



# The Life Cycles of Winter Wheat and Summer Sunflowers

## 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, Science, Mathematics, English (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**)
- Describe daily and seasonal changes in the environment and explore how these changes affect everyday life. (**AC9S1U02**)
- Describe the duration and sequence of events using years, months, weeks, days and hours. (**AC9M1M03**)
- Explore the contribution of images and words to meaning in stories and informative texts. (**AC9EFLA07**)
- Compare how images in different types of texts contribute to meaning. (**AC9E1LA08**)
- Understand that images add to or multiply the meanings of a text. (**AC9E2LA08**)
- Retell and adapt familiar literary texts through play, performance, images or writing. (**AC9EFLE05**)
- Orally retell or adapt a familiar story using plot and characters, language features including vocabulary, and structure of a familiar text, through role-play, writing, drawing or digital tools. (**AC9E1LE05**)
- Create and edit literary texts by adapting structures and language features of familiar literary texts through drawing, writing, performance and digital tools. (**AC9E2LE05**)

## LESSON OBJECTIVE

Students learn about the seasons and life cycles of Australian sunflowers and wheat crops. They will understand the changes that occur in these plants over time and will gain skills in representing and modelling their life cycles. Students will learn about the changing roles of a farmer through the seasons and practise sequencing and creative writing and/or illustrating.

## LESSON OVERVIEW

- **Activity 2.1 – Observing Changes** (25–30 minutes)
- **Activity 2.2 – The Wheat Life Cycle** (30–40 minutes)
- **Activity 2.3 – The Sunflower Life Cycle** (30–40 minutes)
- **Activity 2.4 – Wheat and Sunflower Story** (dependent on option chosen)

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# Resources and Equipment

## > ACTIVITY 2.1 – Observing Changes

1. **Stimulus Activity 1 – Winter Wheat and Summer Sunflowers** (Stimulus activity)
2. **Worksheet 2.1a – The Seasons** (Drawing activity) or **Worksheet 2.1b – The Seasons** (Literacy and drawing activity)
3. Coloured pencils

## > ACTIVITY 2.2 – The Wheat Life Cycle

1. **Worksheet 2.2a – The Wheat Life Cycle** (Sequencing activity)
2. Scissors
3. Eleven metres of string/paper, masking tape, rulers, marker, wall pins, coloured pencils
4. **Worksheet 2.2b – What is the Farmer Doing?** (Matching activity)
5. **Worksheet 2.2c – The Role of a Wheat Farmer** (Timeline activity)

## > ACTIVITY 2.3 – The Sunflower Life Cycle

1. **Worksheet 2.3a – The Sunflower Life Cycle** (Sequencing activity)
2. Scissors
3. Seven metres of string/paper, masking tape, rulers, marker, wall pins, coloured pencils
4. **Worksheet 2.3b – What is the Farmer Doing?** (Matching activity)
5. **Worksheet 2.3c – The Role of a Sunflower Farmer** (Timeline activity)

## > ACTIVITY 2.4 – Wheat and Sunflower Story

1. **Stimulus Activity 2 – A Seasonal Story** (Stimulus activity)
2. **Worksheet 2.4a – A Seasonal Story** (Reading activity)
3. Coloured pencils or design software

# Resources and Equipment (cont'd)

## OTHER RESOURCES

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



**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.

<p><b>PRIMEZONE WEBSITE:</b></p>  <p><a href="http://primezone.edu.au">primezone.edu.au</a></p>	<p><b>GRAINS EDUCATION – PRIMEZONE WEBSITE:</b></p>  <p><a href="http://primezone.edu.au/grains-education/">primezone.edu.au/ grains-education/</a></p>
<p><b>GRAINS RESEARCH AND DEVELOPMENT CORPORATION WEBSITE:</b></p>  <p><a href="http://grdc.com.au">grdc.com.au</a></p>	<p><b>AUSTRALIAN GRAIN TECHNOLOGIES WEBSITE:</b></p>  <p><a href="http://agtbreeding.com.au">agtbreeding.com.au</a></p>






2. [Growing and Changing STEM Challenge](#)
3. [How To Draw A Sunflower](#) (5:29)
4. [Wheat growth stages | seeds of wheat plant | life cycle of wheat | new seeds of wheat plant 2020](#) (2:15)

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# Lesson Guide

## > ACTIVITY 2.1 – Observing Changes (25–30 minutes)

Students consider how changes can be observed over time by observing stimulus images and engaging in class discussion.

