

# Seed germination – Activity pack



**Schools participating in Pick of the Crop are encouraged to integrate activities in the classroom as well as other actions across the whole school.**

This seed germination activity was developed and used at the EKKA Rural Discovery Days, held at the Brisbane Showgrounds in May 2024. Schools can replicate the activity in their classrooms, using other seed varieties as necessary.

The seed's journey from planting to our plate or lunchbox is a wonderful one to watch.

Seeds begin little and hard-cased. With sunlight and moisture, seeds will develop tiny openings on their hard shells. From this, a green stem will begin to grow, and over a few days small leaves will develop. Students will be fascinated to see this happen.

This activity pack includes Curriculum linkages, Instructions (that can be printed for use in the classroom), How to care for the seeds, and a resources list.

## Curriculum Linkages:

*This is a guide only, this activity can be related to a range of curriculum units including English and Maths.*

| Design & Tech            |                          |                          |
|--------------------------|--------------------------|--------------------------|
| Year 1 & 2               | Year 3 & 4               | Year 5 & 6               |
| AC9TDE2K03<br>AC9TDE2K04 | AC9TDE4K03<br>AC9TDE4K04 | AC9TDE6K03<br>AC9TDE6K04 |

| Science  |                      |          |          |          |
|----------|----------------------|----------|----------|----------|
| Prep     | Year 1               | Year 3   | Year 5   | Year 6   |
| AC9SFU01 | AC9S1U02<br>AC9S1U01 | AC9S3U01 | AC9S5U01 | AC9S6U01 |

# Seed germination – Activity pack

## Instructions

### Step 1

Scrunch 3-4 sheets of paper towel into balls, and place inside the plastic container.



### Step 2

Place 4 seeds in the container.

Place the seeds on the edge of the container so they can still be seen.

This way you can see them grow!



### Step 3

Use the spray bottle to spray water inside the container until the paper towel is damp.

Do not flood the container with water!



### Step 4

If you are taking the seeds home or moving, use a lid to seal the container.

Otherwise, leave the container in a sunny position.



# Seed germination – Activity pack



## Step 5

Observe and watch the seeds grow! Shoots should be visible after 1 week.

Small roots should start to emerge in approximately 2-3 days.

Once the first roots emerge, you can keep the lid off the container.



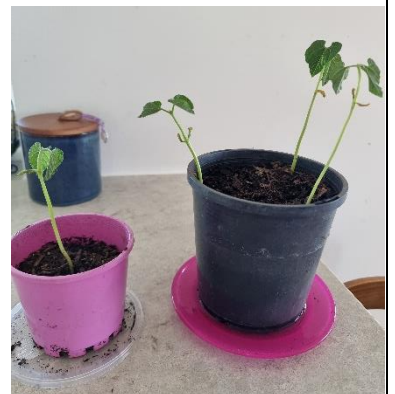
## Step 6

Once sprouted, the seedling should be transplanted into soil in your school or home garden to make sure it has all the nutrients it needs to keep growing.



## Step 7

Now to keep them growing with sun and water.





# Seed germination – Activity pack

## Classroom learning

It is a great opportunity to reflect as a class on what you learnt, and to continue discussions about what your seeds need to grow into healthy plants, and produce lots of crunchy, fresh beans.

### Class Discussions: Seed to plate

- Brainstorm with students – where do vegetables and fruit come from, how are they grown?
- Ask students questions about vegetables and fruit:
  - For examples of vegetables and fruit.
  - How are the vegetables and fruit different? What are their key features?
  - Are all vegetables and fruit grown the same way?
  - What are the different stages of vegetable production?
  - How do farmers help their vegetables grow?
  - How do you cook your vegetables at home?
  - Why do you think it is important to eat vegetables that are green?
  - Do you have a favourite vegetable? Why do you like it?
- Ask students questions about beans (or the vegetables that the seeds will produce)
  - Do you like green beans?
  - What other colours of bean have you seen?
  - What can you do with beans once they're grown?
  - Discuss the different ways your beans may be able to be eaten.
  - Explore the different stages of the plant lifecycle and identify at what point the beans can be harvested to be eaten.
- Other questions you may like to ask students:
  - What colours do vegetables come in?
  - Can you name any other vegetables that grow from seeds, like beans?
  - Why do you think it is important to eat vegetables every day?
  - Can you think of any vegetables that grow underground?

**Extension activity for more complexity:** You can try changing the environment and conditions with which your containers are placed e.g., variations in water, sunlight to see how this impacts the seed growth.

# Seed germination – Activity pack



## Caring for Bean Seedlings

### Remember:

- While waiting for the seedling to emerge, be sure to keep the paper towel moist, adding water as needed.
- The bean plants need at least six (6) hours of sunlight each day
- If the plants are moved outside, make sure they are in well-draining soil and that there are no weeds around the plant. This may prevent it growing fully.
- When planting the seedlings outside, ensure they are 10cm apart. If in rows, ensure 50cm between rows.
- Ensure the soil remains damp – avoid it getting too wet or too dry.
- Bean plants do NOT like frost, so do not move them outside until the risk of frost has passed.

### Further Resources:

| Resource                                                            | Link                                                         | Curriculum Alignment            | Description                                                                                                                                                |
|---------------------------------------------------------------------|--------------------------------------------------------------|---------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Lunchbox Legends: the people behind your lunchbox.</b>           | <a href="#">Scootle</a>                                      | Year 3-6 Design and Technology. | Investigating food production in modern societies (Year 3&4)<br><br>How and why food is produced in managed environments (Year 5&6)                        |
| <b>Kids in the Garden, Episode 4 - plant leaves.</b>                | <a href="#">ABC Education</a> or via <a href="#">Scootle</a> | Years 3, 4 & 5 Science.         | Students will identify the process of photosynthesis and how sunlight, water, the environment and other factors help plants in their lifecycle.            |
| <b>Kids in the Garden, Episode 5 – how plants work</b>              | <a href="#">ABC Education</a> or via <a href="#">Scootle</a> | Year 4 Science                  |                                                                                                                                                            |
| <b>Exploring sustainable practices in food and fibre production</b> | <a href="#">Primezone</a> or via <a href="#">Scootle</a>     | Year 5&6 Design and Technology. | Once your bean seeds are ready to transplant to the garden, this provides opportunity to learn about translating small scale production to mass production |

**Acknowledgements:** Health and Wellbeing Queensland thank Pick of the Crop Regional Coordinators Sam Wyatt and Lucinda Cheke for support in the development of this resource for the 2024 EKKa Rural Discovery Days. We also thank Darcy Smith and Matthew Tong from Queensland University of Technology in collaboration with Children's Health Queensland who inspired this activity through their resource 'Sprout and About'.

July 2024