



pLatform for INnovation in Natural science onlinE education

Didactic Unit (DU)/Lesson plan

Meadow Plants

Contract No.:	2022-1-IT02-KA220-SCH-000088667
EU-Programme:	Erasmus+, KA220-SCH - Cooperation partnerships in school education
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**Co-funded by
the European Union**

LINNEO project has been funded with the support of the European Commission. The responsibility for the content of this publication is borne solely by the publisher; the Commission is not liable for any further use of the information contained therein.

OVERALL DESCRIPTION

Sections	Description
1. Topic/DU Title	Meadow plants
2. Brief description of the DU	<p>In this DU, students will learn: how to distinguish between meadows and lawns; how to identify meadow plants; how to create an herbarium and a closed and open ecosystems.</p> <p>The DU include three phases on the following topics:</p> <ol style="list-style-type: none"> 1. What is a meadow? 2. Meadow plants, species and their features 3. Building the ecosystem
3. Beneficiaries	Pupils aged 8 – 10
4. Total hours	4 hours 30 minutes and three months of observation. We recommend that activities are carried out according to the season.
5. Situation	Can every plant grow in a meadow? What are the qualities of a meadow and a lawn? What's the distinction between a closed and open ecosystem?
6. Aim/s	The main aim of this DU is for students: to learn the difference between closed and open ecosystems; to learn the difference between closed and open ecosystems; to find out how plants grow and to learn how to identify meadow plants.
7. Subjects	Science, Technology, Language
8. Expected results	Ecosystems, both closed and open, and a herbarium will be created.

WORKPLAN

Phase/Title / Lessons	Brief description	Subjects	Objectives	Knowledge and Competences	Educational strategy	Tools and resources	Setting*	Evaluation and assessment	Duration
Lesson 1. What is a meadow?	<p>The teacher shows a video that piques students' interest and asks them what the lesson's topic will be.</p> <p>Video 1</p> <p>Students work in pairs to draw a bubble map and write down what they know about meadows.</p> <p>The teacher shows next video.</p> <p>Video 2</p> <p>After watching the video, the pupils work in pairs to complete a bubble map of</p>	Science, language			<p>Active and Collaborative learning</p> <p>Collaborating in pairs, students complete a Bubble Thinking Map about natural meadows and lawns.</p> <p>Take turns presenting the written statements.</p> <p>Working in pairs, complete the Venn diagram and check in groups.</p>	<p>Video 1</p> <p>YouTube video from Discover Planet Earth Channel. What is Happening in the Meadow</p> <p>Bubble Thinking Map</p> <p>Video 2</p> <p>YouTube video from GardensFor Wildlife Channel What Is A Meadow</p> <p>LINNEO video Natural meadow and lawn</p>	Classroom, interactive whiteboard or screen.	Assessment of the task's accuracy. Distinguish the similarities and differences between meadows and lawn (Worksheet 1-Venn diagram) Worksheet 2	1 hour 30 minutes

	<p>what they have heard about the meadow (using other colours).</p> <p>Pairs read to the class one statement they have written and add to their map by listening to their friends.</p> <p>Use the teacher's descriptions of lawns and meadows from an encyclopaedia or reference book</p> <p>A3.1</p> <p>and in pairs complete a Venn diagram that shows the similarities and differences between meadow and lawn.</p> <p>Worksheet 1</p>		<p>information while working in pairs.</p> <p>to summarise what a meadow is.</p> <p>To identify the similarities and differences between a meadow and a lawn.</p> <p>To determine whether a statement about meadows is true or false.</p>	<p>Be able to select key information.</p> <p>Be able to critically assess material and identify similarities and differences.</p> <p>Be able to select true/false statements about natural meadows and lawns.</p>		<p>Worksheet 1 (annexed)</p> <p>Worksheet 2 (annexed)</p>				
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	<p>After the three pairs have joined, the students discuss the similarities and differences they discovered and add to their Venn diagrams.</p> <p>Students assess what they have learned during the lesson by responding to the teacher's questions.</p> <p>Worksheet 2</p>								
<p>Lesson 2. Meadow plants, species and their features</p> <p>A lesson in the meadow (herbarium)</p>	<p>The teacher shows a video and information about meadow plants.</p> <p>Video 3 A3.3</p> <p>Students draw a card containing the name of a meadow plant.</p> <p>Worksheet 3</p> <p>Students use their smart device to look up</p>	Technology , language, Science	<p>To find information about a plant using a book or Internet.</p> <p>To recognise and take a photo of the plant in the meadow and use a magnifying glass to examine parts of the plant.</p>		Individual work	<p>Video 3 YouTube video from Love2Learn with Miss Ellis Wild Plants</p> <p>LINNEO video Meadow plants</p> <p>Cards with the names of</p>	Meadow	Identify a plant and prepare it for the herbarium.	1 hour 30 minutes

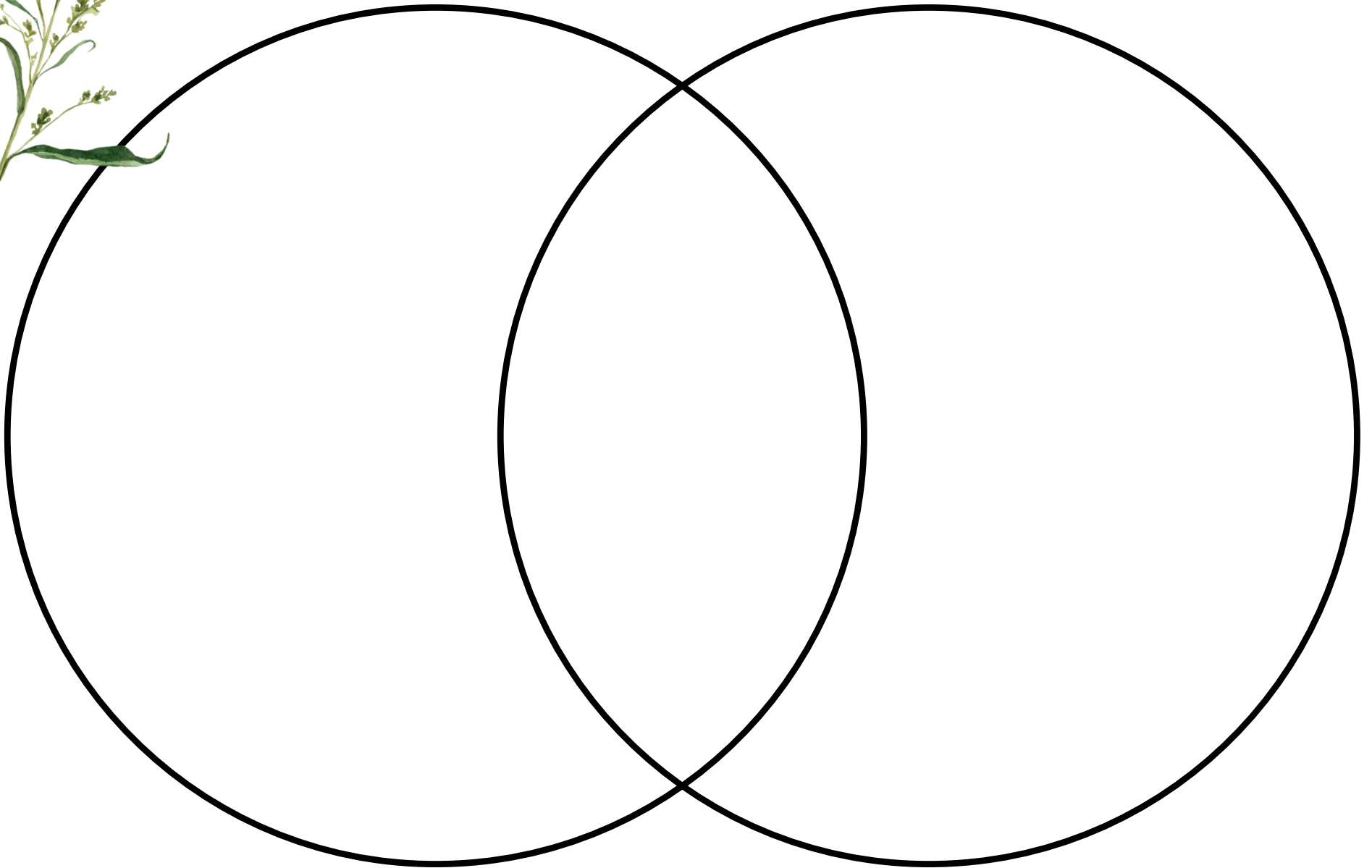
	<p>what the plant looks like online.</p> <p>Students walk around the meadow, identifying and locating the plant they have picked from the photo. Examine the plant using a magnifying glass. It will be photographed and then uprooted (for the herbarium).</p> <p>The teacher displays a video of how the herbarium has been created.</p> <p>Video 4</p> <p>Students follow the instructions to prepare the plants for the herbarium.</p>		<p>To follow the video instructions and prepare a plant for the herbarium.</p>	<p>Be able to identify a plant.</p> <p>Be able to get a plant ready for the herbarium.</p>	<p>Students find a photo of a plant on a smart device.</p> <p>Students photograph the plant then uproot it.</p>	<p>meadow plants</p> <p>Worksheet 3 Meadow plants (annexed)</p> <p>magnifying glass, smart device, folder, reference book.</p> <p>Video 4 YouTube video from ThinkTac Science Experiment</p>			
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<p>Lesson 3.</p> <p>Building the ecosystem</p>	<p>Students work in groups to find out about closed and open ecosystems.</p> <p>Groups share and summarise knowledge received they have collected in a direct (frontal) way.</p> <p>The teacher shows a video how to make a simple ecosystem.</p> <p>Video 5</p> <p>Then students work in groups to create 4 different ecosystems (2 closed and 2 open).</p> <p>After creating the ecosystems, the students will take care of them, keep an eye on them, and document any</p>	<p>Technology , language, Science</p>	<p>To define a closed and open ecology in their own terms.</p> <p>Students reach an agreement and split up the work and duties.</p> <p>To observe and document what happens in the ecosystems</p> <p>To identify changes, keep open ecosystems (watering).</p> <p>To compare changes and draw conclusions.</p>	<p>Be able to critically evaluate the information provided.</p> <p>Be able to collaborate, share roles and responsibilities.</p> <p>Be able to systematically monitor and maintain ecosystems, to provide comments on the worksheets.</p>	<p>Collaborating in groups students take notes and record important details regarding closed and open ecosystems.</p> <p>Collaborating in groups students create closed and open ecosystems.</p> <p>Collaborating in the classroom, students fill out observation sheets.</p>	<p>Video 5</p> <p>YouTube video from ThinkTac</p> <p>Creating a SIMPLE But BEAUTIFUL Ecosystem: Step-by-Step Terrarium Guide</p> <p>4 large transparent containers, 2 containers need a tight-fitting lid. Plasticine, plastic wrap or adhesive tape can be used for sealing. Meadow plants, soil and seeds of meadow plants. Sand or drainage.</p>	<p>Classroom, computers, tablets.</p>	<p>Create a closed and open ecosystem. Fill out the research tracking sheet.</p>	<p>1 hour 30 minutes</p> <p>Three months of observation.</p>
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	changes for three months on observation sheets. Worksheet 4					Worksheet 4 Research tracking sheet (annexed).			
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*Setting: organisation of classroom space (physical and virtual) functional to the activity, provision of resources (technological and others), management of resources.