1. Project the stimulus image **Stimulus Activity 1 – Winter Wheat and Summer Sunflowers** (Stimulus activity) and ask students to reflect on the final task in **Lesson 1, Activity 1.4 – Crop Characters**. Students listened to the story, *A Year on Our Farm* and learned about the jobs required throughout the changing seasons on a farm.

2. Project the stimulus images for one minute and ask students to imagine:

- What do you think the person is doing?
- What do you think the person is thinking?
- What do you think the person will do next?
- Who do you think the person is?

Nominate students to volunteer an answer to one of these questions for one of the two people.

**Answers** 

3. As a class, discuss how students have changed from a baby to the age they are now. Then, inquire how they will change as they become adults. Just like a human, plants transition through phases as they grow. The life cycle of an organism is the sequence of stages it goes through, starting with birth or germination, then growth, reproduction, and eventually death.

**Answers** 

4. Ask students to consider the different jobs parents/carers need to perform as their baby transitions through the different stages of their life cycle. Compare this to the changing jobs a farmer needs to perform to care for their produce.

**Answers** 

5. Recall the four seasons and their features and either complete **Worksheet 2.1a – The Seasons** (Drawing activity) or **Worksheet 2.1b – The Seasons** (Literacy and drawing activity), depending on the student's ability or year level.

## ➤ ACTIVITY 2.2 – The Wheat Life Cycle (30–40 minutes)

Students will learn about the life cycle of wheat and understand how the plant changes over a period of time. They will learn how to create a scaled timeline to represent a life cycle and associate the role of the farmer with jobs that are being performed at different stages of the plant's growth and development.

1. Provide students with **Worksheet 2.2a – The Wheat Life Cycle** (Sequencing activity). Students cut out the paper strips describing the different stages of the wheat life cycle. Each strip contains one stage and its corresponding week number. Ask students to arrange the strips in order of time (e.g., from 0 to 22 weeks).

**Answers** 

2. Lay an eleven-metre piece of string/paper on the floor or along a wall so students can easily access it. Demonstrate how to create a scaled timeline by using a ruler and placing a 5 cm long piece of masking tape every 50 cm along the string. Label each piece of masking tape with the numbers 0 to 22 to represent each week in the wheat life cycle. Explain to students that a timeline can show how something changes over a period of time.
3. Nominate one student at a time to attach a single strip of paper from **Worksheet 2.2a – The Wheat Life Cycle** (Sequencing activity) to the correct locations on the string to create a complete timeline of the life cycle. (Optional: students draw a series of pictures to attach to the timeline based on the descriptions or nominate students to act out/role-play each of the descriptions of what is happening during the particular phase of the life cycle). Display the timeline in the classroom.
4. Explain to students that at each point along the timeline/life cycle, a farmer will perform particular jobs to make sure their crop is healthy and growing well. Hand out the **Worksheet 2.2b – What is the Farmer Doing?** (Matching activity) and read about the four jobs that are performed during the life cycle of wheat. Using a ruler, students match the correct image to the corresponding description.

**Answers** 

- 5 **Optional:**  
Cut out and provide four students with a strip of paper from **Worksheet 2.2c – The Role of a Wheat Farmer** (Timeline activity). Ask the first student to walk to the class timeline and stand near the week where they think the farmer would be performing the job. Ask the rest of the class to raise their hand if they think the student is in the correct position. Attach the strip to the string/paper when the student is in the correct position. Repeat for the other job descriptions.

## ACTIVITY 2.3 – The Sunflower Life Cycle (30–40 minutes)

Students will learn about the life cycle of sunflowers and understand how the plant changes over a period of time. They will learn how to create a scaled timeline to represent a life cycle and associate the role of the farmer with jobs that are being performed at different stages of the plant's growth and development.

1. Provide students with **Worksheet 2.3a – The Sunflower Life Cycle** (Sequencing activity). Students cut out the paper strips with the different stages of the sunflower life cycle. Each strip contains one stage and its corresponding week number. Ask students to arrange the strips in order of time (e.g., 1 to 14 weeks).

