

## CLASSROOM ACTIVITIES

# STAGE ONE LESSON ONE



### Learning Outcomes

- **ST1-4LW-S** describes observable features of living things and their environments
- **MA1-CSQ-01** Uses number bonds and the relationship between addition and subtraction to solve problems involving partitioning



### Resources and Preparation

#### Resources

##### Video (V)

- Video 6 - [How does a seed become a plant?](#)

##### Worksheets (WS) and Powerpoints (PTT)

- [PowerPoint 4 - How do fruits and vegetables grow?](#)
- Worksheet 4 - Counting fruits and vegies
- Teacher Information Document (TID)

##### Materials

- Student's Crunch & Sip fruit and veg
- Classroom poster
- Blank paper or interactive whiteboard
- (Colouring) pencils

##### Preparation

###### Prior to lesson:

- This lesson could be done during or immediately before Crunch & Sip
- Print 1x WS4 per student

# The science behind growing fruit & vegies

Students explore how fruits and vegetables grow and what they need to grow. They do calculations with their fruits and vegetables brought in for Crunch & Sip and pick the most popular one to be used for the classroom poster. They investigate their poster fruit/vegetable in more detail.

### Introduction (5 mins)

Discuss with the students: What are fruits and vegetables and where do they come from? How/where do they grow and what do they need to grow? Brainstorm onto blank display posters or the interactive whiteboard.

### Activity (40 mins)

1. Ask the students to get their Crunch & Sip fruit or veg.
2. Together with the whole class, use page 1 of WS4 to do some calculations with your student's Crunch & Sip fruits and vegetables.
3. Watch V6 or use PPT4 to learn about fruits and vegetables going from seed to plants and what they need to grow. Or find a video about your chosen fruit/vegetable for the classroom poster (see TID for suggestions).
4. Individually, students can complete page 2 of WS4. After, explain the classroom poster to the students and choose which fruit or vegetable will feature on the classroom poster.
5. Investigate the chosen fruit/vegetable for the poster together with the class. Have one student complete Week 1 on the classroom poster. Students keep track of their plants over the next weeks.

### Conclusion (5 mins)

Students can share with the class what their favourite fruit or vegetable is, and using their drawing on WS4, explain how it grows and what it needs to grow.

### Assessment

- For:** Students understand how fruits and vegetables grow.
- As:** Students use what they have learned and apply to their own favourite fruit or vegetable.
- Of:** Students correctly solve the fruit and vegetable math problems.

### Differentiation

- Extend:** Students can brainstorm about how to control and speed up the growth of the plant (i.e. greenhouses, automatic watering systems, fertilising, etc).
- Simplify:** Skip page 2 of WS4, or do as a whole class.

### School/Home Link

Students can use what they learned to explore fruits and vegetables in their own environment, together with their parents/carers

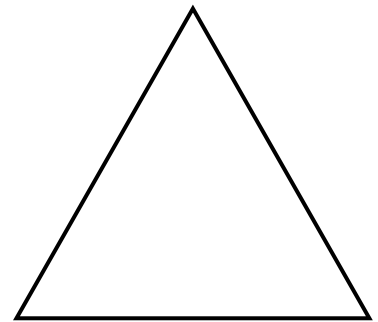
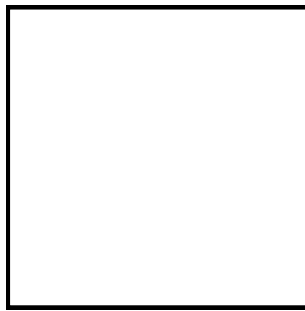
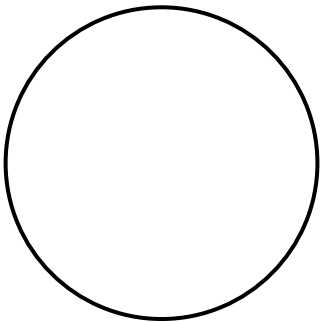
Duration | 50 minutes



# Counting with your Crunch & Sip

1. Count the total number of fruits in your class: .....
2. Count the total number of vegetables in your class: .....
3. Are there more fruits or vegetables? .....
4. How many more? .....
5. Draw below:

- 3 strawberries in the TRIANGLE
- 2 bananas in the CIRCLE
- 4 apples in the SQUARE



6. What shape is your Crunch & Sip fruit or vegetable?

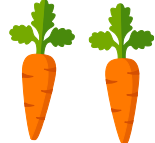
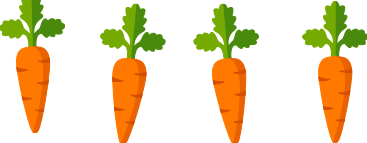
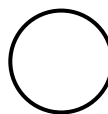
.....

7. Solve the additions below and write the answers in the circles:

 +  = 

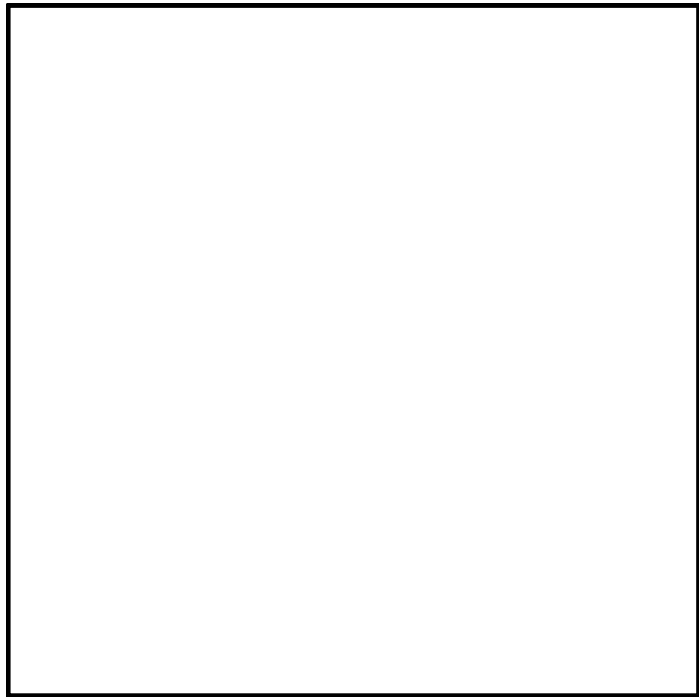
 +  = 

 +  = 

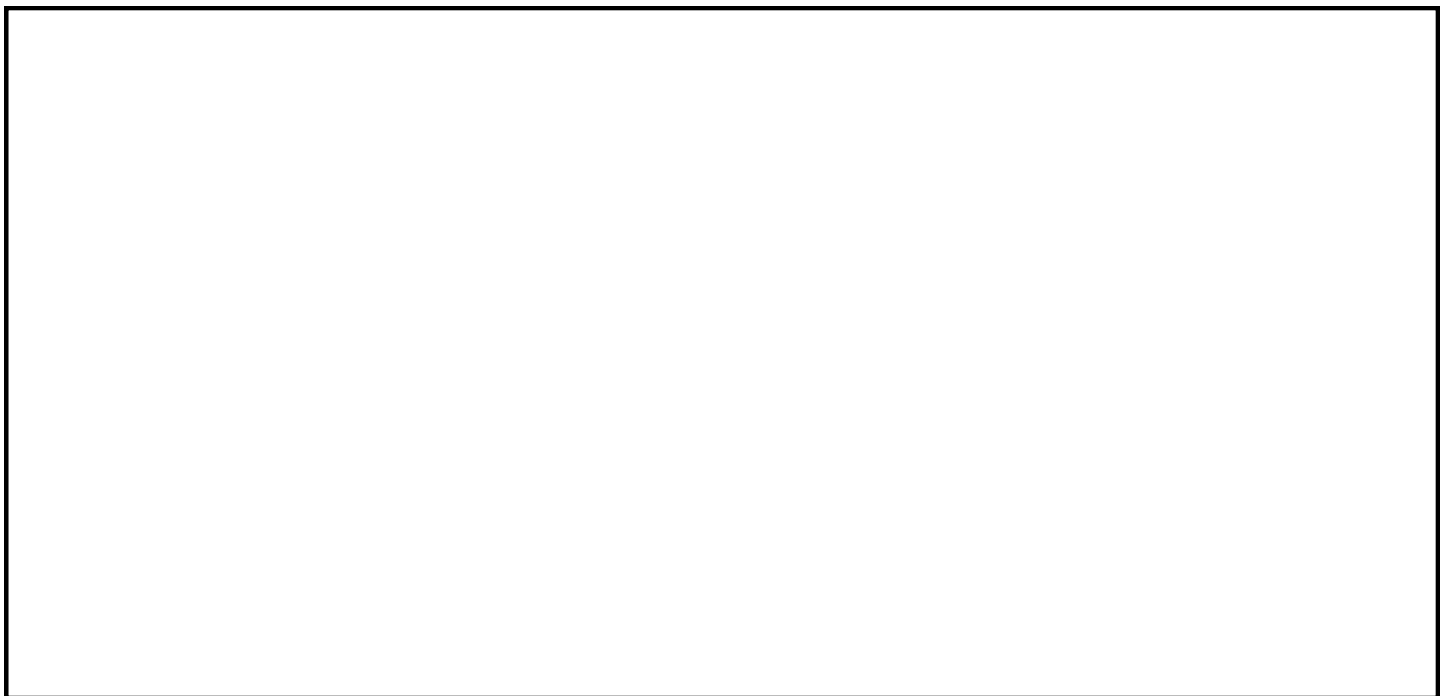
 +  = 

 +  = 

Write the name of your favourite fruit or vegetable. Draw it in the square below:



Draw how your favourite fruit or vegetable grows from seed to plant:



What are 3 things a plant needs to grow?



