



## DETAILED ASSESSMENT PLAN

### Coding and Robotics

### Grade 2 Term 1



| Activity              | Mark      | Weight     | Instrument | Tools         | Planned Date | Date Completed |
|-----------------------|-----------|------------|------------|---------------|--------------|----------------|
| Pattern Recognition   | /20       | 15%        | Worksheet  | Memo & Rubric |              |                |
| Algorithms and Coding | /20       | 50%        | Worksheet  | Memo & Rubric |              |                |
| Robotics              | /20       | 30%        | Practical  | Rubric        |              |                |
| Digital Concepts      | /20       | 5%         | Worksheet  | Memo & Rubric |              |                |
| <b>TOTAL</b>          | <b>80</b> | <b>100</b> |            |               |              |                |

# Coding & Robotics

## Grade 2 Term 1 Information Sheet



Name: \_\_\_\_\_

| Skills                                                                                                                                                                                                                                | Marks | Cognitive Levels                                                                                                                                                |                 |      |     |    |        |    |      |   |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|------|-----|----|--------|----|------|---|
| <b><u>Task 1: Pattern Recognition</u></b> <ul style="list-style-type: none"><li>● Identify the pattern</li><li>● Complete the pattern</li><li>● Create a pattern</li></ul>                                                            | 20    | <table><tr><th>Cognitive Level</th><th>Mark</th></tr><tr><td>Low</td><td>10</td></tr><tr><td>Middle</td><td>5</td></tr><tr><td>High</td><td>5</td></tr></table> | Cognitive Level | Mark | Low | 10 | Middle | 5  | High | 5 |
| Cognitive Level                                                                                                                                                                                                                       | Mark  |                                                                                                                                                                 |                 |      |     |    |        |    |      |   |
| Low                                                                                                                                                                                                                                   | 10    |                                                                                                                                                                 |                 |      |     |    |        |    |      |   |
| Middle                                                                                                                                                                                                                                | 5     |                                                                                                                                                                 |                 |      |     |    |        |    |      |   |
| High                                                                                                                                                                                                                                  | 5     |                                                                                                                                                                 |                 |      |     |    |        |    |      |   |
| <b><u>Task 2: Algorithms &amp; Coding</u></b> <ul style="list-style-type: none"><li>● Explain the problem</li><li>● Identify the information</li><li>● Steps to solve the problem</li><li>● Implement and test the solution</li></ul> | 20    | <table><tr><th>Cognitive Level</th><th>Mark</th></tr><tr><td>Low</td><td>5</td></tr><tr><td>Middle</td><td>10</td></tr><tr><td>High</td><td>5</td></tr></table> | Cognitive Level | Mark | Low | 5  | Middle | 10 | High | 5 |
| Cognitive Level                                                                                                                                                                                                                       | Mark  |                                                                                                                                                                 |                 |      |     |    |        |    |      |   |
| Low                                                                                                                                                                                                                                   | 5     |                                                                                                                                                                 |                 |      |     |    |        |    |      |   |
| Middle                                                                                                                                                                                                                                | 10    |                                                                                                                                                                 |                 |      |     |    |        |    |      |   |
| High                                                                                                                                                                                                                                  | 5     |                                                                                                                                                                 |                 |      |     |    |        |    |      |   |
| <b><u>Task 3: Robotics</u></b> <ul style="list-style-type: none"><li>● Design and make a circuit out of play dough or foil</li></ul>                                                                                                  | 20    | <table><tr><th>Cognitive Level</th><th>Mark</th></tr><tr><td>Low</td><td>5</td></tr><tr><td>Middle</td><td>10</td></tr><tr><td>High</td><td>5</td></tr></table> | Cognitive Level | Mark | Low | 5  | Middle | 10 | High | 5 |
| Cognitive Level                                                                                                                                                                                                                       | Mark  |                                                                                                                                                                 |                 |      |     |    |        |    |      |   |
| Low                                                                                                                                                                                                                                   | 5     |                                                                                                                                                                 |                 |      |     |    |        |    |      |   |
| Middle                                                                                                                                                                                                                                | 10    |                                                                                                                                                                 |                 |      |     |    |        |    |      |   |
| High                                                                                                                                                                                                                                  | 5     |                                                                                                                                                                 |                 |      |     |    |        |    |      |   |
| <b><u>Task 4: Digital concepts</u></b> <ul style="list-style-type: none"><li>● Identify technology</li><li>● Definition of concepts</li><li>● Online safety</li></ul>                                                                 | 20    | <table><tr><th>Cognitive Level</th><th>Mark</th></tr><tr><td>Low</td><td>10</td></tr><tr><td>Middle</td><td>5</td></tr><tr><td>High</td><td>5</td></tr></table> | Cognitive Level | Mark | Low | 10 | Middle | 5  | High | 5 |
| Cognitive Level                                                                                                                                                                                                                       | Mark  |                                                                                                                                                                 |                 |      |     |    |        |    |      |   |
| Low                                                                                                                                                                                                                                   | 10    |                                                                                                                                                                 |                 |      |     |    |        |    |      |   |
| Middle                                                                                                                                                                                                                                | 5     |                                                                                                                                                                 |                 |      |     |    |        |    |      |   |
| High                                                                                                                                                                                                                                  | 5     |                                                                                                                                                                 |                 |      |     |    |        |    |      |   |