### Answers

2. Lay a seven-metre piece of string/paper on the floor or along a wall so students can easily access it. Demonstrate how to create a scaled timeline by using a ruler and placing a 5 cm long piece of masking tape every 50 cm along the string. Label each taped section on the string with the numbers 1 to 14, representing each week in the sunflower life cycle. Explain to students that a timeline can show how something changes over a period of time. Display the timeline in an area of the classroom.
3. Nominate one student at a time to attach a particular strip of paper from **Worksheet 2.3a – The Sunflower Life Cycle** (Sequencing activity) to the correct location on the string to create a timeline of the life cycle. (Optional: students draw a series of pictures to attach to the timeline based on the descriptions or nominate students to act out/role-play each of the descriptions of what is happening during the particular phase of the life cycle). Display the timeline in the classroom.
4. Explain to students that at each point along the timeline, a farmer will be performing particular jobs to make sure their crop is healthy and growing well. Hand out **Worksheet 2.3b – What is the Farmer Doing?** (Matching activity) and read about the four jobs that are performed during the life cycle of sunflowers. Using a ruler, students match the correct image to the description.
5. **Optional:**  
Cut out and provide four students with a strip of paper from **Worksheet 2.3c – The Role of a Sunflower Farmer** (Timeline activity). Ask the first student to walk to the class timeline and stand near the week where they think the farmer would be performing the job. Ask the rest of the class to raise their hand if they think the student is in the correct position. Attach the strip to the string/paper when the student is in the correct position. Repeat for the other job descriptions.



## ACTIVITY 2.4 – Wheat and Sunflower Story (dependent on option chosen)

Students will read a provided story or create their own story about the life cycle of a wheat and sunflower seed. Using the characters designed from Lesson 1 (Activity 1.4), students will have the opportunity to illustrate the story 'A Seasonal Tale' or write and illustrate their own creative story about the phases these plants go through.

1. Project the stimulus image **Stimulus Activity 2 – A Seasonal Story** (Stimulus activity) and complete either Option 1 or Option 2 below.
2. **Option 1:**  
Provide students with **Worksheet 2.4a – A Seasonal Story** (Reading activity). As a class, read the story about the life cycle of the sunflower and wheat characters. Provide students with pencils (or a design program) and allow them time to create a series of pictures to complement the story.
3. **Option 2:**  
Read **Worksheet 2.4a – A Seasonal Story** (Reading activity) to the class to model a story about the life cycle of a sunflower and wheat character. Allow students time to complete their own creative writing piece in their workbooks about the life cycles of the two plants and illustrate their work.



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# Answers

## ▶ ACTIVITY 2.1 – Observing Changes

### 2. Suggested answers/discussion:

#### *What do you think the person is doing?*

- Observing the characteristics and features of the plants.
- Checking for pests and diseases.
- Seeing if the plants look healthy.

#### *What do you think the person is thinking?*

- Are the plants healthy?
- Is this a good crop?
- What do I need to do next?

#### *What do you think the person will do next?*

- Think about the next job they need to do.
- Harvest the crop.
- Water the crop.

#### *Who do you think the person is?*

- Farmer.
- Agronomist (looks after plants and soil – like a doctor for plants).

### 3. Suggested answers/discussion:

- Students have changed in size and shape.
- They have learned how to do tasks on their own.
- Students' bodies have become bigger, stronger, etc.

### 4. Parents used to perform all tasks: feeding, clothing, settling, and putting to bed, etc. As students aged, the jobs that their carers perform also have changed. For example, now they prepare some meals, drive students to school and sports, etc.

# Answers (cont'd)

## ➤ ACTIVITY 2.2 – The Wheat Life Cycle

### WORKSHEET 2.2a – The Wheat Life Cycle

**Week 0 – Sowing (April–May):**

Wheat seeds are planted in the soil.

**Week 2 – Emergence (May–June):**

The wheat starts to germinate and emerge from the soil.

**Week 6 – Tillering (June–July):**

The wheat plants begin to grow more stems, making them bushier.

**Week 12 – Booting (July–August):**

The heads of the wheat, where the grains will grow, start to form.

**Week 16 – Flowering (August–September):**

The wheat plants flower at this time.

**Week 20 – Maturity (September–October):**

The wheat is fully grown, and the grains are ready for harvesting.

**Week 22 – Harvest (October–November):**

Farmers collect the wheat grains from the fields.

### WORKSHEET 2.2b – What is the Farmer Doing?

1C. 2D. 3B. 4A.