## CLASSROOM ACTIVITIES

# STAGE ONE LESSON TWO



### Learning Outcomes

- **EN1-RECOM-01** comprehends independently read texts that require sustained reading by activating background and word knowledge, connecting and understanding sentences and whole text, and monitoring for meaning
- **ST1-5LW-T** identifies how plants and animals are used for food and fibre products
- **MA1-CSQ-01** uses number bonds and the relationship between addition and subtraction to solve problems involving



### Resources and Preparation

#### Resources

##### Video (V)

- Video 2 - [How did that get in my lunchbox?](#)

##### Worksheets (WS) and Powerpoints (PTT)

- Worksheet 5 - From farm to fork
- Teacher Information Document (TID)
- [PowerPoint 2 - From farm to fork](#)

##### Materials

- 1 printed WS5 per student
- Classroom poster
- Scissors
- Glue
- Drawing materials
- Workbooks
- (Optional) ["How did that get in my lunchbox" book](#)

##### Preparation

###### Prior to lesson:

- Print 1x WS5 per student

# The farm to fork process

Students learn about the journey of fruits and vegetables, as they travel from 'farm to fork'. They discuss the process of harvest, transport and storage of different fruits and vegetables. They learn about concepts such as supply chain and food safety.

### Introduction (5 mins)

Ask the class if they remember where and how their fruits and vegetables grow and review the previous lesson together. Now ask the students if they ever thought about how their fruit or vegetables get from where they grow, to the grocery shop and then into their lunchbox. Brainstorm together.

### Activity (40 mins)

1. Read the book "How did that get in my lunchbox", or watch the video (V2) together with the class.
2. Discuss the book and explain anything the students did not understand.
3. Using PPT2, the teacher can explain some concepts related to the farm to fork process (including food safety and storage options).
4. Explain that the process for carrots is all mixed up on their WS5 and they can cut out, complete, order and paste the pictures into their workbook (and colour in if there is time).

### Conclusion (10 mins)

Mention the fruit/veg chosen for the poster and brainstorm with the students about how they think it makes it from 'farm to fork'. Ask them to apply what they have learned by discussing or looking up information about the poster fruit/vegetable and completing Week 2 on the classroom poster.

### Assessment

- For:** Students understood the fruit & veg 'farm to fork process'.
- As:** Students put 'farm to fork' flowchart in the correct order and successfully tally up the carrots.
- Of:** Students successfully complete the flowchart in their workbook.

### Differentiation

- Extend:** Students can explore further discussions about the supply chain and its impact on the environment. Consider questions such as: why is a shorter supply chain better for the environment?
- Simplify:** There can be less focus on teaching about the supply chain and more on how to store their food properly and why it is important to do so.

### School/Home Link

Students can ask their parents/carers where the fruit and vegetables in the house came from, check how far and how it 'travelled to their fork'.

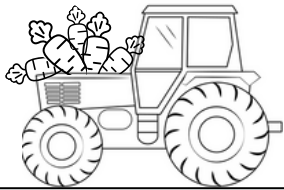
### Duration | 55 minutes



# Carrot supply chain

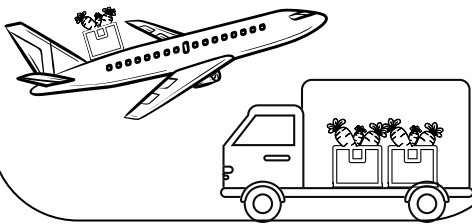
A supply chain shows the steps of something going from where it is made, to where it is used or eaten. Can you put the steps of carrots going from farm, to your lunchbox? Cut out the boxes and arrows, and paste them in your workbook in the correct order.

The carrots are transported from the farm, to be sorted

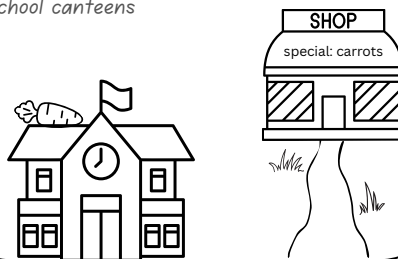


The good carrots are packed up in the packing centre. They are put into pallets for transport

Carrots are transported to places where they can be sold



Carrots are sold in the shops or school canteens



The carrots are sorted for colour, size and shape



The good carrots will go to the packing centre

The bad carrots will go ...



The carrots are grown and harvested

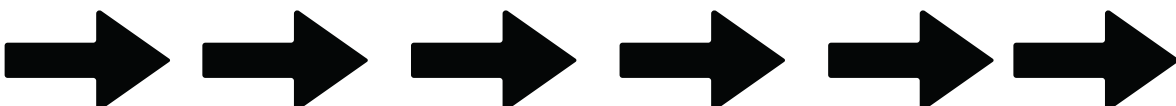
Bad carrots: some are not good to eat and will be thrown out. But some will be cut up and sold in pre-made salads or soups



You buy the carrots and take them for Crunch & Sip



Draw yourself here



## CLASSROOM ACTIVITIES

### STAGE ONE LESSON THREE



#### Learning Outcomes

- **PD1-6** Understands contextual factors that influence themselves and others' health, safety, wellbeing and participation in physical activity
- **MA1-GM-02** measures, records, compares and estimates lengths and distances using uniform informal units, as well as metres and centimetres
- **ST1-5LW-T** identifies how plants and animals are used for food and fibre products



#### Resources and Preparation

##### Resources

##### Video (V)

- Video 7 - [Show younger children why eating their fruit and veg is good](#)

##### Worksheets (WS) and Powerpoints (PTT)

- Worksheet 6 - Digestion board game
- Worksheet 7 - What happens in the body?
- [PowerPoint 1 - What happens in the body?](#)
- Teacher Information Document (TID)

##### Materials

- Classroom poster
- Dice (1 per group)
- Rulers (1 per group)
- Pencils
- Paper
- Drawing materials

##### Preparation

##### Prior to lesson

- Print out WS6 (1 per group) and tape

## What happens in the body?

Through playing a board game, students learn about the basics of what happens in your body when you eat your fruits and vegetables. Students learn about how/why the body takes vitamins, fibre and energy from fruits and vegetables.

#### Introduction (15 mins)

Show students PPT1 about digestion. Discuss with the students (i.e Why do we need to eat fruits and vegetables? How does our food move through our bodies? What body parts do we use for 'digestion'? What do our bodies get from the food we eat?). Option to watch V7 for more in-depth information on some specific nutrients.

#### Activity (30 mins)

1. Divide the class into groups of 4-5.
2. On WS7, all students complete the graphic. At the same time, assign one student to complete Week 3 on the classroom poster.
3. Each group will then play the 'Fruit & Veg Digestion' game (WS6). They can draw their favourite fruit or vegetable to use as their pawn for the board game. They read the instructions of the space they land on after rolling the dice.

#### Conclusion (10 mins)

Back as a whole class, ask who can explain again how fruit and vegetables move through their body and what their body uses them for. Ask students to consider what would happen if they didn't eat any fruit or vegetables and have a discussion about their thoughts and opinions.

#### Assessment

- For:** Students are involved in discussion/brainstorm about digestion and energy.
- As:** Students successfully play the digestion board game.
- Of:** Students understand the concepts of digestion and energy.

#### Differentiation

- Extend:** Aside from energy, the concept of vitamins and minerals can be further discussed and explored with the students.
- Simplify:** Play the game with the whole class.

#### School/Home Link

Students can identify all the fruits and vegetables they ate in one day, and then how they used the energy from those on that day.

#### Duration | 55 minutes

















# Digestion board game

Print the next 4 pages and cut and paste them together to create one big board game.

