Titanosaur: Discovering the World's Largest Dinosaur

by Dr. José Luis Carballido and Dr. Diego Pol

This book tells the story of the discovery of a new dinosaur— the Titanosaur—from the mouths of the paleontologists who led the dig! From its discovery by a local herder to the organization and completion of the excavation, this riveting story will have readers on the edge of their seats, and the beautifully painted illustrations will mesmerize. This book includes a glossary, extra information, photographs from the dig, and an inside jacket poster of the Titanosaur. Readers will devour this book.

Create Successful Reading Habits

The What Works Clearing House suggests that teaching students prefixes and suffixes will help them read and understand the meaning of multisyllabic words.* Knowing how to decode words using prefixes and suffixes supports students in determining the meaning of unknown words. When they can break apart a word, students are better able to learn the word and remember how to read and write it.

* U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, What Works Clearinghouse. (n.d.). Practice Guides. https://ies.ed.gov/ncee/wwc/PracticeGuides

SCIENCE OF READING – CONNECTING RESEARCH TO PRACTICE

Reading Skills

The National Reading Panel report in 2000 categorized reading instructional content into five major areas: Phonemic Awareness, Phonics, Fluency, Vocabulary, and Comprehension. The science of reading focuses on a hierarchy of skills that develop when students are learning to read.

- First, it is important for students to develop **phonemic awareness**, which is the conscious awareness of the individual sounds in language. The students then need to know the letters of the alphabet and their corresponding sounds.
- After developing phonemic awareness and basic letter knowledge, students are able to use this knowledge to begin to decode. This is called the **alphabetic principle**, which is the understanding that letters make sounds, and sounds go together to make words.
- Through explicit and systematic **phonics** instruction paired with repeated practice, children's **decoding** skills become more automatic. Students are able to decode words without much thought, which leads to **fluent** reading.
- Ultimately, with sufficient practice, reading becomes automatic.

In addition to this hierarchy of skills, in order to **comprehend** what they read, students need to have:
- a robust **vocabulary** and knowledge about texts.
- knowledge about the world.

This knowledge is:
- developed through life experiences and instruction students receive in school.
- described as **schema**, which is the framework and organization of what someone has learned and how that information is stored in the brain.

A student's schema, along with the aforementioned knowledge and skills, influences how well they learn to read and comprehend written text.

STANDARDS ALIGNMENT FLORIDA'S B.E.S.T. STANDARDS

The ELA foundational standards are built on the following premises:

- **English Language Arts is not a discrete set of skills but a rich discipline with meaningful, significant content, the knowledge of which helps all students actively and fully participate in society.**
- **The standards are clear and concise, so they are easily understood by every stakeholder.**
- **The texts students read are meaningful and thought-provoking, preparing them to be informed, civic-minded members of their community.**
- **Standards should not stand alone as a separate focus for instruction but should be combined purposefully.**

Look for standards alignment in each section of this guide.

WORD WORK – ADDING SUFFIXES

Suffixes are an important part of understanding morphology. Adding suffixes to base words can be tricky; however, teachers can help students learn morphology by teaching the different rules that apply when adding suffixes.

There are rules for knowing what to do at the end of a base word when adding suffixes. One rule to consider is the **Short Vowel and One Consonant Rule**.
- When a word has a **short vowel sound** followed by a **single consonant**, the last letter of the word will need to be doubled before adding a suffix.

Examples:
- run + -*er* = runner
- shop + -*ed* = shopped
- swim + -*ing* = swimming

Say to Students:
- "Listen to the word *run*. What vowel sound does the *u* make?" (short *u*)
- "How many consonants are after the *u*?" (one)
- "Since the *u* is followed by the single consonant *n*, that means we have to double the *n* before adding a suffix. In this example, we are adding the suffix -*er*."
- "If we double the *n* and then add the -*er*, the word will now be spelled as *runner*. Notice there are two *n*'s before the suffix -*er*."
- Repeat this process with the other examples.

Exceptions to the Doubling Rule: The **Short Vowel and One Consonant Rule** does not apply to words that end in *w*, *x*, or *y*. For example,
- saw + -*ed* = sawed
- box + -*ing* = boxing
- buy + -*er* = buyer

While reading the book, help students find more words that follow the **Short Vowel and One Consonant Rule** when adding a suffix. Implement the gradual release model, shifting from a high level of teacher support to guided and independent practice.

ELA.5.F.1.3 Use knowledge of grade-appropriate phonics and word-analysis skills to decode words.
a. Apply knowledge of all letter-sound correspondences, syllabication patterns, and morphology to read and write unfamiliar single-syllable and multisyllabic words in and out of context.

ELL and SWD suggestion:
Provide students with the opportunity to practice this rule through the use of whiteboards. Whiteboards allow students to connect reading and writing (decoding and encoding) words while applying the rule. Start by having students write a word that follows the short vowel and one consonant rule. Have students underline the base word and the suffix. Then discuss how to apply the rule. Provide multiple opportunities for students to practice applying this rule through the use of the gradual release process.

TALK ABOUT NEW AND INTERESTING WORDS

Roamed (p. 5), **assembled** (p. 9), **fragile** (p. 9), and **ancient** (p. 19) are suggested Tier 2 words that can be used for explicit vocabulary instruction. Create and share a student-friendly definition that is appropriate for the level of your students. Help students make connections to the word by providing contextual information that relates to the text they are reading and builds upon their background knowledge.