Answers are also provided on [Worksheet 2.2c – The Role of a Wheat Farmer.](#)

# Answers (cont'd)

## › ACTIVITY 2.3 – The Sunflower Life Cycle

### WORKSHEET 2.3a – The Sunflower Life Cycle

**Week 0 – Sowing (November–December):**

Sunflower seeds are planted in the soil.

**Week 1 – Emergence (December):**

Little sunflower seedlings start to germinate in the soil.

**Week 3 – Vegetative (December–January):**

The sunflower plants grow leaves and get taller.

**Week 5 – Budding (January):**

Buds start to form, which will turn into sunflower heads.

**Week 8 – Flowering (January–February):**

The sunflower heads open up, and the flowers bloom.

**Week 12 – Maturity (February–March):**

The sunflowers are fully grown, with large heads and seeds.

**Week 14 – Harvest (March–April):**

Farmers collect the sunflowers, either for the seeds or the flowers.

### WORKSHEET 2.3b – What is the Farmer Doing?

1C. 2D. 3B. 4A.

Answers are also provided on [Worksheet 2.3c – The Role of a Sunflower Farmer](#).

## References

Art for Kids Hub. (2018, April 3). *How To Draw A Sunflower*. www.youtube.com. [https://www.youtube.com/watch?v=i\\_pQWFkZJrc](https://www.youtube.com/watch?v=i_pQWFkZJrc)

Primary Industries Education Foundation Australia. (2023). *Redirecting*. Google.com. <https://primezone.edu.au/resource/super-seed-kit/>

Watch Me. (2020, March 20). *Wheat growth stages | seeds of wheat plant | life cycle of wheat | new seeds of wheat plant 2020*. www.youtube.com. [https://www.youtube.com/watch?v=fSOVxsMQ\\_Yk](https://www.youtube.com/watch?v=fSOVxsMQ_Yk)



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# Winter Wheat and Summer Sunflowers



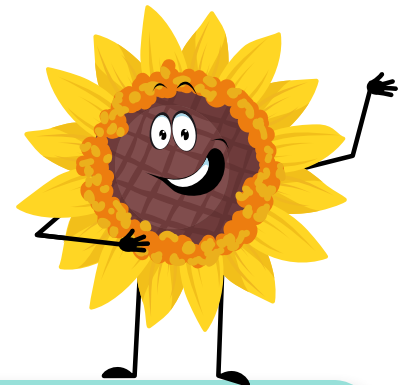
- What do you think the person is doing and why?
- What do you think the person is thinking?
- What do you think the person will do next?
- Who do you think the person is?



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# The Seasons

Draw a picture in each box to show what each of the seasons are like in Australia.



Summer (December to February)



Autumn (March to May)

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# The Seasons (cont'd)



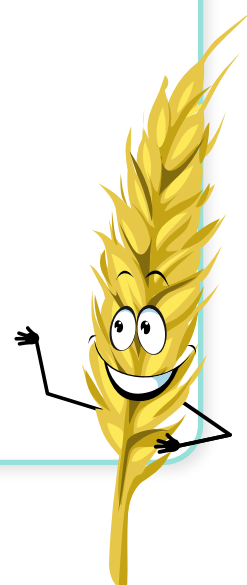
Winter (June to August)

A large, empty rectangular box with rounded corners and a light blue border, intended for students to write about the winter season.



Spring (September to November)

A large, empty rectangular box with rounded corners and a light blue border, intended for students to write about the spring season.

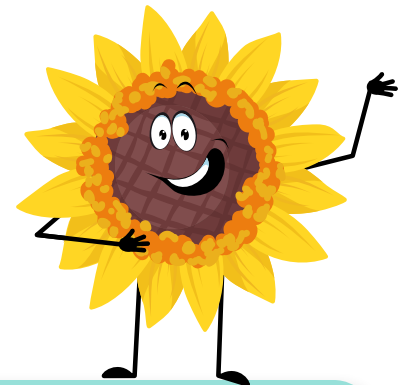


This resource has been developed by:



# The Seasons

Draw a picture in each box to show what each of the seasons are like in Australia.



## Summer (December to February)

In summer, there are more hours of daylight, and the temperature is warmer. We wear light clothing, hats, and sunscreen for protection.



