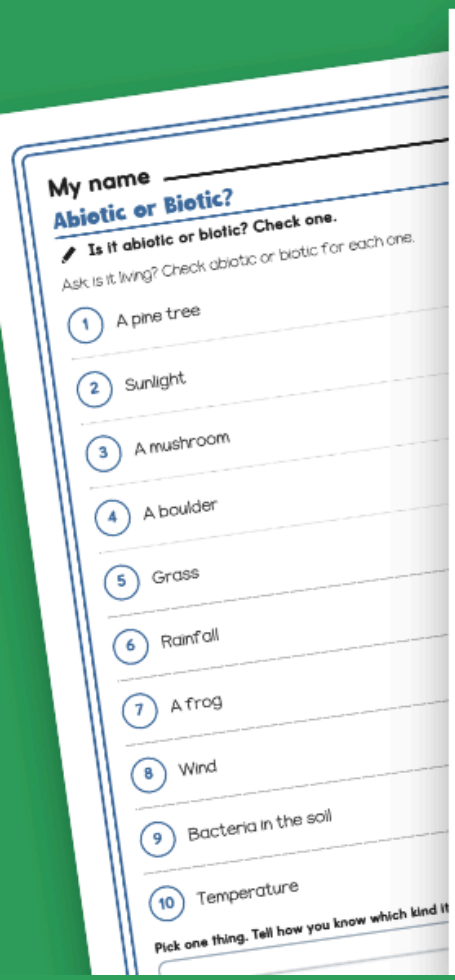
Bright Path Sped

ABIOTIC AND BIOTIC FACTORS

DIAGRAM · SORT · SHORT ANSWER · KEY


My name

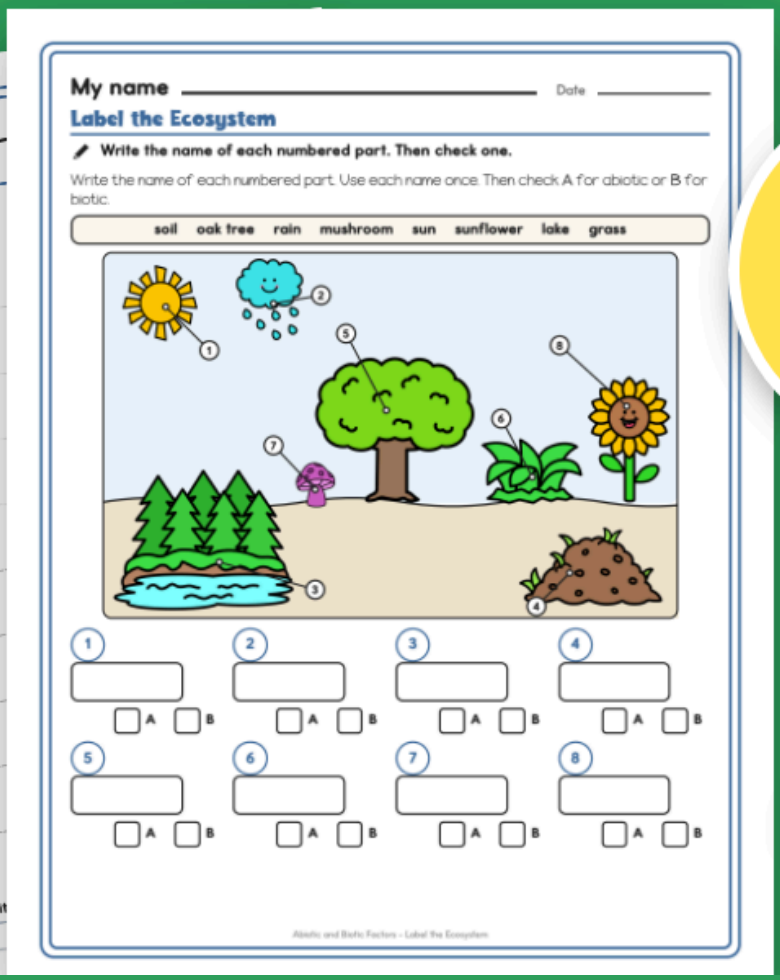
Abiotic or Biotic?