WORKSHEET 6

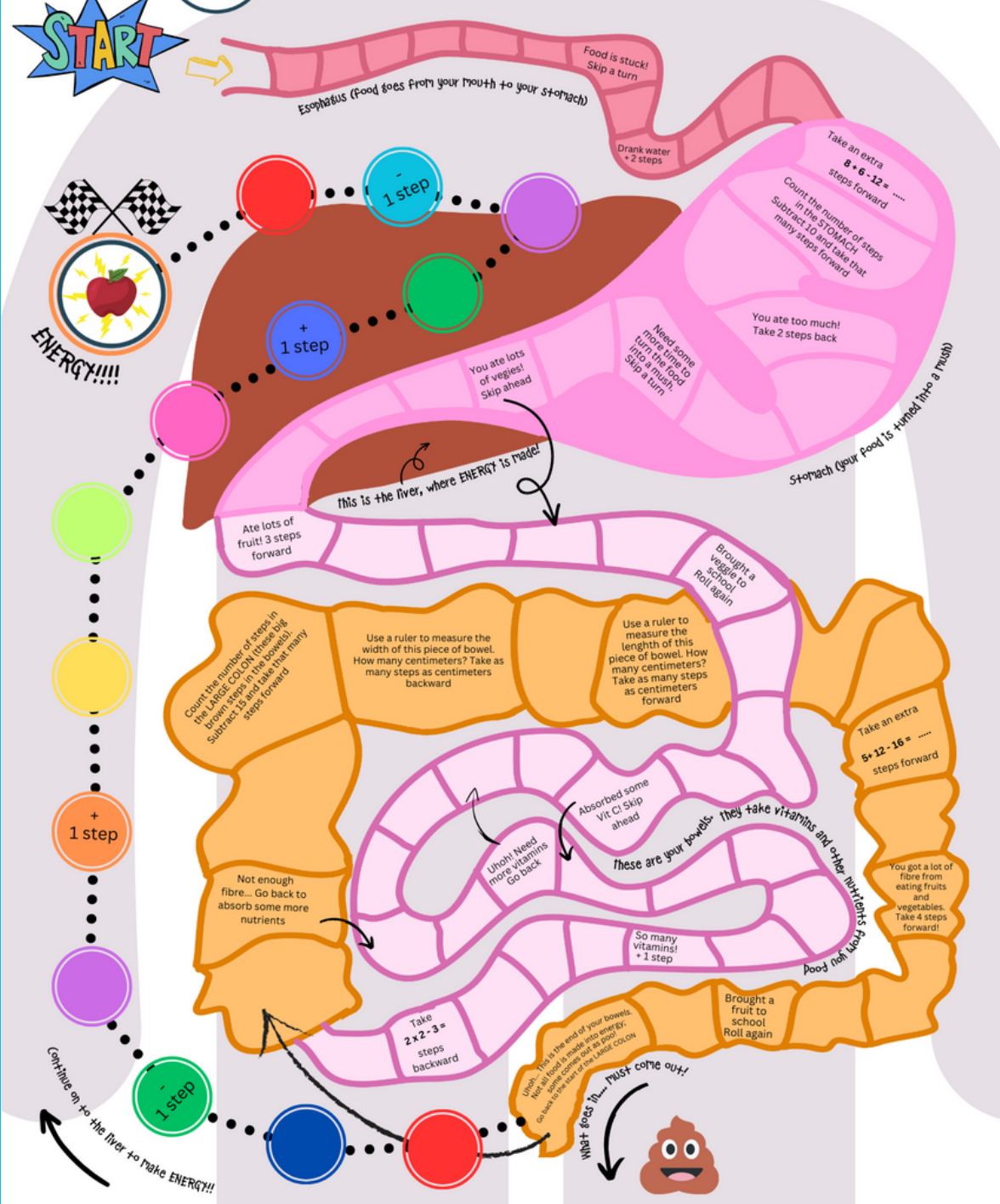
ENERGY!!!!

## Digestion board game

### How to play

Create your own fruit or vegetable pawn to play with: take a very small piece of paper (that will fit on the steps of the game) and draw your favourite fruit or vegetable.  
 Start the game! Roll the dice and move along the digestion system. Follow the instructions when you land on a step with text. Once you have followed the instructions, that's the end of your turn. Do NOT follow instructions on the step you land on again.  
 First to the ENERGY finish wins!



**Esophagus (Food goes from your mouth to your stomach)**

- Food is stuck! Skip a turn
- Drank water + 2 steps

**Stomach (your food is turned into a mush)**

- Take an extra  $8 + 6 - 12 = \dots$  steps forward
- Count the number of steps in the STOMACH Subtract 10 and take that many steps forward
- You ate too much! Take 2 steps back
- Need some more time to get the food into a mush. Skip a turn

**Liver (This is the liver, where ENERGY is made!)**

- Ate lots of fruit! 3 steps forward
- You ate lots of veges! Skip ahead

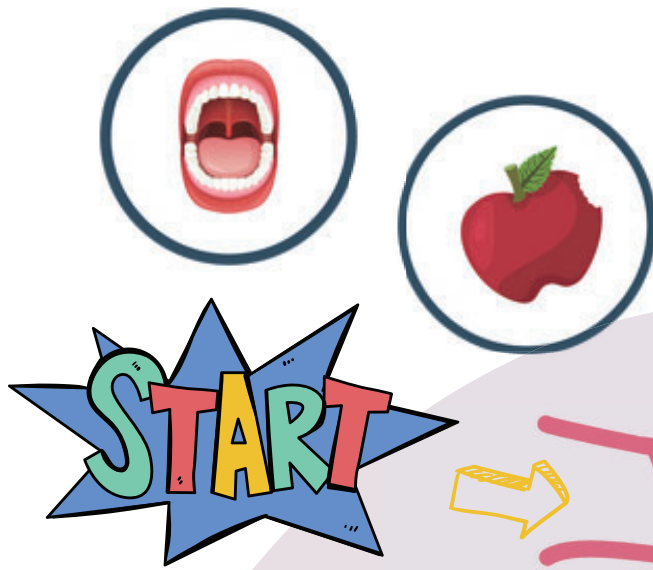
**Small Intestine (these are your bowels - they take vitamins and other nutrients)**

- Brought a veggie to school. Roll again
- Use a ruler to measure the length of this piece of bowel. How many centimeters? Take as many steps as centimeters forward
- Use a ruler to measure the width of this piece of bowel. How many centimeters? Take as many steps as centimeters backward
- Take an extra  $5 + 12 - 16 = \dots$  steps forward
- You got a lot of fibre from eating fruits and vegetables. Take 4 steps forward!
- So many vitamins! + 1 step
- poop! Roll again!
- Uhoh! Need more vitamins. Go back
- Absorbed some Vit C! Skip ahead
- Not enough fibre... Go back to absorb some more nutrients
- Uhoh! What's the end of your bowels. Not all food is made into energy. Go back to absorb it in the large colon
- What goes in must come out!

**Large Intestine (these are your big brown steps in the bowels)**

- Count the number of steps in the LARGE COLON (these are your big brown steps in the bowels) Subtract 12 and take that many steps forward
- Contribute on to the liver to make ENERGY!

