sunflowers

### WORKSHEET 4.1e – Wheat and Sunflower Multiple Choice

1c. 2c. 3a. 4d.

## ACTIVITY 4.2 – Graphing Activity

7. *Is a graph a good way to collect information? Why or why not? Suggested answers:*

- Graphs are useful because they make it easier to understand numbers by showing them in a visual way.
- Graphs show how things are different, like comparing ice cream sales at different shops or how things change over time, like how tall you're getting.
- Graphs tell these stories quickly, which helps people make decisions, like picking the best day for a picnic.

## ACTIVITY 4.3 – Media Watch: Making Wheat and Sunflower Products

5. **Keyword suggestions:** Students will provide simplified descriptions and terms of the following processes. The following list is designed to assist teachers with the main processes detailed in the videos.

### **Wheat Processing:**

- Flour production
- Wheat grain
- Combine harvester
- Mill processing
- Bran, endosperm, wheat germ (components of wheat grain)
- Quality testing
- Gristing (blending different types of wheat)
- Plan sifters (milling machines)
- Protein content (in bread flour)
- Bakery distribution

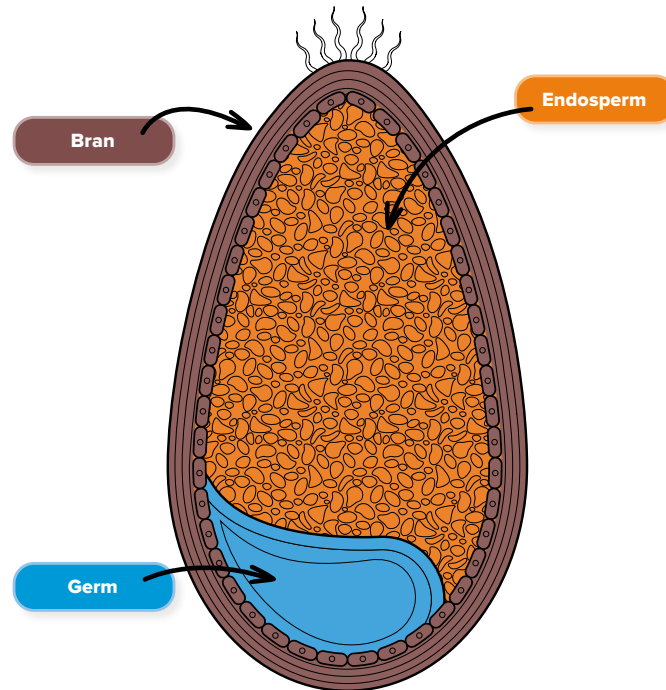
### **Sunflower Oil Processing:**

- Cold pressing method
- Sunflower fields
- Harvesting sunflowers
- Seed cleaning
- Oil extraction
- Nutritional value
- Sustainability
- Animal feed byproduct
- Protein-rich meal
- Filtration process
- Refinement process
- Automated packaging
- Quality inspection
- Local distribution
- Biodiesel repurposing

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## > ACTIVITY 4.4 – White, Wholemeal, and Wholegrain Bread

### WORKSHEET 4.4b – Parts of a Grain of Wheat



### WORKSHEET 4.4bc – The Difference Between Breads

**White bread:** Endosperm

- Endosperm used; bran and germ removed.

**Wholemeal bread:** Bran Germ Endosperm

- All parts used (bran, germ, and endosperm).

**Wholegrain bread:** Bran Germ Endosperm

- All parts used (bran, germ, and endosperm), some whole grains and some cracked grains remain in the dough.

