

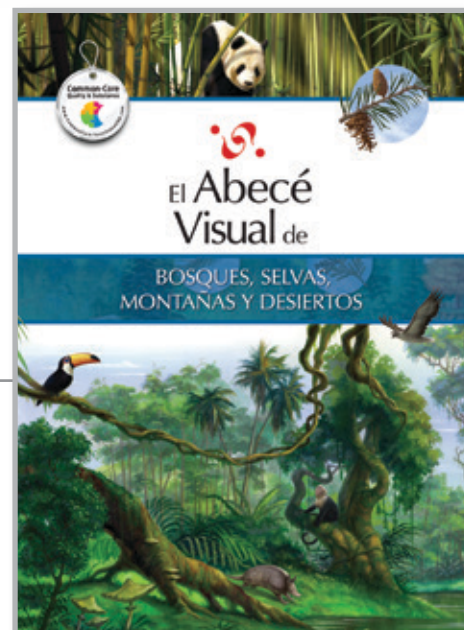


Lesson Plan and Activities Written in accordance with the Language Arts, Social Studies, and Science Standards

El Abecé Visual de bosques, selvas, montañas y desiertos

Author: **JUAN ANDRÉS TURRI**

Illustrator: **NESTOR TAYLOR**



COMPLEXITY

F&P Guided Reading Level V / Lexile Level 1050L

TEXT TYPE

Informational Text: Social Studies and Science

OBJECTIVES

- Demonstrate comprehension of an informational text.
- Quote from a text to support an answer.
- Identify and explore cause and effect relationships.
- Recall information to analyze cause and effect.
- Identify the author's purpose.
- Use word structure and context clues to determine the meaning of unfamiliar words.
- Explore word relationships and use words learned through reading.
- Connect the ideas in the text to real-life situations.
- Make an informational presentation.
- Write to persuade.

INSTRUCTIONAL FOCUS:

Staircase of Complexity / Reading Rigor

INSTRUCTIONAL FOCUS:

Balancing Informational and Literary Text



Together we foster lifelong readers

MATERIALS

- index cards
- *Causa y efecto* (Graphic Organizer #4)*
- journal
- construction paper
- drawing materials: pencils, paper, crayons, etc.

SUMMARY

Differences in latitude, elevation, and humidity have given rise to different climates. These climate differences have been responsible for the emergence of specific communities of plants and animals in different areas of the planet. These areas, or biomes, include forests, tropical rainforests, savannas, deserts, mountain ranges, tundra, etc. Most plants and animals that thrive in each of these areas have developed specific characteristics that help them survive in their environment. Humans have also adapted to life in different environments on Earth. However, in some areas, human activities have had a negative impact on plants and animals.

STANDARDS

SLAR CCSS RI 4.1, RI 4.2, RI 4.3, RI 4.4, RI 4.5, RI 4.7, RI 4.8, RI 4.10, RF 4.3.a, RF 4.4.a, RF 4.4.c, W 4.1, W 4.4, W 4.5, W.6, W.7, W 4.8, W 4.9.b, W 4.10, SL 4.1, SL 4.2, SL 4.3, SL 4.4, SL 4.5, L 4.1, L 4.2, L 4.3, L 4.4.a, L 4.5.c, L 4.6

SLAR TEKS 4.1.A, 4.2.A, 4.2.B, 4.9.A, 4.11.A, 4.11.C, 4.13.B, 4.15, 4.19.A, 4.20.B, 4.20.C, 4.22.A, 4.22.C, 4.23.B, 4.24.A.(ii), 4.24.C, 4.24.D, 4.26.A, 4.27.A, 4.28.A, 4.29.A