## WORKSHEET 6



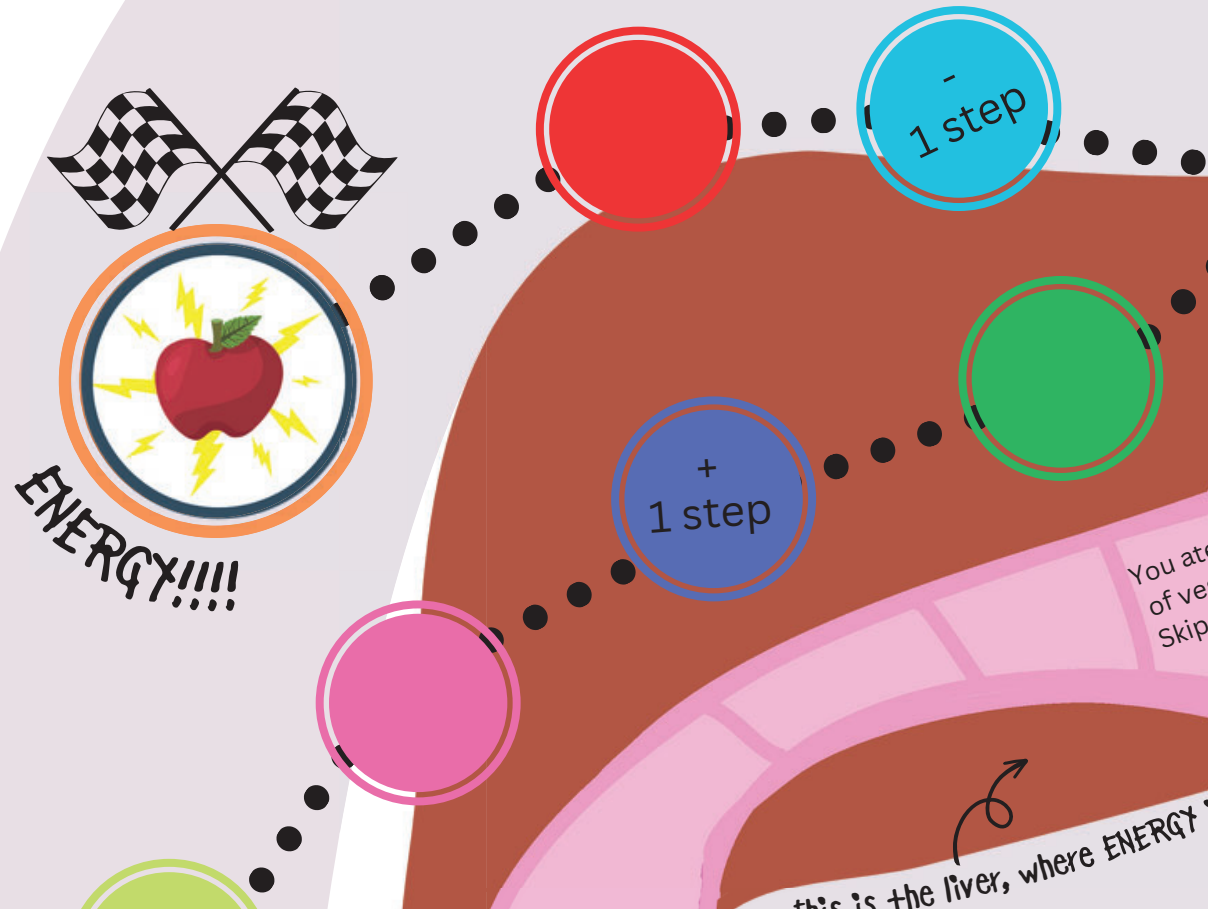
# Digestion

## How to play

Create your own fruit or vegetable and fit on the steps of the game.  
Start the game! Roll the dice.  
If you land on a step with text, do it.  
Do NOT follow instructions on a step with a blank space.  
First to the ENERGY finish wins!



Oesophagus (food goes from your mouth to the stomach)



ENERGY!!!!

- 1 step

+ 1 step

this is the liver, where ENERGY is produced

You ate  
of vegetable  
Skip



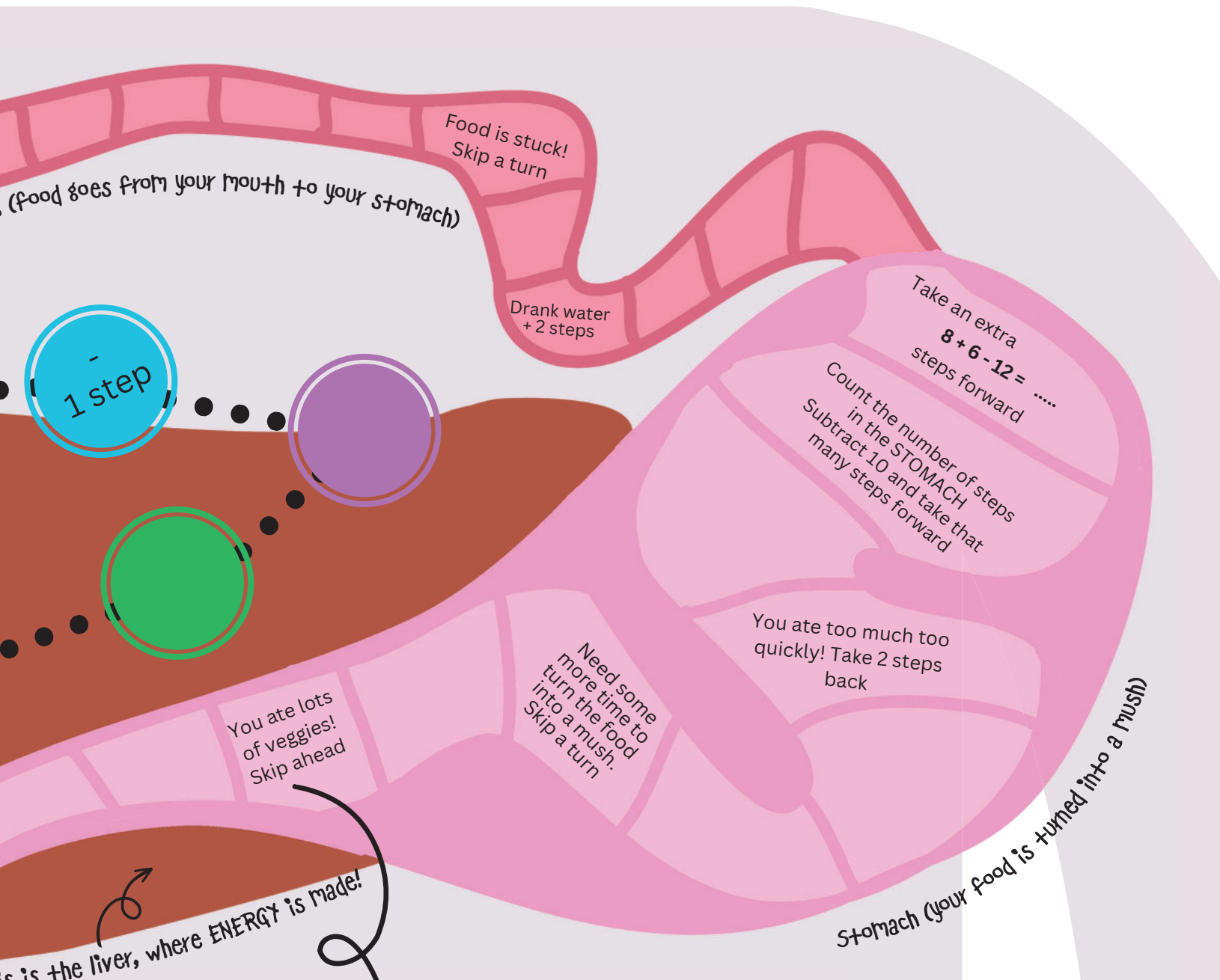
# Digestion board game

## How to play

Create your own fruit or vegetable pawn to play with: take a very small piece of paper (that will fit on the steps of the game) and draw your favourite fruit or vegetable.

Start the game! Roll the dice and move along the digestion system. Follow the instructions when you land on a step with text. Once you have followed the instructions, that's the end of your turn. Do NOT follow instructions on the step you land on again.

First to the ENERGY finish wins!



ENERGY!!!!

You ate  
of ve  
Skip

this is the liver, where ENERGY

Ate lots of fruit! 3 steps forward

Count the number of steps in the LARGE COLON (these big brown steps in the bowels). Subtract 15 and take that many steps forward

Use a ruler to measure the width of this piece of bowel. How many centimeters? Take as many steps as centimeters backward