MEADOW & LAWN



Meadow and lawn

True or false

1 - A lawn is an area of ground used for ornamental or functional purposes.

T

F

2 - A natural meadow is a land area with perennial grasses that grow naturally.

T

F

3-In lawns, plants self-seed and grow unattended.

T

F

4 - A lawn is composed of one or more plant species that grow quickly, provide a firm turf, withstand mowing and trampling, and form a dense herbaceous cover.

T

F

5-In natural meadows, the plants self-seed and grow unattended.

T

F

6 - Ornamental lawns are commonly constructed in parks, squares, street borders, and near farms.

T

F

7 - The lawn requires no upkeep because it grows naturally.

T

F

8 - As agriculture expands, more grasslands are being turned to farmland, reducing the number of natural grasslands.

T

F

A rectangular label with a white background and a black border. The word "DANDELION" is centered in bold, black, uppercase letters. The label is set against a background of stylized black line drawings of dandelion leaves.

DANDELION

A rectangular label with a white background and a black border. The word "WORMWOOD" is centered in bold, black, uppercase letters. The label is set against a background of stylized black line drawings of wormwood leaves.

WORMWOOD

A rectangular frame containing a dense, black-and-white line drawing of various leaf shapes, some elongated and pointed, others more rounded, creating a textured background.

CREPIS

A rectangular frame containing a dense, black-and-white line drawing of various leaf shapes, some elongated and pointed, others more rounded, creating a textured background.

CHICORY

A rectangular frame containing a background pattern of stylized, overlapping leaf outlines. The leaves are drawn with simple black lines, creating a dense, organic texture.

**CENTAUREA
MACROCEPHALA**

A rectangular frame containing a background pattern of stylized, overlapping leaf outlines. The leaves are drawn with simple black lines, creating a dense, organic texture.

DAISY

A rectangular frame containing a dense, black-and-white line drawing of stylized leaves or branches, creating a textured background.

YARROW

A rectangular frame containing a dense, black-and-white line drawing of stylized leaves or branches, creating a textured background.

THISTLE

A rectangular frame containing a background pattern of stylized, overlapping leaf outlines. In the center of this frame is a white rectangular box with a black border.

WHITE CLOVER

A rectangular frame containing a background pattern of stylized, overlapping leaf outlines. In the center of this frame is a white rectangular box with a black border.

**BLUE-FLOWERED
VETCH**



**YORKSHIRE
FOG**



TIMOTHY

A rectangular frame containing a stylized, black-and-white line drawing of grass blades. The blades are depicted with simple outlines and some internal hatching to suggest texture. They are arranged in a dense, overlapping pattern that fills the background of the frame.

**COCKSFOOT
GRASS**

A rectangular frame containing a stylized, black-and-white line drawing of grass blades. The blades are depicted with simple outlines and some internal hatching to suggest texture. They are arranged in a dense, overlapping pattern that fills the background of the frame.

RYEGRASS

A rectangular frame containing a background pattern of stylized, overlapping leaf outlines. In the center of this frame is a white rectangular box with a black border.

**ST. JOHN'S
WORT**

A rectangular frame containing a background pattern of stylized, overlapping leaf outlines. In the center of this frame is a white rectangular box with a black border.

**QUÁKING-
GRÀSS**

A rectangular frame containing a background pattern of stylized, overlapping leaf outlines. In the center of this frame is a white rectangular box with a black border.

**BROADLEAF
PLANTAIN**

A rectangular frame containing a background pattern of stylized, overlapping leaf outlines. In the center of this frame is a white rectangular box with a black border.

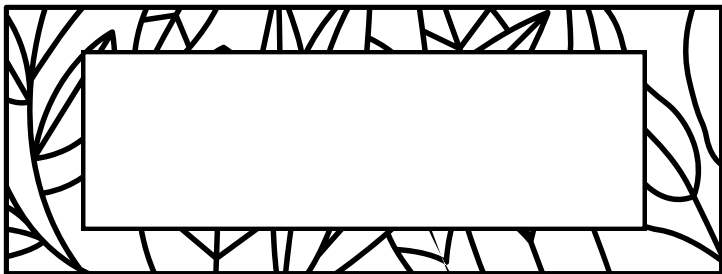
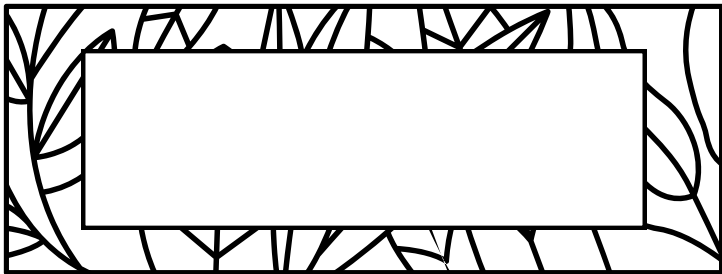
**SPREADING
BELLFLOWER**

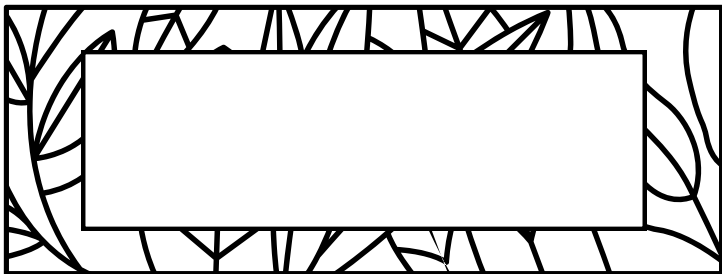
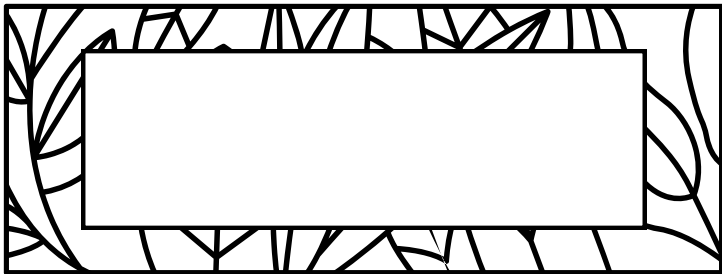
A rectangular label with a white background and a black border. The text "MEADOW CLARY" is centered in a bold, black, sans-serif font. The label is set against a background of a repeating black line pattern of stylized leaves.

**MEADOW
CLARY**

A rectangular label with a white background and a black border. The text "THYME" is centered in a bold, black, sans-serif font. The label is set against a background of a repeating black line pattern of stylized leaves.

THYME





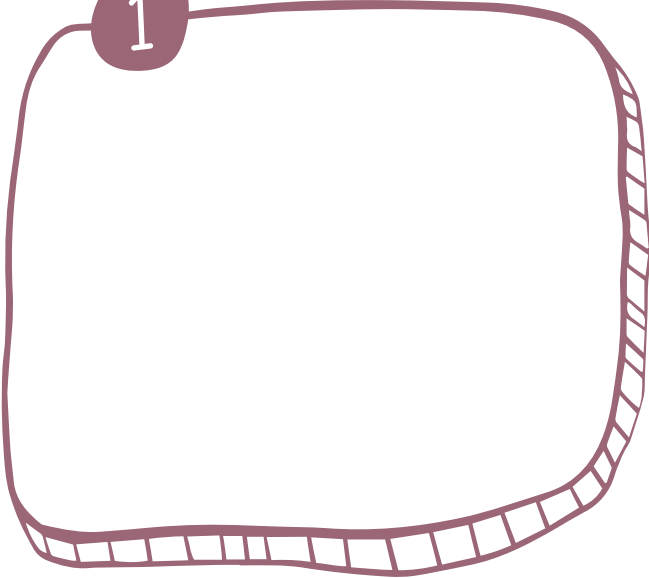
Research tracking sheet

Week 1 _____

Open ecosystem

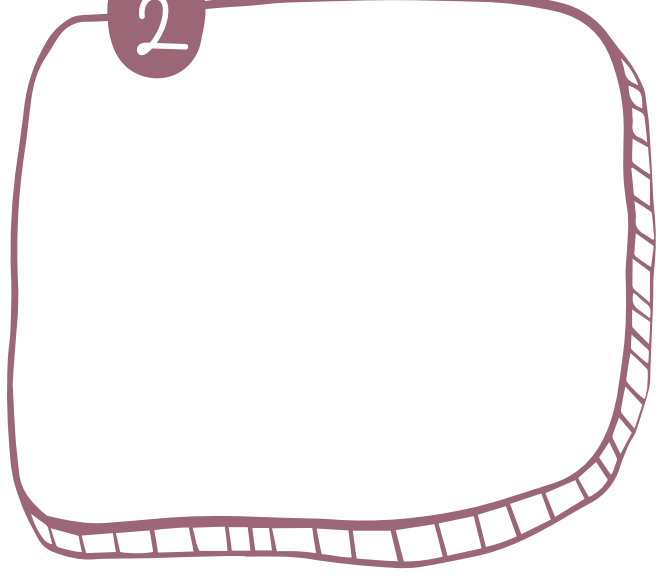
What did I notice?