## References

Museums Victoria. (2020, October 31). *Unboxing the museum: Bread samples*. www.youtube.com. <https://www.youtube.com/watch?v=DWVn8Lgxaeo>

National Health and Medical Research Council. (2013). *Australian Guide to Healthy Eating*. Eat for Health; Australian Government. <https://www.eatforhealth.gov.au/guidelines/australian-guide-healthy-eating>

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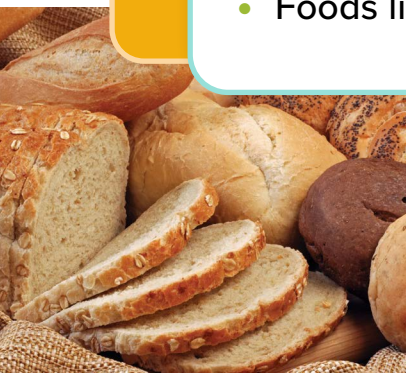
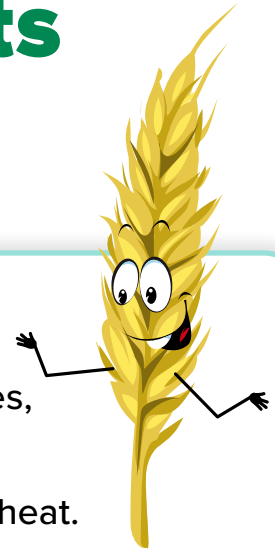
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# Healthy Wheat and Sunflower Products

Read the information to find out about healthy wheat and sunflowers.

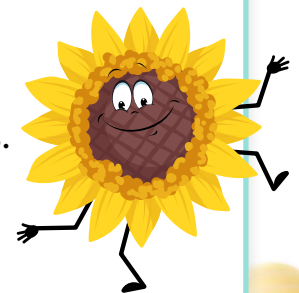
## Wheat

- Wheat is packed with nutrients.
- Wheat contains fibre, vitamins, minerals, carbohydrates, and proteins, which are excellent for our bodies.
- Foods like bread, pasta, and cereals are made from wheat.



## Sunflowers

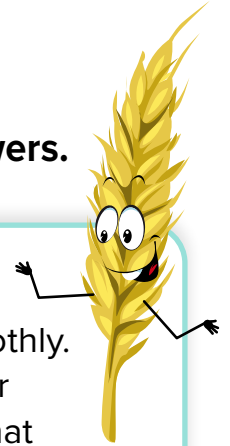
- Sunflower products are good for us.
- Sunflower seeds contain protein, vitamins, minerals, and fibre, which are great for our bodies.
- Sunflower oil is good for cooking and is full of healthy fats.
- Sunflower products can be found in things like bread, snacks, and some yummy spreads.



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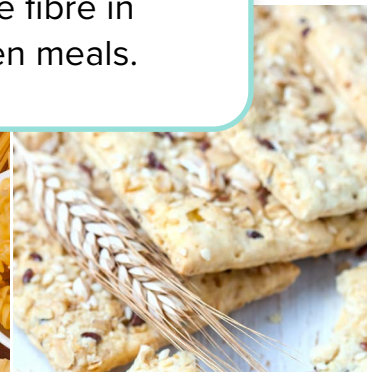
# Healthy Wheat and Sunflower Products

Read the information to find out about healthy wheat and sunflowers.



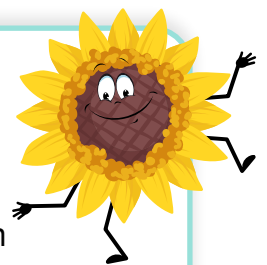
## Wheat

Eating wheat is good for us because it is packed with nutrients. Wheat contains fibre, which helps our digestive system work smoothly. It also contains vitamins, minerals, and proteins, which we need for building and repairing our body. Lastly, it is full of carbohydrates that give us energy. Foods like bread, pasta, and cereals are made from wheat, making wheat an excellent choice for a balanced diet. Plus, the fibre in wheat can help us feel full, so we don't get too hungry between meals.