Is it abiotic or biotic? Check one.

Ask: Is it living? Check abiotic or biotic for each one.

1. A pine tree
2. Sunlight
3. A mushroom
4. A boulder
5. Grass
6. Rainfall
7. A frog
8. Wind
9. Bacteria in the soil
10. Temperature

Pick one thing. Tell how you know which kind it


My name _____ Date _____

Label the Ecosystem

Write the name of each numbered part. Then check one.

Write the name of each numbered part. Use each name once. Then check A for abiotic or B for biotic.

soil · oak tree · rain · mushroom · sun · sunflower · lake · grass

1 ☐A ☐B 2 ☐A ☐B 3 ☐A ☐B 4 ☐A ☐B

5 ☐A ☐B 6 ☐A ☐B 7 ☐A ☐B 8 ☐A ☐B

Abiotic and Biotic Factors – Label the Ecosystem

GRADES 6-8

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This is a fillable PDF

- Open it in a PDF reader (Adobe Acrobat Reader, Preview, or your browser), click into a line or a box, type, and Save As.
- The name line, every answer box, every ruled work box and every check box on the student pages are type-in fields, and so are the tracker, class grid, team note and family page. You can also print any page and write by hand.
- It works offline. No account, no subscription, no internet connection needed after you download it.

Print at 100 percent

Turn off fit to page and shrink to fit so the ruled lines stay 0.34 inch apart. Every student page is black and white inside a colored border, so it still reads when copied in black and white.

Student work

A filled-in tracker, class grid or team note carries a real student's name. Keep it in the data folder, and use a first name only on any page that leaves your hands.

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PREVIEW

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How To Read a Page

The parts of a student page, then the kinds of sheet in the order they come.

The parts of a page

- **The answer box.** A bordered box for a letter, a number or a word. Click it to type, or print and write in it.
- **The ruled work box.** Lines 0.34 inch apart for sentences. Write one idea to a line.
- **The check box.** True or false, abiotic or biotic, yes or not yet: click or mark.
- **The word bank.** A box of words to use. Some words are used once, some not at all.
- **The cut line.** Nine pieces in a short grid, edge to edge: a few straight cuts across and down.

Kind of sheet	How many	What the student does
Readings and cards	4 sheets	Read, answer, and keep the factor cards to look things up.
Words and matching	4 sheets, 22 items	Match words and clues; try a worked example.
Diagram and chart	2 sheets, 18 items	Label the ecosystem, then fill in a chart for five factors.
Sort and story	2 sheets, 16 items	Check abiotic or biotic for ten things, then fill in the pond story.
True or false and mistakes	3 sheets, 16 items	Check sentences, fix false ones, find Mara's mistakes.
Writing	4 sheets, 12 questions	Short answers with at least four ruled lines, then explain-it boxes with at least five each.
Quizzes, exit tickets, sorts	12 items, 3 tickets, 18 pieces	Two quizzes, one exit sheet, two cut-and-sort mats.

Untimed, unscored on the page

No student page has a timer or a score on it. The keys and the tracker are for you. The answer keys are on pages 30 to 35.

Short answers and explain-its

Their keys (page 34) say what to look for, not one right sentence. Accept any answer that uses a fact from the readings or the factor cards.

Printing and the type-in fields

Every page prints clean in black and white. The name line, every answer box, every ruled box and every check box are type-in fields in any PDF reader: click one, type, then save. This is a fillable PDF, not a slideshow or a word-processor file.

Room to work

Short-answer boxes hold four lines and explain-it boxes hold five. If a student needs more room, hand over one page a day, or let students write on scrap paper and copy their best sentences into the box.

