



## **Bones**

John Wilson

Reading level: 4.5

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AR Quiz #165822

### **Book Summary**

Sam and Annabel are visiting Drumheller, Alberta, where the farmland Sam's mother lives on is host to a dinosaur dig. Annabel, an avid learner, is thrilled to have access to paleontologists and spends as much time as she can near the dig, much to Sam's dismay. When they learn the dig has uncovered scientifically important bones, even Sam's interest is piqued. In fact, the whole town is talking about the dig. When Sam and Annabel learn that Humphrey Battleford, a famous collector of stolen goods, is in the area, they are on high alert to keep the ancient bones safe.

### **Author Biography**

Born in Edinburgh, Scotland, **John Wilson** grew up on the Isle of Skye and outside Glasgow without the slightest idea that he would ever write books. John is addicted to history and firmly believes that the past must have been just as exciting, confusing and complex to those who lived through it as our world is to us. Every one of his books for kids, teens and adults deals with the past. His tales involve intelligent dinosaurs, angry socialist coal miners, confused boys caught up in the First and Second World Wars, and the terrors faced by lost Arctic explorers. John spends significant portions of his year travelling across the country telling stories from his books and their historical background and getting young readers (particularly but not exclusively boys) energized and wanting to read and find out more about the past.

**Connecting to the Text*****Character Study***

To engage students with the main characters in *Bones*, use the following as group discussion topics, individual novel study or paragraph-writing exercises:

In chapter 4, Sam reveals, “My trouble is that I can’t let things go. If something bothers me, I worry at it like a dog with a bone. I convince myself that the worst possible outcome will happen.” Consider the times in the novel that Sam does this. Is this behavior helpful, or does it hold him back? Examples are:

- Sam worries that Annabel is more interested in “pirate guy” Greg than him.
- Sam is suspicious of Darren and Beetlebrow. What are they up to?
- Sam is sure that Battleford is trying to steal the fossil at the dig.

***Vocabulary Enrichment***

The following words are used in the novel in the context of the Sam and Annabel’s visit to Drumheller, Alberta.

ancient	dinosaurs	impressions	scientist
badlands	discovery	information	site
bones	excavate	plaster	skeleton
collection	fossils	prairies	specimens
coulee	hoodoos	research	treasure

Using words from the above list, invite students to choose from the writing exercises below.

- Describe Sam and Annabel’s first impression of the badlands.
- Describe what leads up to a fossil ending up in a museum.
- Do you think it’s important to study fossils? What can we learn from them?
- Create a crossword puzzle with a fossil or dinosaur theme.

***The Writer’s Craft***

In chapter 10, Humphrey Battleford and Percy visit Sam at Sam’s Mom’s house. Ask students to note the words used to describe Battleford. For example, he has a “cultured American accent” and he’s “immaculately dressed.” Ask students to comment on how the choice of words provides an impression of how Sam feels about Battleford. Further, how are we, as readers, meant to feel about Battleford?

**Option:** Prompting with the same questions, invite students to consider how Acacia, Sam’s mother, is described in chapter 1.

**Connecting to the Curriculum*****Creative Writing***

1. Dr. Bob says that a dinosaur dig is “not all *Jurassic Park*” but for each dig, there

is a story which unfolds. Ask students to read Dr. Bob's story in chapter 3 which begins, "Seventy million years ago this was a coastal, swampy place, cut by rivers running into the sea." Ask students to reflect on Dr. Bob's story and respond through creative writing. Ideas to get students started:

- ◆ You study dinosaurs and love to travel. On a recently discovered island, you find dinosaurs that have evolved to the point where they have spoken language. You live with them and learn to speak Dinosaur. A journalist visits the island. Think of two questions the journalist might ask, and how you, the translator, will answer.
  - ◆ You have travelled back in time and are making a video about the life of the "our friend here" dinosaur Dr. Bob described. From the text and using your imagination, can you describe what you see? What sounds do you hear? What is the landscape like, and how did the small dinosaur with "delicate" hands die? Why did it have such a long tail?
  - ◆ Imagine that Darren, the "creepy guy in the red pickup" had been right, and the bones discovered at the dig were that of an alien species. You are a journalist assigned to interview Dr. Bob about the fossil. What questions will you ask? How will Dr. Bob answer?
2. Annabel is known for her infectious interest in history and also her ability to memorize Pi "to some ridiculous number of decimal places" (ch. 3). She says, "I just remember stuff." Ask students to imagine they can choose to have an unusual ability like Annabel and write about the experience.
- ◆ What would it be? If the talent or ability was suddenly there, what would be the first thing you'd do?
  - ◆ Did Annabel's ability to memorize help her in the novel? How would yours help you?