## Autumn (March to May)

Autumn is the change from the hot summer to the cooler winter. There is less hours of daylight and the nights feel longer. The temperature drops, making the air cooler, and we start wearing slightly warmer clothes.

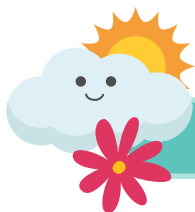
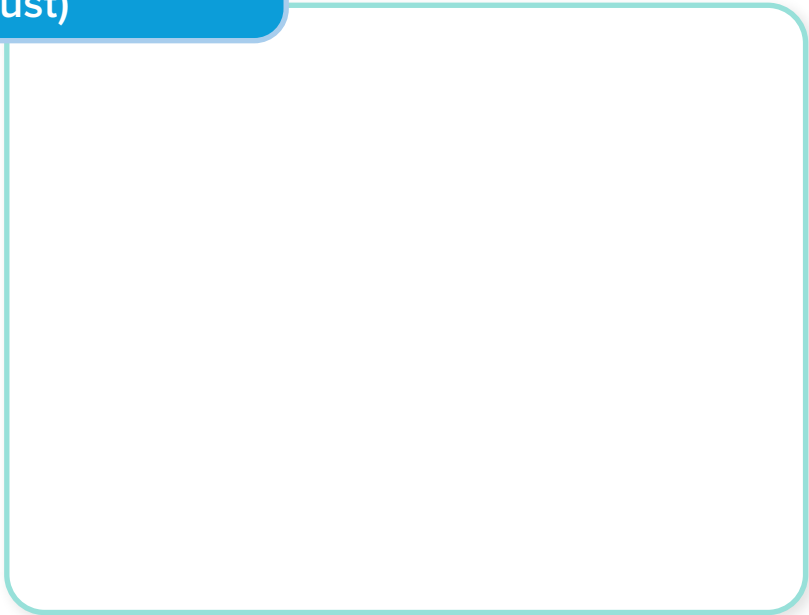
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# The Seasons (cont'd)



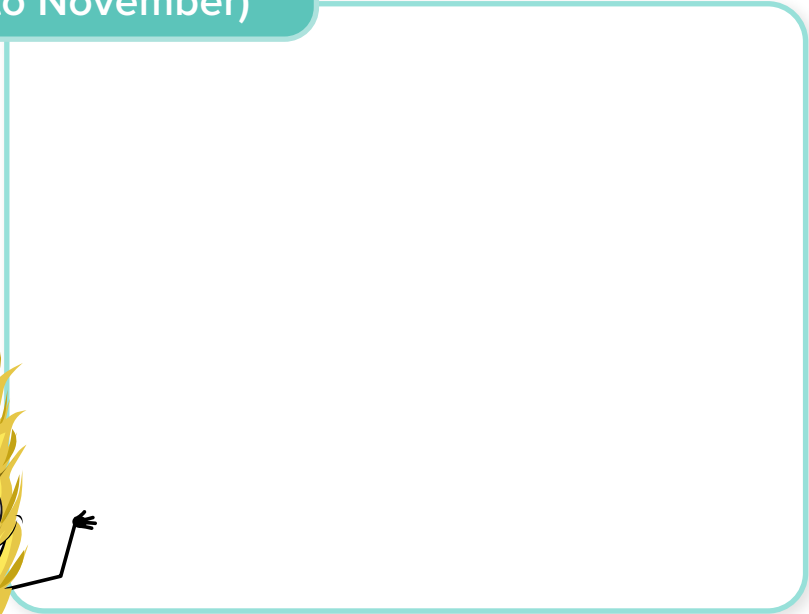
## Winter (June to August)

During winter, there are less daylight hours, and the nights feel longer. The lower temperatures make it the coldest season of the year. We wear warm clothes like jackets, gloves, and beanies to keep ourselves warm. In some parts of Australia, it gets cold enough for snow.



## Spring (September to November)

Spring is the season of growth. The daylight hours get longer, and the weather warms up. This change encourages plants and flowers to grow. It's also a time when many animals have their offspring.



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# The Wheat Life Cycle

Cut out the strips of paper and arrange the strips in order, starting at Week 0 and ending with Week 22.



## Wheat Life Cycle (22 Weeks)

### Week 6 — Tillering (June–July):

The wheat plants begin to grow more stems, making them bushier.

### Week 16 — Flowering (August–September):

The wheat plants flower at this time.

