Informational Text

Digging for SUE

by Susan Evento

Mc Graw Hill

PAIRED READ

Ancient Ship Discovered!

STRATEGIES & SKILLS

Comprehension

Strategy: Summarize

Skill: Main Idea and Key Details

Phonics

Consonant + *le* (*el, al*) syllables

Vocabulary Strategy

Greek and Latin Roots

Vocabulary

exploration, important, machines, prepare, repair, result, scientific, teamwork

Content Standards

Science

Science as Inquiry

Word count: 705**

Photography Credit: Cover Image Sources/(bkgd) Datacraft Co Ltd/imagenavi/Getty Images, (inset) Sue Ogrocki/Reuters/CORBIS

**The total word count is based on words in the running text and headings only. Numerals and words in captions, labels, diagrams, charts, and sidebars are not included.

CCSS **Genre** Informational Text

Essential Question

Why is teamwork important?

Digging for SUE

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Chapter 1

The Mighty T. Rex

Tyrannosaurus rex were huge animals. They walked on two legs. They once ruled the earth. That was about 67 to 70 million years ago. How do we know this?

We know this from scientific studies of T. rex **fossils**. An important discovery of T. rex fossils took place in 1990. It led to more information about them.

Tyrannosaurus rex **means "king of the tyrant lizards."**

(bkgd) Nic Taylor/Photodisc/Getty Images, (br) Dorling Kindersley/Getty Images

Sue made her discovery right before she was going to leave.

In 1990, Sue Hendrickson was part of an exploration. Her team was in South Dakota. They were looking for fossils. One day, Sue walked to some nearby cliffs.

She saw a few small bones on the ground. She saw some huge bones stuck in a cliff. Sue guessed that the bones had probably belonged to a T. rex.

STOP AND CHECK

How do we know about T. rex that lived millions of years ago?

Chapter 2

The Dig

Sue and other fossil hunters started to dig. They didn't use machines. That might harm the bones. Sue's team used picks and shovels. It took five days of teamwork. But at last they reached the bones.

Fossil hunters may spend hours searching for pieces of bone.

Sue's large jaw held sharp teeth that were 12 inches long.

Then Sue's team had to work more carefully. They used smaller tools. They found many bones. The skull was about five feet long! The hunters named this T. rex *Sue*. They named her for Sue Hendrickson.

The diggers took photographs. They numbered the bones. They wrote notes about them. Some bones were mixed up. Many were just where they were millions of years ago. A few were missing.

Some diggers fit into tight spaces to uncover bones.

(bkgd) Datacraft Co Ltd/imagenavi/Getty Images, (inset) Louie Psihoyos/CORBIS

The diggers kept some rock around the bones. That way, the bones wouldn't break. They covered the fossils with cloth. It was soaked in plaster. When the plaster dried, it would protect the bones.

People fought over the right to Sue's bones. Finally, Sue's bones found a home. It was the Field Museum in Chicago.

The plaster is like a cast people wear on a broken bone.

STOP AND CHECK

What steps did people follow to dig up Sue?

