

Trophic Levels Cipher Puzzle

- Students solve problems to discover a secret message
- NO PREP, NO MARKING, NO MATERIALS

Students use clues to answer questions and their answers reveal a hidden message.

Trophic Levels Cipher Puzzle

Instructions: Read each ecology clue and identify the trophic level, consumer type, or energy flow term. Use the Trophic Levels Cipher Key to find the cipher number for that term then convert the number to a letter using the chart below A = 1, B = 2, C = 3, and so on. Write the letters in order and add spaces to reveal the hidden message.

Trophic Levels Cipher Key

Role/Term	Number	Role/Term	Number
First trophic level	5	Second trophic level	14
Third trophic level	18	Fourth trophic level	7
Producer	25	Primary consumer	12
Secondary consumer	22	Tertiary consumer	19
Energy pyramid	20	Food chain	1
Energy transfer	6		

Student Questions

#	Clue	Role/Term	Cipher Number	Letter
1	In an energy pyramid, plants and algae that make their own food are found at which trophic level?			
2	A rabbit eats grass. What trophic level is the rabbit in this food chain?			
3	The level with the greatest amount of energy is usually the producer level. What trophic level is this?			
4	A hawk eats a mouse that ate seeds. What trophic level is the hawk?			
5	A hawk eats a snake that ate a mouse that ate plants. What trophic level is the hawk?			
6	Grass, algae, and phytoplankton make their own food using sunlight. What role do they have?			
7	A deer eats leaves directly from a tree. What type of consumer is the deer?			
8	In an energy pyramid, the organisms at the top are which trophic level?			
9	A frog eats grasshoppers that fed on grass. What trophic level is the frog?			
10	The base of a food web is made of organisms that make their own food using sunlight. Which trophic level is the base?			
11	A grasshopper eating grass is classified as what type of consumer?			
12	An owl eats a snake that ate a mouse that ate seeds. What type of consumer is the owl?			
13	A diagram showing how available energy decreases from producers to top consumers is called what?			
14	A fox eats a rabbit that ate clover. What trophic level is the fox?			
15	Grass -> grasshopper -> frog -> snake is a simple sequence showing energy flow. What is it called?			
16	A caterpillar eats leaves from an oak tree. What trophic level is the caterpillar?			
17	A shark eats a large fish that ate smaller herbivorous fish. What trophic level is the shark?			
18	The movement of energy from one organism to another as one organism eats another is called what?			
19	Which trophic level contains autotrophs such as plants and algae?			
20	A bird eats a caterpillar that ate leaves. What trophic level is the bird?			

Number-to-Letter Chart

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T

Hidden Message: _____

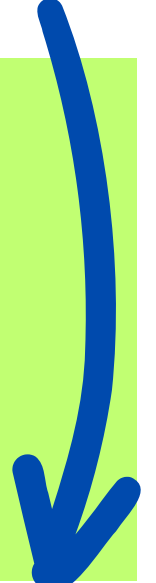
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Student Questions

#	Clue	Role/Term	Cipher Number	Letter
1	In an energy pyramid, plants and algae that make their own food are found at which trophic level?	First trophic level	5	E
2	A rabbit eats grass. What trophic level is the rabbit in this food chain?	Second trophic level	14	N

SCROLL
to take a look inside!



NO PREP, MATERIALS, OR MARKING

HOW THESE ACTIVITIES HELP YOU

- **Saves Prep Time** - Everything is pre-made, ready to go, and fully editable.
- **Provides Built-In Assessments** - The activity lets students self-assess and lets you quickly check for understanding.
- **Perfect for:** Review, Practice, Homework, and more!

