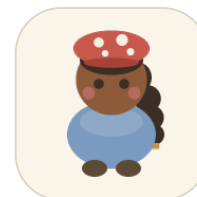


Wild Willows

STUDENT FIELD KIT

Restoring Willow Meadow

Six worksheets to print. Use the ones your teacher asks for – they work on their own or as a set.



1

Before You Play

Predict what the meadow needs and who will come back first.

2

Field Log

Record what you built and who arrived, in the order it happened.

3

Before & After

Count what lived in the meadow at the start and what lives there now.

4

Habitat Detective

Pick an animal that hasn't come back. Work out what it is missing, then test your idea.

5

Design Your Own Biome

Invent a damaged habitat and plan how you would bring it back.

6

Game vs. Nature

Decide what this game gets right about nature and what it leaves out.

How to use these

Write what you actually see, not what you think should happen. A prediction that turns out wrong is worth just as much as one that turns out right – as long as you can say **why** it was wrong. There is no score in this game and no way to lose, so take your time and watch closely.

Before You Play

Look at Willow Meadow on day one. Do not build anything yet – just look, and answer these.

Sketch the meadow A quick sketch of what you can see on your screen right now.

1. What do you notice about this meadow? Describe what the ground looks like.

2. What do you think is missing here? List at least three things.

1. _____

2. _____

3. _____

3. Every animal needs four things. Fill in what you think this meadow can offer right now.

Food	Water	Shelter	Space
_____	_____	_____	_____
_____	_____	_____	_____

4. Which animal do you think will come back first – and why?

My prediction _____

Because... _____

Keep this sheet. At the end of the lesson you will come back and check your prediction against what actually happened.

Field Log

When an animal arrives, write it down right away. Also, note what you just planted or built. The goal is to see how they are connected.

#	WHAT WE PLANTED OR BUILT	WHO ARRIVED	HEALTH %
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			

Which arrival surprised you most?

Was there a moment when nothing came for a while? What ended it?

Biodiversity – Before & After

Biodiversity means the number of different living things in one place. Count it at the start, count it again at the end, and compare.

Before – sketch

After – sketch

COUNT THIS	BEFORE	AFTER
How many different animal species could you see?		
How many kinds of animal? (insect, bird, mammal, reptile, invertebrae)		
Roughly what fraction of the ground was bare?		
How many places to drink?		
How many plant-eaters did you see?		
How many predators did you see?		

Which number changed the most? Why do you think that one changed more than the others?

What might an increase in biodiversity tell us about how the meadow has changed?

Think about it: the last animals to arrive were probably predators – the fox, the hawk, the owl. What had to be true about the meadow before a hunter would move in?

Habitat Detective

You won't see a name for an animal that hasn't returned, so you have to guess. Or you can choose one from the list below. You get a silhouette, its group, and a hint. Use them to work out what it is and what it still needs.

STEP 1 – CHOOSE YOUR ANIMAL

Animal I picked _____

Draw it

Open the field journal with J. Silhouettes are the ones still missing.

STEP 2 – WHAT DO YOU THINK IT NEEDS?

Food

What does it eat?

Water

Where would it drink?

Shelter

Where would it hide or nest?

STEP 3 – MY PREDICTION

Change only one thing, or you will not know what worked.

If I add... _____

Then this will happen... _____

STEP 4 – WHAT ACTUALLY HAPPENED

Did it come back?



Yes



No

How long did it take? _____

If it came – what does that tell you about what it needed? If it didn't – what else might still be missing?

Stuck? Plants have to grow all the way before they count as habitat – a seedling does nothing yet. And a hunter will not move in until the animals it eats are already living there. You can also upgrade your field journal to get more hints.

SOME OF THE MEADOW ANIMALS YOU COULD PICK



Bumblebee



Garter Snake



Cottontail
Rabbit



Snail



Mule Deer



Red Fox



Red-tailed
Hawk



Barn Owl

Design Your Own Biome

Pick a real biome that Wild Willows does not have. Work out what damaged it, then plan how you would bring it back.

Check the one you are designing.

☐ Jungle

☐ Savanna

☐ Tundra

☐ Grassland

☐ Swamp

☐ Coral reef

☐ Another one – _____

What damaged it _____

What does it look like right now?

Five animals that used to live there – and what each one needs.

ANIMAL	FOOD	WATER	SHELTER

Four things you would plant or build, and who each one is for.

1

2

3

4

Which animal comes back first?

and why does it only need a little

Which animal comes back last?

and what has to happen before it will

My sources:

Game vs. Nature

Wild Willows is a **model** of an ecosystem — a simplified version built to be played. Some of it is true to nature. Some of it has been left out on purpose. Your job is to tell them apart.

1. Three things the game gets right about how nature works.

1 _____

2 _____

3 _____

2. Three things that happen in a real meadow but never happen in the game.

1 _____

2 _____

3 _____

3. Check the ones you think are true of a real meadow but not of this game.

☐

Animals can die, or go hungry.

☐

Plants can be eaten faster than they grow back.

☐

Two animals can want the same food and compete for it.

☐

Weather can wreck a habitat, not just decorate it.

☐

One species arriving can push another one out.

☐

Restoring a real meadow takes years, not minutes.

4. Pick one thing the game leaves out. If it were added, how would it change the way you played?

5. Models leave things out on purpose, so they are simple enough to use. Is a model still useful if it is not completely true? Explain.

Scientists use models the same way you just did. A model of a river, a forest or the climate always leaves something out. Being able to say exactly **what** it leaves out is part of using it properly.