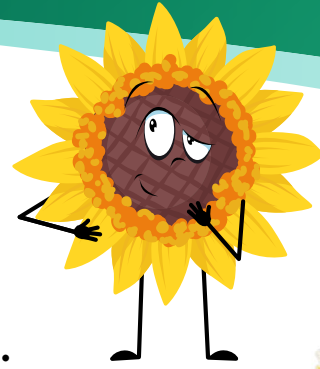
## Sunflowers

Sunflower products, like sunflower seeds and oil, are good for us. Sunflower seeds are tiny but mighty; they have lots of protein, which helps build strong muscles, and fibre, which is great for our digestive system. They also have vitamins and minerals, which keep our bodies healthy and strong. Sunflower oil is good for cooking and is full of healthy fats. These fats are important for our brains and hearts, helping them stay healthy. Sunflower products can be found in things like bread, snacks, and even in some yummy spreads. Eating foods with sunflower seeds can give us the energy to play and learn all day!

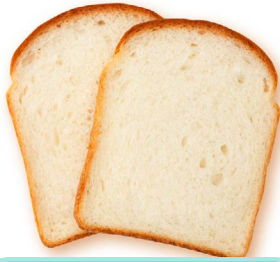


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# Have You Eaten These Foods?



Circle the foods or products you have eaten.



White bread



Wheat cereal



Sunflower oil



Wholemeal bread



Biscuits



Sunflower seeds



Pizza



Pancakes



Sunflower seeds



Pasta



Noodles

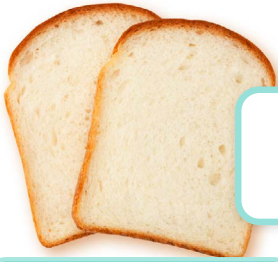


Spreads

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# Have You Eaten These Foods? – Class Tally

Create a class tally for the following foods and products.



White bread



Wheat cereal



Sunflower oil



Wholemeal bread



Biscuits



Sunflower seeds



Pizza



Pancakes



Sunflower seeds



Pasta



Noodles

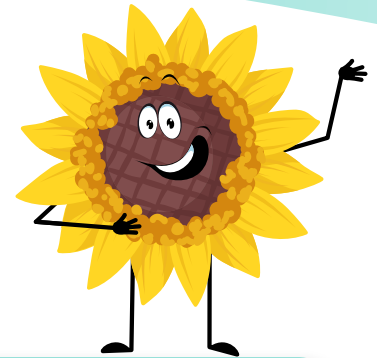


Spreads

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# Wheat and Sunflower Multiple Choice



Circle the correct answers below.

**1** Why is wheat considered an excellent choice for a balanced diet?

- a) It only contains carbohydrates.
- b) It's used to make desserts.
- c) It includes fibre, vitamins, minerals, proteins, and carbohydrates.
- d) It comes in different colours.

**3** Why is sunflower oil a healthy choice for cooking?

- a) It contains healthy fats, which are good for our brain and heart.
- b) It adds a spicy flavour to food.
- c) It can heat up very quickly.
- d) It makes food look more colourful.

**2** Besides giving us energy, what is another benefit of eating wheat?

- a) It helps us to swim faster.
- b) It can change the colour of food.
- c) It contains fibre, which helps us feel full and aids our digestion.
- d) It makes us feel more hungry.

**4** Sunflower seeds are a good choice for a healthy snack because they contain:

- a) Only carbohydrates and water.
- b) Mostly sugar.
- c) Salt.
- d) Protein for building muscles and fibre for digestion.