# FORMAL ASSESSMENT

## Coding and Robotics Task 2: Algorithm & Coding Grade 2 Term I Worksheet (03)

Name: \_\_\_\_\_

Date: \_\_\_\_\_

20

%

7

### Problem statement:

The bunny is hungry. How will it get to the food? The flowers are obstacles.

### Question 1: Explain problem

Explain the problem by filling in the missing words.

The problem is that the \_\_\_\_\_ needs to get to the  
\_\_\_\_\_ but cannot go in the \_\_\_\_\_  
where the \_\_\_\_\_ is.

### Question 2: Identify

What was given? Fill in the missing words.

The bunny is \_\_\_\_\_.

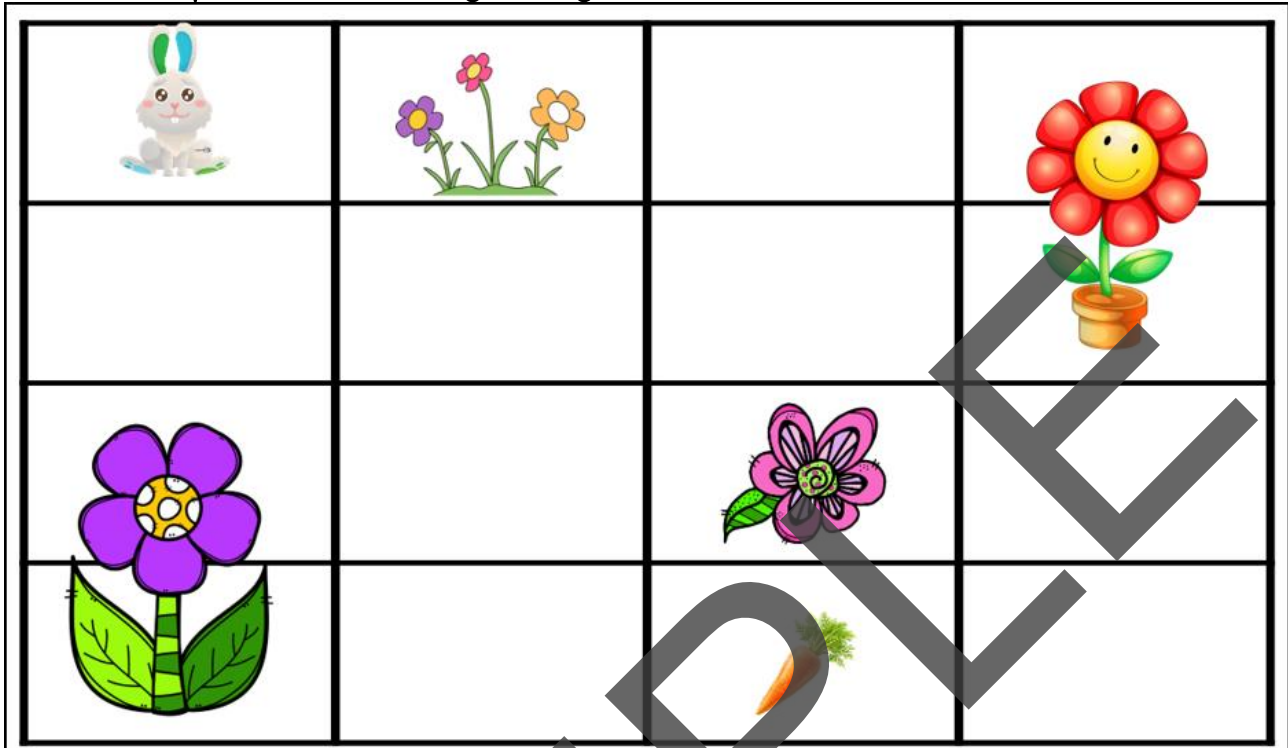
The flowers are \_\_\_\_\_.