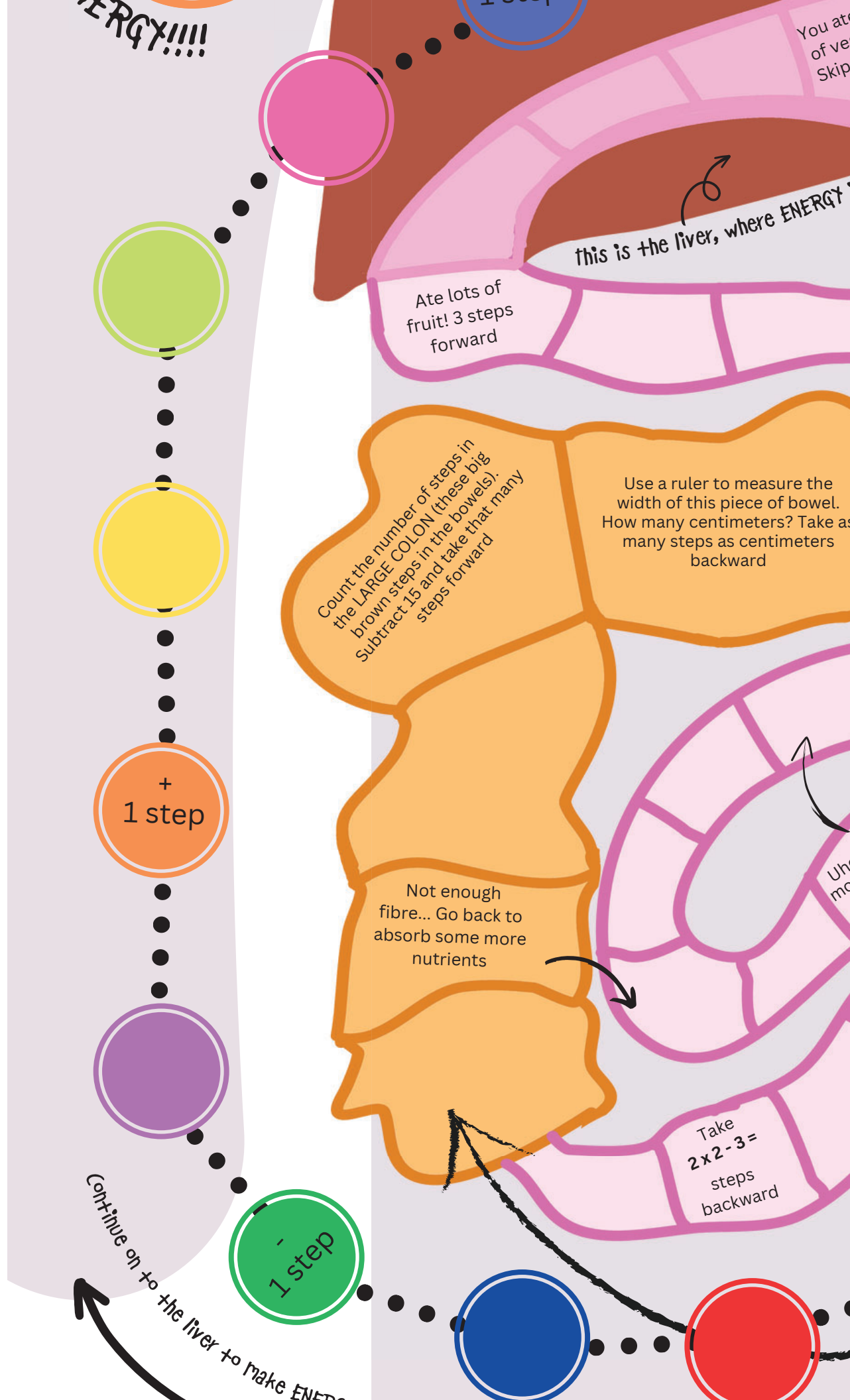
+ 1 step

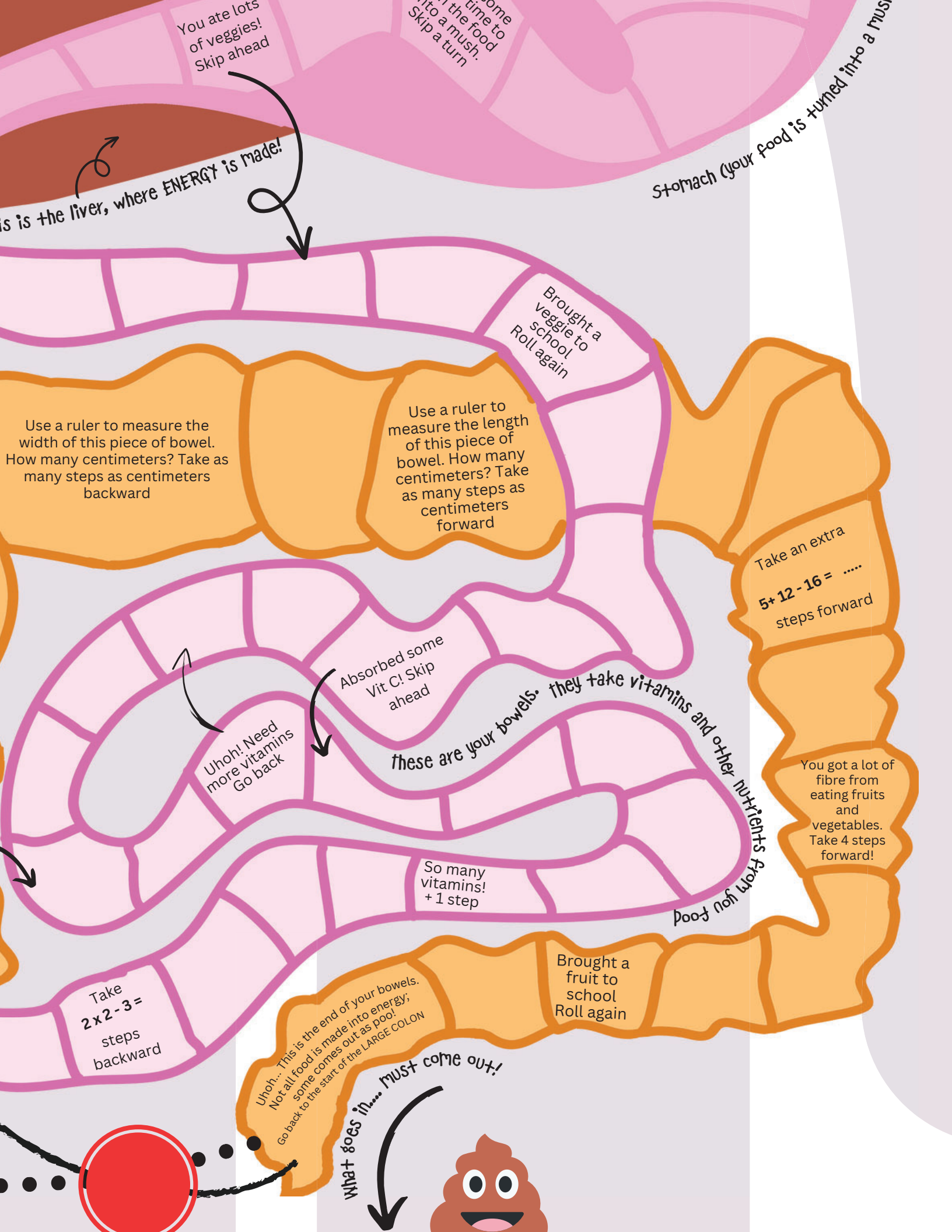
Not enough fibre... Go back to absorb some more nutrients

Take  $2 \times 2 - 3 =$  steps backward

- 1 step

Continue on to the liver to make ENERGY





You ate lots of veggies! Skip ahead

It's time to turn the food into a mush. Skip a turn

Stomach (your food is turned into a mush)

This is the liver, where ENERGY is made!

Brought a veggie to school! Roll again

Use a ruler to measure the width of this piece of bowel. How many centimeters? Take as many steps as centimeters backward

Use a ruler to measure the length of this piece of bowel. How many centimeters? Take as many steps as centimeters forward

Take an extra  $5 + 12 - 16 = \dots$  steps forward

Uhoh! Need more vitamins Go back

Absorbed some Vit C! Skip ahead

these are your bowels. they take vitamins and other nutrients from your food

You got a lot of fibre from eating fruits and vegetables. Take 4 steps forward!

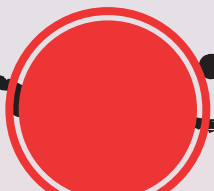
So many vitamins! +1 step

Take  $2 \times 2 - 3 =$  steps backward

Brought a fruit to school Roll again

Uhoh.. This is the end of your bowels. Not all food is made into energy; some comes out as poo! Go back to the start of the LARGE COLON

What goes in... MUST come out!



Complete the text below and draw a line to the body part.

Words to use: energy teeth bowels stomach vitamins.

Your ..... chomp  
your fruit/veg  
into small pieces



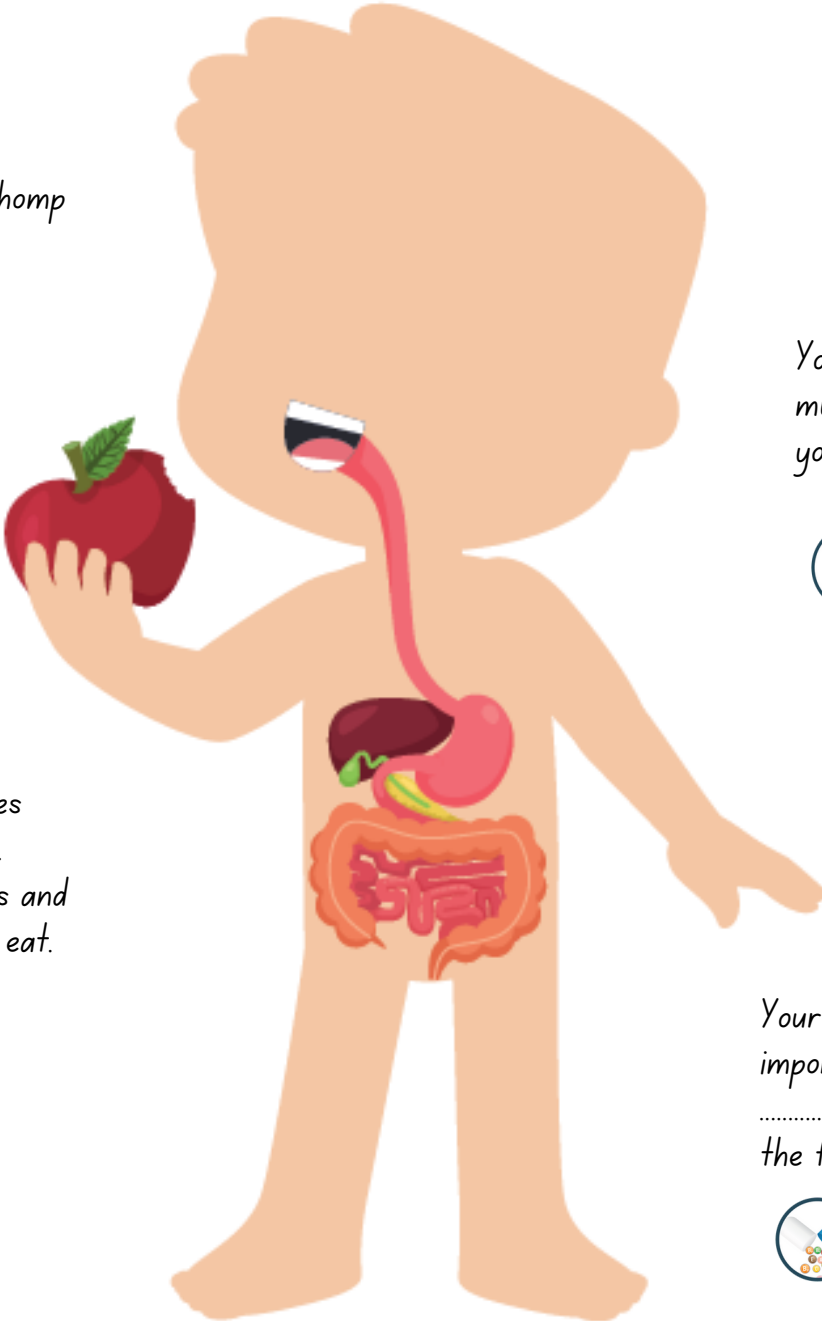
Your ..... makes a  
mush that can go into  
your bowels