PREVIEW

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My name _____ Date _____

Reading 1: Living and Nonliving Parts

Read about living and nonliving parts. Then answer.

Ecosystems, biotic factors and abiotic factors

An **ecosystem** is all the living and nonliving things in one area, and the ways they affect each other. A pond, a forest and a desert are ecosystems. The living parts are called **biotic factors**. Plants, animals, fungi and bacteria are biotic factors. The nonliving parts are called **abiotic factors**. Sunlight, water, temperature, air, wind, soil and rocks are abiotic factors. In a pond, the fish, the water lilies and the bacteria are biotic. The water, the sunlight and the rocks on the bottom are abiotic. A living thing cannot stay in a place unless its needs are met, so both kinds of factors help decide who lives where.

Main idea: What is this reading mostly about?

Check what you read. Write the letter in the box.

1. What are biotic factors?
   - **A** The nonliving parts of an ecosystem
   - **B** The living parts of an ecosystem
   - **C** Only the animals in an ecosystem

2. Which of these is an abiotic factor in a pond?
   - **A** The fish
   - **B** The bacteria
   - **C** The sunlight on the water

3. What is an ecosystem?
   - **A** All the living and nonliving things in one area
   - **B** Only the plants in one area
   - **C** A group of animals of one kind

PREVIEW

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My name _____ Date _____

Factor Cards 1

Read the cards. Keep them all week.

Abiotic factors



What it is	the nonliving parts of an ecosystem
Examples	sunlight, water, temperature, air, wind, soil and rocks
Quick test	It is not alive
Why it matters	it helps decide which living things can live in a place

Biotic factors



What it is	the living parts of an ecosystem
Examples	plants, animals, fungi and bacteria
Quick test	It is alive: it grows, needs energy and makes more of its kind
Why it matters	living things eat, compete and help each other

Sunlight and temperature



Kind	abiotic
Sunlight	gives plants the energy to make food
Temperature	how hot or cold a place is; it helps decide which living things can live there
Example	a cactus lives where the days are hot and dry

Pick one card. Tell what it says in your own words.

PREVIEW

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My name _____ Date _____

Ecosystem Words

Match each word to what it means.

Write the letter of the meaning in the box. Use the readings to help you.

1	**ecosystem**		**A**	A living thing that makes its own food, like a plant.
2	**biotic factor**		**B**	All the living and nonliving things in one area.
3	**abiotic factor**		**C**	Something that keeps a population from growing larger.
4	**producer**		**D**	A nonliving part of an ecosystem.
5	**decomposer**		**E**	A living thing that breaks down dead matter, like a fungus.
6	**limiting factor**		**F**	A living part of an ecosystem.

Use two of the words in one sentence about an ecosystem.

PREVIEW

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My name _____ Date _____

Match the Ecosystem Words

Match each word to what it means.

Write the letter of the meaning in the box. Use the factor cards to help you.

1	**Sunlight**		**A**	A living thing that breaks down dead matter.
2	**Soil**		**B**	How hot or cold a place is.
3	**Temperature**		**C**	The place where a living thing lives and gets what it needs.
4	**Producer**		**D**	Energy from the sun that plants use to make food.
5	**Consumer**		**E**	A living thing that makes its own food.
6	**Decomposer**		**F**	All the living things of one kind in an area.
7	**Population**		**G**	A mix of tiny rock pieces, air, water and dead matter where roots grow.
8	**Habitat**		**H**	A living thing that gets energy by eating other living things.

Pick one pair. Tell how the two things are connected in the cycle.

PREVIEW

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My name _____ Date _____

Fill In the Chart

Fill in the chart for each factor.