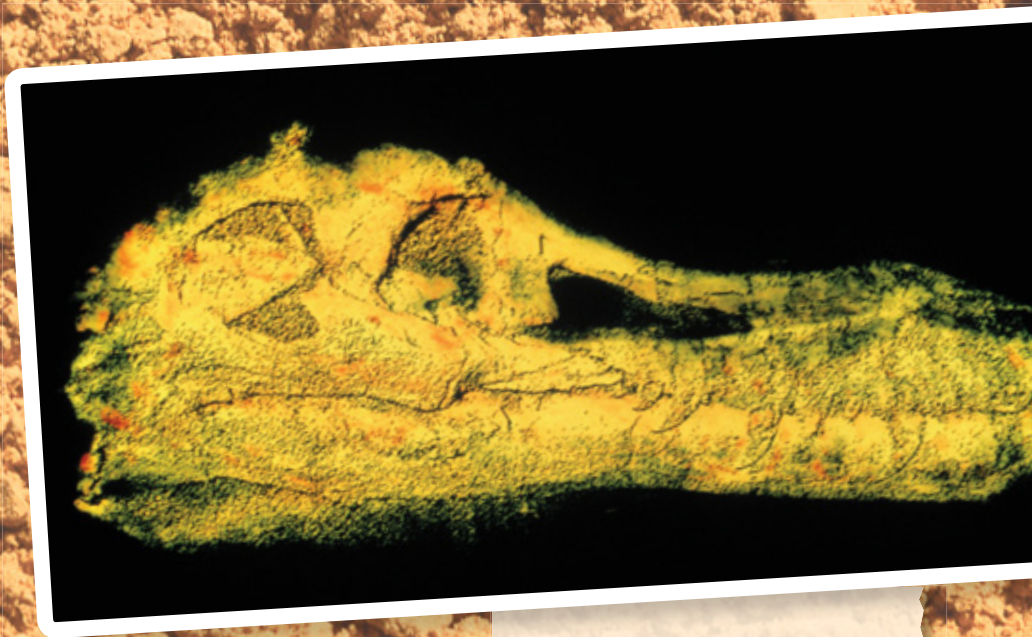
(inset) Photo Researchers/Getty Images

Chapter 3
At the Museum

Sue's skull took over 3,000 hours to clean.

People at the museum wanted to show off these bones. They had to prepare them first. More than 250 bones had to be cleaned and studied. First, workers removed the plaster. Then, they removed the rock around the bones.

The team used a **CT scanner.** This let them see inside Sue's bones. Her skull wouldn't fit in the scanner. The team had to put it in a place where they scan airplanes for problems!



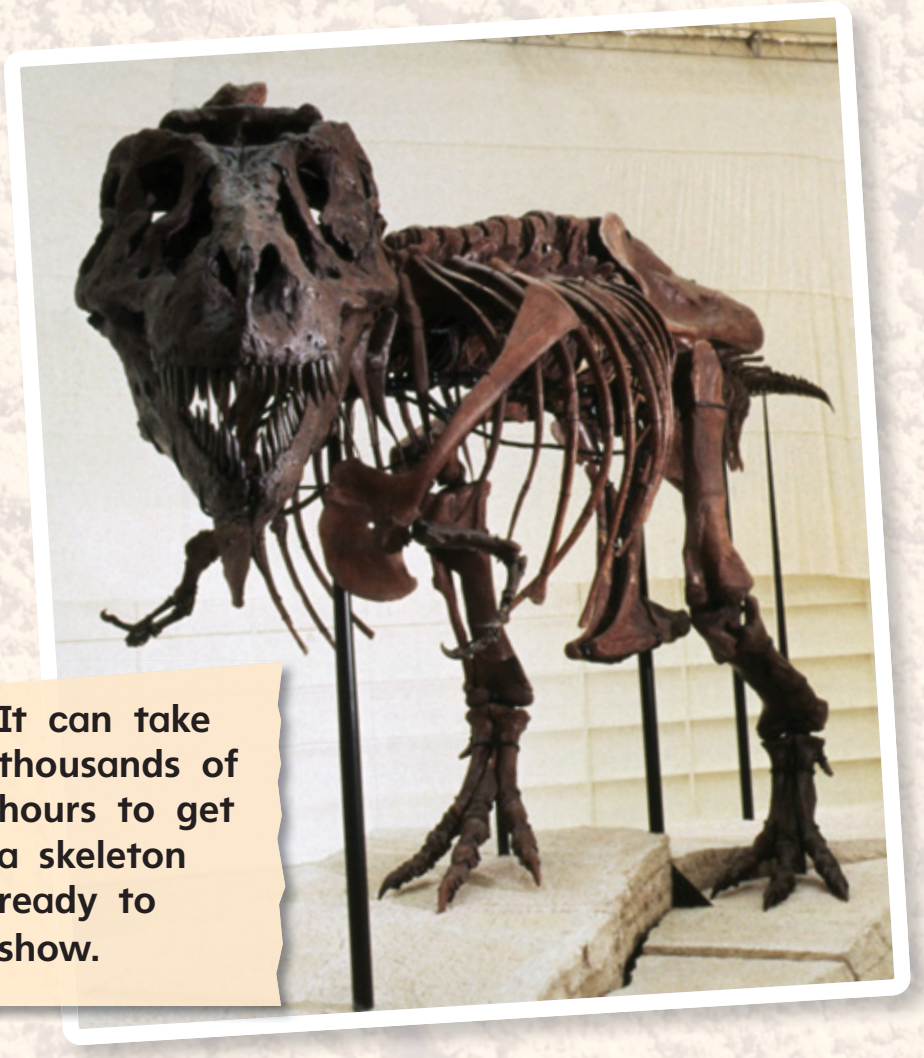
This is what the scan of Sue's skull looked like.

