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**
Authors	**Gedimino miesto mokykla (LT)**

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OVERALL DESCRIPTION

Sections	Description
1. Topic/DU Title	Meadow plants
2.Brief description of the DU	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. The DU include three phases on the following topics: 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?	The teacher shows a video that piques students' interest and asks them what the lesson's topic will be. **Video 1** Students work in pairs to draw a bubble map and write down what they know about meadows. The teacher shows next video. **Video 2** After watching the video, the pupils work in pairs to complete a bubble map of what they have	Science, language	To know about meadows and create a bubble map. To update bubble maps with new information while working in pairs.	Be able to apply the information they know. Be able to select key information.	Active and Collaborative learning Collaborating in pairs, students complete a Bubble Thinking Map about natural meadows and lawns. Take turns presenting the written statements. Working in pairs, complete the Venn diagram and check in groups.	**Video 1** YouTube video from Discover Planet Earth Channel. What is Happening in the Meadow Bubble Thinking Map **Video 2** YouTube video from GardensFor Wildlife Channel What Is A Meadow LINNEO video Natural meadow and lawn	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

	heard about the meadow (using other colours). Pairs read to the class one statement they have written and add to their map by listening to their friends. Use the teacher's descriptions of lawns and meadows from an encyclopaedia or reference book **A3.1** and in pairs complete a Venn diagram that shows the similarities and differences between meadow and lawn. **Worksheet 1** After the three pairs have joined, the		to summarise what a meadow is. To identify the similarities and differences between a meadow and a lawn. To determine whether a statement about meadows is true or false.	Be able to critically assess material and identify similarities and differences. Be able to select true/false statements about natural meadows and lawns.		Worksheet 1 (annexed) Worksheet 2 (annexed)			

	students discuss the similarities and differences they discovered and add to their Venn diagrams. Students assess what they have learned during the lesson by responding to the teacher's questions. **Worksheet 2**								
Lesson 2. Meadow plants, species and their features A lesson in the meadow (herbarium)	The teacher shows a video and information about meadow plants. **Video 3** **A3.3** Students draw a card containing the name of a meadow plant. **Worksheet 3** Students use their smart device to look up what the	Technology, language, Science	To find information about a plant using a book or Internet. To recognise and take a photo of the plant in the meadow and use a magnifying glass to examine parts of the plant. To follow the video instructions and prepare a		Individual work Students take out a plant name card. Students find a photo of a plant	Video 3 YouTube video from Love2Learn with Miss Ellis Wild Plants LINNEO video Meadow plants Cards with the names of meadow plants	Meadow	Identify a plant and prepare it for the herbarium.	1 hour 30 minutes

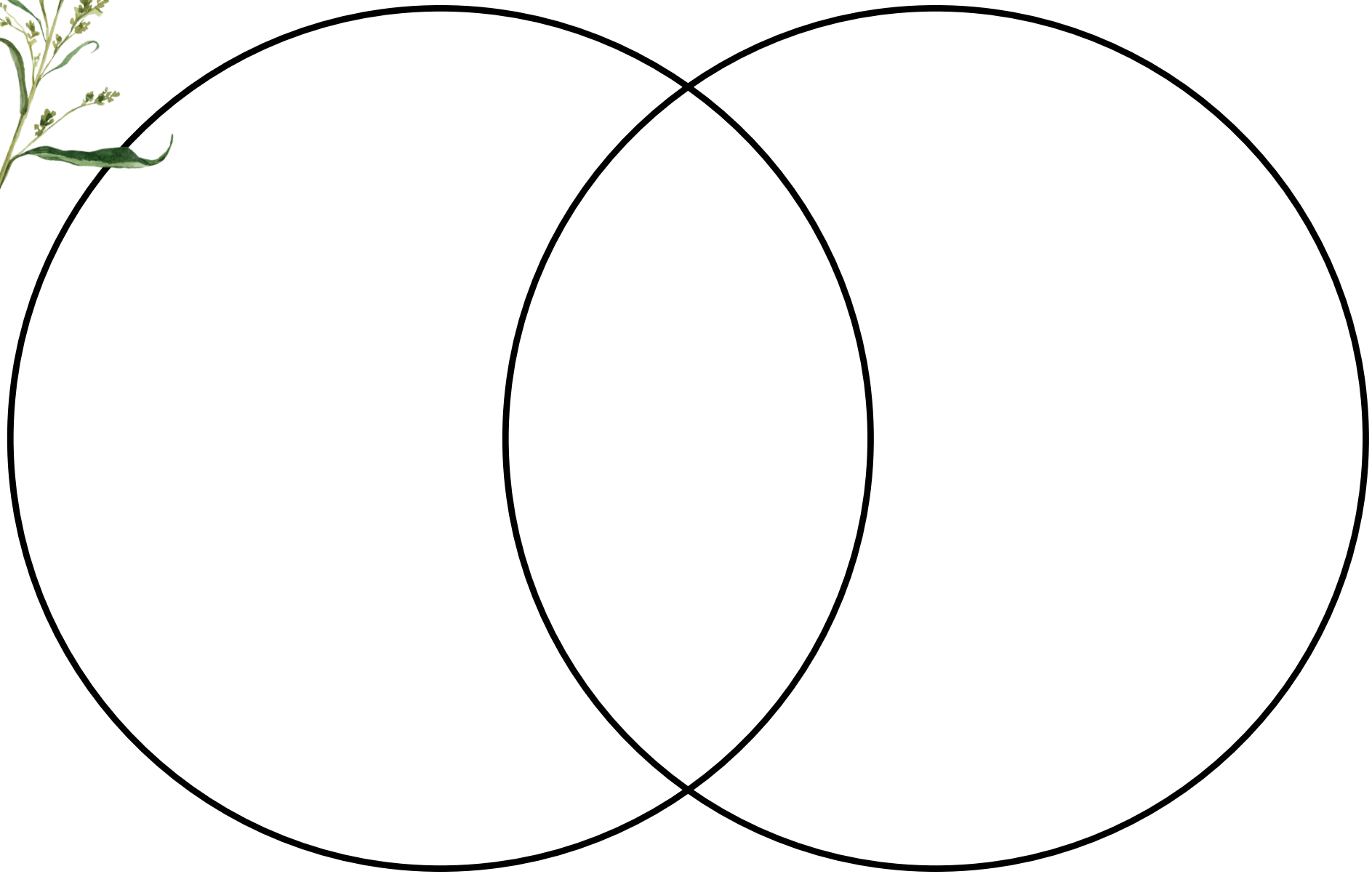
	plant looks like online. Students walk around the meadow, identifying and locating the plant they have picked from the photo. Examine the plant using a magnifying glass. It will be photographed and then uprooted (for the herbarium). The teacher displays a video of how the herbarium has been created. **Video 4** Students follow the instructions to prepare the plants for the herbarium.		plant for the herbarium.	Be able to identify a plant. Be able to get a plant ready for the herbarium.	on a smart device. Students photograph the plant then uproot it.	Worksheet 3 Meadow plants (annexed) magnifying glass, smart device, folder, reference book. **Video 4** YouTube video from ThinkTac Science Experiment			
Lesson 3.	Students work in groups to find out about closed	Technology,	To define a closed and open	Be able to critically evaluate	Collaborating in groups students take notes and	Video 5 YouTube video from	Classroom, computers, tablets.	Create a closed and	1 hour 30 minutes