1



What did I notice?

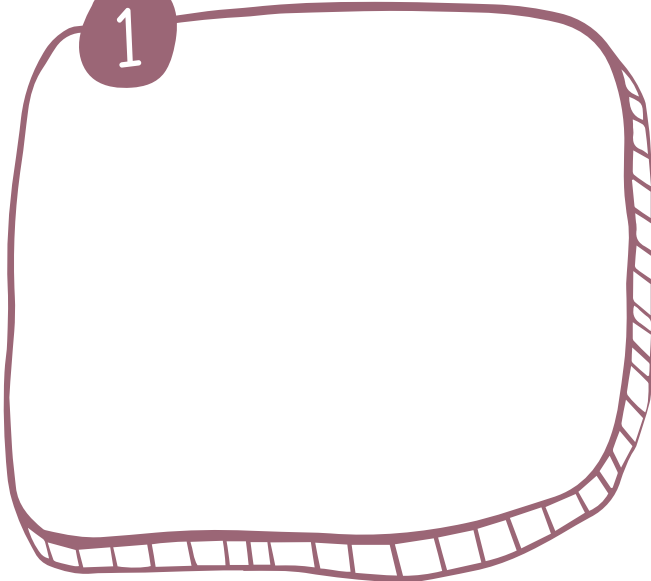
2



Closed ecosystem

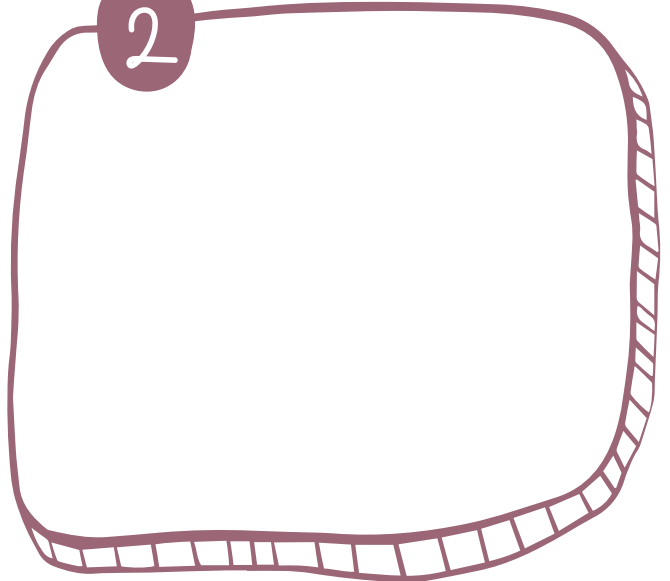
What did I notice?

1



What did I notice?

2



What is my hypothesis for next week?

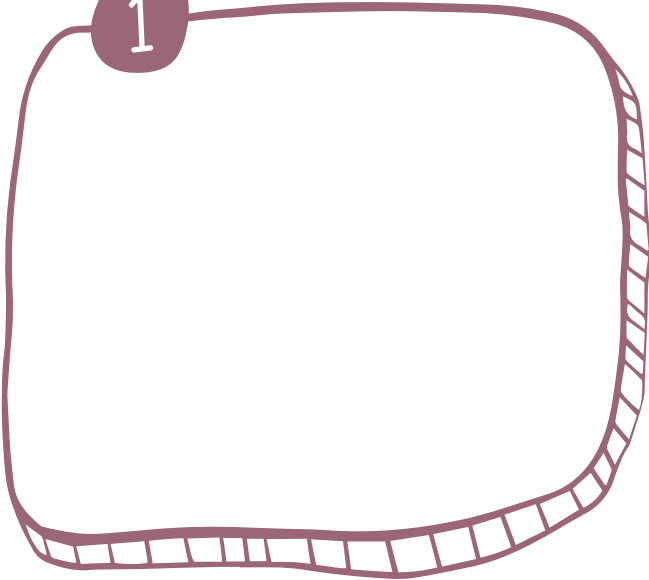
Research tracking sheet

Week 2 _____

Open ecosystem

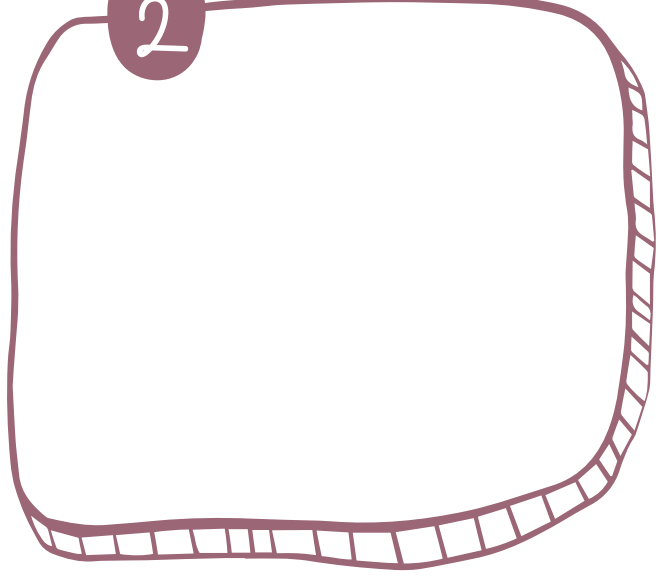
What did I notice?

1



What did I notice?

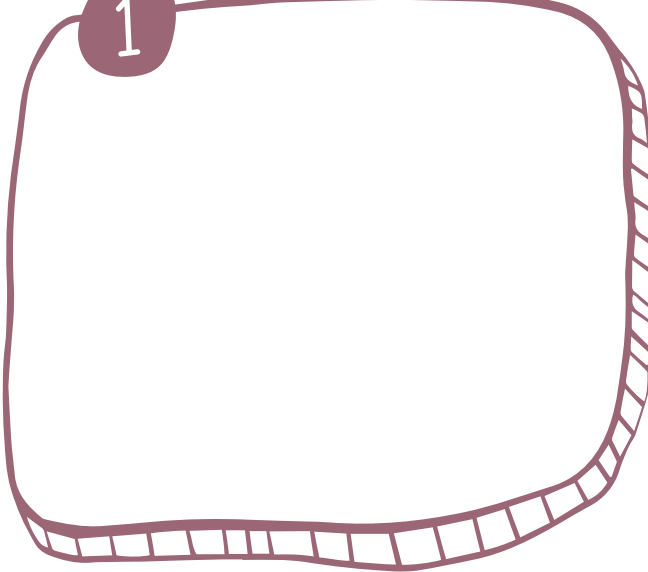
2



Closed ecosystem

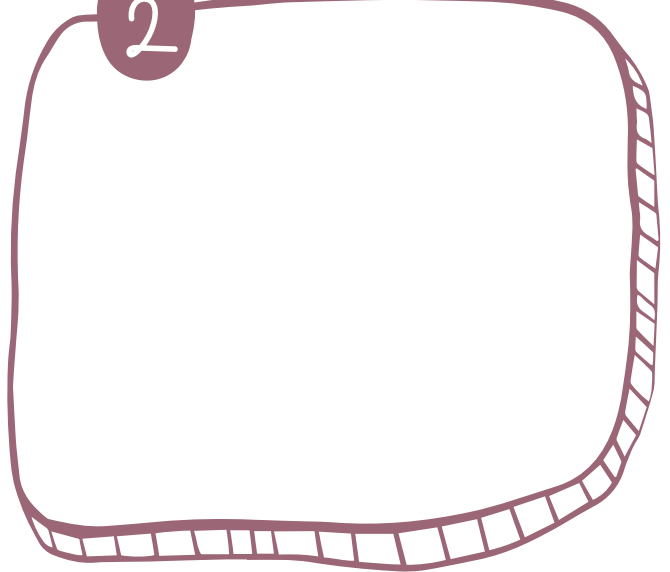
What did I notice?

1



What did I notice?

2



What is my hypothesis for next week?

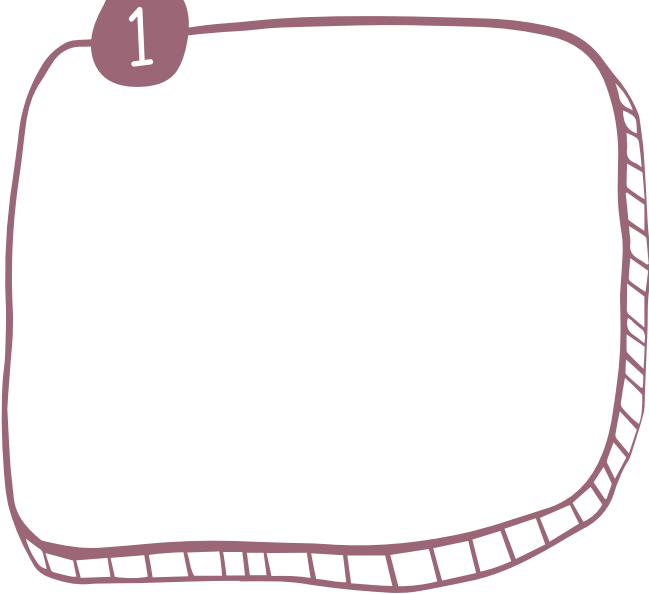
Research tracking sheet

Week 3 _____

Open ecosystem

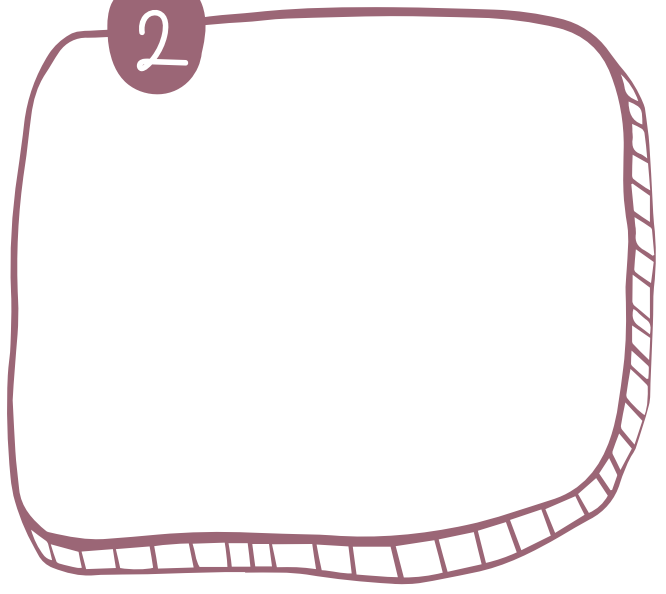
What did I notice?