What is needed?

The bunny needs to find a \_\_\_\_\_.

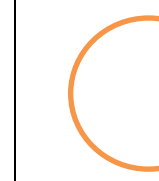
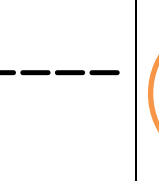
### Question 3: Main step to solve the problem

Draw the path the bunny can go.



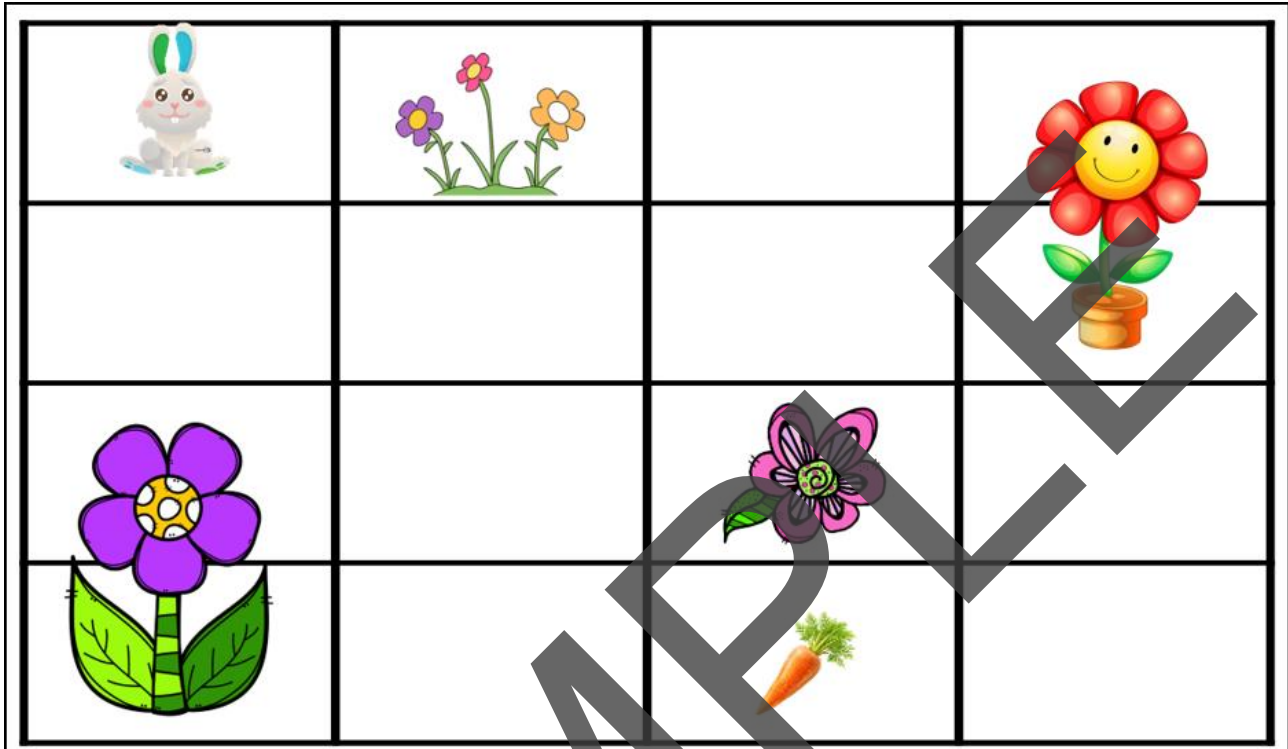
### Question 4: Break the main step into smaller steps