Putting Sue back together was hard. First, the team fixed cracks in the bones with glue. They used a material like modeling clay. This helped them repair missing parts of bones. They made models of the missing bones.

Putting Sue's bones together was like doing a big puzzle.

(bkgd) Datacraft Co Ltd/Imagenavi/Getty Images, (inset) John Zich/Allied Van Lines/AP Photo

The workers made casts of each bone. Copies of Sue's **skeleton** could then be shown in other places. Then they had to put all the pieces together. That was another hard job.



It can take thousands of hours to get a skeleton ready to show.

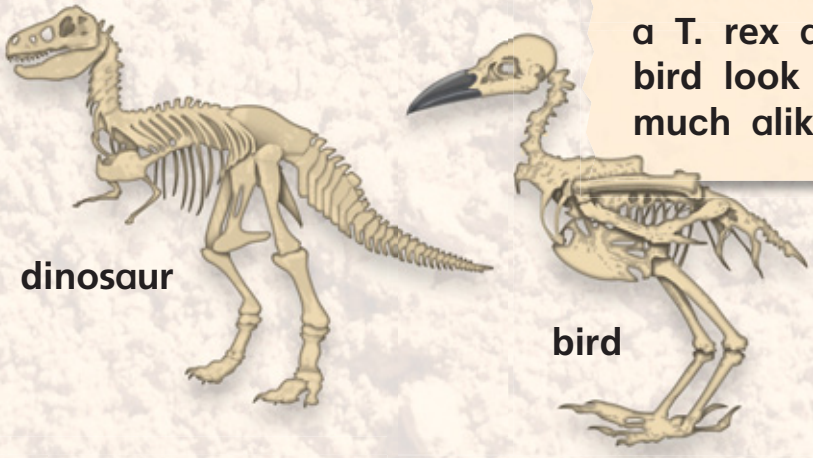
Reuters/CORBIS

The workers needed a special frame to hold up the bones. But Sue's skull was too heavy. It could not be placed on top. So they made a lighter plastic cast of it. They placed the real skull in a special case.

Sue's skull is large and hard to lift.

We don't know why T. rex had such small arms. We do know they were strong. Huge arm muscles left marks on Sue's arm bones. The scans showed something else too. Sue had an amazing sense of smell!

What have we learned about Sue? She was about 41 feet long. She stood about 12 feet high from the hip. She weighed about 9 tons. And she died when she was about 28 years old.



Some bones of a T. rex and a bird look very much alike.

Illustration: Rob Schuster

Sue was finally standing tall at the museum.

Millions of people have now visited Sue. She is the largest T. rex ever found. Her fossils are the most complete. They are in the best shape.

As a result of finding new bones, we learn more about dinosaurs. Studying fossils helps us understand the past. They show us how animals have changed over time.

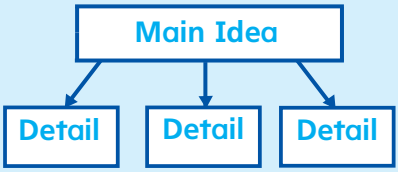
STOP AND CHECK

What did the museum workers do to get Sue ready to show?