Use the factor cards. Write abiotic or biotic, then pick what it does from the bank. Then give your own example.

breaks down dead matter **gives plants energy to make food**
eats other living things for energy

holds water and minerals for roots **makes its own food**

Sunlight	**Abiotic or biotic?**	
	What it does	
	One example	
Soil	**Abiotic or biotic?**	
	What it does	
	One example	
Producer	**Abiotic or biotic?**	
	What it does	
	One example	
Consumer	**Abiotic or biotic?**	
	What it does	
	One example	
Decomposer	**Abiotic or biotic?**	
	What it does	
	One example	

PREVIEW

My name _____ Date _____

Fill In the Pond Story

Fill in each blank. Use the word bank.

Read the story about a pond. Fill each blank with a word from the bank. Two words are not used.

producers	habitat	abiotic	Sunlight
ecosystem	consumer	biotic	decomposers

1. _____ is an abiotic factor that gives the pond plants energy to make food.

2. Water lilies are _____ because they make their own food.

3. A fish is a _____ because it eats other living things.

4. Bacteria and fungi are _____ that break down dead plants.

5. Rocks, water and temperature are _____ factors because they are not alive.

6. Plants, fish and bacteria are _____ factors because they are living.

Pick one sentence. Tell what would change if the pond had less rain.

PREVIEW

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My name _____ Date _____

True or False 2

Is it true or false? Check one.

Check true or false for each sentence.

1. Decomposers break down dead matter and return nutrients to the soil. ☐ true ☐ false

2. A consumer makes its own food from sunlight. ☐ true ☐ false

3. A change in an abiotic factor can change the living things in an ecosystem. ☐ true ☐ false

4. Abiotic factors are the living parts of an ecosystem. ☐ true ☐ false

5. Less rain in a pond means less water for the living things there. ☐ true ☐ false

6. A limiting factor helps a population grow without end. ☐ true ☐ false

Pick one false sentence. Fix it so it is true.

PREVIEW

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My name _____ Date _____

Short Answers 2

Answer each question in sentences.

Use facts from the readings and the factor cards. Write in sentences.

4 Why are producers important in an ecosystem?

5 How do decomposers help the other living things in an ecosystem?

6 A pond gets much less rain for a season. Name two ways the living things there could be affected.

PREVIEW

My name _____ Date _____

Explain It 2

Explain your thinking in sentences.

Use what you know about ecosystems. Say why.

Start with: I know that ____ because ____.

4 Choose an ecosystem. Describe one biotic factor and one abiotic factor in it, and tell how they affect each other.

5 Explain why an ecosystem needs both biotic and abiotic factors.

6 Tell what a limiting factor is and give one example for a pond.

PREVIEW

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My name _____ Date _____

Quiz B

Pick the best answer. Write its letter.

Take your time. Guess if you are not sure.

7 Which group gets energy by eating other living things?

A Producers
B Decomposers
C Consumers

8 Which of these could be a limiting factor for a pond population?

A A shortage of food or water
B A new rock in the pond
C The color of the pond

9 Which is nonliving and needed by every living thing?

A A mushroom
B Water
C A consumer

10 A fungus growing on a log is a...

A producer
B consumer
C decomposer

11 Which pair has one abiotic and one biotic factor?

A Water and a fish
B Rain and wind
C A tree and a frog

12 How can a drop in temperature affect an ecosystem?

A Nothing in the ecosystem changes
B Some living things may not survive
C Rocks become alive

PREVIEW

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My name _____ Date _____

Check My Own Work

Check your own work. Mark yes or not yet.

1	I can say what an ecosystem is.	☐ yes	☐ not yet
2	I can tell what a biotic factor is.	☐ yes	☐ not yet
3	I can tell what an abiotic factor is.	☐ yes	☐ not yet
4	I can name three abiotic factors.	☐ yes	☐ not yet
5	I can name three biotic factors.	☐ yes	☐ not yet
6	I can tell a producer, a consumer and a decomposer apart.	☐ yes	☐ not yet
7	I can explain how an abiotic factor can change living things.	☐ yes	☐ not yet
8	I can use the quick test: is it living?	☐ yes	☐ not yet

The part I can explain best is...