Fill in the missing code

|                                                                                     |      |                                                                                     |      |                                                                                     |       |                                                                                       |
|-------------------------------------------------------------------------------------|------|-------------------------------------------------------------------------------------|------|-------------------------------------------------------------------------------------|-------|---------------------------------------------------------------------------------------|
| forward                                                                             |      | -----                                                                               |      | -----                                                                               |       | forward                                                                               |
|  | Turn |  | Turn |  | ----- |  |

### Question 5: Implement and test the solution

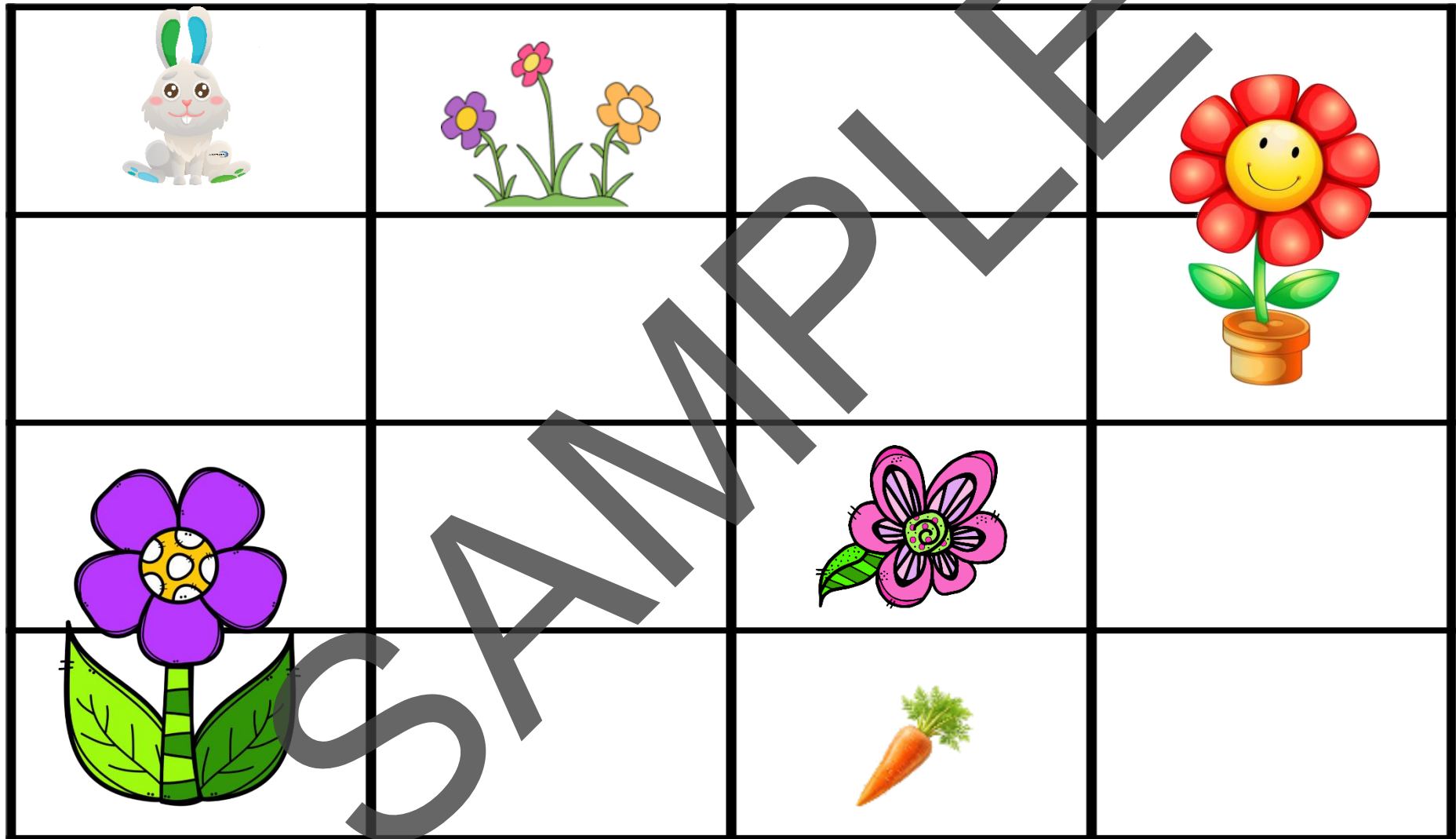
Draw the forward arrows on the grid. Use a  to show the turns.