1



What did I notice?

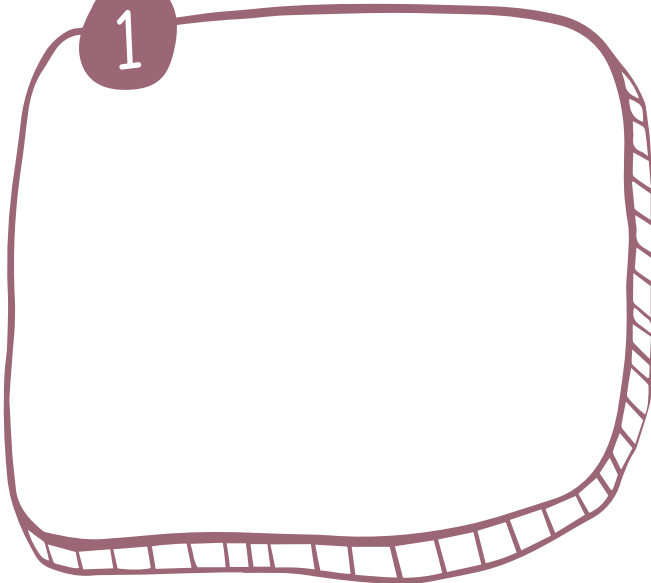
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Closed ecosystem

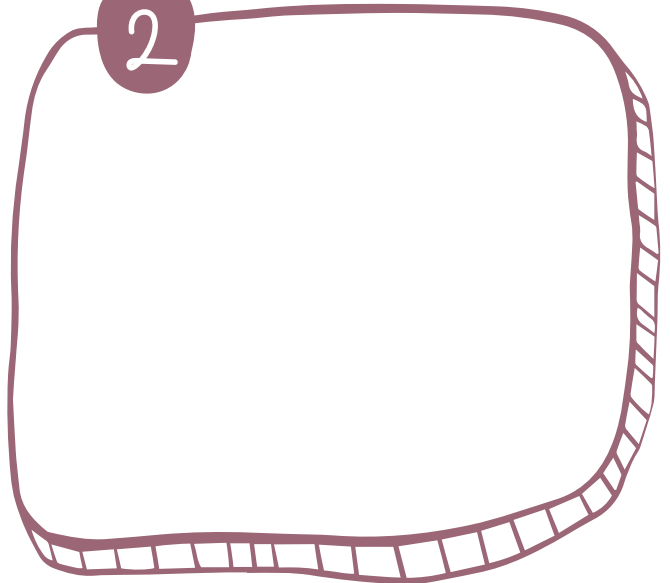
What did I notice?

1



What did I notice?

2



What is my hypothesis for next week?

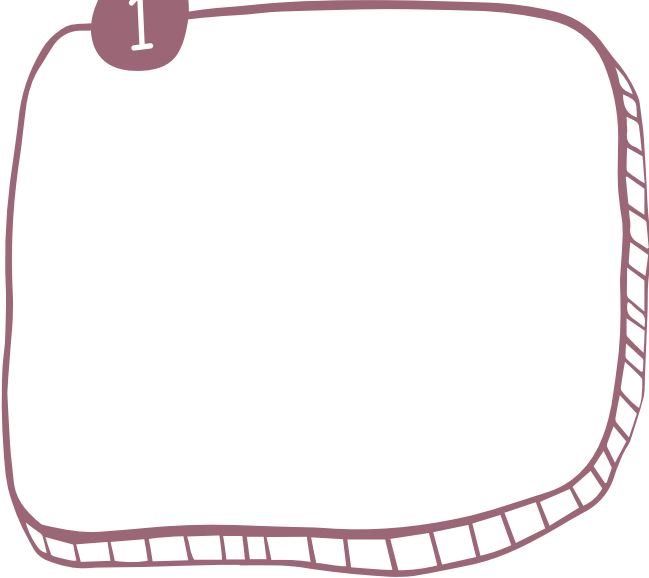
Research tracking sheet

Week 4 _____

Open ecosystem

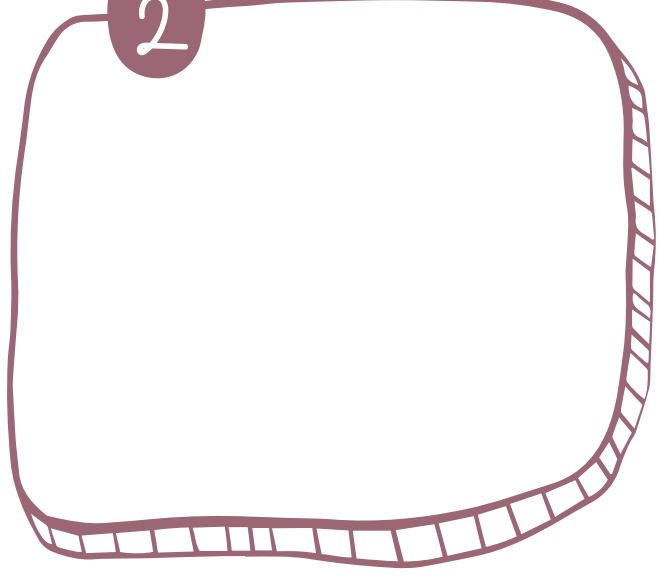
What did I notice?

1



What did I notice?

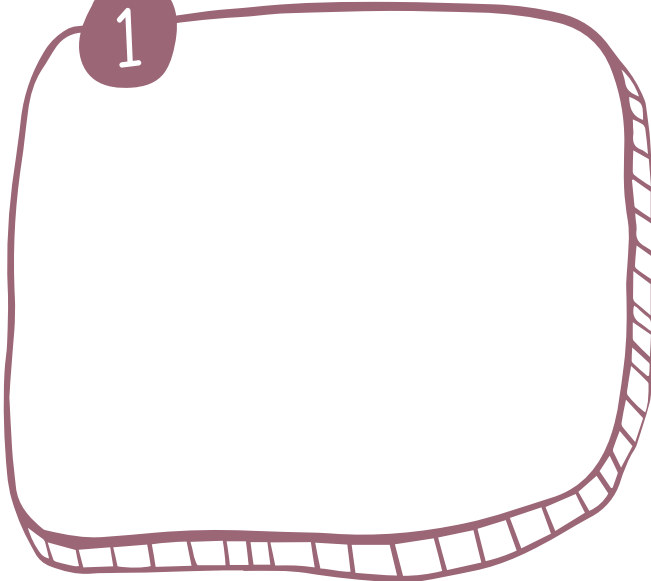
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Closed ecosystem

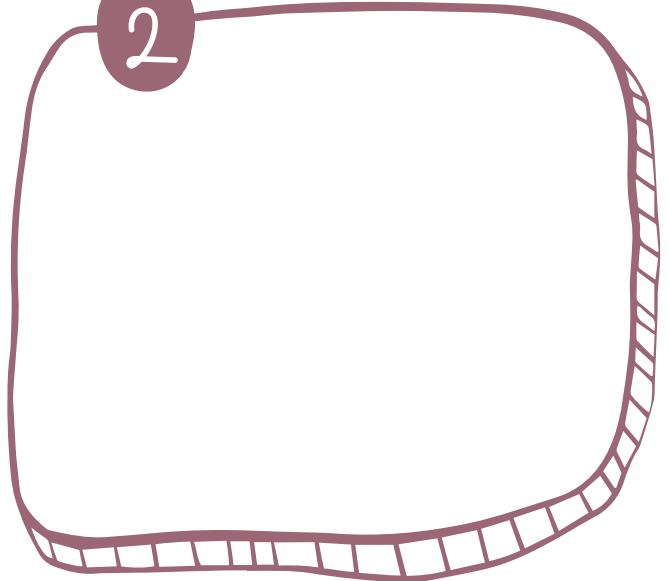
What did I notice?

1



What did I notice?

2



What is my hypothesis for next week?

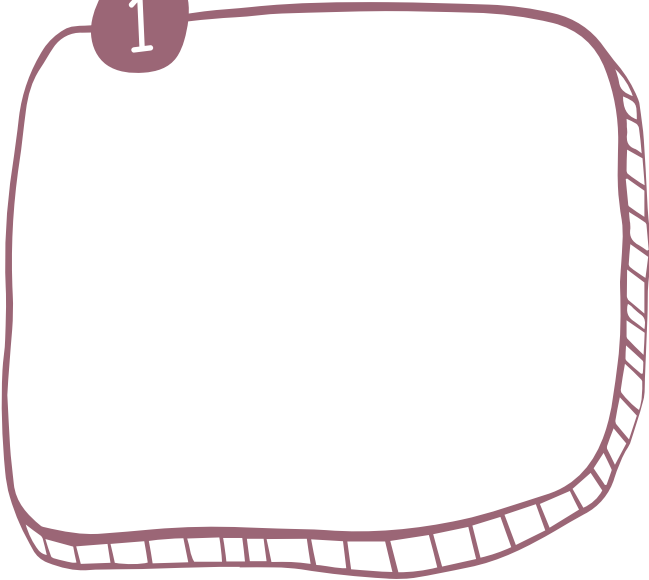
Research tracking sheet

Week 5 _____

Open ecosystem

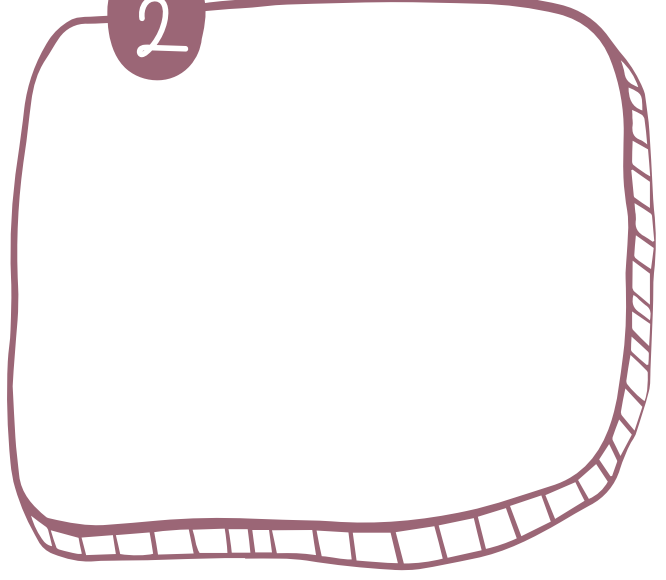
What did I notice?

