Before Reading

Great White Sharks

Magazine Article by Peter Benchley

Can you tell FACT from fiction?

Artists and writers often use what they know to be true about the world to create imaginary scenarios that can seem more real than life itself. But how do you know when a work of fiction is technically accurate and when it’s not? Peter Benchley has made a name for himself by dealing in both facts and fiction about great white sharks.

LIST IT Choose a movie or a book you have enjoyed that features animals or natural events. For each movie or book, list some of the details that were included, explaining whether they’re true or not.

COMMON CORE

RI 6 Determine an author’s point of view and analyze how the author distinguishes his position.
RI 8 Trace specific claims in a text.

Video link at thinkcentral.com

Homeward Bound

1. Animals can find their way home across hundreds of miles.
2.
3.
4.
Meet the Author

Peter Benchley
1940–2006

The Jaws Sensation

Peter Benchley is best known for his novel *Jaws*, which is about the hunt for a great white shark that killed several people in a beach community. *Jaws* stayed on the bestseller list for 40 weeks. In 1975, Steven Spielberg turned it into one of the top-grossing movies at the time. It was also nominated for an Academy Award for Best Picture. Benchley went on to write other novels and screenplays with the ocean as the setting, as well as nonfiction works about the ocean.

Regrets

In the 1970s, when Benchley wrote *Jaws*, little was known about great white sharks. His description of them as vicious man-eaters frightened many people out of the water and triggered an aggressive shark hunt. Benchley, always fascinated by the ocean, spent a great deal of his life exploring it. He came to discover that much of what he wrote was incorrect. He was outspoken in his regrets for helping to create this hysteria. Benchley noted, “For every human being killed by a shark, roughly ten million sharks are killed by humans.”

Text Analysis: Evidence in Informational Text

Writers of informational text usually support their claims with evidence, such as facts, which are statements that can be proved. Be sure that you can tell the difference between factual claims and opinions or commonplace assertions.

- A factual claim is a statement that can be proved from evidence such as a fact, personal observation, reliable source, or an expert’s opinion.
- An opinion is a statement of personal belief, feeling, or thought, which does not require proof or evidence.
- A commonplace assertion is a statement that many people assume to be true, but which is not necessarily so.

As you read, look for evidence that will help you distinguish factual claims from opinions and commonplace assertions.

Reading Skill: Recognize Author’s Bias

Even nonfiction writers can reveal a bias toward their topics. Bias is the side of an issue that a writer favors. One way writers reveal their bias is through loaded language, words that are strongly positive or negative. As you read, record the loaded language in a chart and identify the author’s bias.

<table>
<thead>
<tr>
<th>Loaded Language</th>
<th>Possible Author’s Bias</th>
</tr>
</thead>
<tbody>
<tr>
<td>“most wonderful of natural-born killers”</td>
<td>Benchley is impressed by sharks’ survival instincts.</td>
</tr>
</tbody>
</table>

Vocabulary in Context

The boldfaced words help Peter Benchley share facts and feelings about great white sharks. Use context clues to figure out the meaning of each word.

1. Humans **demonize** an innocent creature out of fear.
2. The tourist gave **anecdotal** evidence instead of hard facts.
3. We finally reached a **consensus** after a loud debate.
4. The evidence was subject to close **scrutiny**.
5. Most scary movies are based on our **visceral** fears.
6. The scientist interviewed two **prospective** assistants.
7. The test errors were caused by **inadvertence** to detail.
8. The trial was a **travesty** because the jury was biased.

Complete the activities in your Reader/Writer Notebook.
Analyze Visuals

What might you infer about the great white shark from this photograph?
Considering the knowledge accumulated about great whites in the past 25 years, I couldn’t possibly write *Jaws* today—not in good conscience anyway. Back then, it was generally accepted that great whites were anthropophagous—they ate people by choice. Now we know that almost every attack on a human is an accident. The shark mistakes the human for its normal prey.

Back then, we thought that once a great white scented blood, it launched a feeding frenzy that inevitably led to death. Now we know that nearly three-quarters of all bite victims survive, perhaps because the shark recognizes that it has made a mistake and doesn’t return for a second bite.

Back then, we believed that great whites attacked boats. Now we know that their sensory systems detect movement, sound, and electrical fields, such as those caused by metal and motors, in water, and when they approach a boat, they’re merely coming to investigate. Granted, investigation by a 3,000-pound animal can wreak havoc.

