

Westcave Story 4-5th Teacher Resources

Program Summary: In this overview program, students will learn about plants, animals, hydrology, and geology of the Texas Hill Country with Westcave Preserve as the backdrop and focal point. On the guided hike to Westcave's Grotto, students will observe two different habitats, Live Oak -Ashe Juniper Savanna and the Riparian Woodland. In the grotto students will learn about Westcave's cultural history and come to understand the importance of environmental conservation by hearing the story of damage Westcave suffered from overuse in the 1960's and 1970's. They will also learn about the recovery that is ongoing today.

Age Range Recommended: All Ages (Lower E 1st-3rd, Upper 4th-5th)

Program Length: 3 hours

Learning Objectives: (work in progress)

- Learn about the 4 basic requirements an animal needs to survive in a habitat (food, water, cover, and a place to raise their young).
- Learn about the past geologic and hydrologic history of Westcave Preserve and the surrounding area, including fossil evidence of past environments.
- Learn about two of the endangered species that call Westcave home and the difference between native, invasive, and endangered species. Examples of each will be provided.
- Observe Westcave's lush plant life and understand the importance of water in different habitats (Canyon and Savanna).
- Gain a better understanding of the interaction of water and geology on plant and animal communities. (Canyon Tour).
- Experience the sounds of nature without urban background noises (Canyon Tour).
- Understand the importance of conservation at Westcave and their own communities, especially water conservation (Canyon Tour)
- Gain an awareness of the historical use of Westcave Preserve in and the surrounding area by people (Canyon Tour).
- (Optional): Learn about the cycling of matter and flow of energy through food chains and food webs in an interactive game.



Higher Elementary (4th – 5th) Westcave Story Key Terms:

Bald Cypress
Ball Moss
Bird
Cactus
Decomposition
Erosion
Fish
Flint

Flower
Fossil
Galls
Invasive Species
Lichen
Limestone
Native Species
Nest

Pedernales River
Poison Ivy
Riparian Woodland
Ashe Juniper / Live Oak
Savannah
Scat
Snake
Spider Web

Stalagmites
Stalactites
Travertine
Animal Track
Preserve
Park
Littering

Bald Cypress: The tallest tree in the canyon, it is deciduous, meaning it loses its needle-like leaves every fall.

Ball Moss: A native epiphyte, a plant that lives in air, surviving by resting on tree branches and absorbing water and nutrients from the atmosphere.

Bird: A warm-blooded (typically) flying animal that lays eggs and has a spine, a beak, feathers, and wings.

Cactus: A dry area/desert adapted plant with fleshy stems and a waxy coating that prevents water loss. Most have spines.

Decomposition: The breaking down of plants, animals, and other organic substances into small pieces of organic matter.

Erosion: The process of removing material (soil, rocks, sediments) from one location and moving it to another location, which can be done by natural process like water, wind, ice, or gravity.

Fish: A vertebrate (organisms with a spine) that swims in the water. They breathe using special organs called gills.

Fern: A non-flowering plant found in the canyon that requires a moist environment.

Flint Rock: Indigenous people used this sedimentary rock to spark fire and make arrowheads.

Flower: A showy part of a plant that attracts animals to pollinate it, producing seeds.

Fossil: Any evidence of past life preserved in a petrified form.

Galls: A large round growth found on trees that serves as a home to the larva of a tiny wasp. This wasp stung the tree to insert its larva.

Invasive Species: A living organism that is not native to an ecosystem, causing harm to the environment and its inhabitants.

Lichen: A composite organism of algae/cyanobacteria and fungi living in a symbiotic relationship that can be found growing on our trees.

Limestone: A hard sedimentary rock that is porous in Central Texas, made up of calcium carbonate.

Native Species: A living organism that naturally originated and lives in a particular area and ecosystem in self-sustaining populations without human intervention.

Nest: A structure to raise young, typically made by birds to raise their chicks.

Pedernales River: The river visible from the overlook that has been shaped over the last 250,000 years by the power of water and flooding.

Poison Ivy: A plant you should avoid with three leaves that can give you a rash.

Ashe Juniper / Live Oak Savannah: The first habitat we walked through at Westcave Preserve that was a grassland with two main types of trees.

Riparian Woodland: The second type of habitat inside the canyon with a higher diversity of plants, cooler temperatures, and higher moisture.

Scat: The scientific name for animal poop.

Snake: A reptile that slithers around on the ground using its long, slender body.

Stalagmites: A type of cave formation made up of calcium carbonate that grows on the floor.