Science TEKS 4.7.A–C, 4.8.B–C, 4.9.A–B, 4.10.A

Social Studies TEKS 4.21.B–C, 4.21.E

NGSS 4-LS1-1; 4-ESS2-1; 4-ESS2-2; 4-ESS3-1

VOCABULARY

INSTRUCTIONAL FOCUS:
Academic Vocabulary

abarcar – *incluir, comprender* / to cover

abastecer – *dar lo que se necesita* / to supply

desencadenar – *originar, comenzar* / to trigger

escarpado – *que tiene mucha pendiente* / steep

localizar – *estar en un lugar determinado* /
to be situated

permeable – *que deja pasar agua* / permeable

predominar – *abundar, ser numeroso* /
to predominate

regenerar – *mejorar, restablecer* / to regenerate

representativo – *típico, característico* /
representative

retener – *no dejar que algo salga o se vaya* / to hold

transición – *cambio, transformación* /
transition

ubicar – *estar en un lugar determinado* /
to be situated

Advanced Vocabulary

acuífero – *capa subterránea del terreno que contiene agua* / aquifer

cauce – *camino por donde corre un río o un arroyo* / riverbed

caudal – *cantidad de agua que tiene un río* /
flow

depresión – *zona baja del terreno, hundimiento* /
depression

erosión – *desgaste de la superficie por la acción del viento o del agua* / erosion

follaje – *conjunto de hojas de los árboles y las plantas* / foliage

germinar – *brotar y comenzar a crecer una planta* / to germinate

glaciar – *masa de hielo en zonas altas que se desliza lentamente* / glacier

magma – *masa de rocas fundidas que está en el interior de la Tierra* / magma

precipitación – *agua que cae a la superficie terrestre en forma sólida o líquida* /
precipitation

savia – *líquido que circula por el interior de las plantas* / sap

* To download the Spanish Graphic Organizers on this lesson go to: santillanausa.com/spanishliteracy



VOCABULARY DEVELOPMENT

- Introduce vocabulary by providing a description, explanation, or example of all the words presented in the vocabulary section and any additional vocabulary you may wish to discuss prior to the reading activities. Consider using pictures, sketches, and/or pantomime to explain the meaning of each word. You may also tell a story to integrate some of the terms.
- Make sure students understand all the vocabulary needed to complete the activities (e.g., *causa*, *consecuencia*, *efecto*, *evidencia*) and instruction words, such as *cita*, *compara*, *explica*, *justifica*, *visualiza*.
- Organize a Think-Pair-Share activity for the vocabulary words. Have students think about each word for a moment. Then ask them to write about their understanding of the word on an index card (one card for each word). Next, have students get together with a classmate to compare their understanding of the word. Finally, have students share their knowledge of the word by creating a visual representation (on the back of the card) in order to teach it to others.
- Point out the prefix *des-* (opposite) in *desencadenar* and the prefix *re-* (repetition) in *regenerar*. Then introduce the prefixes *im-/in-* (negation) and *sub-* (below, under). Next, have students explain the meaning of *desintegración* (disintegration) on p. 38, *desmontar* (to cut down trees) on p. 55, *desprender* (to come off) on p. 39, *impermeable* (waterproof) on p. 43, *insuficiente* (insufficient) on p. 50, *invertebrado* (invertebrate) on p. 60, *rebautizar* (to rename) on p. 14, *reproducir* (to reproduce) on p. 23, *subsuelo* (underground) on p. 35, and *subterráneo* (subterranean) on p. 17.
- To expand students' word knowledge, go over the concept of synonyms (i.e., words that have very similar meanings) and point out this synonym pair in the vocabulary list: *localizar* – *ubicar*. Then have students look for synonyms of the following vocabulary words in the text (answers are in parentheses): *abarcar* (*incluir*, p. 54); *desencadenar* (*originar*, p. 9); *escarpado* (*empinado*, *abrupto*, p. 8); *predominar* (*abundar*, p. 30); *regenerar* (*mejorar*, p. 53). Have students come up with sentences using these synonyms.
- Remind students that sometimes authors provide examples, explanations, or synonyms to clarify the meaning of words. Have students use context clues provided in the text to explain the meaning of *bioma* (p. 7), *estrato* (p. 7), *yacimiento* (p. 20), and *taiga* (p. 22).
- Form two teams and play "Password." Give one of the players a word from the vocabulary list to be guessed (the "password"). He or she then gives a one-phrase clue to a partner from the same team who must attempt to guess the word. Alternate between the two teams.