Building the ecosystem	and open ecosystems. Groups share and summarise knowledge received they have collected in a direct (frontal) way. The teacher shows a video how to make a simple ecosystem. **Video 5** Then students work in groups to create 4 different ecosystems (2 closed and 2 open). After creating the ecosystems, the students will take care of them, keep an eye on them, and document any changes for three months on observation sheets.	language, Science	ecology in their own terms. Students reach an agreement and split up the work and duties. To observe and document what happens in the ecosystems To identify changes, keep open ecosystems (watering). To compare changes and draw conclusions.	the information provided. Be able to collaborate, share roles and responsibilities. Be able to systematically monitor and maintain ecosystems, to provide comments on the worksheets.	record important details regarding closed and open ecosystems. Collaborating in groups students create closed and open ecosystems. Collaborating in the classroom, students fill out observation sheets.	ThinkTac Creating a SIMPLE But BEAUTIFUL Ecosystem: Step-by-Step Terrarium Guide 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. Worksheet 4 Research tracking		open ecosystem. Fill out the research tracking sheet.	Three months of observation.

	Worksheet 4					sheet (annexed).			

*Setting: organisation of classroom space (physical and virtual) functional to the activity, provision of resources (technological and others), management of resources.

MEADOW& LAWN



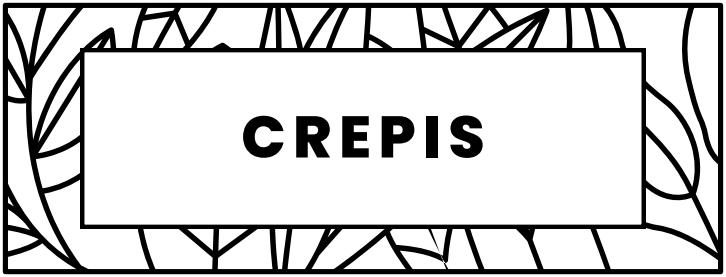
Meadow and lawn

True or false

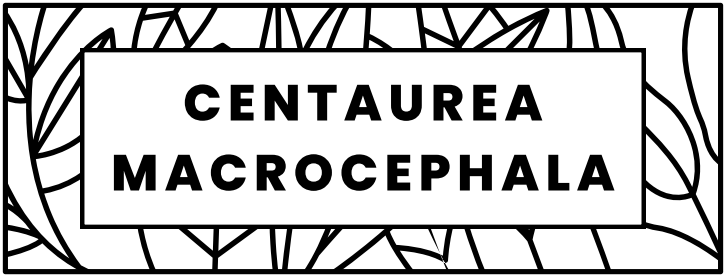
1 - A lawn is an area of ground used for ornamental or functional purposes.	T	F
2 - A natural meadow is a land area with perennial grasses that grow naturally.	T	F
3-In lawns, plants self-seed and grow unattended.	T	F
4 - A lawn is composed of one or more plant species that grow quickly, provide a firm 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