1



What did I notice?

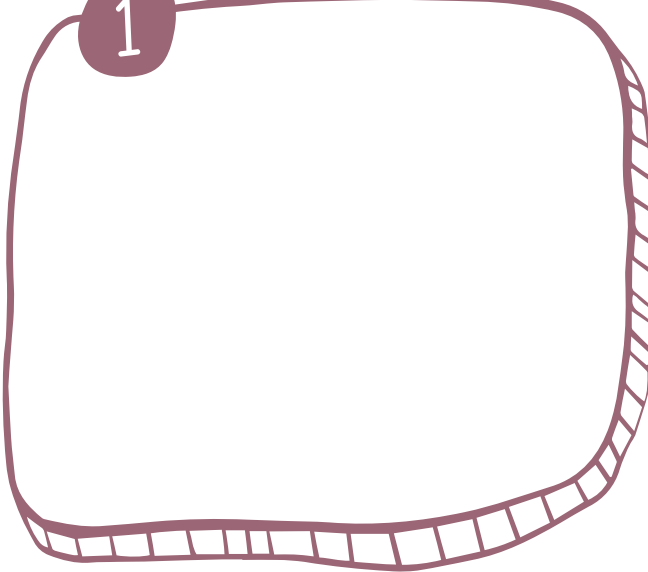
2



Closed ecosystem

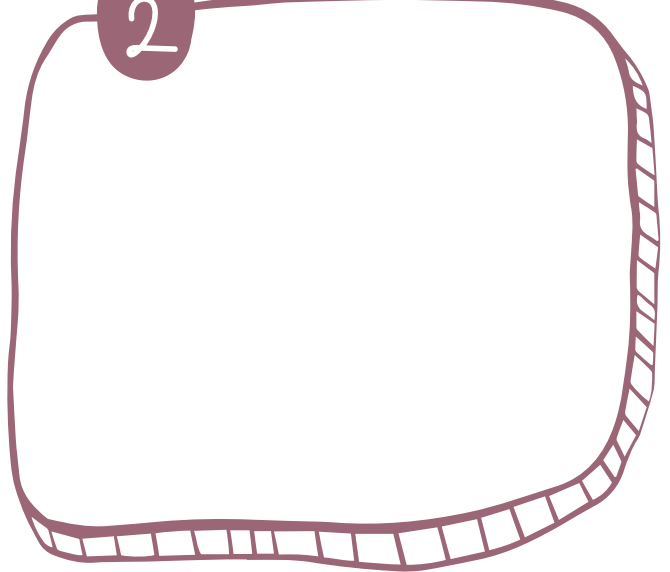
What did I notice?

1



What did I notice?

2



What is my hypothesis for next week?

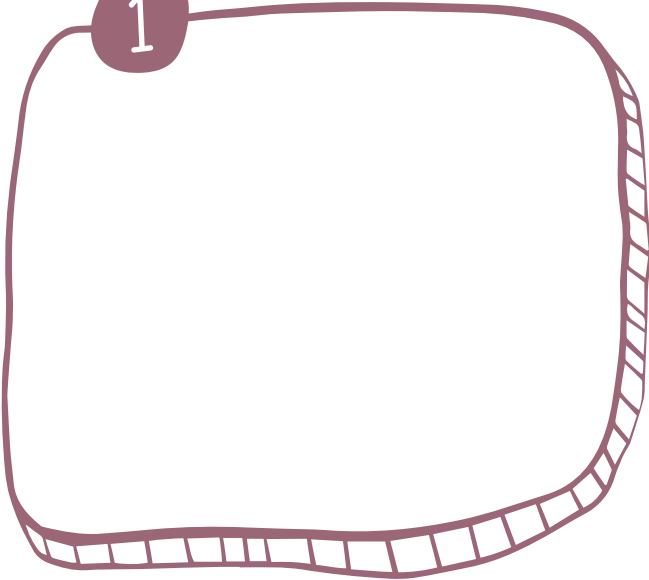
Research tracking sheet

Week 6 _____

Open ecosystem

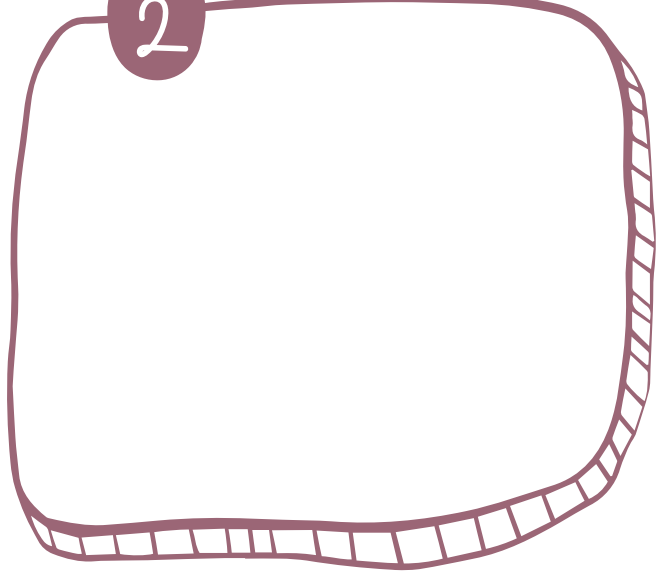
What did I notice?

1



What did I notice?

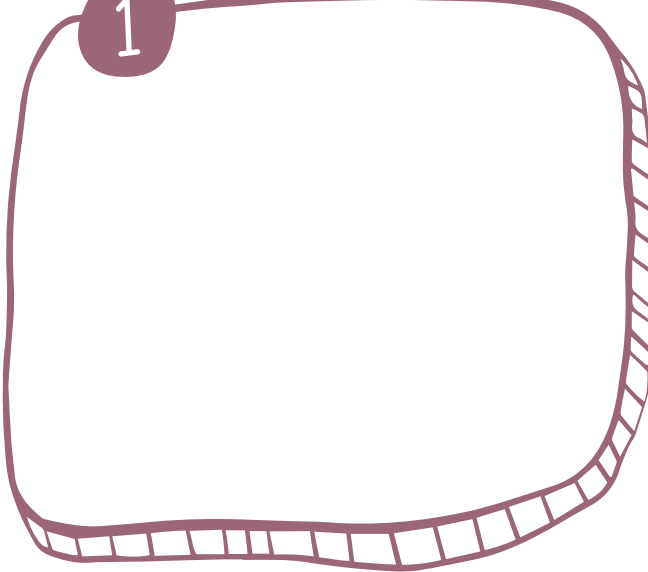
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Closed ecosystem

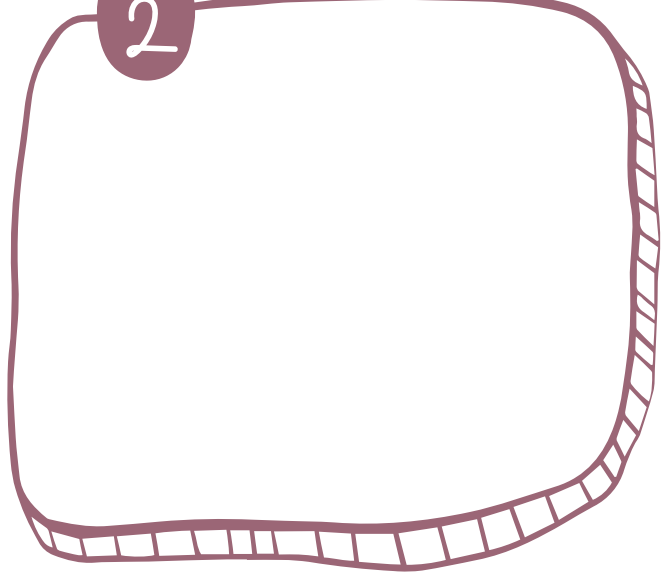
What did I notice?

1



What did I notice?

2



What is my hypothesis for next week?