Your liver makes  
.....  
from the fruits and  
vegetables you eat.



Your ..... take  
important  
..... from  
the fruit/veg mush



What is your favourite fruit or vegetable? What do you like to do with the energy you get from eating it?

.....  
.....  
.....  
.....



## CLASSROOM ACTIVITIES

# STAGE ONE LESSON FOUR



### Learning Outcomes

- **MA1-DATA-01** gathers and organises data, displays data in lists, tables and picture graphs
- **ST1-1WS-S** observes, questions and collects data to communicate and compare ideas



### Resources and Preparation

#### Resources

##### Video (V)

- Video 8 - [The colour changing celery experiment](#)

##### Worksheets (WS) and Powerpoints (PTT)

- Worksheet 8.1 - Celery stems, cabbage leaves and flowers
- Worksheet 8.2 - Storage experiment
- Worksheet 8.3 - Growing seeds
- [Powerpoint 3 - Experiment](#)
- Teacher Information Document (TID)

##### Materials

- See TID for specific material lists per experiment
- Classroom poster

#### Preparation

##### Prior to lesson

- See TID for specific preparation instructions per experiment

## Fruit & vegie experiments

Students will pick, plan, research and implement an exciting experiment with fruit and/or vegetables. Through the experiment, students either learn about capillary action, the effect of packaging or how to grow seeds the quickest. Students can present their findings to the class, school or even the community.

### Introduction (10 mins)

Explain to the students that you will be doing a science experiment with fruit/vegetables. You can use PPT3 to explain to the students what an experiment is, and watch V8 to learn about one of the experiments in this lesson. The experiment in WS8.1 could first be done first with the whole class, to model an experiment for the students.

### Activity (60-120 mins, spread over several days)

1. As a class, choose an experiment to do in class (see TID and WS8.1-8.3)
2. Divide the class into groups of 3-4. Each group will test a different condition in the experiment
3. Together with the class, walk through the steps in the worksheet and guide them in doing their research and answering the questions.
4. Students continue to collect data and make notes over several days. Depending on the experiment chosen, the length of time will vary (see TID).
5. When finished, students will answer the questions about their findings and, if possible, complete the graph.
6. Discuss with the students what they think of doing 'research' and fill out the classroom poster for one of the experiments.
7. On the last day, the cabbage can be used to make a rainbow salad or funny cabbage faces can be created by decorating it with other fruits and vegetables such as blueberries and carrots.

### Conclusion (5 mins)

Ask the students if anyone can summarise their experiment for the rest of the class. What data did they collect and what were their findings? Was it what they expected? Can they explain WHY they found what they did? Other students can ask each group questions about their experiment.

### Assessment

- For:** Students understand how to do their experiment  
**As:** Student successfully complete their experiment  
**Of:** Students collected data, made predictions and conclusions about their experiment

### Differentiation

- Extend:** Students can create posters or PowerPoint slides about their experiment and present to the class/school/community (perfect to combine this with an organised School Science Fair).
- Simplify:** Follow lesson 4 for ES1.

### School/Home Link

Coloured cabbage leaves and celery stems could be used in salads/sandwiches in the canteen. Flowers could be used as decoration in class.

**Duration | 75-135 minutes**



# Option 1: Celery stems, cabbage leaves and flowers

Give your experiment a name

.....

**1** What do you want to find out from your experiment?

I want to test what happens when I put a ..... in coloured water.

**2** What will you measure? And what do you need?

I will measure:

1) ..... 2) ..... 3) .....

I will need:

.....  
.....

**3** What colour is your water?

.....

**4** What do you think will happen?

.....  
.....  
.....  
.....

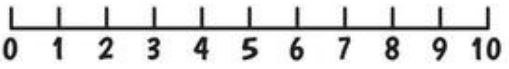


**5** Day ..... measurements and observations

- 1. Draw a picture of your experiment:
- 2. How much water is in the cup?  
.....cm
- 3. How much time has the leaf/flower been in the coloured water?  
.....
- 4. Rate the colour of the leaf/flower

On a scale of 0 to 10, how much has your leaf or flower changed colour?  
0 is not at all and 10 is completely.

.....



Write here the colour in your cup.

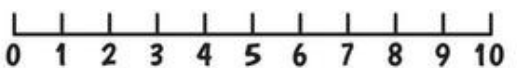


**6** Day ..... measurements and observations

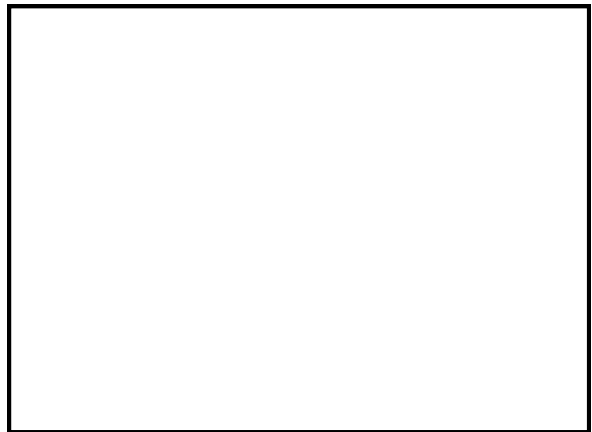
- 1. Draw a picture of your experiment:
- 2. How much water in in the cup?  
.....cm
- 3. How much time has the leaf/flower been in the coloured water?  
.....
- 4. Rate the colour of the leaf/flower

On a scale of 0 to 10, how much has your leaf or flower changed colour?  
0 is not at all and 10 is completely.

.....

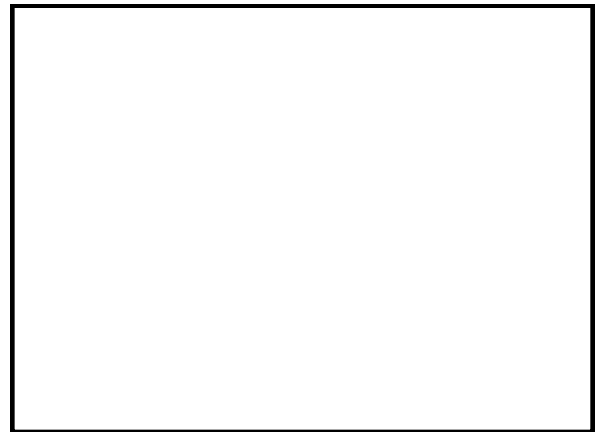


Write here the colour in your cup.



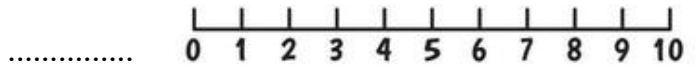
**7** Day ..... measurements and observations

- 1. Draw a picture of your experiment:
- 2. How much water is in the cup?  
.....cm
- 3. How much time has the leaf/flower been in the coloured water?  
.....



4. Rate the colour of the leaf/flower

On a scale of 0 to 10, how much has your leaf or flower changed colour?  
0 is not at all and 10 is completely.



Write here the colour in your cup.