DANDELION


WORMWOOD


CREPIS


CHICORY


CENTAUREA
MACROCEPHALA


DAISY

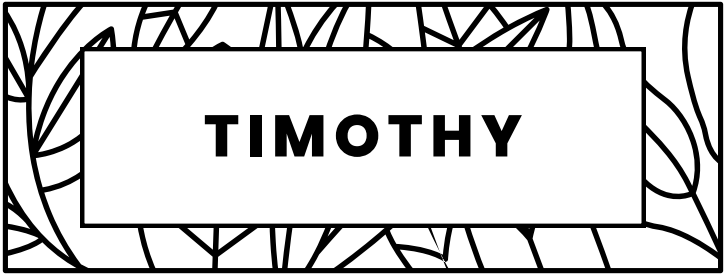

YARROW


THISTLE


WHITE CLOVER

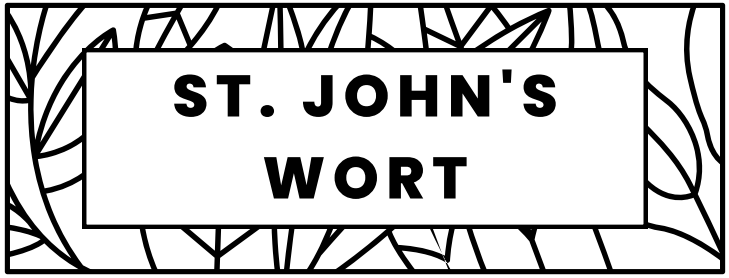

BLUE-FLOWERED
VETCH


YORKSHIRE
FOG

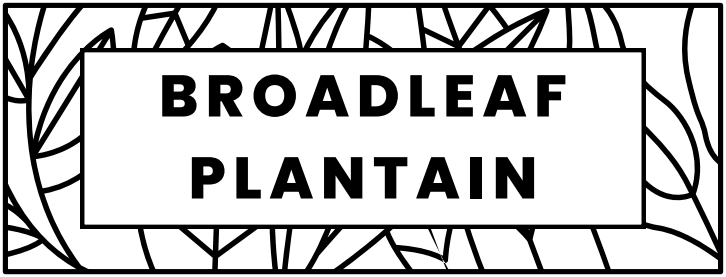

TIMOTHY

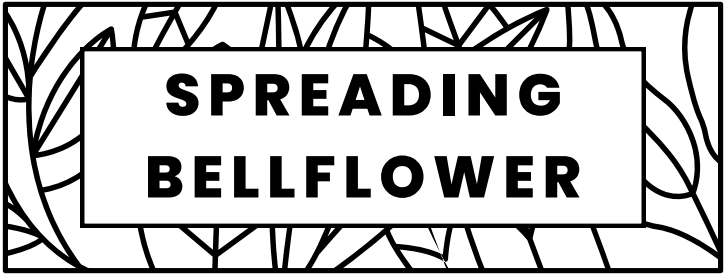

COCKSFOOT
GRASS


RYEGRASS

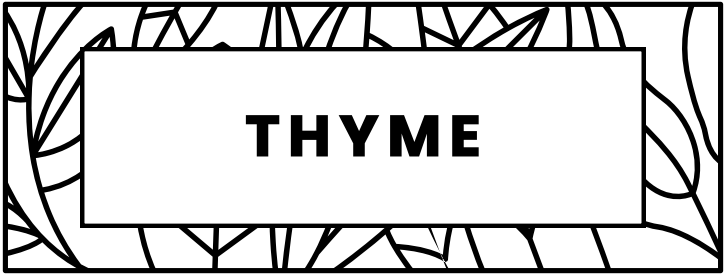

ST. JOHN'S
WORT

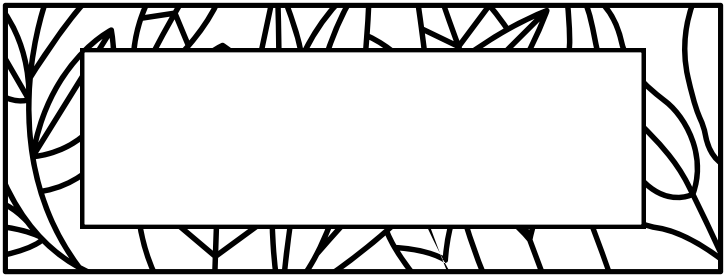

QUÁKING-
GRÀSS

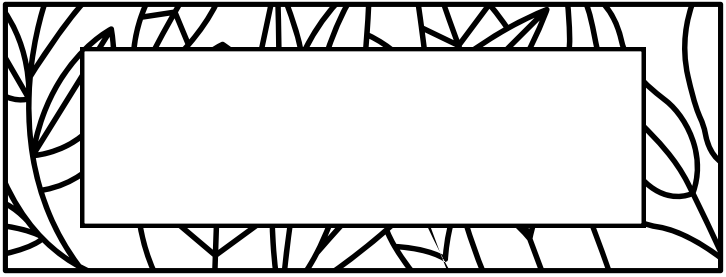

BROADLEAF
PLANTAIN

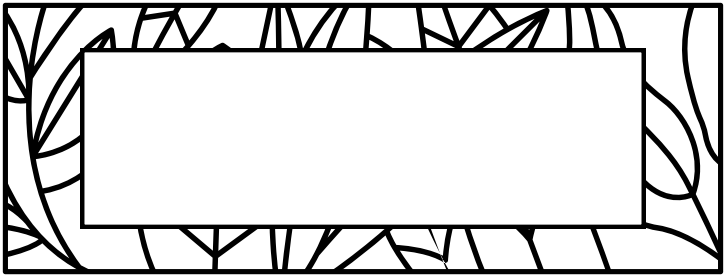

SPREADING
BELLFLOWER

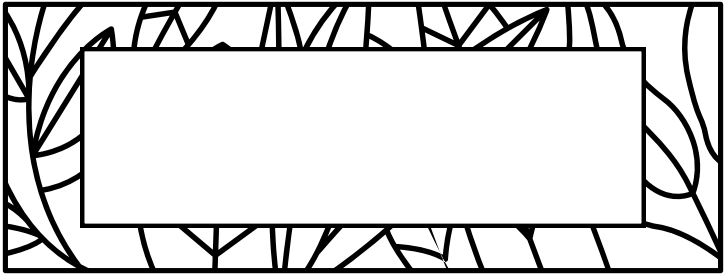

MEADOW
CLARY


THYME









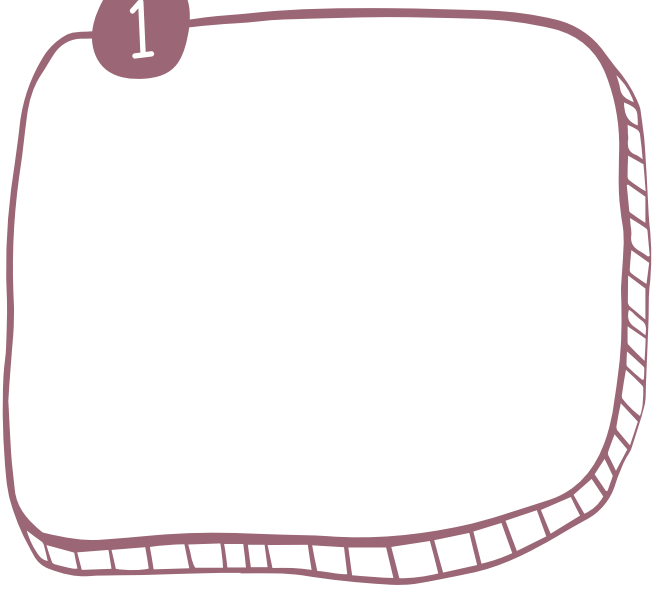
Research tracking sheet

Week 1_____

Open ecosystem

What did I notice?

1



What did I notice?