Stalactites: A type of cave formation made up of calcium carbonate that grows on the ceiling.

Travertine: A type of limestone deposited by mineral springs that has other organisms, like plants, growing on the surface.

Animal Track: An imprint left behind on the ground after an animal has walked across it.

Preserve: An area of land managed to protect its flora, fauna, natural resources, and landscape.

Park: A recreational area of land for people to explore and get outside to experience nature.

Littering: Leaving behind trash anywhere on purpose, instead of throwing it away or recycling it.

Westcave Story

Word Search

R P O I S O N I V Y K A O E V I L F L O W E R
I K Y Y X Q V Y Y M N R T S C A T Y J L X L Q
P A R K Z X M E K A N S D J J T B S B N P R N
A T J E L T Z B B T J V Z R M W L R E Y N T K
R G G T V I N A T I V E S P E C I E S N Q A N
I V T X M I C L G Z Z G Z D L V Z R G T S J W
A T V V N W R H J B S G K G Y S R D T H K T M
N S E I C E P S E V I S A V N I E E E N R Q V
W J Q R K S L L E N H L E A N C F J S A B K M
O P J E E C I I L L L A K R O O U L V E R Y J
O Y T A T S A J M S A E N M P N I E I A R W L
D B T V S I S R M E M N P N I Y R S P N K P W
L E P O Q N M E T N S O R P A T C Y O Y T B D
A W F L N W R G T L S T E E I V B D T R Y Y Y
N R J J I Q Y B A I A R O N D D A Q L Q E R G
D E R N M T A T T L T M E N G E J S T A R Y L
J D H B T L T I M Y A C I J E T P N T Y B R L
N I M S L K O E B Q B T A N S U T C A C R Y R
B P Y M I N K L R L B D S L A Y N G R J D B L
J S O J T F B B M I Q Q P G A T G D L R K T D
V S L Q W J R J Y N N Y Y J Z T Z Z I L W J N
S Y R V T W T L Z L L G D B T Q S B Y M K B L

Word Bank

Animal Track

Ashe Juniper

Bald Cypress

Ball Moss

Bird

Cactus

Decomposition

Erosion

Fish

Flint

Flower

Fossil

Galls

Invasive Species

Lichen

Limestone

Littering

Live Oak

Native Species

Nest

Park

Pedernales River

Poison Ivy

Preserve

Riparian Woodland



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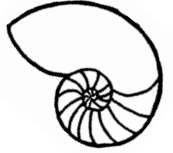
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Westcave Story: Crossword Puzzle



Down

1. Leaving behind Trash anywhere on purpose, instead of throwing it away or recycling it.
2. A type of limestone Deposited by mineral springs that has other organisms, like plants, growing on the surface.
3. A large round growth found on Trees that serves as a home to the larva of a tiny wasp. This wasp stung the tree to insert its larva.
4. An area of land managed to protect its flora, fauna, and natural resources.
5. An organism of algae/cyanobacteria and fungi living in a symbiotic relationship that can be found growing on our trees.
6. The tallest tree in the canyon, it is deciduous, meaning it loses its needle-like leaves every fall.
8. A native epiphyte, a plant that lives in air, surviving by resting on tree branches and absorbing water and nutrients from the atmosphere.
9. A non-flowering plant found in the canyon that requires a moist habitat.
12. A dry area/desert adapted plant with fleshy stems and a waxy coating that prevents water loss. Most have spines.
13. Indigenous people used this sedimentary rock to make fire And arrowheads.
16. The second type of habitat inside the canyon with a higher diversity of plants, cooler temperatures, and higher moisture.
17. An imprint left behind on the ground after an animal has walked across.
18. A type of cave formation made up of calcium carbonate that grows on the ceiling.
24. A hard sedimentary rock that is porous in Central Texas, made up of calcium carbonate.
25. A vertebrate (organisms with a spine) that swims in the water. They breathe using special organs called gills.
26. Any evidence of past life preserved in a petried form.
27. A warm-blooded (typically) flying animal that lays eggs and has a spine, a beak, feathers, and wings.
28. A recreational area of land for people to explore and get outside to experience nature.