Help students practice learning new words by engaging them in vocabulary activities that require them to manipulate, ask questions, and learn about new and interesting vocabulary words. One strategy you can use is known as the **List-Group-Label** strategy. This strategy:
- helps students make connections with concept vocabulary words.
- builds on students' background knowledge and supports making connections to new words.
- actively engages students in the learning process.
- promotes the use of critical thinking skills.
- provides opportunities for students to learn how to categorize and label groups of words.

Follow the steps below to implement the List-Group-Label strategy using the vocabulary words identified in the text *Titanosaur*.

List - Group - Label Strategy
1. Select the main concept or topic in the reading selection.
2. **List:** Display a visual list of all the Tier 2 vocabulary words you would like students to sort, or allow students to generate a list of words.
3. **Group:** Divide your class into small groups. Each group will work to group the list of words into subcategories. As groups of words emerge, challenge your students to explain their reasoning for placing words together.
4. **Label:** Students will label the groups of words they have formed. These labels should relate to their reasoning for the grouping.

Allow students to share their groupings with the class. This will allow them to see the connections that other students have made and share a way of thinking that others might not have considered.

ELA.5.V.1.1 Use grade-level academic vocabulary appropriately in speaking and writing.

ELL and SWD suggestion:
Teachers can differentiate this activity by doing one or more of the following things:
1. Provide a picture of the word.
2. Provide a definition of the word.
3. Predetermine the word groupings, and ask students to sort the words.

Depending on each child's level of vocabulary knowledge, teachers can choose to incorporate these different options to support their students in making connections to the words in the text.

Topic: (identify a topic) **Animal Habitat**			
1. **LIST** words related to the topic.	rock pool rocks river sand	dirt logs stream stones	grass waterfall leaves
3. **LABEL** the groups of words.	Water Supply	Shelter	Land
2. **GROUP** the words into subcategories.	rock pool river stream waterfall	rocks logs grass leaves	sand dirt stones

READ FOR MEANING – UNDERSTANDING WHY THE AUTHOR ORGANIZES INFORMATION USING DIFFERENT STRUCTURES

Students need to develop their reading comprehension skills so they can understand, analyze, and interpret the information twhat they read. Students can develop their reading comprehension skills by understanding the structure of a text and the author's purpose for using a particular structure.

- **ELA.5.C.1.4 Write expository texts about a topic using multiple sources and including an organizational structure, relevant elaboration, and varied transitions.**
- **ELA.5.R.2.1: Explain how text structures and/or features contribute to the overall meaning of texts.**
- **ELA.5.R.2.3: Analyze an author's purpose and/or perspective in an informational text.**
- **ELA.K12.EE.3.1 Make inferences to support comprehension.**

Before: Introduction
- Say to students, "Today you are going to read an informational text about the discovery of the world's largest dinosaur, the Titanosaur. The authors of this book have organized the information sequentially, meaning that they are recounting the events that took place in discovering the dinosaur from the very beginning to the end. As we read, we will discuss the organizational structure of the text, why the authors chose this structure, and how this structure helps you better understand what you read."

During:
- How does the discovery of the Titanosaur begin? (p. 2)
- How do the paleontologists, Diego and José, learn about what the gaucho found? (p. 6)
- The authors explain the order in which the Titanosaur bones are discovered. Using the text, place a number 1 - 10 in the order that each bone is found. (p. 11 - 24)

Bone Type	Order Found	Bone Type	Order Found
Tail Bones		Teeth	
Leg Bones		Femur #1	1
Vertebra		Hip Bones	
Femur #2 and #3		Arm bones	
Over 100 Bones		Neck bones	

- Why do the authors reveal the discovery of the Titanosaur bone by bone? How does it add meaning to the story? (p. 24)
- What is the significance of the discovery of these bones?
- What does the team do to safely transport the bones back to the museum? (p. 20 - 25)
- What happens to the bones once they are back at the museum? (p. 26)
- Why is the team in "awe" of the skeleton when they see it in the warehouse? (p. 29)
- Think about a time when you were in "awe" of something you saw. Why were you in "awe" of it? What made it so special or unique?
- Why does José believe that the Titanosaur is the biggest dinosaur ever found, for now? (p. 29)

READ FOR MEANING – UNDERSTANDING WHY THE AUTHOR ORGANIZES INFORMATION USING DIFFERENT STRUCTURES

After: Write and reflect.

- Describe the process that it takes to discover a dinosaur from start to finish. Think about the steps the team of paleontologists have to take from finding the first bone to displaying it in the museum. Use signal words from the list provided to help you create a step-by-step guide to discovering dinosaur bones.

After Before During Finally Then	First Last Later While Soon	Next Now Second Since When

Reflection Questions:

- Have you ever created a replica or built a model of something? What do you think it would be like if you didn't have instructions?
- When describing the process, how did you compile the information learned from the text? How did you decide what information you would use to describe the process of discovering dinosaur bones?
- What information did you leave out and why?
- Why is it important for authors to use different text structures when giving information to the reader?

ELL and SWD suggestion:
Use a graphic organizer to support students in learning how to sequence events in a story. When using the graphic organizer, include page numbers that students can use to help them identify each event. Consider filling out a few of the events as a model for what they are supposed to do, and then have students complete the empty spaces. See the example below:

Order of Event	Description of Event
1 (p. 4)	**Before** paleontologists can discover dinosaur bones, they must first know where to look for them.
2	
3	
4	
5	
6	**Lastly**, a replica of the dinosaur skeleton is placed in the museum for everyone to see.