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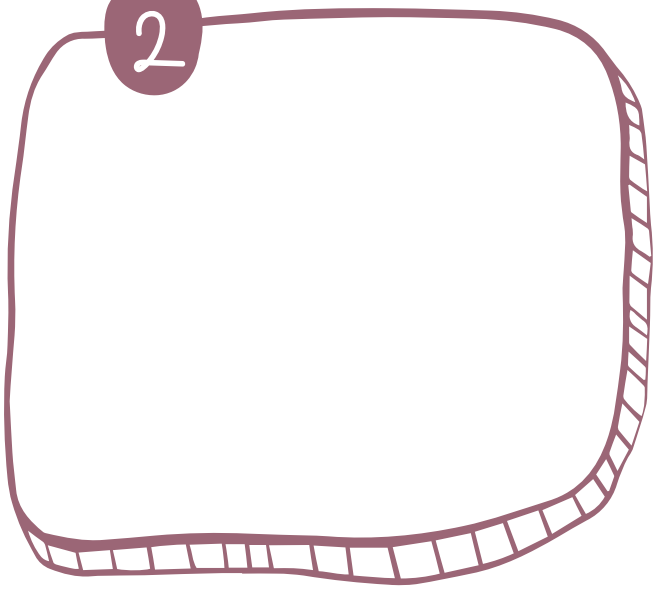
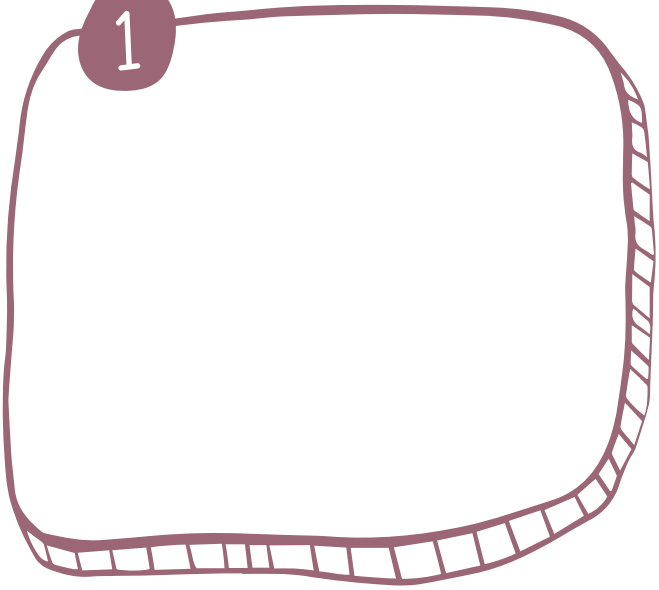


Closed ecosystem

What did I notice?

1



What did I notice?

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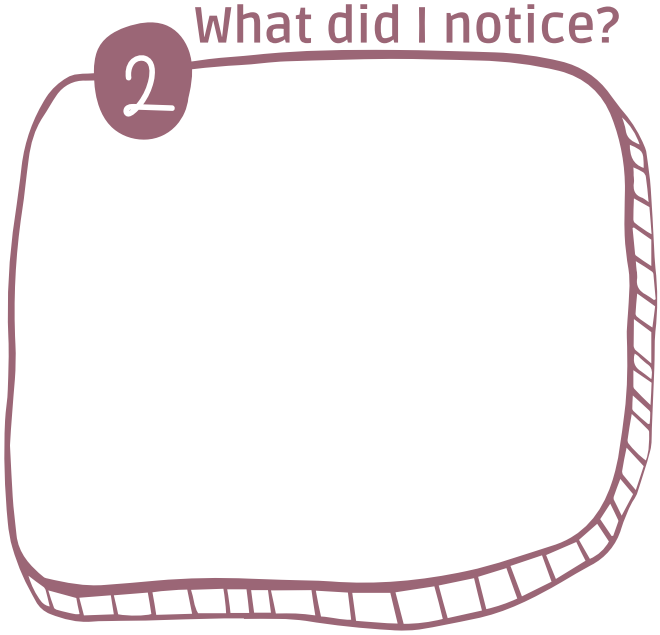


What is my hypothesis for next week?

_____

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?