Finally, back then, it was OK to *demonize* an animal, especially a shark, because man had done so since the beginning of time, and, besides, sharks appeared to be infinite in number.

No longer. Today we know that these most wonderful of natural-born killers, these exquisite creatures of evolution, are not only *not* villains, they are victims in danger of—if not extinction quite yet—serious, perhaps even catastrophic, decline. Much of the evidence is *anecdotal*. Fishermen and naturalists are seeing fewer great whites, and in most places those they are seeing are younger and smaller.

---

1. *wreak havoc*: bring about great destruction.
Shark finning in the Pacific Ocean

This 17-foot great white shark was caught in the Atlantic Ocean. It weighed a record-breaking 3,500 pounds.

Scientists estimate that, worldwide, populations of some species of sharks have dropped by 80 percent. Though precise numbers of white sharks aren't known, there is a growing consensus that they are not reproducing at a rate sufficient to maintain the population. What is known now is that great white sharks—scarce by nature and growing scarcer thanks to contact with man—are, for all their grace and power and manifest menace, remarkably fragile.

Nowadays more people are coming to respect and appreciate sharks for what they are: beautiful, graceful, efficient, and, above all, integral members of the ocean food chain. In large measure the change is due to television and the abundance of films documenting not only the glories from sharks but also the dangers to them from longlines, nets, and the odious practice of finning—slicing the fins off sharks to sell in Asian markets, then tossing the living animals overboard to die. Gradually governments and individuals are learning that while a dead shark may bring ten or twenty or even fifty dollars to a single fisherman, a live shark can be worth thousands of dollars more in tourist revenue to a community. Divers will fly halfway around the world to see white sharks. Immodestly I claim some credit for the change in attitude. For while the Jaws phenomenon was blamed for distorting the public's view of sharks and causing sporadic outbreaks of macho mayhem, it also generated a fascination with and, over time, an affection for sharks that had not existed before.

2. sporadic outbreaks of macho mayhem: occasional wild flare-ups of people trying to show their superiority over sharks by attacking and killing them.
These days I receive more than a thousand letters a year from youngsters who were not alive when *Jaws* appeared, and all of them, without exception, want to know more about sharks in general and great whites in particular.

Great white sharks are among the true apex predators in the ocean. The largest predatory fish in the world, they have few natural enemies. And so, in balanced nature, there are not very many great whites, and the number grows or shrinks depending on availability of food. They breed late in life and pup relatively few. Again, nobody knows exactly how many, but seven or eight seems to be a safe average. The youngsters appear alive, four or five feet long, weighing 50–60 pounds, fully armed and ready to rumble. Still, many don’t survive the first year because other sharks, including great whites, will eat them.

Of all the infuriating unknowns about great white sharks, none is more controversial than size. How big can they grow to be? Fishermen from Nova Scotia to South Australia, from Cape Town to Cape Cod claim to have encountered 25-footers, 30-footers, even 36-footers. Usually the proof offered is that the beast was “bigger than the boat.” There have been reports of a 23-footer in the waters off Malta and a 21-foot, 7,000-pounder off Cuba, but none has held up under scrutiny. The largest

EVIDENCE
Reread lines 72–82. What factual claims does Benchley make about the quantity of great white sharks? Identify three resources that you could use to verify these statements.

scrutiny (skrōōt’n-) n.
close examination or study
generally accepted catch—made by lasso, of all things—was a shark 19.5 feet long. The largest great white shark ever caught on rod and reel weighed 2,664 pounds.

According to British biologist Ian Fergusson, chairman of the Shark Trust, no great white shark longer than 19.5 feet has ever been validated, and in a widely circulated e-mail, he expressed irritation at “this stubborn reluctance by some elements of the media to accept the facts and even more of a reluctance to accept that a 16-foot, 4500-pound white shark is big, very big, and should need no further exaggeration to impress even the most discerning of viewers when seen up close.”

I can attest that underwater, cruising toward you out of the gloom with the serene confidence of the invincible, a 12-foot great white looks like a locomotive with malice in mind. . . .

At the moment science accepts about 400 species of sharks, but the number changes as new species are discovered. Of all known species, only four attack human beings with any frequency: bull sharks, tiger sharks, oceanic whitetips, and great whites.