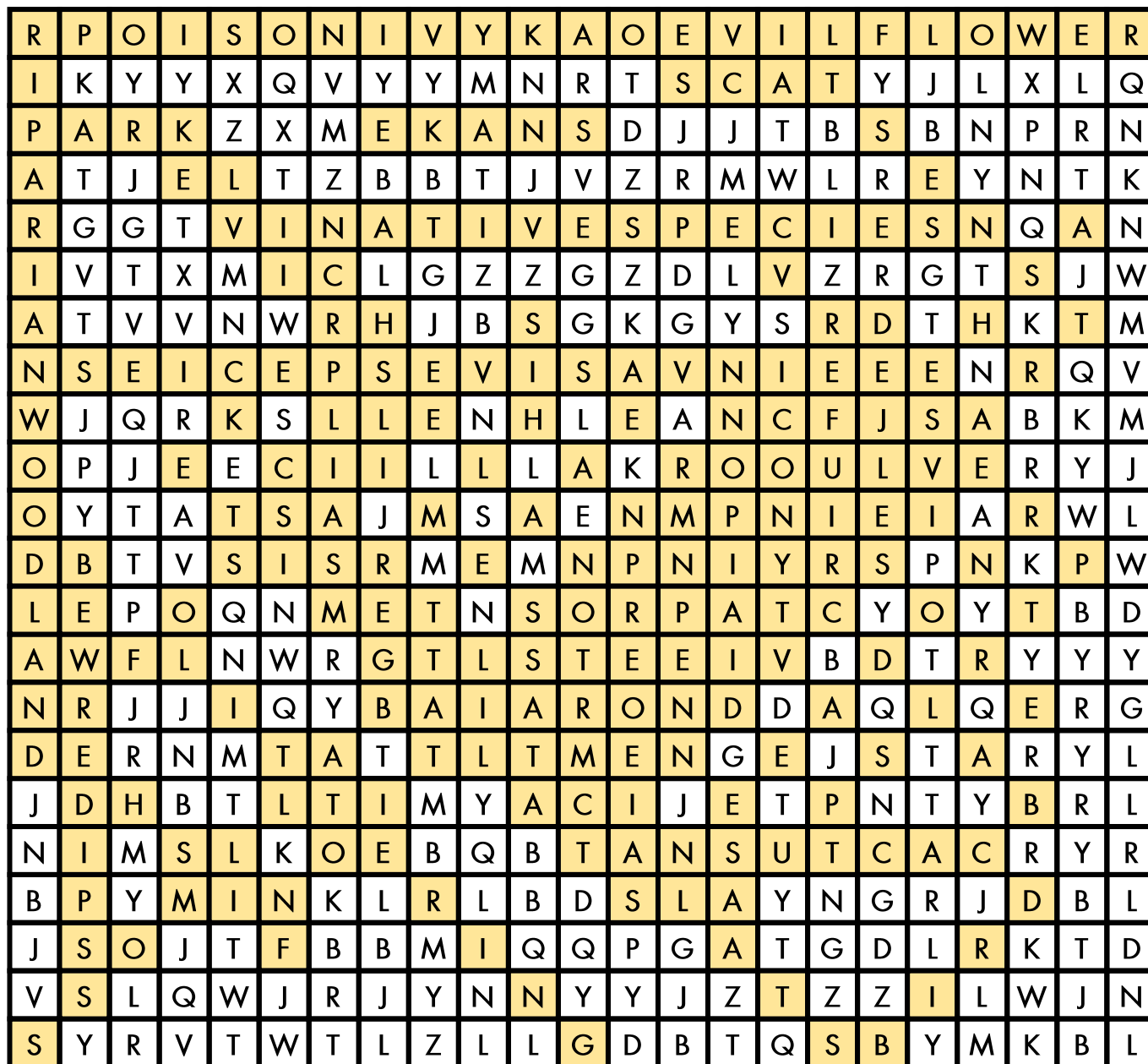
Across

7. The scientific name for animal poop.
10. A structure to raise young, often made by birds to raise their chicks.
11. The river visible from the overlook. It has been shaped over the last 250,000 years by the power of water and flooding.
14. The breaking down of plants, animals, and other organic substances into small pieces of organic matter.
15. The first habitat we walked through at Westcave that was a grassland with two main types of trees.
19. A living organism that is not native to an ecosystem, causing harm to the environment and its inhabitants.
20. A showy part of a plant that attracts animals to pollinate it, producing seeds.
21. A living organism that naturally originated and lives in an particular area and ecosystem in self-sustaining populations without human intervention.
22. A reptile that slithers around on the ground using its long, slender body.
23. A type of cave formation made up of calcium carbonate that grows on the floor .
28. A plant you should avoid with three leaves that can give you a rash .
29. The process of removing material (soil, rocks, sediments) from one location and moving it to another location, which can be done by natural process like water, wind, ice, or gravity.