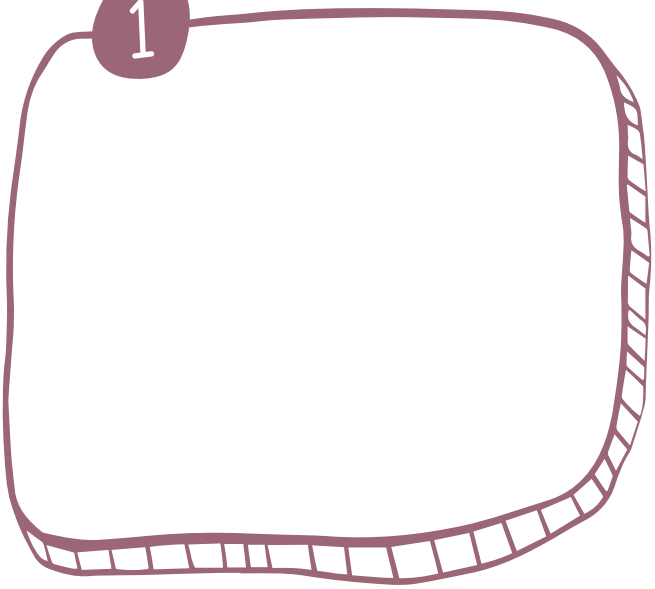
_____

Research tracking sheet

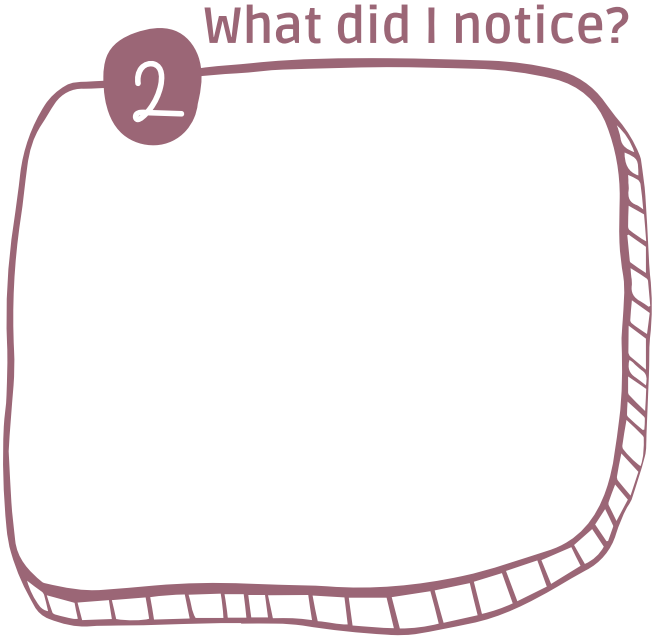
Week 3 _____

Open ecosystem

1 What did I notice?

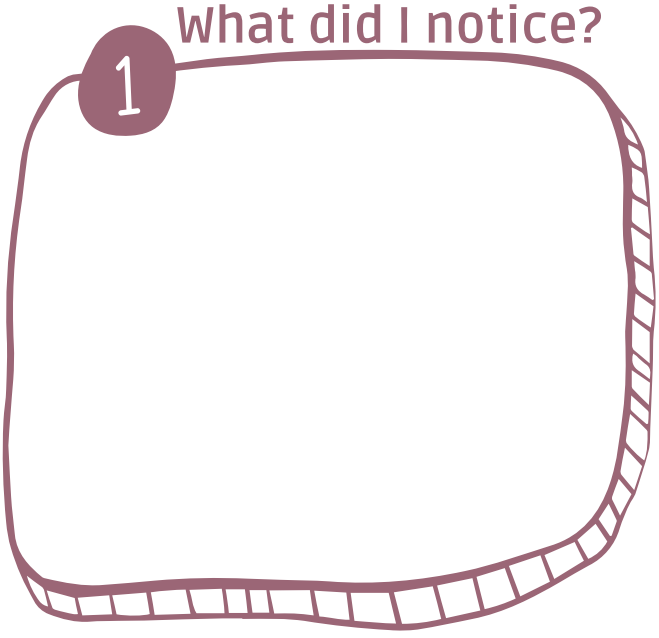


2 What did I notice?

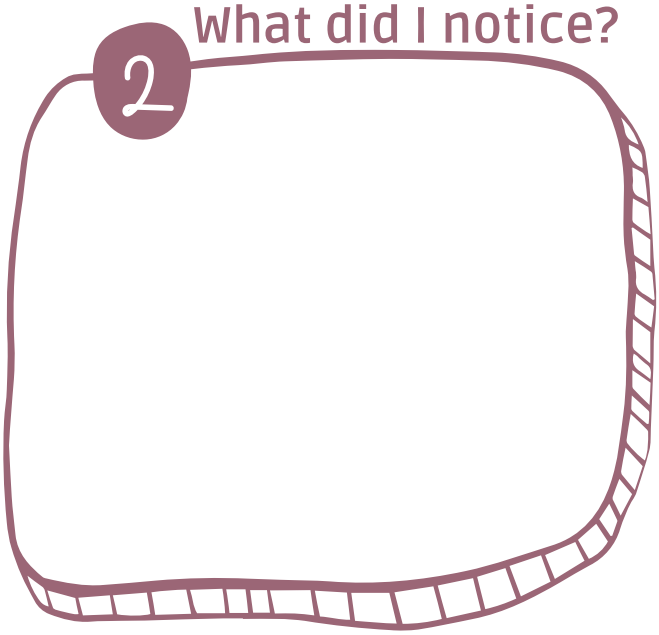


Closed ecosystem

1 What did I notice?



2 What did I notice?



What is my hypothesis for next week?

_____

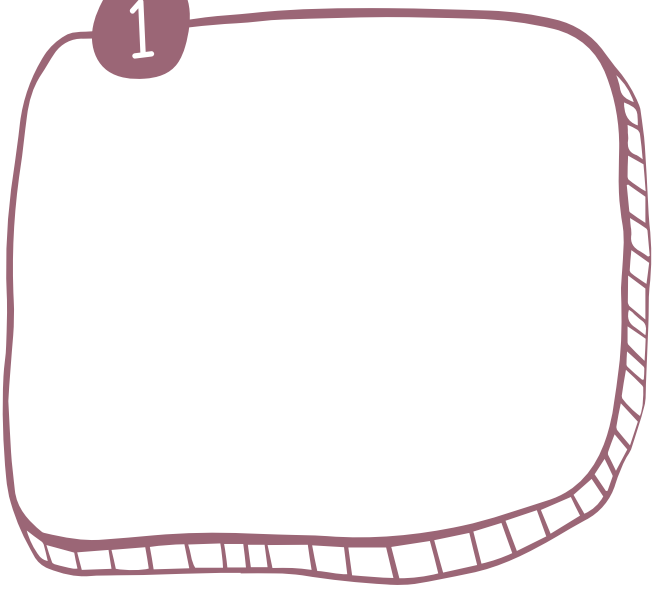
Research tracking sheet

Week 4 _____

Open ecosystem

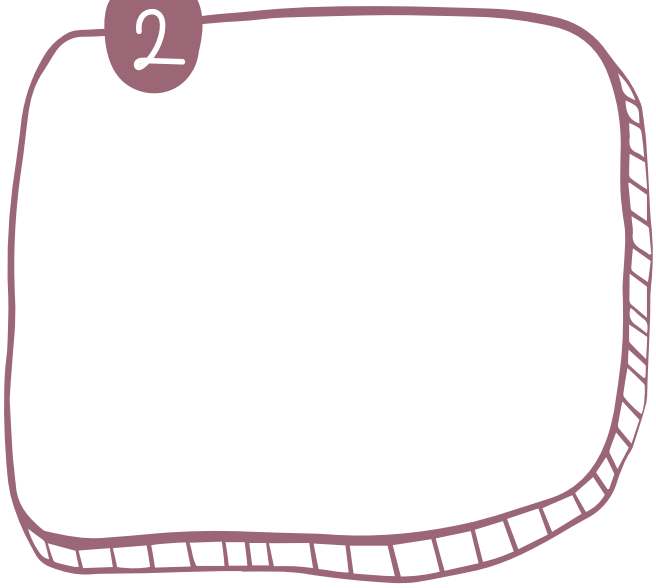
What did I notice?

1



What did I notice?

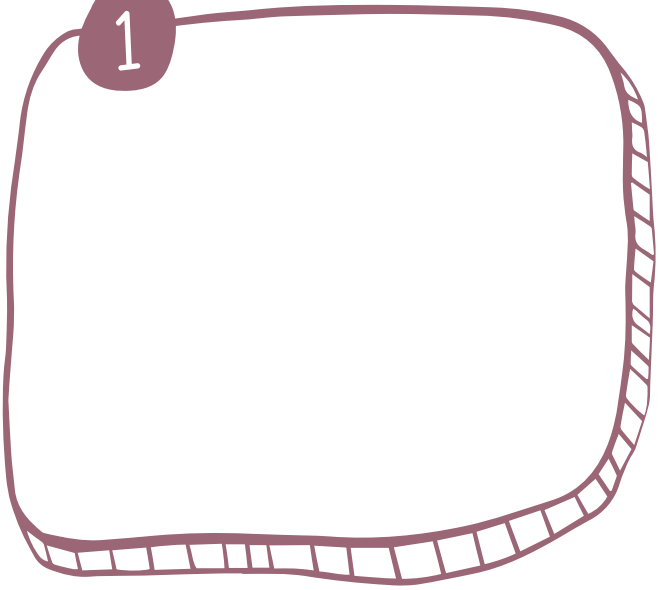
2



Closed ecosystem

What did I notice?