### Week 0 — Sowing (April–May):

Wheat seeds are planted in the soil.

### Week 20 — Maturity (September–October):

The wheat is fully grown, and the grains are ready for harvesting.

### Week 2 — Emergence (May–June):

The wheat starts to germinate and emerge from the soil.

### Week 12 — Booting (July–August):

The heads of the wheat, where the grains will grow, start to form.

### Week 22 — Harvest (October–November):

Farmers collect the wheat grains from the fields.

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# What is the Farmer Doing?

Draw a line between the picture and the correct description to match what the farmer is doing.



1



2



3



4

A

The farmer is checking the soil to make sure it has the right amount of nutrients and water.

B

The farmer is using machinery to plant seeds in the soil.

C

The farmer is using technology to check if the grain is ready to harvest.

D

The farmer is using machinery to harvest the grain and collect it for sale.



Image credit: Ben White

This resource has been developed by:

# The Role of a Wheat Farmer

Cut along the dotted line to create four strips. Attach the strips to the class life cycle timeline at the correct week where the farmer needs to perform the job.



The farmer is using technology to check if the grain is ready to harvest.



The farmer is using machinery to harvest the grain and collect it for sale.

Image credit: Ben White



The farmer is using machinery to plant seeds in the soil.

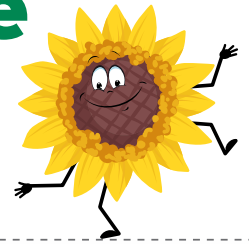


The farmer is checking the soil to make sure it has the right amount of nutrients and water.

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# The Sunflower Life Cycle

Cut out the strips of paper and arrange the strips in order, starting at Week 0 and ending with Week 14.



## Sunflower Life Cycle (14 Weeks)

### Week 8 — Flowering (January–February):

The sunflower heads open up and the flowers bloom.

### Week 0 — Sowing (November–December):

Sunflower seeds are planted in the soil.

### Week 12 — Maturity (February–March):

The sunflowers are fully grown, with large heads and seeds.

### Week 1 — Emergence (December):

Little sunflower seedlings start to germinate in the soil.

### Week 5 — Budding (January):

Buds start to form, which will turn into sunflower heads.

### Week 14 — Harvest (March–April):

Farmers collect the sunflowers, either for the seeds or the flowers.

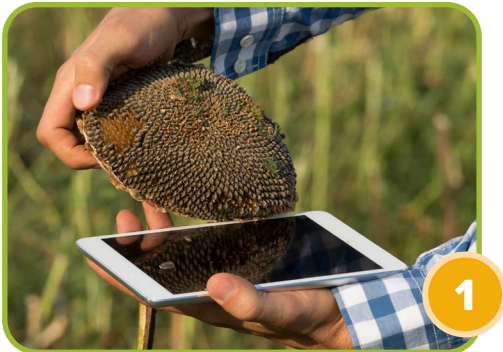
### Week 3 — Vegetative (December–January):

The sunflower plants grow leaves and get taller.

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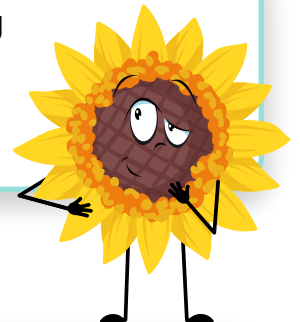
# What is the Farmer Doing?

Draw a line between the picture and the correct description to match what the farmer is doing.



**A** The farmer is checking the soil to make sure it has the right amount of nutrients and water.

**B** The farmer is using machinery to plant seeds in the soil.



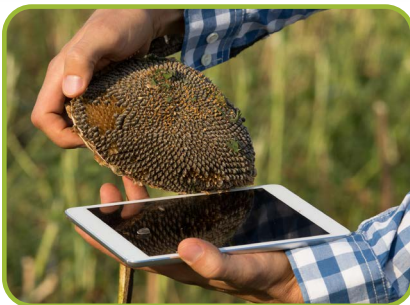
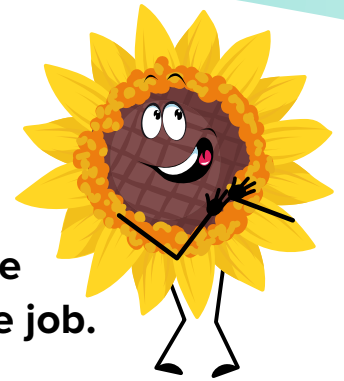
**C** The farmer is using technology to check if the grain is ready to harvest.