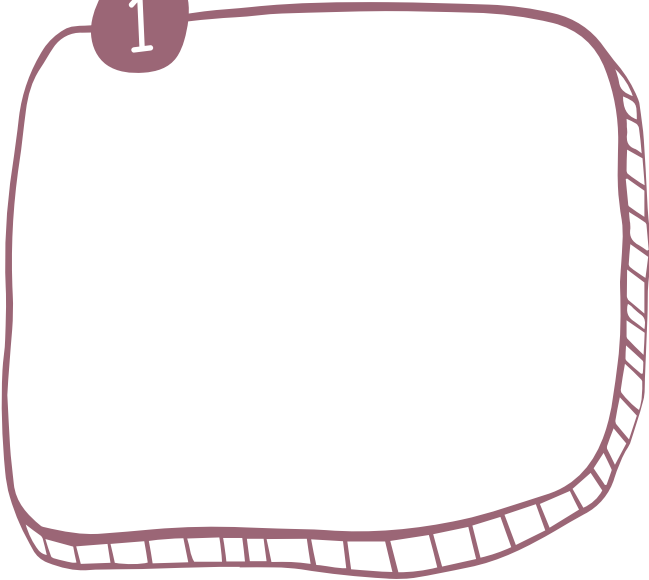
Research tracking sheet

Week 7 _____

Open ecosystem

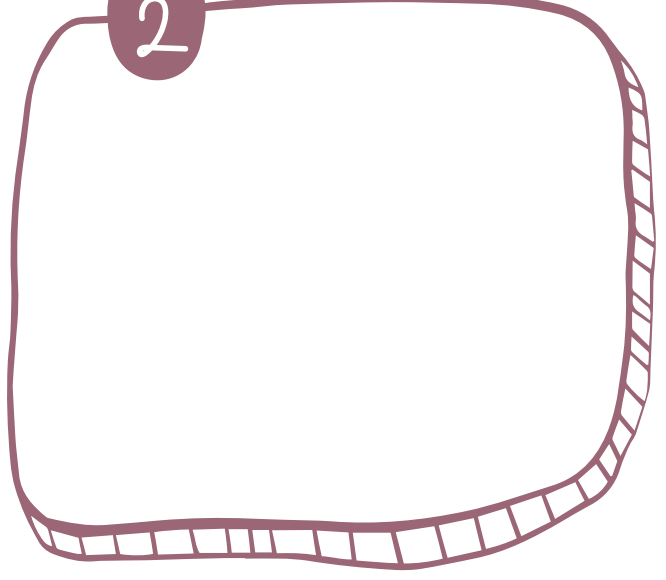
What did I notice?

1



What did I notice?

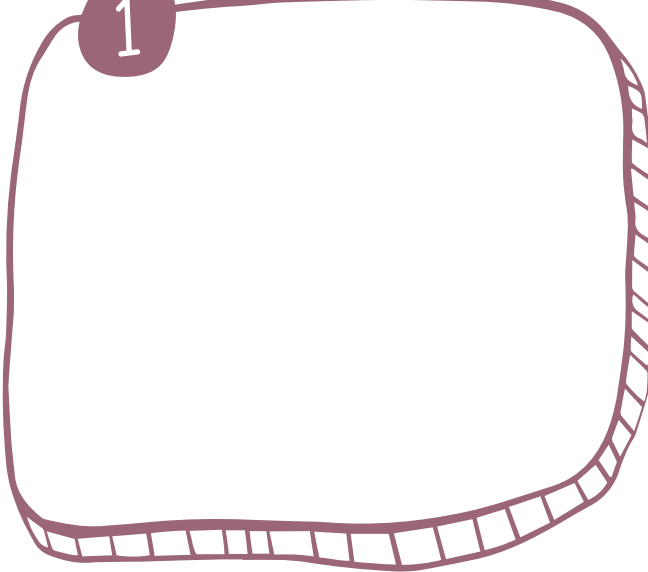
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Closed ecosystem

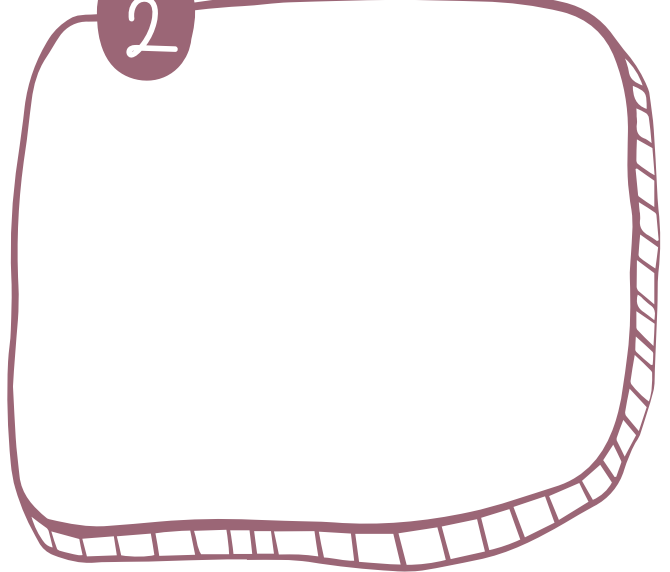
What did I notice?

1



What did I notice?

2



What is my hypothesis for next week?

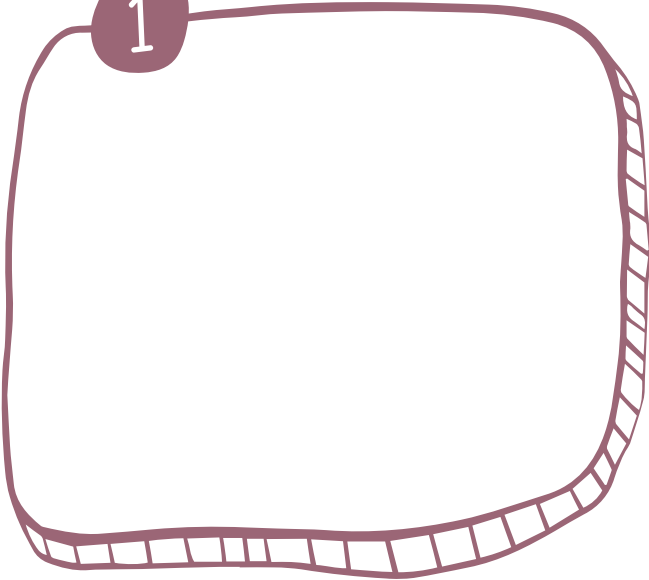
Research tracking sheet

Week 8 _____

Open ecosystem

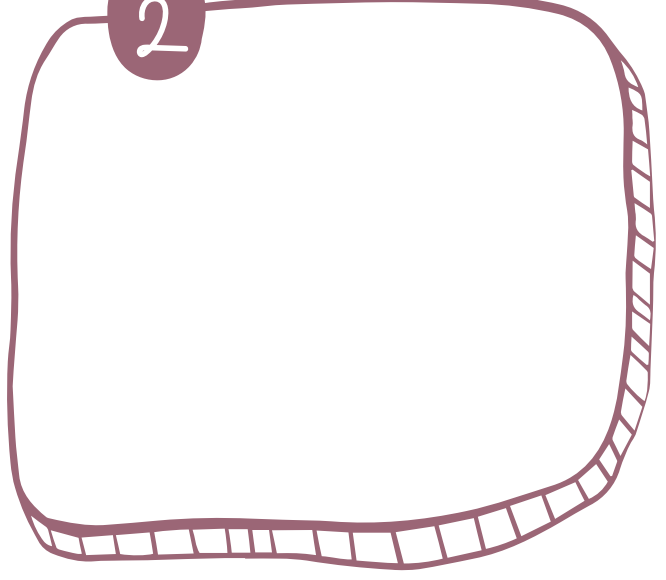
What did I notice?

1



What did I notice?

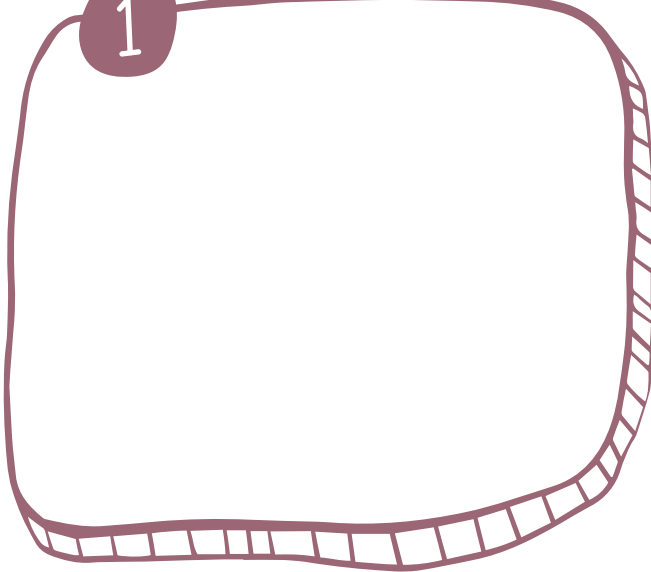
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Closed ecosystem

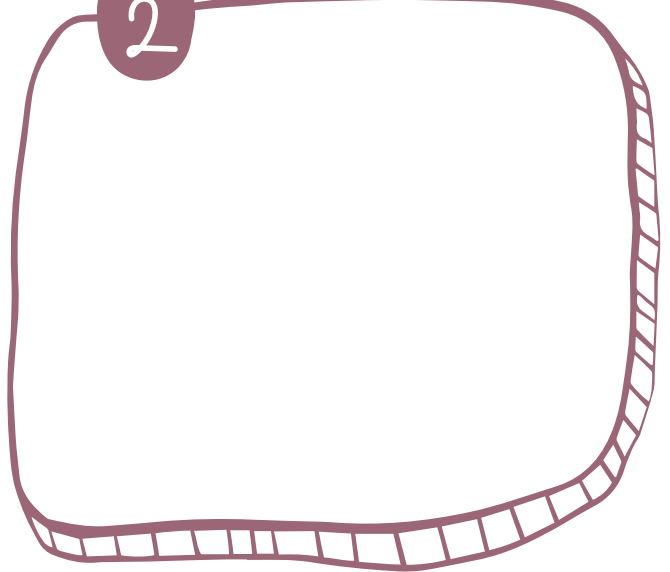
What did I notice?

1



What did I notice?

2



What is my hypothesis for next week?