1



What did I notice?

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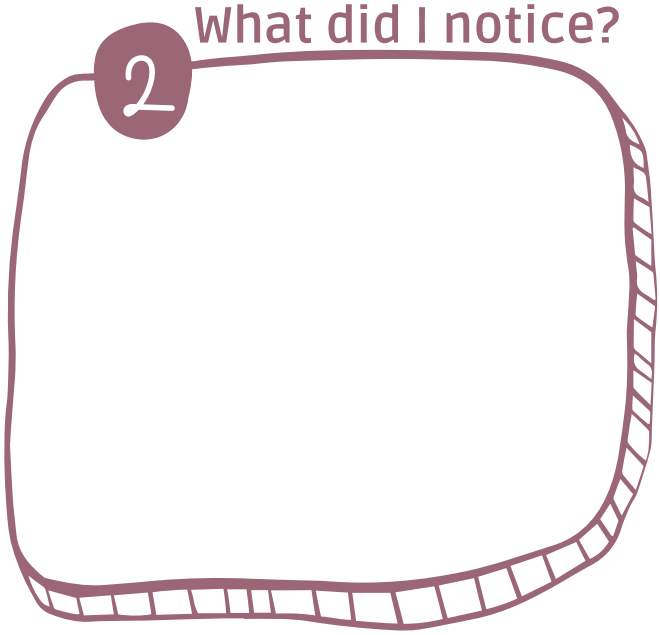


What is my hypothesis for next week?

_____

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?

_____

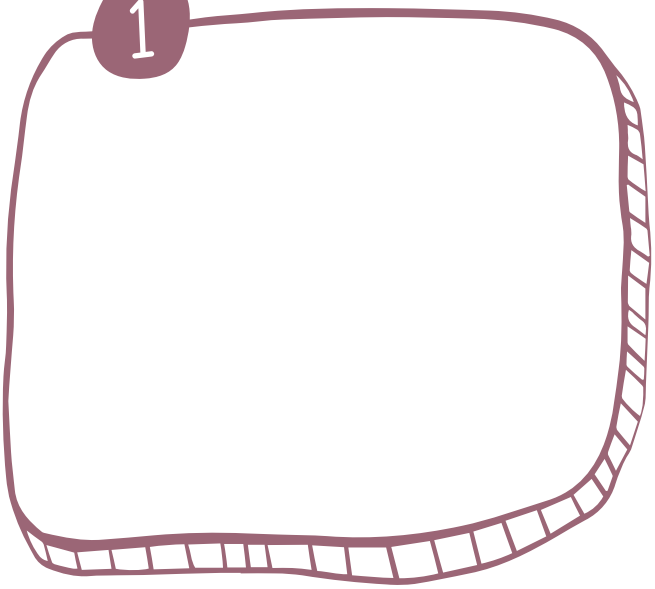
Research tracking sheet

Week 6 _____

Open ecosystem

What did I notice?

1



What did I notice?

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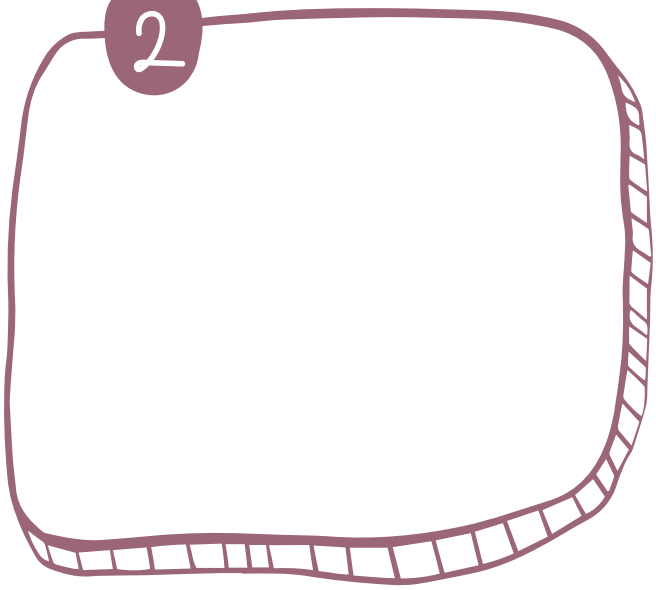
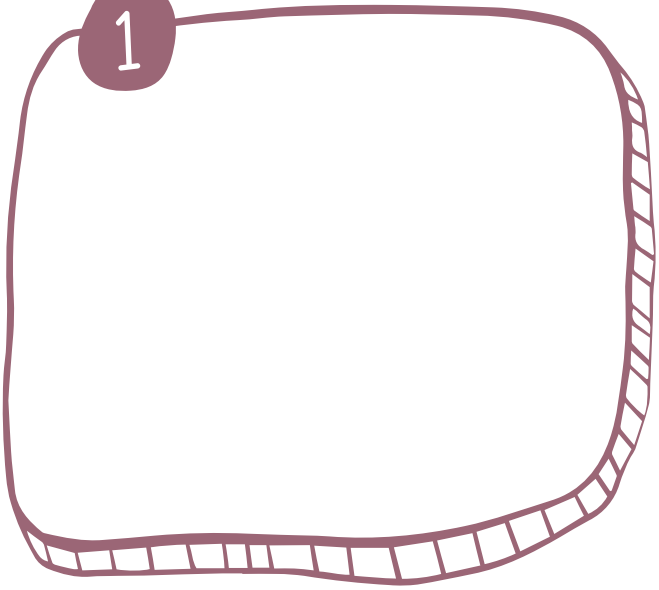


Closed ecosystem

What did I notice?

1



What did I notice?