Westcave Story

Word Search



Word Bank

Animal Track

Erosion

Lichen

Pedernales River

Ashe Juniper

Fish

Limestone

Poison Ivy

Bald Cypress

Flint

Littering

Preserve

Ball Moss

Flower

Live Oak

Riparian Woodland

Bird

Fossil

Native Species

Cactus

Galls

Nest

Decomposition

Invasive Species

Park



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Westcave Story: ANSWER KEY



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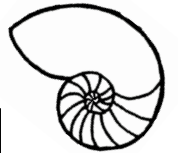
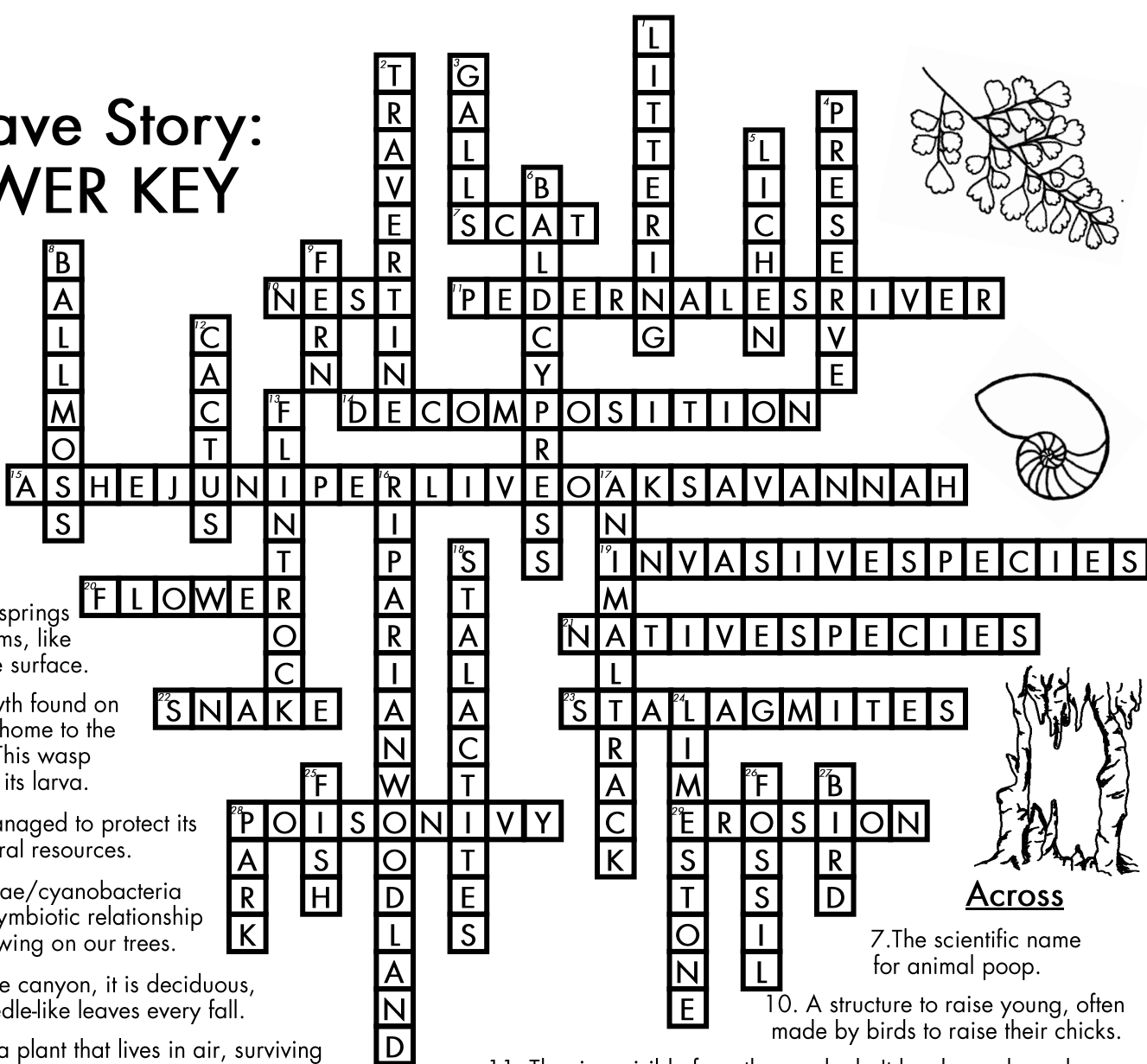
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