MULTIPLE QUESTION TYPES THAT CHECK FOR UNDERSTANDING

Example

Trophic Levels Cipher Key			
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2	A rabbit eats grass. What trophic level is the rabbit in this food chain?	Second trophic level	14	N

Full Teacher Answer Key



Trophic Levels Cipher Puzzle - Answer Key				
#	Clue	Correct Role/Term	Cipher Number	Letter
1	In an energy pyramid, plants and algae that make their own food are found at which trophic level?	First trophic level	5	E
2	A rabbit eats grass. What trophic level is the rabbit in this food chain?	Second trophic level	14	N
3	The level with the greatest amount of energy is usually the producer level. What trophic level is this?	First trophic level	5	E
4	A snake eats a mouse that ate seeds. What trophic level is the snake?	Third trophic level	18	R
5	A hawk eats a snake that ate a mouse that ate plants. What trophic level is the hawk?	Fourth trophic level	7	G
6	Grass, algae, and phytoplankton make their own food using sunlight. What role do they have?	Producer	25	V
7	A deer eats leaves directly from a tree. What type of consumer is the deer?	Primary consumer	12	L
8	In an energy pyramid, the organisms at the bottom level form which trophic level?	First trophic level	5	E
9	A frog eats grasshoppers that fed on grass. What type of consumer is the frog?	Secondary consumer	22	V
10	The base of a food web is made of organisms that capture energy from sunlight. Which trophic level is the base?	First trophic level	5	E
11	A grasshopper eating grass is classified as what type of consumer?	Primary consumer	12	L
12	An owl eats a snake that ate a mouse that ate seeds. What type of consumer is the owl?	Tertiary consumer	19	S
13	A diagram showing how available energy decreases from producers to top consumers is called what?	Energy pyramid	20	T
14	A fox eats a rabbit that ate clover. What trophic level is the fox?	Third trophic level	18	R
15	Grass → grasshopper → frog → snake is a simple sequence showing energy flow. What is it called?	Food chain	1	A
16	A caterpillar eats leaves from an oak tree. What trophic level is the caterpillar?	Second trophic level	14	N
17	A shark eats a large fish that ate smaller herbivorous fish. What type of consumer is the shark?	Tertiary consumer	19	S
18	The movement of energy from one organism to another as one organism eats another is called what?	Energy transfer	6	P
19	Which trophic level contains autotrophs such as plants and algae?	First trophic level	5	E
20	A bird eats a caterpillar that ate leaves. What trophic level is the bird?	Third trophic level	18	R

Final Message: ENERGYLEVELSTRANSFER → ENERGY LEVELS TRANSFER

Students Use Clues to Answer Questions. Their Answers Reveal a Hidden Message.

What Will Your Students Learn?

SIMPLY DOWNLOAD AND GIVE TO YOUR STUDENTS

Trophic Levels Cipher Puzzle

Instructions: Read each ecology clue and identify the trophic level, consumer type, or energy flow term. Use the Trophic Levels Cipher Key to find the cipher number for that term then convert the number to a letter using the chart below A = 1, B = 2, C = 3, and so on. Write the letters in order and add spaces to reveal the hidden message.

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Student Questions

#	Clue	Role/Term	Cipher Number	Letter
1	In an energy pyramid, plants and algae that make their own food are found at which trophic level?			
2	A rabbit eats grass. What trophic level is the rabbit in this food chain?			
3	The level with the greatest amount of energy is usually the producer level. What trophic level is this?			
4	A snake eats a mouse that ate seeds. What trophic level is the snake?			
5	A hawk eats a snake that ate a mouse that ate plants. What trophic level is the hawk?			
6	Grass, algae, and p...			
7	A deer eats leaves...			
8	In an energy pyramid...			
9	A frog eats grasshoppers...			
10	The base of a food web...			
11	A grasshopper eats...			
12	An owl eats a snake...			
13	A diagram showing...			
14	A fox eats a rabbit...			
15	Grass → grasshopper...			
16	A caterpillar eats...			
17	A shark eats a large...			
18	The movement of energy...			
19	Which trophic level...			
20	A bird eats a caterpillar...			

- ✓ Full Answer Key
- ✓ No Prep, Just Print
- ✓ Perfect for

- Review
- Practice
- Additional work for early finishers

- How to identify first, second, third, and fourth trophic levels
- How to distinguish between producers, primary consumers, secondary consumers, and tertiary consumers
- How energy moves through food chains and energy pyramids
- How to recognize the base of an energy pyramid
- How to connect trophic levels to real food chain examples
- How to connect ecology vocabulary to clues and patterns in a puzzle format