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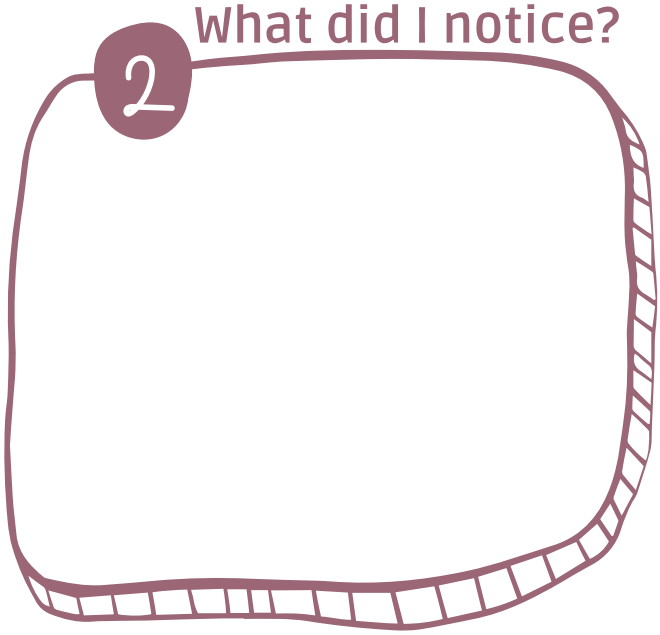


What is my hypothesis for next week?

_____

Research tracking sheet

Week 7 _____

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 8 _____

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 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?

_____

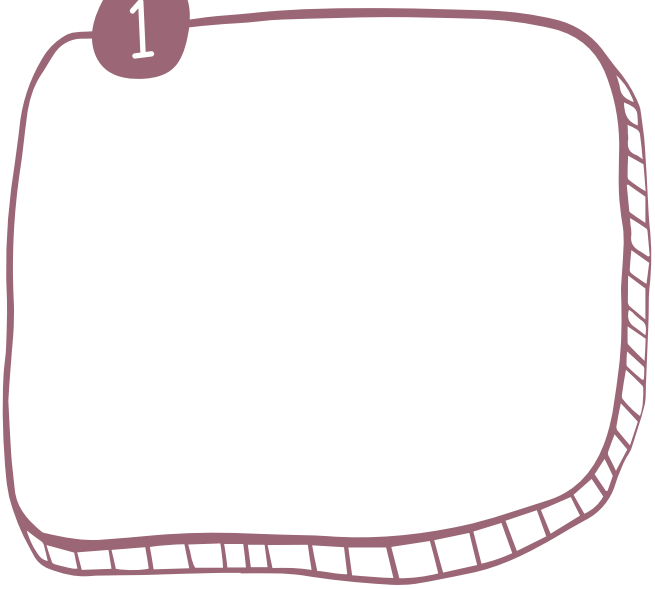
Research tracking sheet

Week 10 _____

Open ecosystem

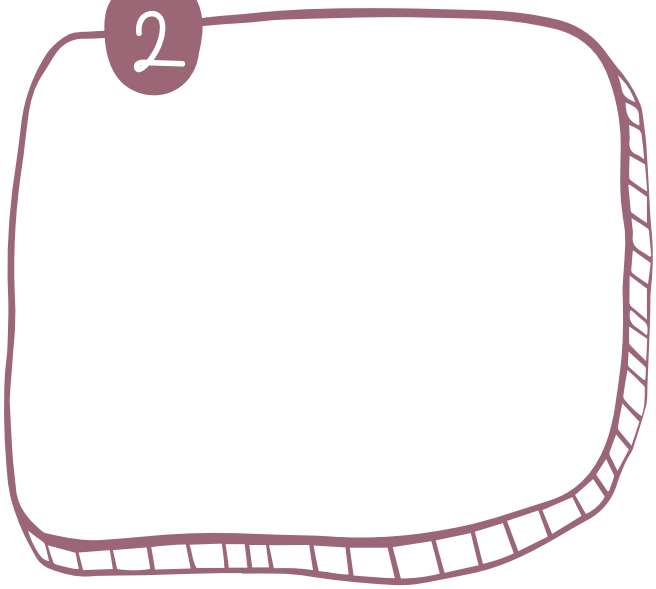
What did I notice?

1



What did I notice?

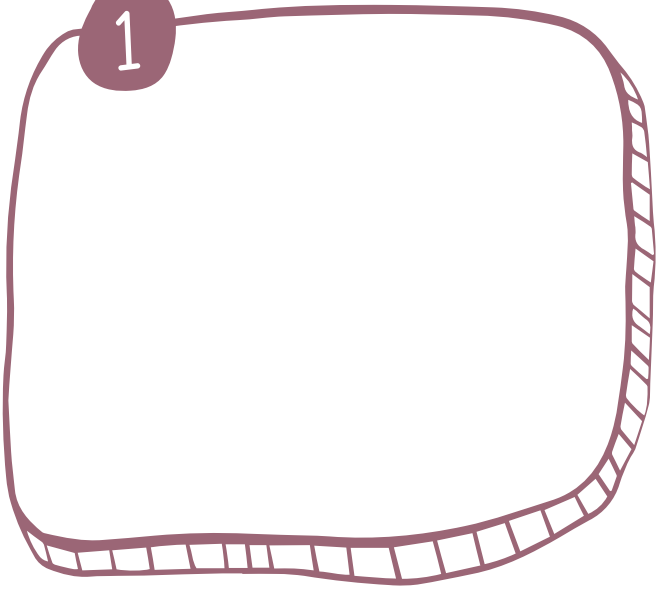
2



Closed ecosystem

What did I notice?

1



What did I notice?