### Sciences

1. A number of dinosaurs are mentioned in *Bones*, including the *T. Rex*, *Triceratops*, *Velociraptor* and *Pachycephalosaurus*. Dr. Bob explains that from studying dinosaurs' bones, they learn about the world the dinosaurs lived in. Invite students to find out about one dinosaur and its habitat. When and where did it live? What did it eat? What was the climate like? What predators did it have?
2. Sam's mom may embarrass Sam sometimes, but she knows a lot about living off the land and using folk medicine. Ask students to find out more about the "healing herb" acacia, or another of their choice. Encourage students to use some of the following vocabulary words from the novel.

ailment  
allergies  
astringent

botany  
folk medicine  
healing

insect bites  
medicinal  
species

3. When people think of Canada, they may think of frozen landscapes, but Canada actually has different biomes, including tundra, boreal forest, temperate deciduous forest and grasslands.
  - ◆ In what biome does Drumheller exist?
  - ◆ Name a native plant you could expect to find in the biome of Drumheller. Why would this plant thrive here instead of other biomes?
  - ◆ What kind of animals could you find in the Canadian biomes? Name a native species for each and a food source.
  - ◆ In the Canadian biomes, which is coldest? Which gets the most precipitation?

### *Art*

To engage students in the powerful imagery in *Bones*, invite students to create art projects based on a descriptive scene or image that appeals to them. Some examples are below.

- Imagine Sam and Annabel seeing the badlands for the first time. The badlands have “narrow steep-sided, cactus-filled valleys that go nowhere... [and] dusty misshapen hills and weird spires of rock called hoodoos” (ch. 1). What textures and colors do you think this hot, dry “sci-fi landscape” has? What media illustrate this best?
- When they saw the badlands, Annabel wondered if there was an opposite landscape somewhere called the “goodlands” (ch. 1). Create a side-by-side “mirror” with images of the badlands on one side (hot, dry, dusty with cacti and coulees) and the imaginary goodlands on the other. Which would you prefer to visit?
- Dr. Bob explained that there are thousands of dinosaurs that have yet to be discovered: “Dinosaurs where we haven’t found that one bone” (ch. 1). Imagine the bones of a dinosaur that hasn’t been discovered yet—one that can be found in the most unlikely of places: within an amber stone, in the trunk of a very old tree, frozen in the arctic, or even deep beneath your school!

### **Connecting to the Wider World—Ideas for Exploration**

1. Dr. Bob says that in science, one has to always keep an open mind: “If we dismiss an idea as stupid, then we won’t recognize evidence if we see it” (ch. 3). Encourage students to research an influential scientist who was famous for thinking “outside the box.” What contribution did they make, and how does their work influence our world today?

**Ideas:** Marie Curie (radiation), Charles Darwin (evolution), Paul Ehrlich (chemotherapy), Gertrude Belle Elion (pharmacology), Alexander Fleming (Penicillin), Sigmund Freud (psychology), Edwin Hubble (modern telescope), Stephen Hawking (quantum cosmology), Dmitri Mendeleev (Periodic Table of Elements), Louis Pasteur (germ theory of disease, pasteurization), Jonas Salk (vaccination), Erwin Schrödinger (wave mechanics).

2. An important theme in *Bones* is ownership of priceless fossils. Sam and Annabel learn that anyone can dig up fossils; they aren't protected unless they're in a park. In chapter 2, they learn about Sue, the "largest, most complete *T. rex* skeleton ever found." There was controversy over who owned Sue: the farmer whose land the skeleton was found on, the company who discovered her, or the government. As a research project, ask students to learn more about Sue and to consider who they think should own dinosaur fossils.
3. More Orca Currents novels to enjoy:
  - ◆ For students interested in the theme of paleontology, invite them to read *Fraud Squad* by Michele Martin Bossley. In this novel, amateur detectives Trevor, Nick and Robyn visit the Royal Tyrrell Museum in Drumheller, Alberta, and get caught up in a mystery involving missing fossils and a fraudulent discovery at a dig.
  - ◆ Students who enjoy history, mystery or the adventures of Sam and Annabel will want to read *Stolen* written by John Wilson. In *Stolen*, Sam and Annabel solve a mystery while treasure-hunting the fabled Mahogany Ship, a shipwreck sought after on the Australian coast. This novel also includes the billionaire Humphrey Battleford, who travels the world buying (or stealing) precious art for his collection.

### Web Resources

The Tyrrell Museum, Museum of the Rockies, Dinosaur Provincial Park and the Field Museum of Natural History all have excellent resources for educators on their websites (listed below).

[www.tyrrellmuseum.com](http://www.tyrrellmuseum.com)

[www.museumoftherockies.org](http://www.museumoftherockies.org)

[www.fieldmuseum.org](http://www.fieldmuseum.org)

[www.albertaparks.ca/dinosaur](http://www.albertaparks.ca/dinosaur)

<http://earthobservatory.nasa.gov/Experiments/Biome>