NO PREP or Materials

Trophic Levels Cipher Puzzle - Answer Key

#	Clue	Correct Role/Term	Cipher Number	Letter
1	In an energy pyramid, plants and algae that make their own food are found at which trophic level?	First trophic level	5	E
2	A rabbit eats grass. What trophic level is the rabbit in this food chain?	Second trophic level	14	N
3	The level with the greatest amount of energy is usually the producer level. What trophic level is this?	First trophic level	5	E
4	A snake eats a mouse that ate seeds. What trophic level is the snake?	Third trophic level	18	R
5	A hawk eats a snake that ate a mouse that ate plants. What trophic level is the hawk?	Fourth trophic level	7	G
6	Grass, algae, and phytoplankton make their own food using sunlight. What role do they have?	Producer	25	Y
7	A deer eats leaves directly from a tree. What type of consumer is the deer?	Primary consumer	12	L
8	In an energy pyramid, the organisms at the bottom level form which trophic level?	First trophic level	5	E
9	A frog eats grasshoppers that fed on grass. What type of consumer is the frog?	Secondary consumer	22	V
10	The base of a food web is made of organisms that capture energy from sunlight. Which trophic level is the base?	First trophic level	5	E
11	A grasshopper eating grass is classified as what type of consumer?	Primary consumer	12	L
12	An owl eats a snake that ate a mouse that ate seeds. What type of consumer is the owl?	Tertiary consumer	19	S
13	A diagram showing how available energy decreases from producers to top consumers is called what?	Energy pyramid	20	P
14	A fox eats a rabbit that ate clover. What trophic level is the fox?	Third trophic level	18	R
15	Grass → grasshopper → frog → snake is a simple sequence showing energy flow. What is it called?	Food chain	1	A
16	A caterpillar eats leaves from an oak tree. What trophic level is the caterpillar?	Second trophic level	14	N
17	A shark eats a large fish that ate smaller herbivorous fish. What type of consumer is the shark?	Tertiary consumer	19	S
18	The movement of energy from one organism to another as one organism eats another is called what?	Energy transfer	6	F
19	Which trophic level contains autotrophs such as plants and algae?	First trophic level	5	E
20	A bird eats a caterpillar that ate leaves. What trophic level is the bird?	Third trophic level	18	R

Final Message: ENERGYLEVELTRANSFER → ENERGY LEVELS TRANSFER

- **Trophic Levels Cipher Puzzle Worksheet**
 - A student-friendly activity with 20 clues focused on identifying trophic levels, consumer types, food chains, energy pyramids, and energy transfer.
- **Clear Instructions**
 - Students read each clue, identify the correct trophic level or ecology term, use the cipher key to find the matching number, and convert it to a letter to decode a hidden message.
- **Reinforces:**
 - First, second, third, and fourth trophic levels
 - Producers, primary consumers, secondary consumers, and tertiary consumers
 - Food chains and energy pyramids
 - Energy transfer through ecosystems
 - Ecology vocabulary and food chain examples
- **Includes answer key and number-to-letter conversions**
- **No-Prep Resource**
 - Ready to print or assign digitally for review, practice, early finishers, stations, homework, or sub plans.

What You Get

Students Use Their Answers to Reveal a Hiddle Message

1. For each clue, write the answer in the ‘Answer’ column.
2. Identify the letter to be extracted using the “Letter position” column.
3. Write the letter in the ‘Letter extracted from Answer’ column.
4. Write your letters in order below the table to reveal the hidden message.

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Trophic Levels Cipher Puzzle - Answer

Clue	Correct Role/Term	Cipher Number	Letter
1	First trophic level	1	A
2	First trophic level	1	A
3	First trophic level	1	A
4	Third trophic level	18	R
5	Fourth trophic level	19	S
6	Producer	25	Y
7	Primary consumer	12	L
8	First trophic level	1	A
9	Secondary consumer	22	V
10	First trophic level	1	A
11	Primary consumer	12	L
12	Tertiary consumer	19	S
13	Energy pyramid	20	T
14	Third trophic level	18	R
15	Food chain	1	A
16	Second trophic level	14	N
17	Tertiary consumer	19	S
18	Energy transfer	6	F
19	First trophic level	1	A
20	Third trophic level	18	R