**8** Findings

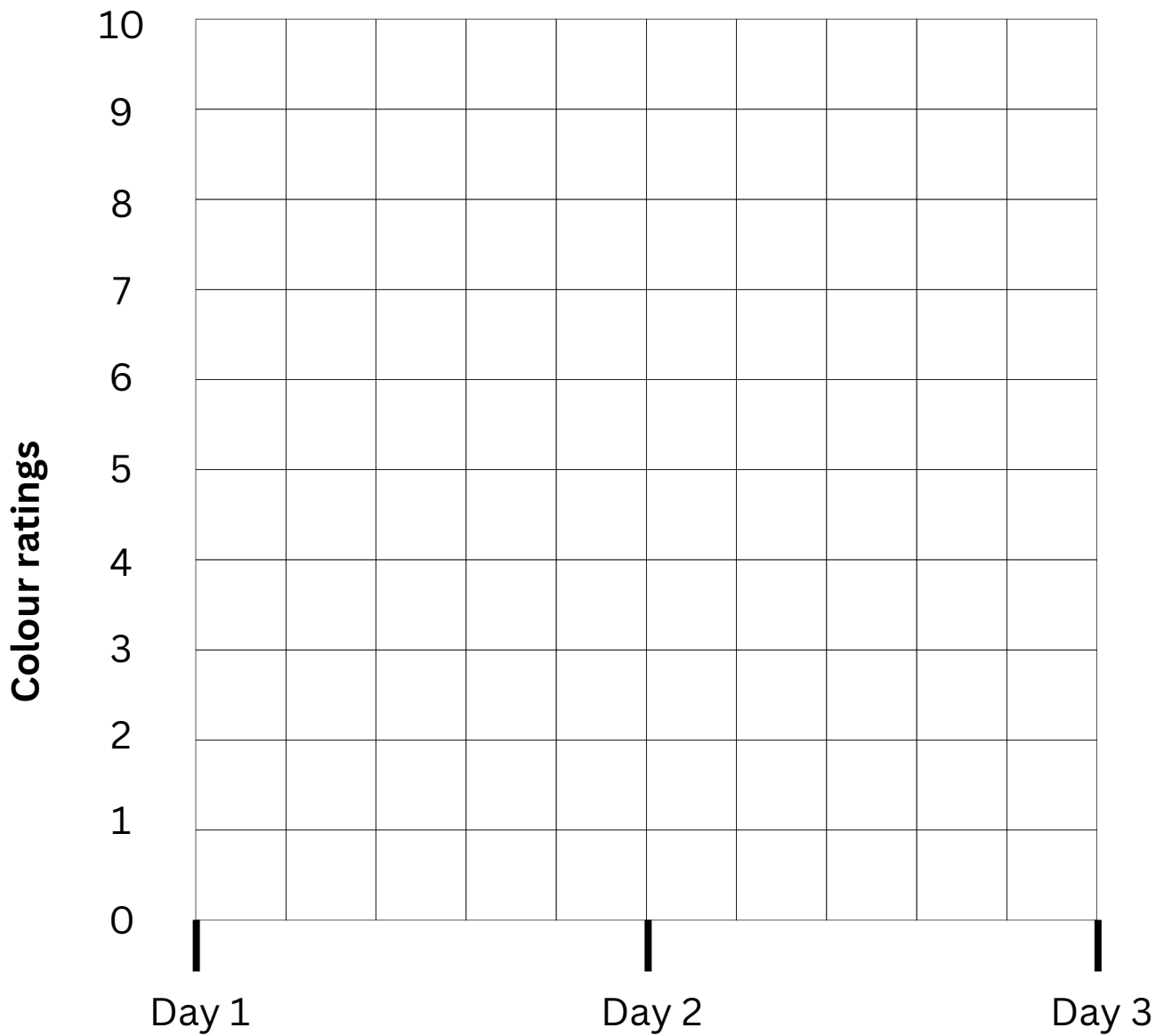
1. What happened to your flower or leaf?

.....  
.....

2. What happened to the leaves and flowers of the other groups?

.....  
.....

3. Can you put your data in a graph?



4. Take a look at the graphs of other groups that used another leaf or flower. Write down any differences you can see between your graph and theirs.

.....

.....

.....

5. Together with your teacher, compare all the graphs.  
Which one got the highest colour ratings?

.....

6. Which one changed colour the quickest?

.....

7. Check the data on each day and write down the centimeters of water in the cup for each day:

DAY 1: ..... cm

DAY 2: ..... cm

DAY 3: ..... cm

Did the water level go down, up or stay the same? Why do you think that happened?

.....  
.....  
.....

## Option 2: Storage experiment

*Give your experiment a name*

.....

**1** What do you want to find out from your experiment?

*I want to test what happens when I store  
a fruit or vegetable in a .....*

**2** What will you measure? And what do you need?

*I will measure:*

1) ..... 2) ..... 3) .....

*I will need:*

.....  
.....

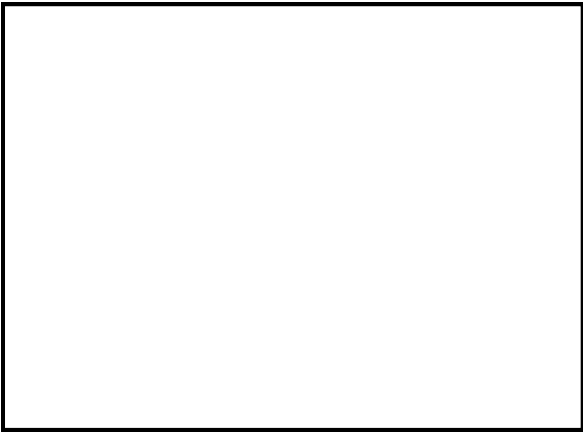
**3** What fruit or vegetable are you using?

.....

**4** What do you think will happen?

.....  
.....  
.....  
.....

**5** Day ..... measurements and observations



- 1. Draw a picture of your experiment:
- 2. How much time has the fruit/vegetable been stored?  
.....

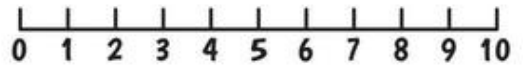
3. Describe what you see (any changes from the last measurement?):

.....

.....

.....

4. Rate the state of the fruit/vegetable .....



On a scale of 0 to 10, how much has your fruit/vegetable rotted?  
0 is not at all and 10 is completely.

Write here what you are rating

5. Write any other measurements or observations

.....

**6** Day ..... measurements and observations



- 1. Draw a picture of your experiment:
- 2. How much time has the fruit/vegetable been stored?  
.....

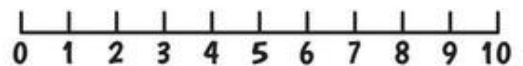
3. Describe what you see (any changes from the last measurement?):

.....

.....

.....

4. Rate the state of the fruit/vegetable .....



On a scale of 0 to 10, how much has your fruit/vegetable rotted?  
0 is not at all and 10 is completely.

Write here what you are rating

5. Write any other measurements or observations

.....



**8**

**Findings**

1. What happened to your fruit/vegetable?

.....

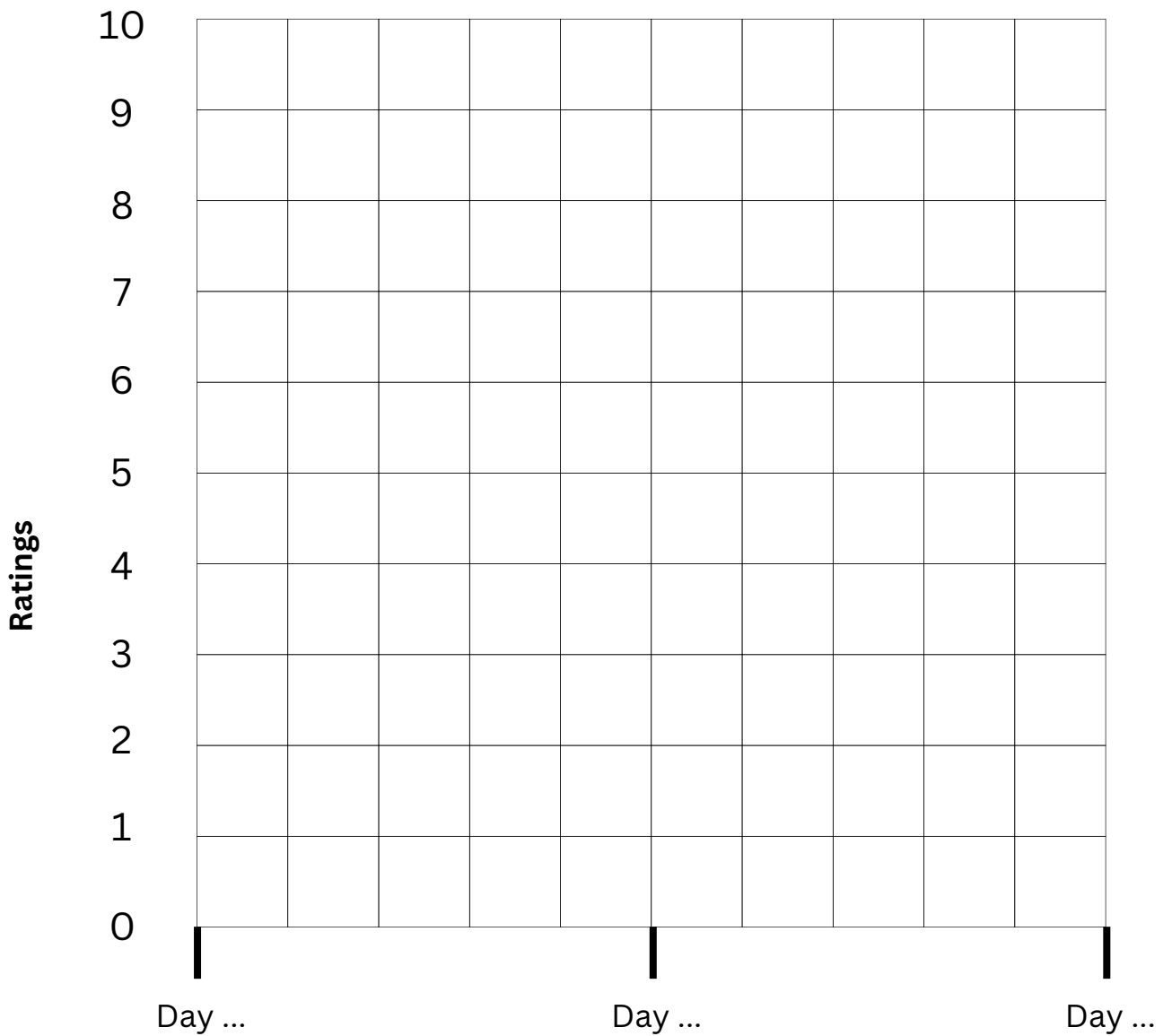
.....