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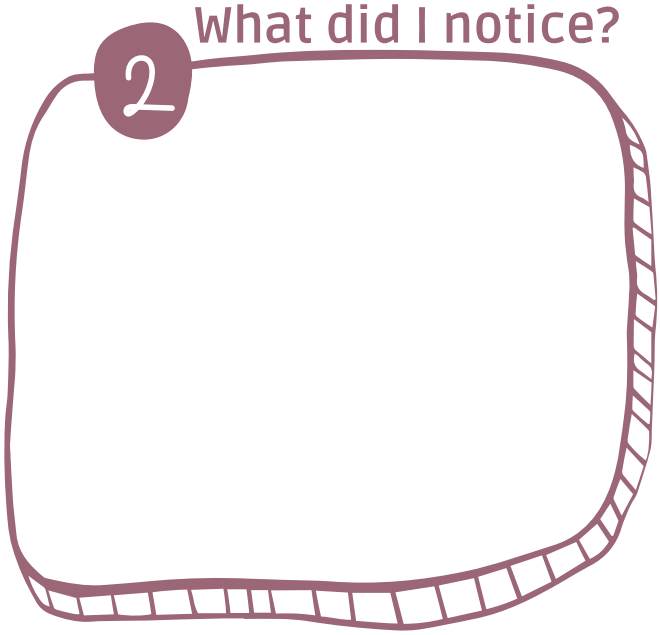


What is my hypothesis for next week?

_____

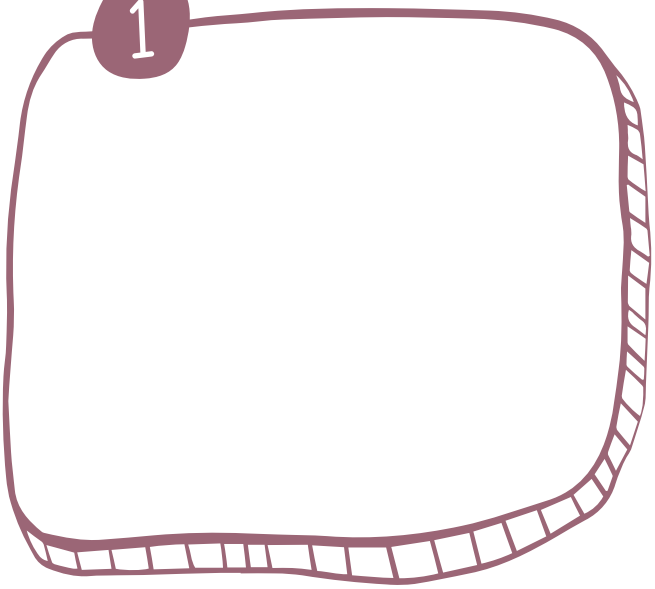
Research tracking sheet

Week 11 _____

Open ecosystem

What did I notice?

1



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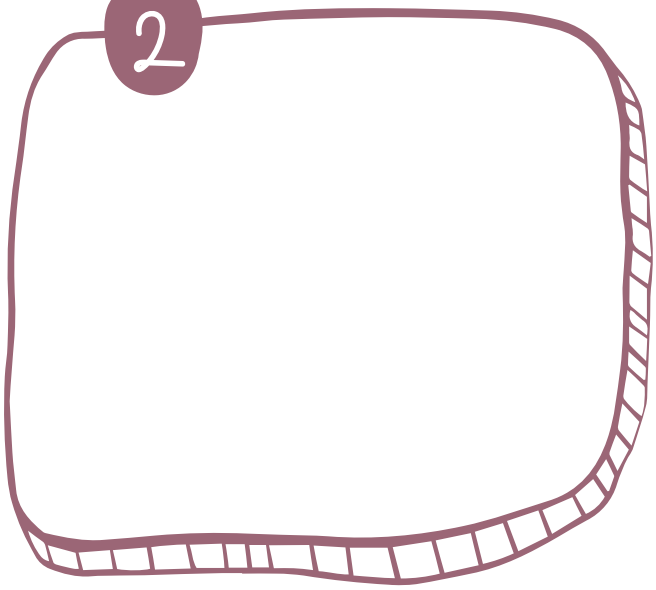
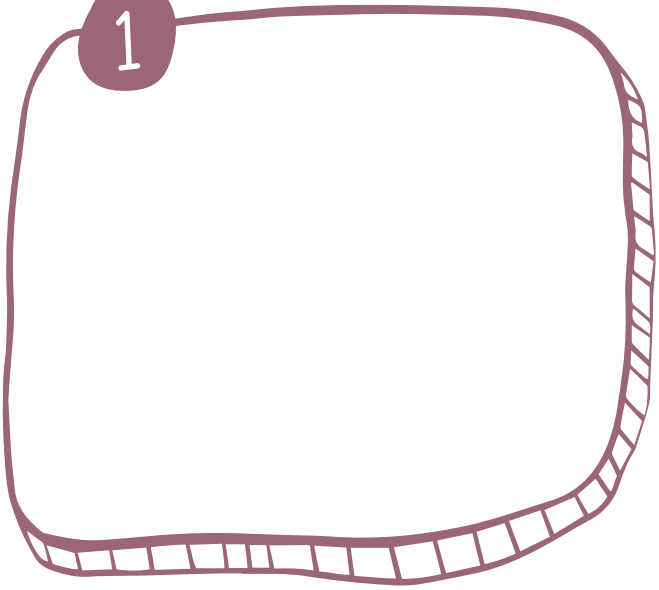


Closed ecosystem

What did I notice?

1



What did I notice?

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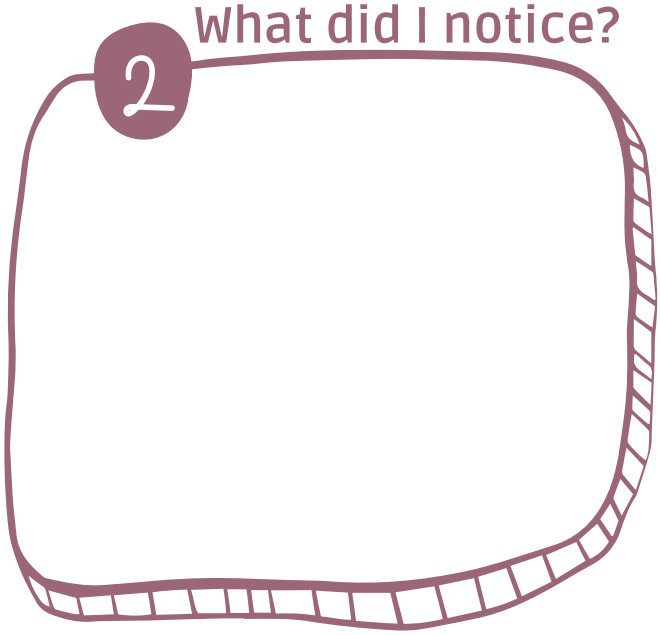

What is my hypothesis for next week?

_____

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?

_____