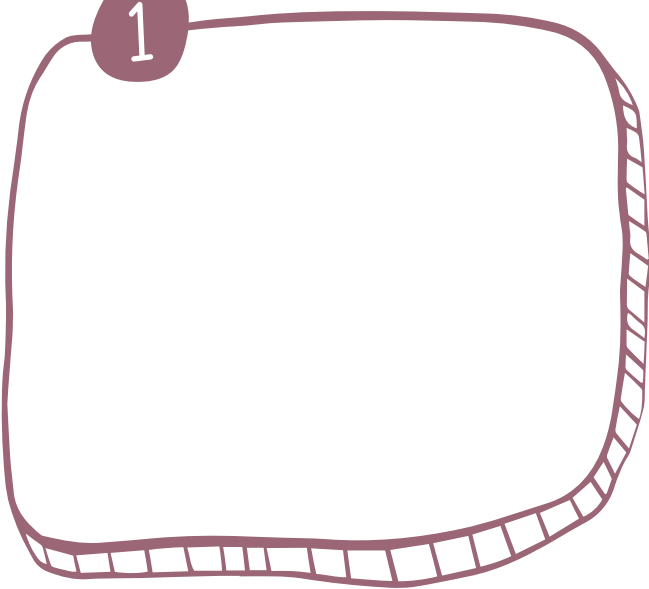
Research tracking sheet

Week 9 _____

Open ecosystem

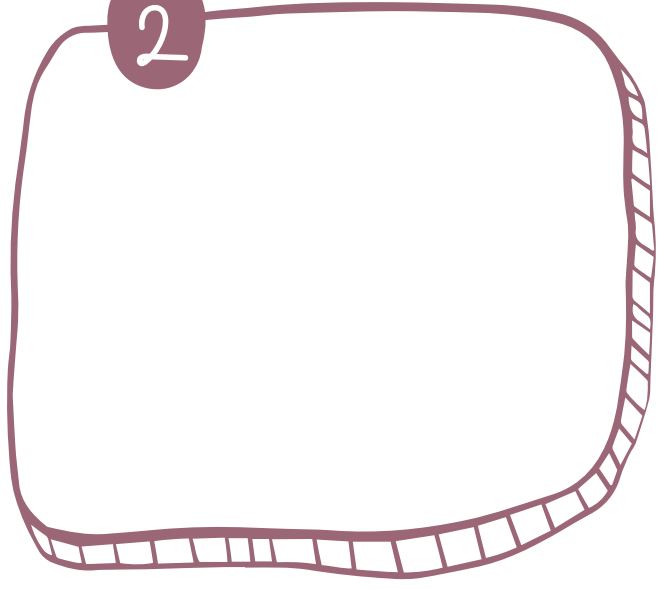
What did I notice?

1



What did I notice?

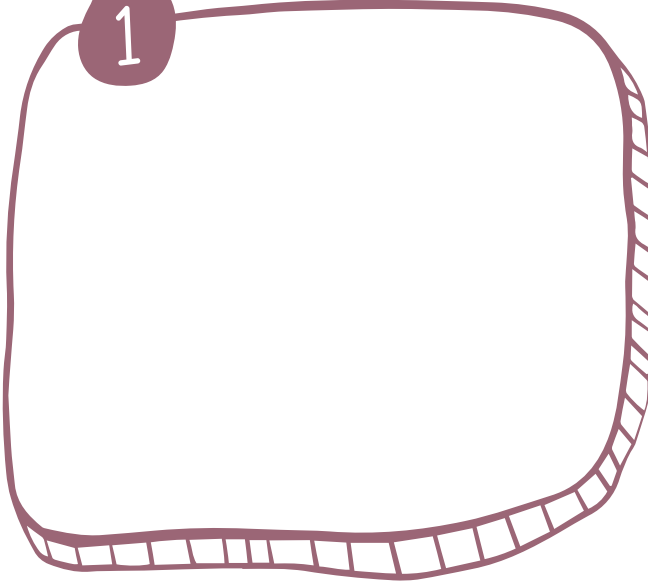
2



Closed ecosystem

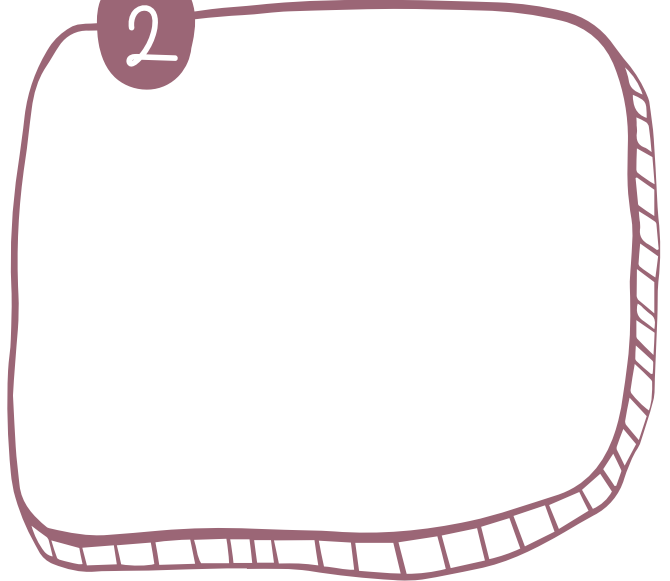
What did I notice?

1



What did I notice?

2



What is my hypothesis for next week?

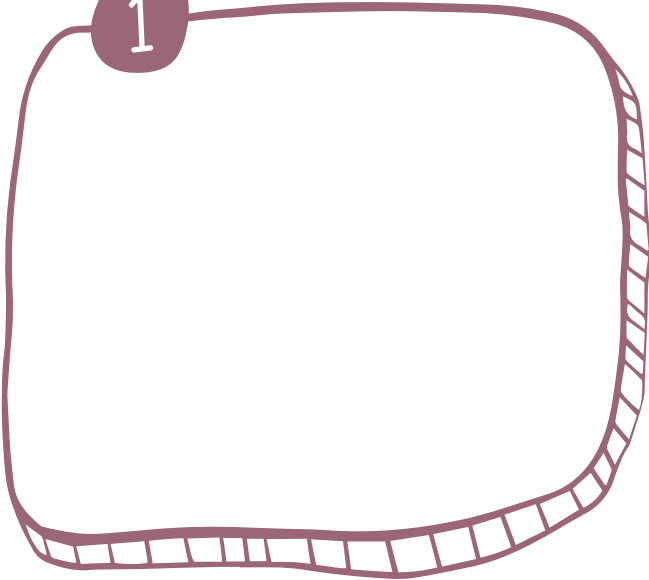
Research tracking sheet

Week 10 _____

Open ecosystem

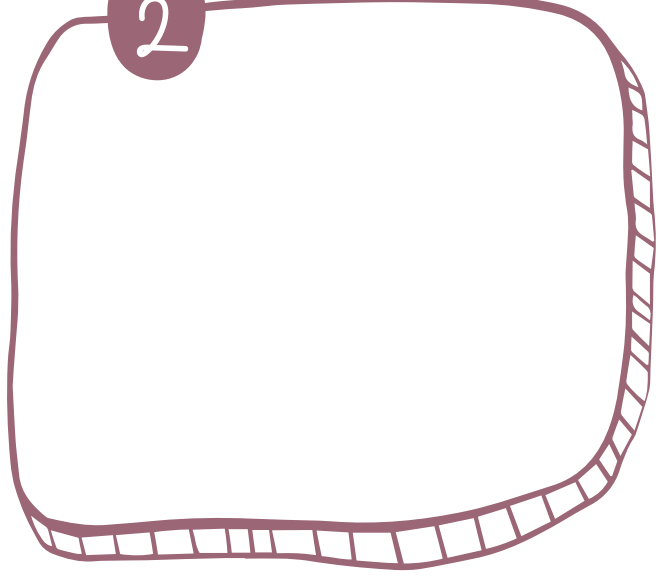
What did I notice?

1



What did I notice?

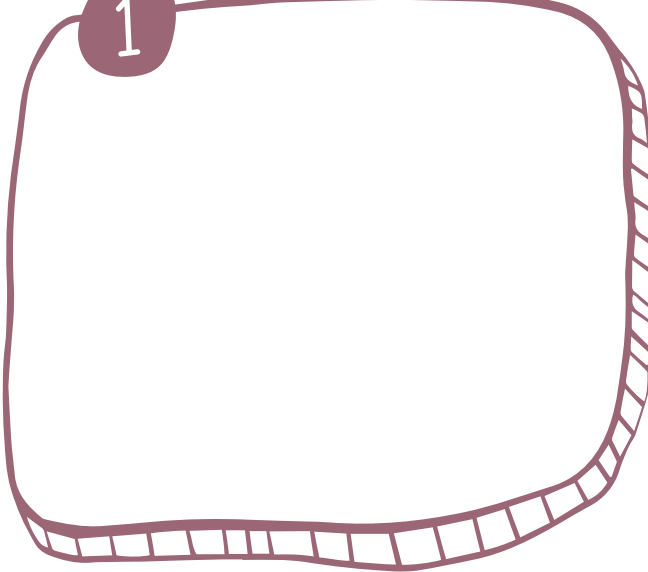
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Closed ecosystem

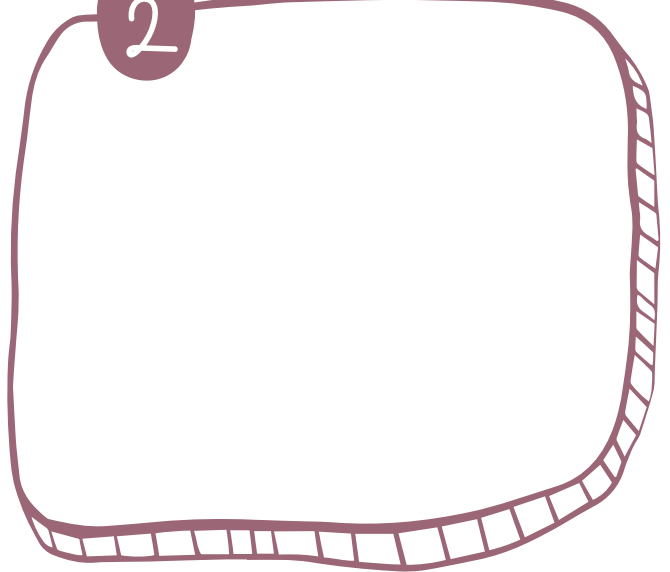
What did I notice?

1



What did I notice?

2



What is my hypothesis for next week?