| Aspect assessed                           |  |                                                |                         |  |
|-------------------------------------------|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|                                           | Beginning                                                                           | Developing                                                                                                                        | Accomplished                                                                                                | Exemplary                                                                             |
|                                           | 1                                                                                   | 2                                                                                                                                 | 3                                                                                                           | 4                                                                                     |
| Explain the problem in his/her own words  | Learner cannot explain the problem in his/her own words.                            | Learner attempts to explain the problem in his/her own words but continuously seeks assistance from the teacher.                  | Learner can explain the problem in his/her own words but leans on peers for support. Some points are vague. | Learner can skilfully explain a problem in his/her own words and can self-correct.    |
| Identify what is given and what is needed | Learner cannot identify what is given and what is needed.                           | Learner hesitantly attempts to identify what is given and what is needed, but still seeks continuous assistance from the teacher. | Learner hesitantly attempts to identify what is given and what is needed. Some points are vague.            | Learner confidently identifies what is given and what is needed.                      |

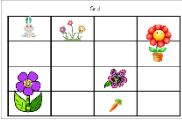
|                                                                          |                                                          |                                                                                                                        |                                                                                                                                                          |                                                                                |
|--------------------------------------------------------------------------|----------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|
| Provide the main steps to solve the problem                              | Learner cannot provide the path to solve the problem.    | Learner attempts to provide the path to solve the problem but will continuously refer to the teacher for confirmation. | Learner hesitantly attempts to provide the path to solve the problem, but he/she might miss some steps or give a vague explanation of some of the steps. | Learner confidently provides a path to solve the problem.                      |
| Break the main steps into smaller, easier to solve, detailed steps/parts | Learner cannot identify detailed, easier to solve steps. | Learner attempts to identify detailed, easier to solve steps, but continuously seeks assistance from the teacher.      | Learner attempts to identify detailed, easier to solve steps, but some steps may be vague or incomplete. May lean on peers for support.                  | Learner can identify detailed, easier to solve steps. He/she can self-correct. |
| Implement and test the solution                                          | Learner cannot implement and test the solution.          | Learner attempts to implement and test the solution but cannot follow through.                                         | Learner hesitantly attempts to implement and test the solution. May lean on peers for support.                                                           | Learner can confidently implement and test the solution.                       |

## Grid



FORMAL ASSESSMENT

Coding and Robotics Task 2: Algorithm & Coding  
Grade 2 Term I Memo (04) Total 20



Print the grid for the learners in A3 or A4 or display the grid on the board.