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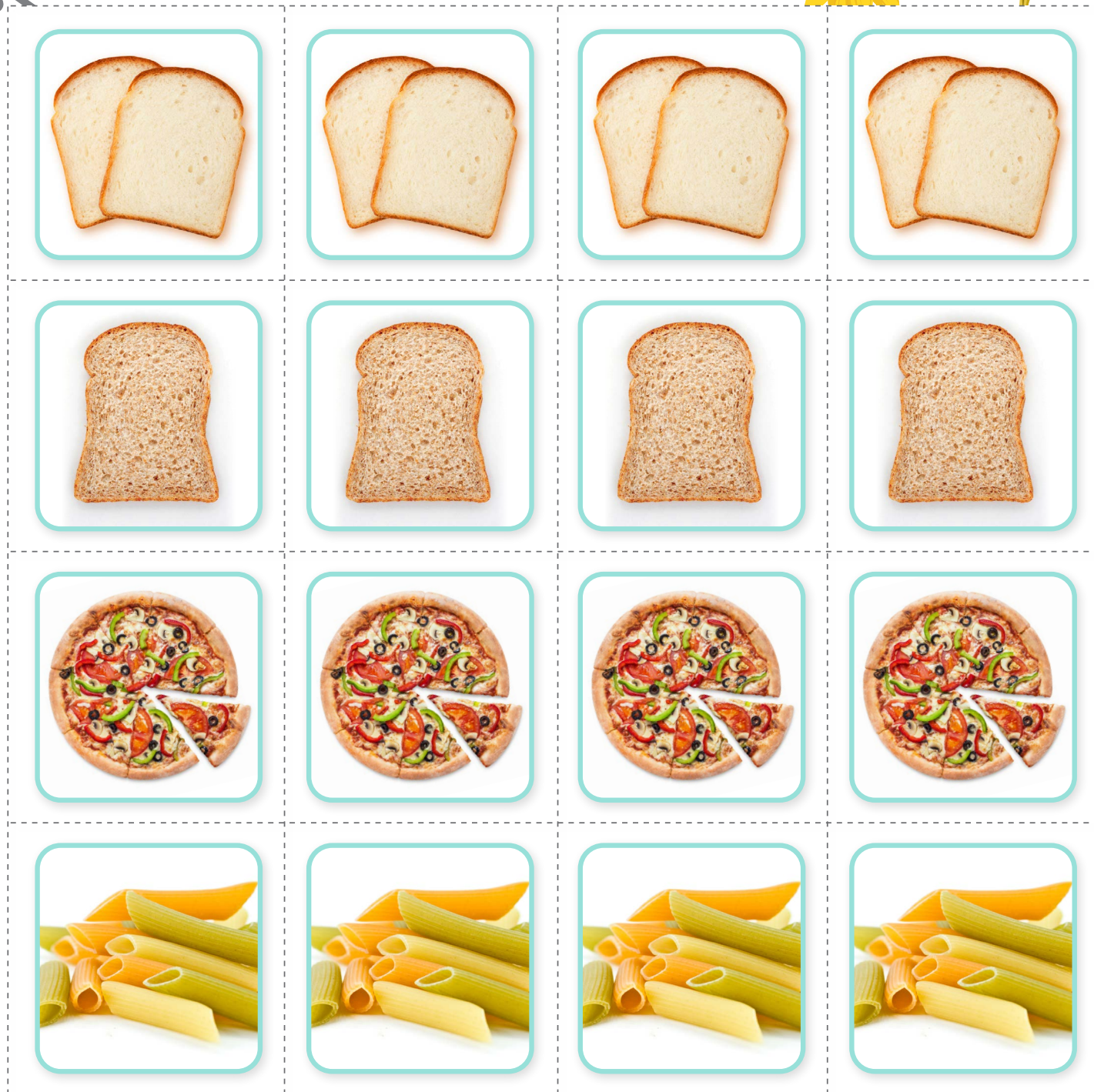
Primary Industries Education  
Foundation Australia



www.primezone.edu.au  
**primezone**  
The place for all your food and fibre resources

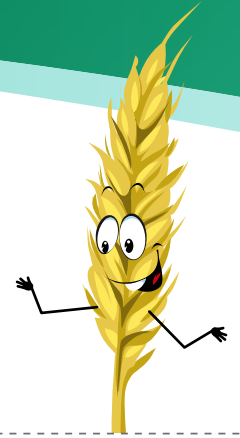
# Have You Eaten These Foods?

Copy and cut out a picture of each food and product for each student in the class.