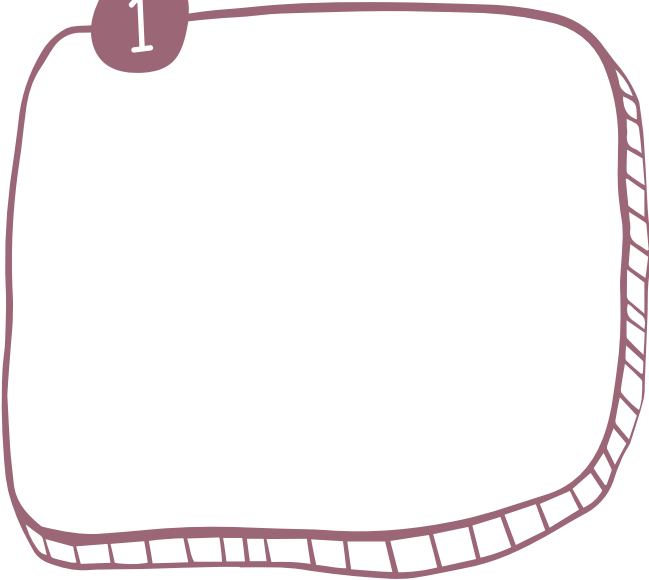
Research tracking sheet

Week 11 _____

Open ecosystem

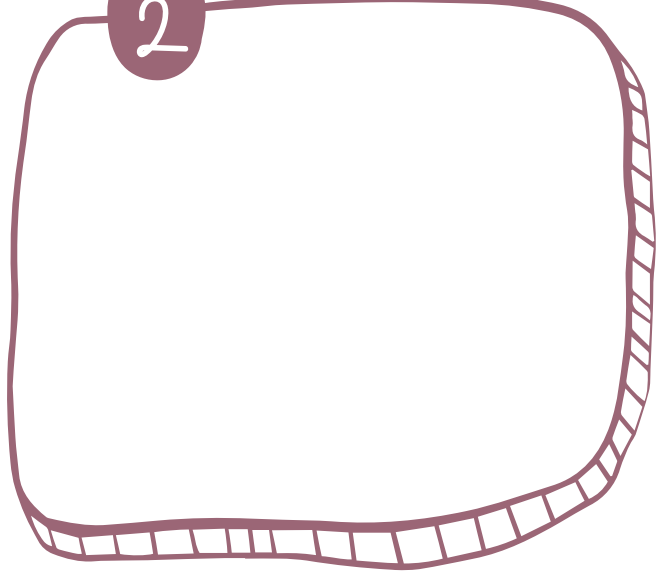
What did I notice?

1



What did I notice?

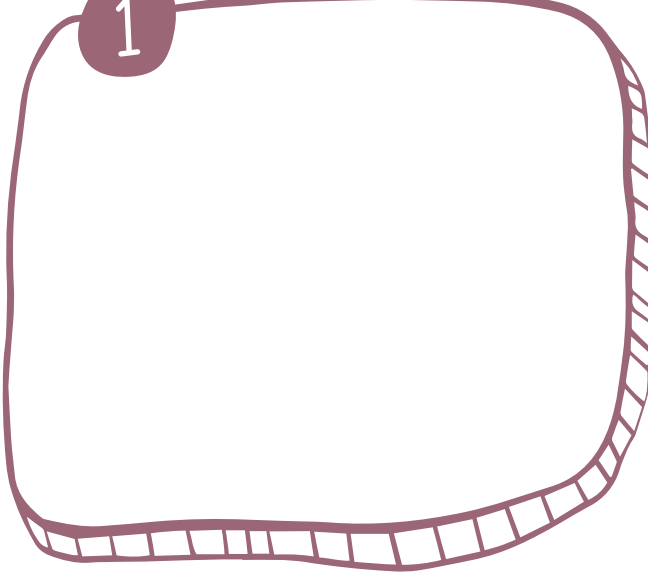
2



Closed ecosystem

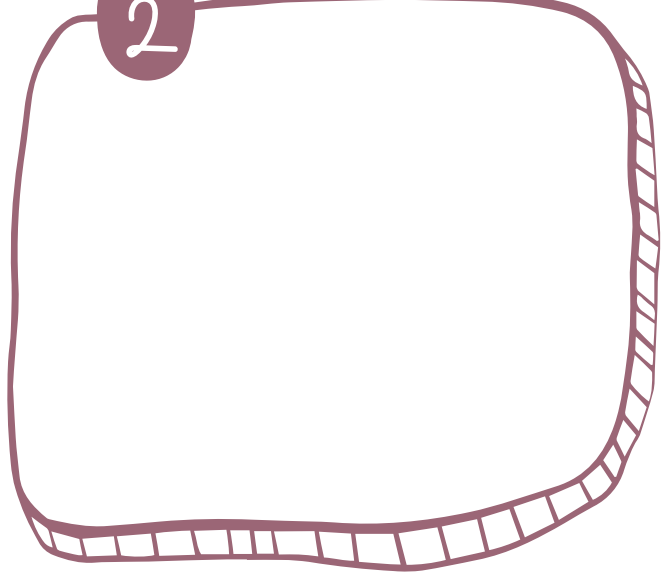
What did I notice?

1



What did I notice?

2



What is my hypothesis for next week?

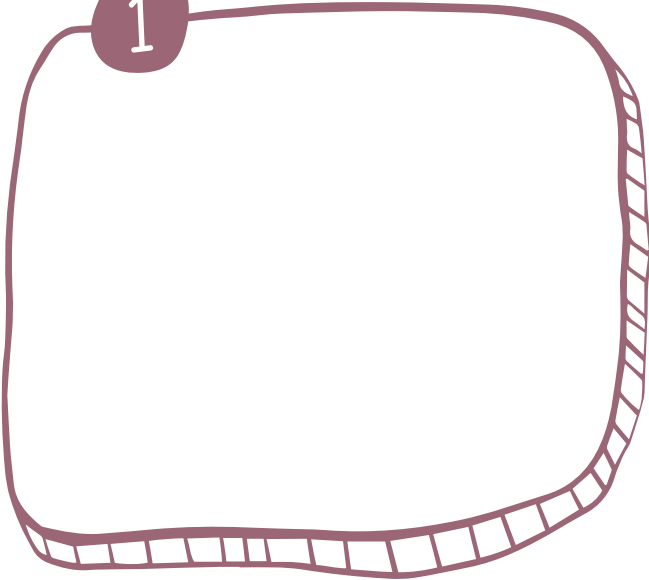
Research tracking sheet

Week 12 _____

Open ecosystem

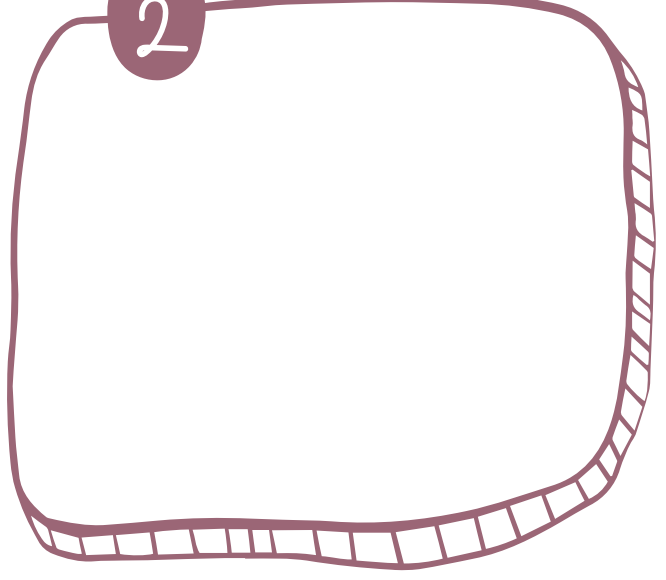
What did I notice?

1



What did I notice?

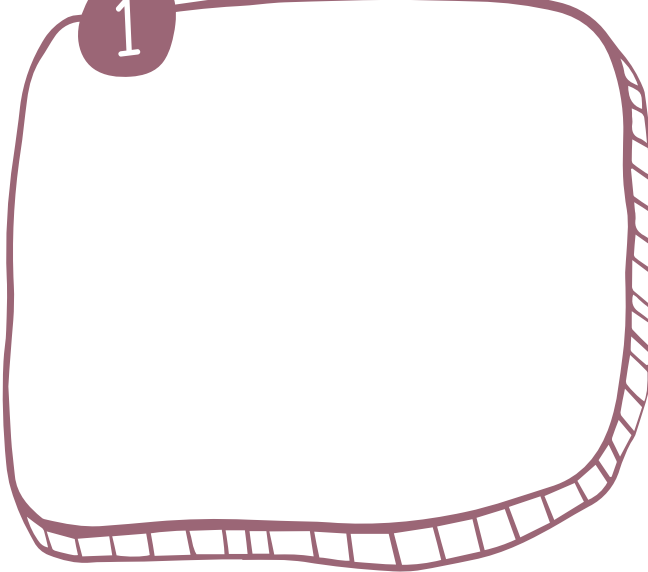
2



Closed ecosystem

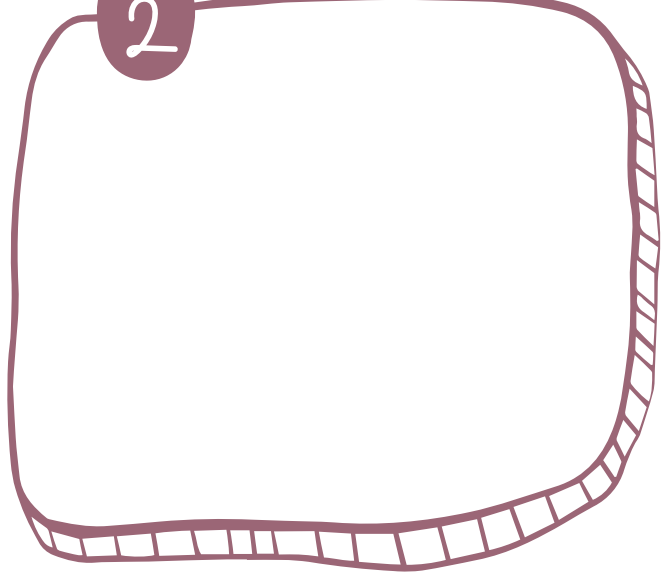
What did I notice?

1



What did I notice?

2



What is my hypothesis for next week?