The part I still need help with is...

PREVIEW

My name _____ Date _____

Cut and Sort: Who Is It?

Cut out the nine pieces. Sort each one into the right box.

Read each piece. Is it a producer, a consumer or a decomposer?

Producers	
Consumers	
Decomposers	

Cut on the dashed lines: nine pieces, two cuts across and two cuts down.

 A sunflower	 A mushroom on a log	 An eagle
 Soil bacteria	 A rabbit eating clover	 An oak tree
 A frog	 Pond grass	 A fungus on dead leaves

PREVIEW

Answer Key: Worked Example, Diagram, Chart

Accept any correct answer that matches the factor card. The example column on the chart is open: accept any true example.

Worked Example: your turn page 10

Step	Answer
Step 1 is it living?	no
Step 2 kind	abiotic
Step 3 why	It is not alive.
Check	no

Label the Ecosystem page 13

Number	Part	Kind
1	sun	abiotic
2	rain	abiotic
3	lake	abiotic
4	soil	abiotic
5	oak tree	biotic
6	grass	biotic
7	mushroom	biotic
8	sunflower	biotic

Fill In the Chart page 14

Factor	Kind	What it does	Example
Sunlight	abiotic	gives plants energy to make food	any correct example
Soil	abiotic	holds water and minerals for roots	any correct example
Producer	biotic	makes its own food	any correct example
Consumer	biotic	eats other living things for energy	any correct example
Decomposer	biotic	breaks down dead matter	any correct example

PREVIEW

Answer Key: Writing

These pages have no single right sentence. Accept any answer that uses a fact from the readings or the factor cards.

Short answers: what to look for pages 19, 20

Item	Look for
19.1	Biotic factors are living (plants, animals, fungi, bacteria); abiotic factors are nonliving (sunlight, water, temperature, soil, rocks). Accept any correct example of each.
19.2	Ask whether it is living. If it is alive it is biotic; if it is not alive it is abiotic. Accept any answer that uses a fact such as growing, needing energy or making more of its kind.
19.3	A cactus can store water and live with very little of it, while a water lily needs a pond with plenty of water. Accept any answer that links an abiotic factor (water) to the living thing.
20.1	They make food from sunlight, water and air, and consumers get energy from them. Accept any answer that says producers are the starting source of food.
20.2	They break down dead matter and return nutrients to the soil, where producers can use them again.
20.3	Fewer fish and plants can live there, some may die or leave, and there is less food. Accept any two reasonable effects tied to less water.

Explain it: what to look for pages 21, 22

Item	Look for
21.1	Sunlight gives a producer such as grass the energy to make food. The rabbit eats the grass and gets energy, so sunlight helps the rabbit through the producer.
21.2	Any two: sunlight (plants make food), water (every living thing needs it), temperature (helps decide who can live there), soil (roots and minerals) or wind. Each needs an effect on a living thing.
21.3	It is a decomposer, a biotic factor. It breaks down dead matter and returns nutrients to the soil, where producers can use them.
22.1	Accept any correct pair with a link, such as a plant and sunlight, or a fish and water.
22.2	Living things need nonliving things such as water, sunlight and soil to survive, and living things such as decomposers return nutrients to the soil. Accept any answer that says they depend on each other.
22.3	A limiting factor keeps a population from growing larger, such as food, water or space. For a pond: not enough food or room for the fish.

Exit tickets

- Exit tickets (page 26): ticket 1 names one abiotic and one biotic factor; ticket 2 tells one effect of an abiotic factor on a living thing; ticket 3 is open.

PREVIEW

Abiotic and Biotic Factors Tracker

One student, every scored sheet. Filled example: page 40.