**D** The farmer is using machinery to harvest the grain and collect it for sale.

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# The Role of a Sunflower Farmer

Cut along the dotted line to create four strips.  
Attach the strips to the class life cycle timeline at the correct week where the farmer needs to perform the job.



The farmer is using technology to check if the grain is ready to harvest.



The farmer is using machinery to harvest the grain and collect it for sale.



The farmer is using machinery to plant seeds in the soil.



The farmer is checking the soil to make sure it has the right amount of nutrients and water.

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# A Seasonal Story

Create a story about a sunflower and wheat plant that follows their life cycle.



*This image was generated with the assistance of AI*

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# A Seasonal Story

Read and illustrate the story,  
'A Seasonal Story'.



In the sunny land Down Under,  
where kangaroos hop and  
eucalyptus trees sway, lived  
two lively friends—Sam the  
Sunflower and Wendy Wheat.

Sam was a cheerful sunflower,  
always smiling at the bright  
Australian sun, while Wendy, a  
spirited wheat plant, swayed  
gracefully in the cool breeze of  
the vast wheat fields.



Sam's adventure began in the  
spring. A tiny seed tucked into  
the soil, Sam sprouted with joy  
as the days grew longer. She  
stretched tall with a skip and a  
hop, her green stem reaching  
for the sun's warm hugs.

Sam loved the dance of  
photosynthesis, a magical trick  
that turned sunlight into her  
vibrant golden petals.



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## The Seasonal Story (cont'd)

Meanwhile, Wendy Wheat, planted by the farmers in autumn, started her journey when the air turned a bit cooler. She sprouted as winter whispered, turning the paddocks into a sea of young, green shoots.

Wendy danced through spring and summer, her slender stalks swaying.



As the seasons played their tunes, so did the life cycles of Sam and Wendy. Sam's joyful story took about three months, from seed to a grown sunflower.

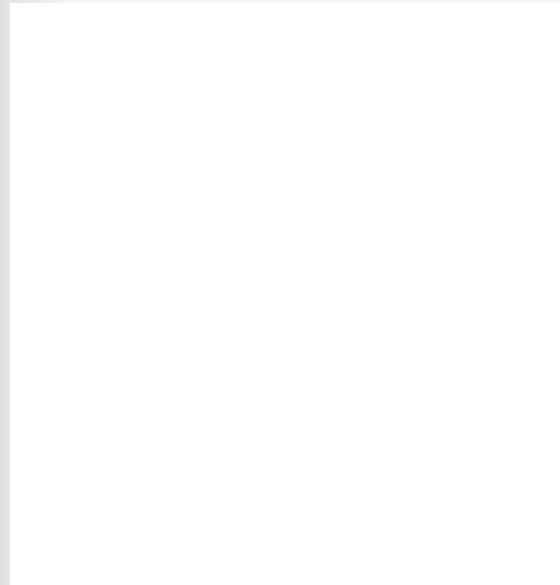
Wendy, with her golden grains of wheat, had a longer adventure. She began in autumn, danced through winter and spring, and by the time summer painted the land in warm hues, she was ready for the harvest.

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## The Seasonal Story (cont'd)

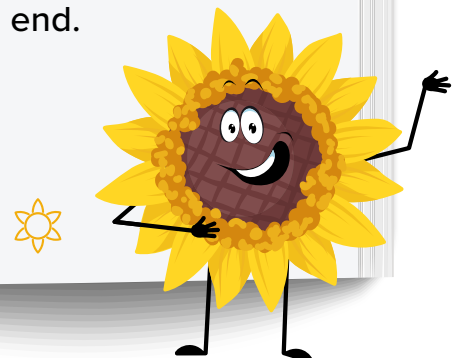
Autumn arrived with a gentle breeze. Sam's once golden petals turned shades of red and brown, like a beautiful sunset in the outback.

Standing tall in the wheat fields, Wendy saw her golden grains ready for the farmer's harvester, the end of her grain's journey.



And so, Sam and Wendy had grown through the seasons in the colourful land of Australia.

As the sun dipped low in the sky, they waved their leaves and petals, grateful for the seasons that painted their stories from beginning to end.



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