READING

PRE-READING

- ▶ Discuss with students different biomes. Ask: *¿Cuáles son algunas de las plantas y animales de las selvas tropicales?* (What are some of the plants and animals we find in tropical rainforests?) *¿En qué bioma predominan los cactus y las serpientes?* (In what biome are cacti and snakes abundant?) *¿Hay bosques en nuestro estado? ¿Y montañas?* (Are there forests in our state? What about mountains?)
- ▶ Have students read the title and table of contents and allow them a moment to look at the illustrations. Then ask: *¿De qué creen que trata el libro?* (What do you think the book is about?) *¿Qué tipo de texto creen que es? ¿Por qué?* (What type of text do you think this is? Why?)
- ▶ Have students set a purpose for reading. Ask: *¿Qué esperan aprender al leer este libro?* (What do you expect to learn by reading this book?)

READING

- ▶ Discuss with students the text structure of this book. Elicit that it is divided into twenty-eight spreads and that each spread presents a different biome or explains a geological process. Read aloud the first spread on pp. 6–7 to familiarize students with the text and to model pronunciation and intonation. Pause often to allow students time to observe the illustrations and diagrams. Then, ask: *¿Qué son los “estratos” en un bosque o selva? Citen ejemplos.* (What are the strata in a forest or rainforest? Provide examples.) *¿Qué evidencias da el autor para apoyar este argumento: “La selva es el bioma más complejo que existe” (p. 6)?* (What evidence does the author provide to support this argument: “Rainforests are the most complex biome on Earth”?) *Mencionen dos diferencias y dos semejanzas entre los bosques y las selvas.* (Tell two differences and two similarities between forests and rainforests.)
- ▶ Encourage students to visualize the different biomes and processes presented in the text. Point out some of the images and comparisons the author offers to help us create a mental picture. For example: *“las grandes copas de los árboles forman un ‘techo’ continuo”* (p. 7); *“los bosques funcionan como una esponja que absorbe y retiene agua”* (p. 12); *“el bosque funciona como un gran paraguas”* (p. 13). Encourage students to find other images and examples in the text as they read. Examples include: *la cordillera del Himalaya se suele llamar “el techo del mundo”* (p. 15); *los cactus saguaro tienen “forma de farol o candelabro”* (p. 43); *el desierto florido es “un manto de flores silvestres que lo cubre”* (p. 56).
- ▶ Choose and assign different spreads to student pairs. Provide them with index cards and have them make notes for themselves as they read. Students should note the topic, list important details, and list any words or phrases whose meaning they cannot determine. After students finish reading their assigned spread, have them teach it to another pair. Use a group quiz to encourage students to work collaboratively and to assess comprehension and analysis of the text. Some examples of questions include: *¿De qué trata el texto?* (What is the text about?) *¿Cuáles son los detalles más importantes? ¿Por qué son importantes?* (What are the most important details? Why are those details important?) *Mencionen algunas características únicas de ese bioma.* (Tell some unique characteristics of that biome.) *¿Qué problemas afectan o pueden afectar a ese bioma?* (What problems are affecting or could affect that biome?)

INSTRUCTIONAL FOCUS:

Text-based Answers / Critical Analysis





DIFFERENTIATED INSTRUCTION

BELOW-LEVEL STUDENTS

- Have students answer these or similar comprehension questions with short phrases or incomplete sentences: *¿Cuál es la montaña más alta de la Tierra? ¿En qué cordillera está?* (Which is the highest mountain on Earth? In which mountain range is it located?) *Menciona dos características de los desiertos.* (Tell two characteristics of deserts.) *¿Cuáles son algunos de los animales y plantas de la sabana?* (What are some of the animals and plants in the savanna?)