**Problem statement:**

The bunny is hungry. How will it get to the food? The flowers are obstacles.

**Question 1: Explain the problem**

Explain the problem by filling in the missing words.

The problem is that the **bunny** needs to get to the **carrot** but cannot go in the **blocks** where the **flowers** are.

**Question 2: Identify**

What was given? Fill in the missing words.

The bunny is **hungry**.  
The flowers are **obstacles**.

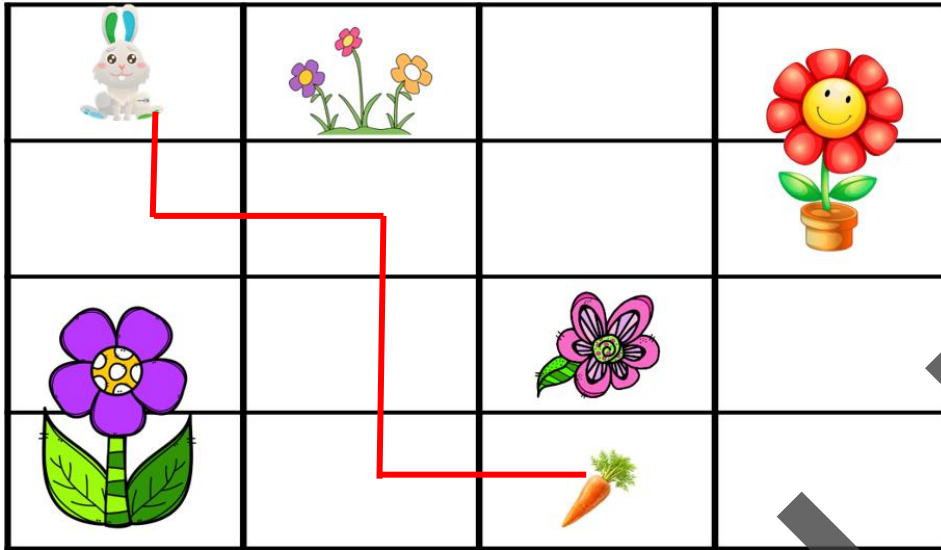
What is needed?

The bunny needs to find a **path to the carrot**.



### Question 3: Path to solve the problem

Draw the path the bunny can go.