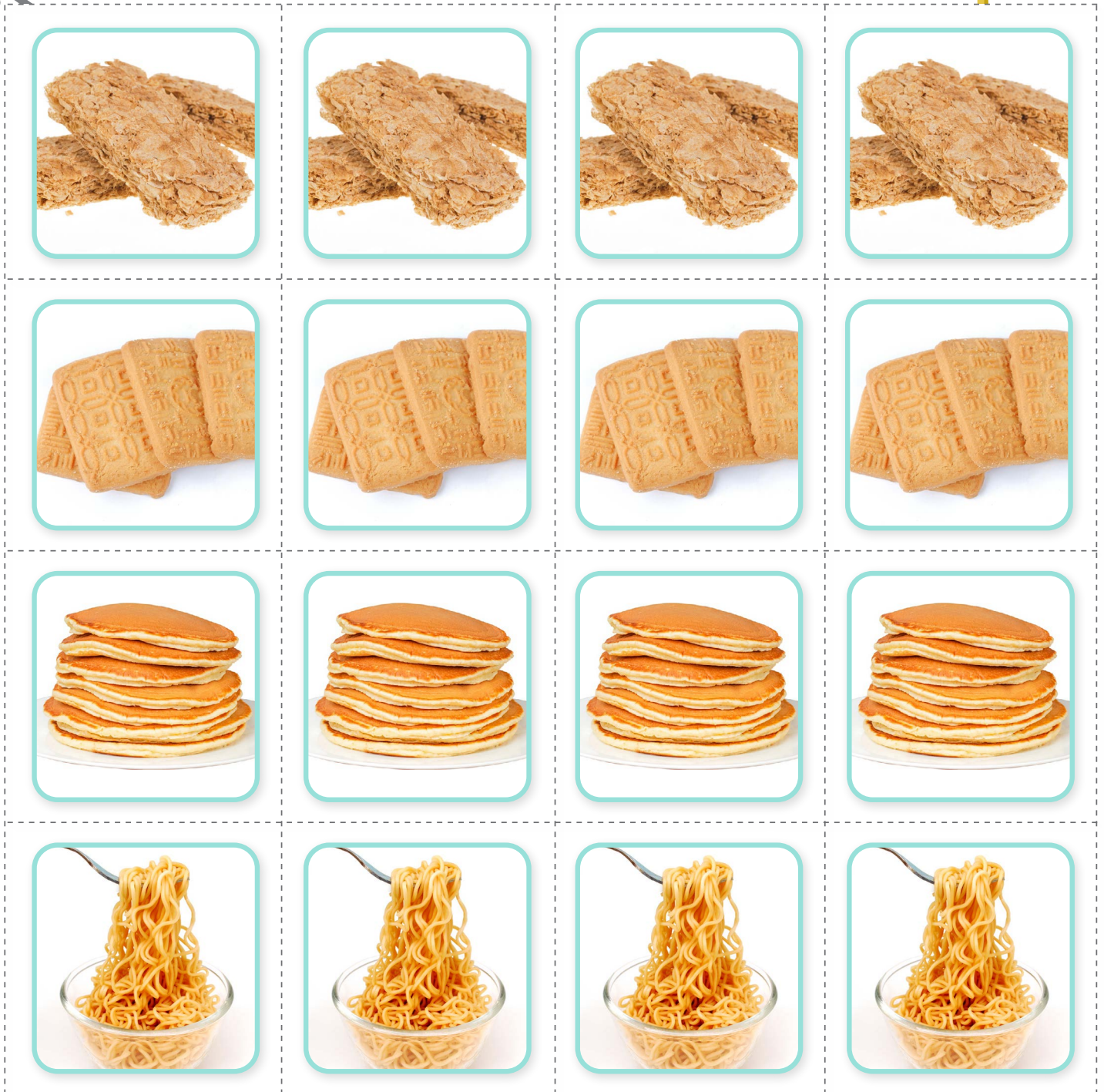


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# Australian Wheat



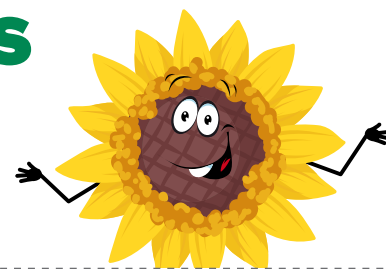
Copy and cut out a picture of each food and product for each student in the class.