AT-LEVEL STUDENTS

- Encourage students to make inferences and predictions based on the text, using short sentences. Ask these or similar questions: *¿Qué le ocurriría al oso panda si disminuyera la superficie de bosques de bambú? ¿Por qué?* (What would happen to panda bears if the total area of bamboo forests decreased? Why?) *¿Por qué las zonas montañosas tienen poca población?* (Why are the mountainous areas sparsely populated?) *¿Qué efectos tiene la extracción de petróleo en un bioma de desierto?* (What effects does the extraction of oil have on a desert biome?)

ABOVE-LEVEL STUDENTS

- Encourage students to analyze and evaluate the text, using complete and elaborate answers. Ask these or similar questions: *¿Qué características de un bioma contribuyen a una mayor biodiversidad? Da ejemplos.* (What characteristics of a biome contribute to a greater biodiversity? Provide examples.) *¿Qué se debe hacer para detener la deforestación? ¿Por qué es importante hacerlo?* (What can we do to stop deforestation? Why is it important to do this?)

POST-READING

- ▶ Explain that each action (cause) has a consequence (effect). Model an example: *Cuando se talan los bosques (causa), el suelo se queda sin cobertura vegetal y se erosiona (efecto).* (When forests are cut down (cause), the soil becomes exposed and it erodes (effect).) Discuss and analyze cause and effect relationships with students. Ask: *¿Qué causa la erosión de las montañas?* (What causes mountains to erode?) *¿Cuál es un efecto de la deforestación?* (What is one effect of deforestation?) *Expliquen la relación de causa y efecto entre el ser humano y algunos animales de la selva: “las poblaciones han disminuido debido a la destrucción de su hábitat como consecuencia de las actividades humanas”* (p. 36). (Explain the cause and effect relationship between humans and some rainforest animals: “the populations have decreased due to the destruction of their habitat as a consequence of human activity.”)
- ▶ Have students reread the spreads on pp. 20–21 and on pp. 54–55, paying special attention to cause and effect relationships. Next, have students fill in the cause and effect chart (Graphic Organizer #4) for the spreads they just re-read. Then have student pairs discuss their graphic organizers, evaluating and explaining their choices. ✓
- ▶ Revisit the question *¿Qué esperan aprender al leer este libro?* (What do you expect to learn by reading this book?) from the Pre-reading section, and ask: *¿Qué aprendieron al leer este libro?* (What did you learn by reading this book?) *¿Con qué propósito creen que el autor escribió el libro?* (What was the author’s purpose for writing this book?)

CONNECTION WITH CONTENT AREAS: SOCIAL STUDIES

INSTRUCTIONAL FOCUS:

Building Knowledge in the Content Areas

- ▶ Have students work collaboratively in small groups to create and make a presentation about one of the biomes introduced in the book (e.g., *bosque, selva, desierto, sabana*). You may wish to assign the topics to avoid duplication of information. If available in your classroom, encourage students to use technology (e.g., PowerPoint®, online images, interactive whiteboard) for their presentations. Suggest reference sources and remind students to include a list of their sources. Require that all students in the group participate in the presentation. Encourage them to use the domain-specific vocabulary they have learned. ✓
- ▶ Have students conduct a real-life observation of their region's biome. Suggest that they keep a journal and jot down the types of plants, animals, and geographical features they see. Ask them to also add information regarding the seasons and the weather typical of each season in their region. After several days' worth of observations, have students get together with a partner and compare and contrast their notes. Then, ask student pairs to combine their observations and create a poster. Encourage them to add appropriate images. They can take photos, use images from the Internet, or draw their own illustrations. Invite students to present their finished posters to the class.

WRITING

INSTRUCTIONAL FOCUS:

Writing from Sources / Research Strand

Have students write a persuasive essay to convince their readers of the importance of stopping the deforestation of tropical rainforests. In addition to using their graphic organizers, presentations, and the book, have students consult reference materials to find facts to back up their opinions. Remind them to provide a list of sources at the end of their essays. This writing activity will take place in stages (prewriting activities, research and gathering of information, and writing). As part of the prewriting activities, have students create an outline. Suggest this structure: I. Introduction: stating the thesis; II. Body: consisting of three paragraphs supporting the thesis with well-argued reasons and facts; III. Conclusion: summarizing the most important details and restating the thesis. Guide and assist students through the writing process. As students revise and edit their work, have them pay attention to the conventions of Spanish grammar and punctuation. Encourage students to share their final work with the class or to publish their essays on the class web page, if there is one. ✓



Informal Assessment

You may wish to assess a student's progress as he or she completes comprehension and production activities. Suggested activities are identified with the icon.