2. What happened to the fruit/vegetable of other groups?

.....

.....

3. Can you put your data in a graph?



4. Compare your graph to those of groups with another storage method. Write down any differences you see.

.....

.....

.....

5. Together with your teacher, compare all the graphs. Which one got the highest ratings?

.....

6. Which one rotted/changed the quickest?

.....

7. What storage method was the best to stop the fruit/vegetable rotting?

.....

What do you think that means? How would you store this fruit or vegetable?

.....

.....

.....

### Option 3: Growing seeds

Give your experiment a name

.....

**1** What do you want to find out from your experiment?

*I want to test what happens when I ..... to my plant*

**2** What will you measure? And what do you need?

*I will measure:*

1) ..... 2) ..... 3) .....

*I will need:*

.....

.....

**3** What fruit/vegetable are you growing?

.....

**4** What do you think will happen?

.....

.....

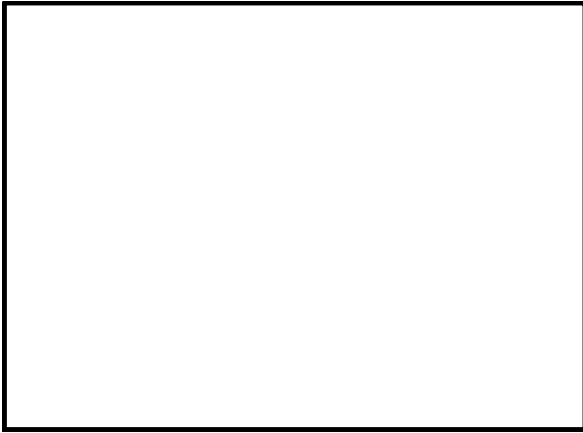
.....

.....

5

**Day ..... measurements and observations**

1. Draw a picture of your experiment:



2. How tall is your seedling?

.....cm

3. How much time has passed since planting the seed?

.....

4. Note down any other observations:

.....  
.....

5. Write what you will do to the plant today and for how long:

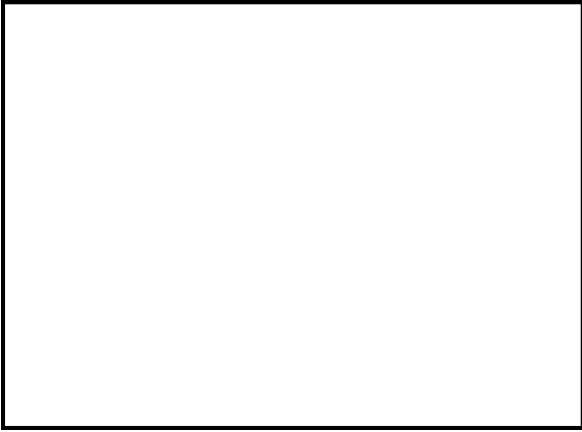
.....  
.....



6

**Day ..... measurements and observations**

1. Draw a picture of your experiment:



2. How tall is your seedling?

.....cm

3. How much time has passed since planting the seed?

.....

4. Note down any other observations:

.....  
.....

5. Write what you will do to the plant today and for how long:

.....  
.....



**Findings**

1. *What happened to your seed?*

.....

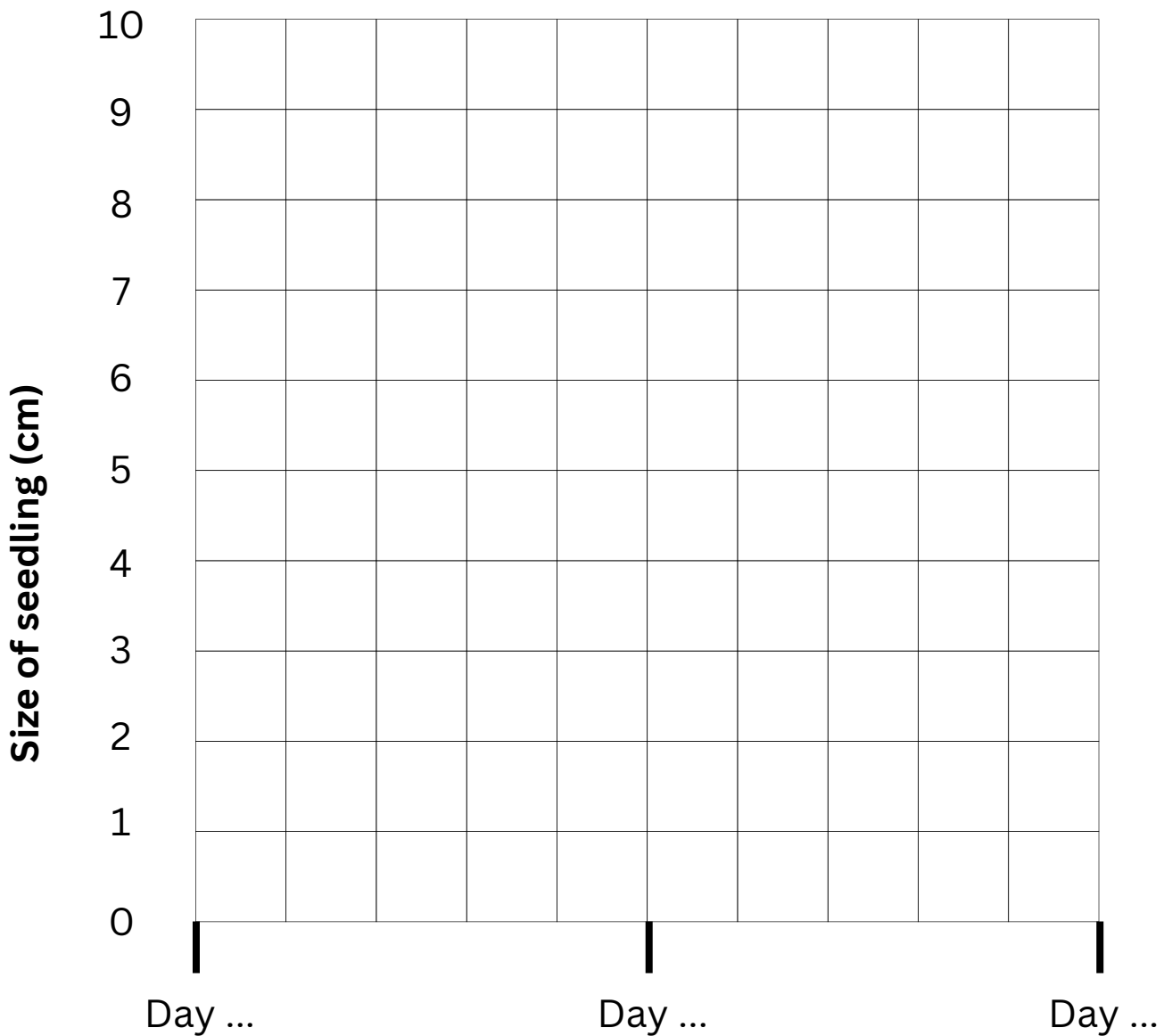
.....

2. *What happened to seeds of the other groups?*

.....

.....

3. *Can you put your data in a graph?*



4. Compare your graph to those of other groups. What differences can you see?

.....  
.....  
.....

5. Together with your teacher, compare all the graphs.  
What plant got the tallest?

.....

6. Which one got the tallest the quickest?

.....

7. What was done to the plant that grew the tallest?

.....

What do you think that means? How would you grow your fruit/vegetable plants?

.....  
.....  
.....