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# Australian Sunflowers

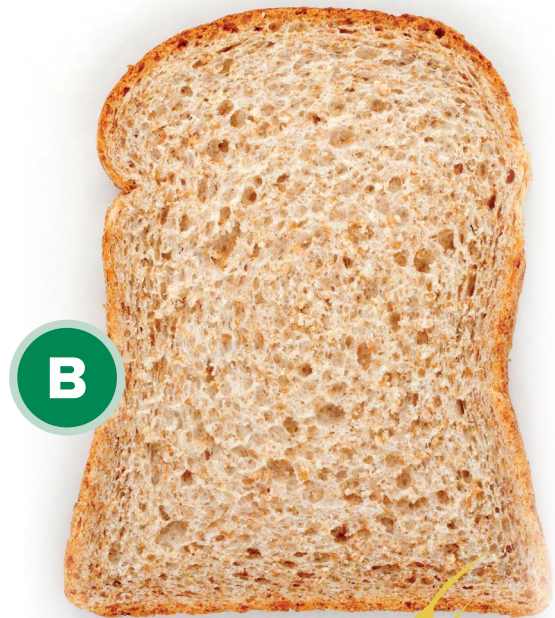
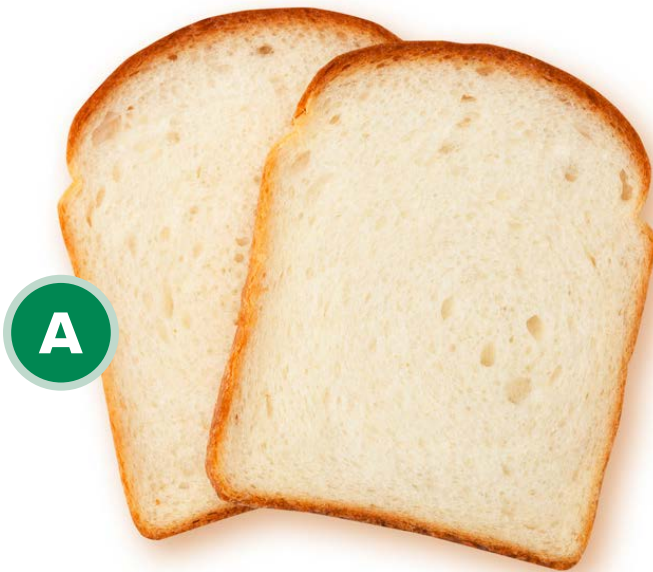
Copy and cut out a picture of each food and product for each student in the class.



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# Odd One Out

Which type of bread is the odd one out and why?