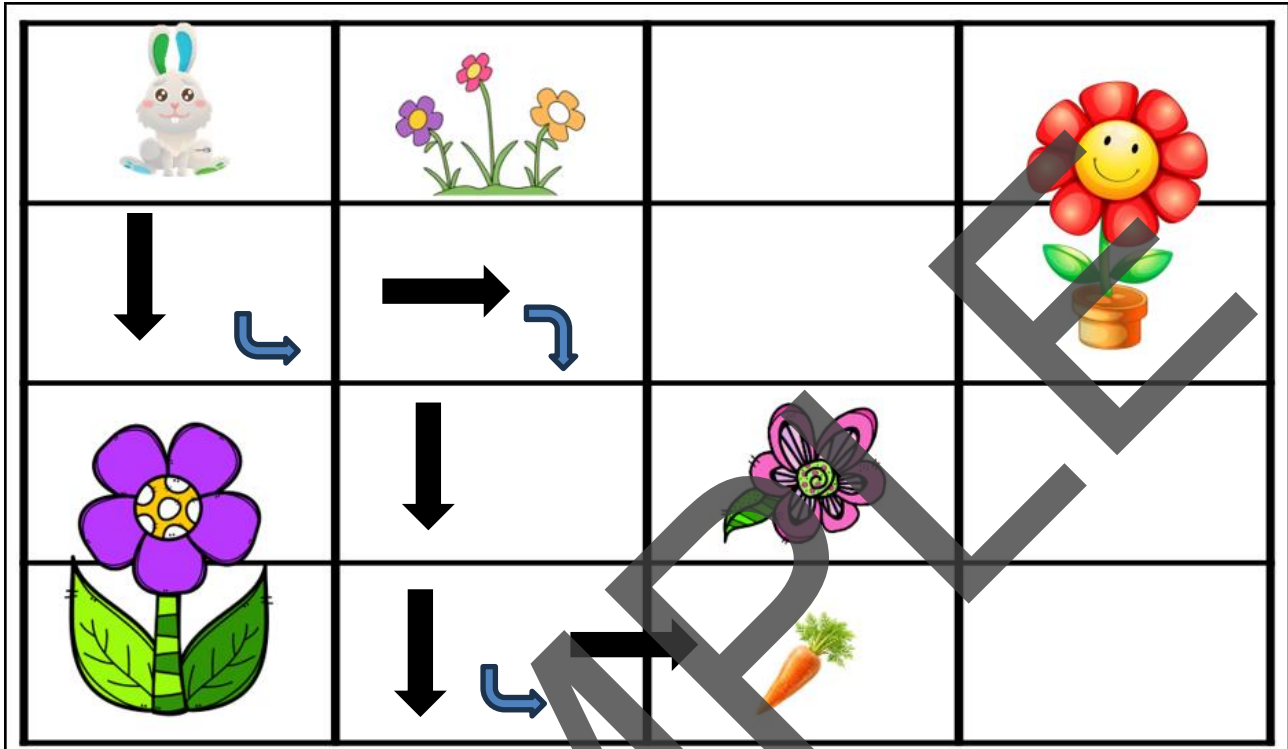
### Question 4: Break the path into smaller steps

Fill in the missing code

|         |      |         |      |         |      |         |
|---------|------|---------|------|---------|------|---------|
| forward |      | forward |      | forward |      | forward |
| 1       | Turn | 1       | Turn | 2       | Turn | 1       |

### Question 5: Implement and test the solution

Draw the forward arrows on the grid. Use a  to show the turns.



| Aspect assessed                           |  |                                                |                         |  |
|-------------------------------------------|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|                                           | Beginning                                                                           | Developing                                                                                                                        | Accomplished                                                                                                | Exemplary                                                                             |
|                                           | 1                                                                                   | 2                                                                                                                                 | 3                                                                                                           | 4                                                                                     |
| Explain the problem in his/her own words  | Learner cannot explain the problem in his/her own words.                            | Learner attempts to explain the problem in his/her own words but continuously seeks assistance from the teacher.                  | Learner can explain the problem in his/her own words but leans on peers for support. Some points are vague. | Learner can skilfully explain a problem in his/her own words and can self-correct.    |
| Identify what is given and what is needed | Learner cannot identify what is given and what is needed.                           | Learner hesitantly attempts to identify what is given and what is needed, but still seeks continuous assistance from the teacher. | Learner hesitantly attempts to identify what is given and what is needed. Some points are vague.            | Learner confidently identifies what is given and what is needed.                      |

|                                                                          |                                                          |                                                                                                                        |                                                                                                                                                          |                                                                                |
|--------------------------------------------------------------------------|----------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|
| Provide the path to solve the problem                                    | Learner cannot provide the path to solve the problem.    | Learner attempts to provide the path to solve the problem but will continuously refer to the teacher for confirmation. | Learner hesitantly attempts to provide the path to solve the problem, but he/she might miss some steps or give a vague explanation of some of the steps. | Learner confidently provides a path to solve the problem.                      |
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| Implement and test the solution                                          | Learner cannot implement and test the solution.          | Learner attempts to implement and test the solution but cannot follow through.                                         | Learner hesitantly attempts to implement and test the solution. May lean on peers for support.                                                           | Learner can confidently implement and test the solution.                       |