Nombre _____

Vocabulario

A Une.

- | | | |
|-------------------|------------------|-------------|
| 1. abarcar | _____ | a. típico |
| 2. abastecer | _____ | b. ubicar |
| 3. representativo | _____ | c. dar |
| 4. escarpado | _____ | d. abundar |
| 5. localizar | _____ | e. incluir |
| 6. predominar | _____ | f. empinado |

B Escribe una definición y luego da un ejemplo tomado del libro.

1. permeable: Possible answer: que deja pasar agua

Ejemplo: Possible answer: Las rocas del desierto son permeables porque permiten que el agua se infiltre (pág. 17).

2. retener: Possible answer: no dejar que algo salga o se vaya

Ejemplo: Possible answer: Las terrazas o andenes son un ejemplo de una construcción que sirve para retener la tierra y el agua (pág. 53).

C Añade el prefijo adecuado y define las palabras. Después escribe una oración con cada palabra.

des-

im-

re-

sub-

1. re- generar: mejorar, restablecer
Answers will vary.

2. sub- suelo: que está debajo del suelo, subterráneo
Answers will vary.

3. des- encadenar: originar, comenzar
Answers will vary.

4. im- permeable: que no deja pasar agua
Answers will vary.



Nombre _____

Comprensión lectora

A Describe uno de los biomas que se presentan en el libro.

Tipo de bioma: _____ Ubicación: _____

Clima: _____

Plantas: _____

Animales: _____

Características representativas: *Answers will vary. Students should describe one of these biomes: forest, rainforest, mountain, desert, tundra, savanna.*

B Contesta.

1. ¿Por qué son importantes las selvas?

Possible answer: Porque tienen la mayor biodiversidad del planeta.

2. Explica la teoría de las placas tectónicas. Da dos ejemplos de lo que puede ocurrir cuando estas placas se desplazan.

Possible answer: La superficie terrestre está formada por una serie de placas rígidas que se desplazan. Cuando las placas chocan se forman montañas. Cuando se separan, dan origen a volcanes.

3. ¿Por qué cambian de color los bosques caducifolios?

Possible answer: Porque en otoño, debido a la poca luz solar, la producción de clorofila disminuye y las hojas pierden el color verde.

4. ¿Cuáles son algunas de las adaptaciones de las plantas del desierto?

Possible answer: Tienen raíces muy largas. Almacenan agua en el tallo. Tienen espinas para reducir la pérdida de agua.

C Completa esta tabla de causa y efecto.

CAUSA	EFEECTO
la industria papelera arroja sustancias contaminantes	contaminación del agua y de la atmósfera
actividades humanas que destruyen la selva	disminuye el número de animales y de plantas
tala de bosques	erosión del suelo
aumento en el uso del agua para el riego	disminución de las reservas de aguas subterráneas



Nombre _____

Vocabulario

A Une.

- | | |
|-------------------|-------------|
| 1. abarcar | a. típico |
| 2. abastecer | b. ubicar |
| 3. representativo | c. dar |
| 4. escarpado | d. abundar |
| 5. localizar | e. incluir |
| 6. predominar | f. empinado |

B Escribe una definición y luego da un ejemplo tomado del libro.

1. permeable: _____

Ejemplo: _____

2. retener: _____

Ejemplo: _____

C Añade el prefijo adecuado y define las palabras. Después escribe una oración con cada palabra.

des-

im-

re-

sub-

1. _____ generar: _____

2. _____ suelo: _____

3. _____ encadenar: _____

4. _____ permeable: _____



Nombre _____

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Plantas: _____

Animales: _____

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actividades humanas que destruyen la selva	
	erosión del suelo
	disminución de las reservas de aguas subterráneas