Respond to Reading

Summarize

Use the chart to help you summarize *Digging for Sue.*



Text Evidence

1. How do you know that *Digging for Sue* is an informational text? Genre
2. What is the main idea on page 2? Main Idea and Key Details
3. The Greek root *saur* means "lizard." How does that help you know the meaning of *dinosaur*? Greek and Latin Roots
4. Write about the main idea and key details on page 14. Write About Reading

CCSS **Genre** Informational Text

Compare Texts

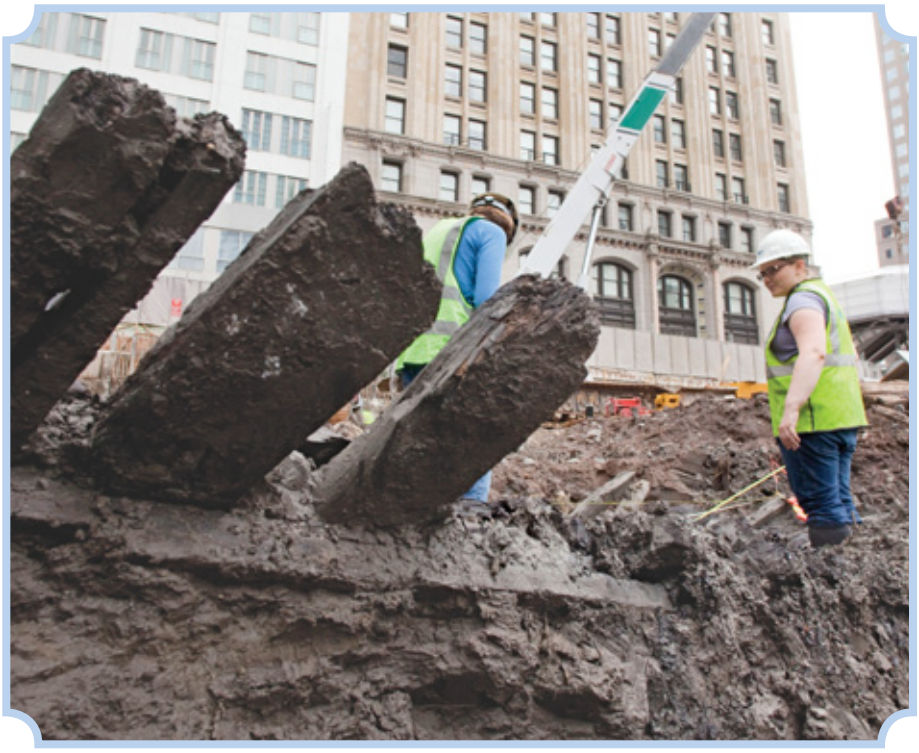
Read about how people who explore work as a team.

Ancient Ship Discovered!

In 2010, an amazing discovery was made in New York City. An ancient ship was uncovered! A digging machine was at the site of the new World Trade Center. Then it hit something hard.

Workers found the ship 20 feet underground.

Illustration: Rob Schuster



Scientists recorded what they found at the site.

The machine had hit the wooden ship. Scientists hurried to the site. They wanted to dig up the ship. They needed to do it right away. Otherwise, the air would destroy the wood.

Mark Lennihan/AP Images

Scientists studied a coin found on the ship.

Scientists studied rings in the wood to learn about the age of the ship. They think it was built between 1770 and 1780. It probably carried goods to sell. Hopefully, more secrets of this ship will be discovered!

Mark Lennihan/AP Images

Make Connections

Why do people work as a team?

Essential Question

How do scientists protect things they find? **Text to Text**

Glossary

CT scanner *(see-TEE SKAN-er)* machine that takes pictures and lets doctors look inside bodies ***(page 9)***

fossils *(FOSS-uhlz)* hardened remains of animals or plants that lived long ago ***(page 2)***

skeleton *(SKEL-i-tuhn)* frame that supports and protects the body of an animal ***(page 11)***

Index

Focus on Science

Purpose To find out how teamwork helps you explore

What to Do

Step 1 Think about a time when you worked with a team to explore something.

Step 2 Create a chart like this one.

Team Members	What We Did

Conclusion Share your chart with a partner. Talk about how each person helped the team. What did you learn?

Literature Circles

Nonfiction

Thinkmark

Text Structure

How does the author organize information in *Digging for Sue*?

Vocabulary

What new words did you learn after reading *Digging for Sue*?

Conclusions

What conclusions can you draw about Sue's discovery?