Student _____ Teacher _____ Month _____

Page	Page type and set	Items	Right	Date	Notes
5	Reading 1: Living and Nonliving Parts	3			
6	Reading 2: Working Together	3			
9	Ecosystem Words	6			
11	Match the Ecosystem Words	8			
12	Which Abiotic Factor?	8			
13	Label the Ecosystem	8			
14	Fill In the Chart	10			
15	Abiotic or Biotic?	10			
16	Fill In the Pond Story	6			
17	True or False 1	6			
18	True or False 2	6			
23	Find the Mistake	4			
24	Quiz A	6			
25	Quiz B	6			
28	Cut and Sort: Abiotic or Biotic?	9			
29	Cut and Sort: Who Is It?	9			

PREVIEW

How to fill this in

Write how many items the student got right with no prompt, and the date. A blank means not tried yet, never wrong. There are 108 items on the 16 scored sheets. Answer keys: pages 30 to 35. Filled example: page 40.

This unit we are working on (your own standard or wording)

Team Note

Use this page between team meetings or when a student moves classes, to hand off what changed without writing a note from scratch. Everything below is observable, with a blank for the number or the wording your team already uses.

Student _____ Team member _____ Date _____

Kind of sheet	Covered since last note (Y/N)	Items right	Still blank
Readings and words			
Matching			
Diagram and chart			
Sort and story			
True or false			
Find the mistake			
Quizzes			
Sorts			

What I saw (observable, not a conclusion)

- Matched ___ of 16 words and clues (pages 11, 12).
- Labeled ___ of 8 parts of the diagram (page 13).
- Sorted ___ of 10 things as abiotic or biotic (page 15).
- Got ___ of 12 true or false sentences right (pages 17, 18).
- Told why one thing is abiotic or biotic in a complete sentence: yes / no / with a reminder.

Next step

- Next page or set: ___, because ___ (what you saw).
- What to try in another class or at home: ___.
- What to keep doing because it is working: ___.
- Anything for the team meeting to decide: ___ (this page records what happened, never a label or a plan).

Summary, in one or two sentences, for whoever reads this next

A filled-in line, for reference

"Got 5 of 6 true or false sentences right on 10/17. Next step: reread Reading 1 and ask which parts of a pond are abiotic." That is the level of detail this page is built for. It matches the filled example on page 40.

PREVIEW

Jordan's Tracker (Invented Student)

Jordan R. is invented; nothing on this page describes a real student. The blank tracker is on page 36.

Student: Jordan R. (an invented student)

Teacher: Ms. Patel (invented)

Month: October

Page	Page type and set	Items	Right	Date	Notes
5	Reading 1: Living and Nonliving Parts	3	2	10/6	Mixed up abiotic and biotic
6	Reading 2: Working Together	3	3	10/7	-
9	Ecosystem Words	6	5	10/8	Mixed up producer and decomposer
11	Match the Ecosystem Words	8	6	10/9	Swapped habitat and population
12	Which Abiotic Factor?	8	7	10/10	Missed the soil clue
13	Label the Ecosystem	8	5	10/13	Called the mushroom abiotic
14	Fill In the Chart	10	7	10/14	Left three boxes blank
15	Abiotic or Biotic?	10	8	10/15	Called bacteria abiotic
16	Fill In the Pond Story	6	5	10/16	Used consumer where producers goes
17	True or False 1	6	5	10/17	Thought sunlight is biotic
18	True or False 2	6	6	10/17	-
23	Find the Mistake	4	3	10/20	Missed the mushroom sentence
24	Quiz A	6	6	10/21	-
25	Quiz B	6	4	10/21	Mixed up producer and consumer
28	Cut and Sort: Abiotic or Biotic?	9	7	10/22	Put the grass in the abiotic box
29	Cut and Sort: Who Is It?	9	-	-	-

PREVIEW

How to read it

Jordan R. has done **15 of 16** scored sheets and got **79 of 99** items right with no prompt. **3** sheets were all right and **12** carry a note. Every number comes from the table.

What the table points to

The lowest sheet is Label the Ecosystem (5 of 8). That is where the next practice goes. The 1 sheet left blank is not tried yet, never wrong.