Final Message: ENERGY TRANSFER THROUGH ENERGY LEVELS

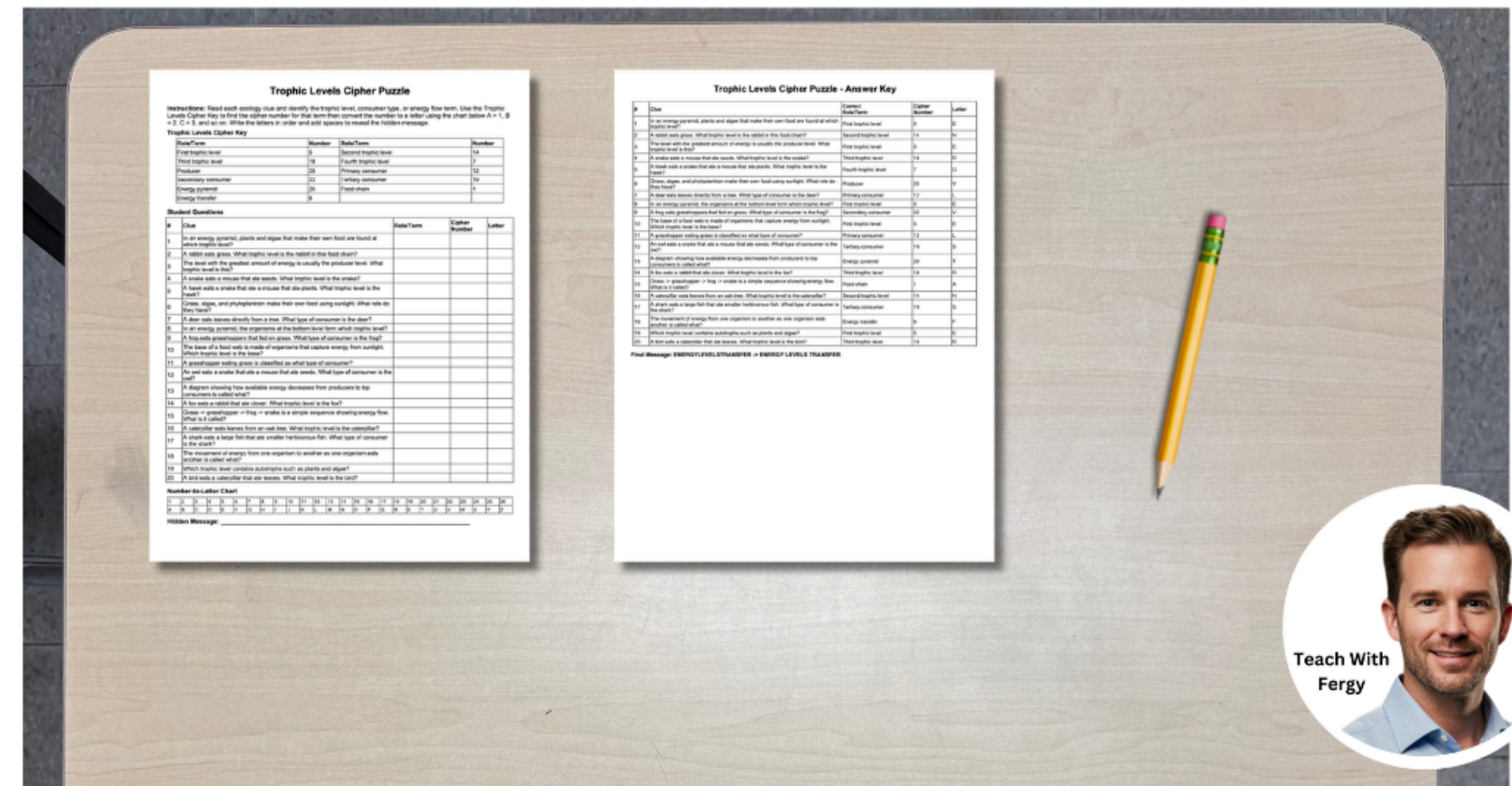
Your Activity

- Is a fun and interactive way to reinforce concepts and study
- **DIGITAL** and **PRINT** ready
- **FULLY EDITABLE**
- Complete Answer Key



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- Students solve problems to discover a secret message
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NO PREP, MATERIALS, OR MARKING

Thanks
**for your interest
in this resource!**

I am a real person and if
you have any questions,
suggestions, or concerns,
please reach out.



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TWF

Teach With Fergy

*Let's
Connect!*