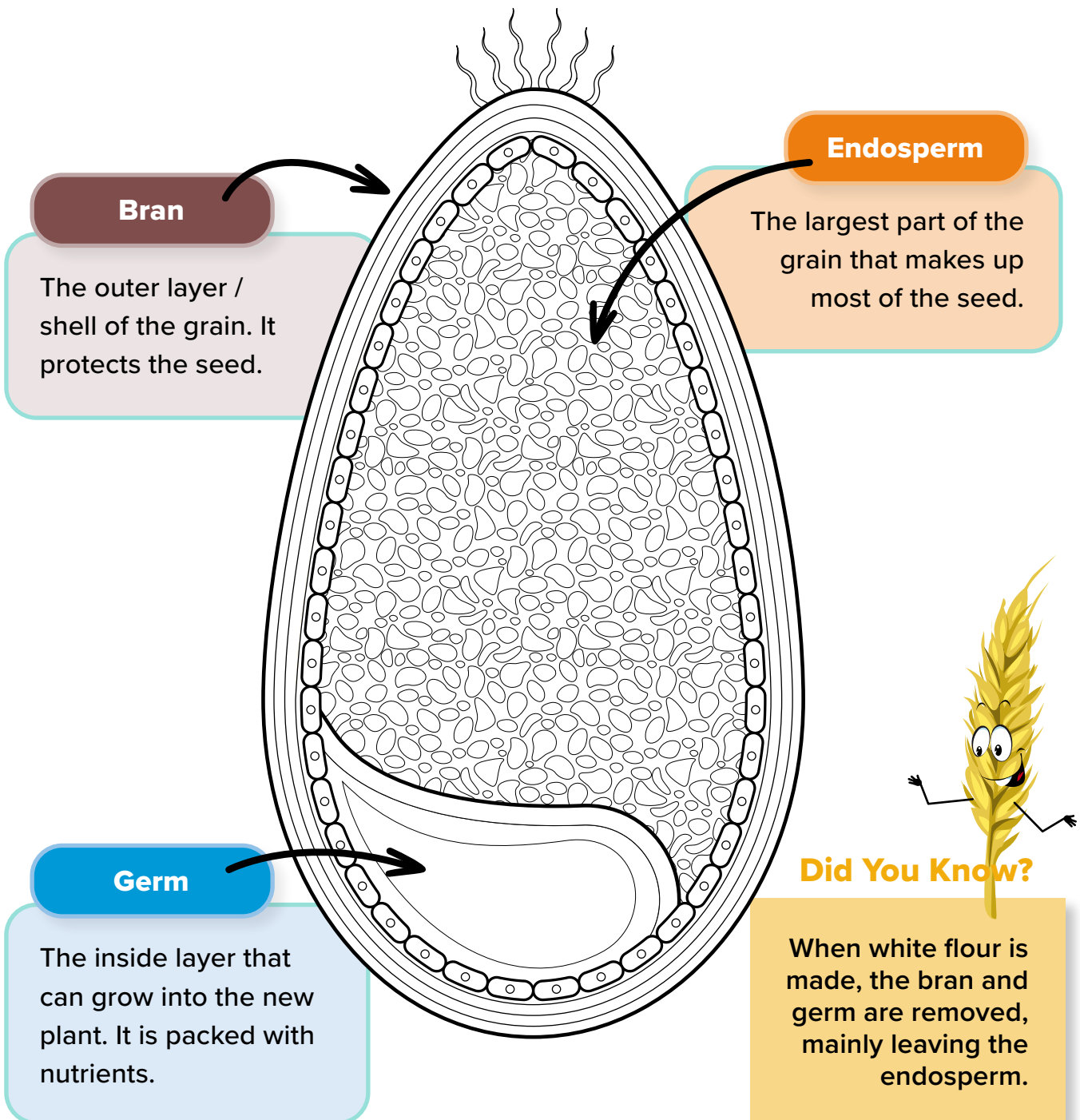
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# Parts of a Grain of Wheat

There are three main parts to a wheat grain. Colour in the diagram.



**Bran = Brown, Endosperm = Orange, Germ = Blue**



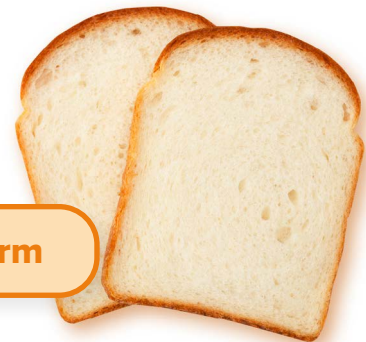
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# The Difference Between Breads

You may have eaten different types of bread that are all made from wheat. They are made by using different parts of the grain.

**Cross out the parts of the grain that are NOT used in each type of bread.**

**White bread** is made by taking out the bran and germ and only using the endosperm. This makes flour that is soft, white, and fine.



Bran

Germ

Endosperm

**Wholemeal bread** uses all of the wheat grain: bran, germ, and endosperm. This makes the flour denser and more nutritious.



Bran

Germ

Endosperm

**Wholegrain bread** is made from flour that includes the entire grain kernel: the bran, germ, and endosperm. The difference from wholemeal bread is that wholegrain bread often contains whole or cracked grains.



Bran

Germ

Endosperm

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