In Australia, between 1876 and 1999, 52 attacks by great whites were recorded, and of them 27 were fatal. In the Mediterranean Sea since 1900 there have been 23 reliably recorded encounters with great whites, including one in 1909 in which the remains of two adults and a child were found inside a single 15-foot-long female shark caught off Augusta, Sicily.

The old adage is true: A swimmer has a better chance of being struck by lightning than killed by a shark. And around the world many, many more people die every year from bee stings, snakebites, falling off ladders, or drowning in bathtubs than from shark attack. None of which, to be sure, detracts from the ghastly, visceral horror of being eaten by a huge fish, but all of which should give some comfort to the recreational swimmer. . . .

More and more these days it is the naturalists and field operators, guides and dive masters who are contributing to the accumulation of practical knowledge about great whites. To cite just one example: Until recently scientists thought that the scars that mar nearly every
mature shark were acquired either from prey that fought back or from ritual biting by prospective mates. Now there is eyewitness testimony of aggressive social interaction\(^3\) between sharks and also of spectacular threat displays that take the place of major—potentially fatal—encounters with other white sharks.

---

3. aggressive social interaction: contact that is combative even though there is no actual intent to fight.
Comprehension

1. Recall  How many years passed between the time the author wrote *Jaws* and the time he wrote the article?

2. Clarify  Why are there naturally so few great white sharks?

Text Analysis

3. Identify Evidence  Statistics are facts expressed in numbers, and they are often used as evidence. Reread lines 110–115 and identify the statistics. What factual claim made by the writer do they support?

4. Distinguish Types of Evidence  The main idea, or factual claim, of this article is that people have the wrong impression of sharks. Use a chart like the one shown to list factual claims, opinions, and commonplace assertions that Benchley uses to support his main idea. Which type of evidence does he use the most?

<table>
<thead>
<tr>
<th>Type of Evidence</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factual Claim</td>
<td></td>
</tr>
<tr>
<td>Opinion</td>
<td></td>
</tr>
<tr>
<td>Commonplace Assertion</td>
<td></td>
</tr>
</tbody>
</table>

5. Analyze Author’s Bias  What is Benchley’s attitude toward his subject? Refer to the chart you made while you were reading and identify Benchley’s loaded language. Describe the bias you see in these examples.

6. Analyze Stereotype  A stereotype, or an overgeneralization, is a form of bias that presents an idea or an image of someone or something that is too simple or that may not be wholly true. What stereotype of sharks does Benchley present? How does he attempt to change it?

Extension and Challenge

7. SCIENCE CONNECTION  Review the article and choose three facts about great white sharks. For each fact, find two reliable sources, such as an encyclopedia, an atlas, or an almanac, that verify it. Present your findings to the class.

Can you tell FACT from fiction?

Write a fictional paragraph about nature in which you include facts that are real. Exchange paragraphs with a classmate. Can you accurately identify each other’s facts?
Vocabulary in Context

**VOCABULARY PRACTICE**
Decide whether the words in each pair are synonyms (words with the same meaning) or antonyms (words with opposite meanings).

1. consensus/disagreement
2. inadvertence/inattention
3. visceral/analytical
4. demonize/praise
5. travesty/distortion
6. scrutiny/observation
7. anecdotal/scientific
8. prospective/unexpected

**ACADEMIC VOCABULARY IN SPEAKING**

- area
- domain
- hypothesis
- objective
- resolve

Benchley explains that observations about sharks have led to new theories about their behavior. In a small group of classmates, choose a **hypothesis** that is posed in the article, and design a process for testing it. Use the Academic Vocabulary words in your discussion.

**VOCABULARY STRATEGY: PREFIXES AND THE LATIN ROOT *vert***
The vocabulary word *inadvertence* contains the Latin root *vert*, which means “turn.” This root, sometimes spelled *vers(e)*, is combined with various prefixes to form simple English words. To understand the meanings of words with *vert* or *vers(e)*, use the meaning of the root and the prefixes it is used with.

**PRACTICE** Combine a prefix from the chart with *vert* or *vers(e)* to form words to complete each of these sentences. Note that some prefix spellings vary.

1. If you back up a car, you put it in _______.
2. A person who is very outgoing is known as a(n) _______.
3. If you don’t want to watch a scary movie, you can _______ your eyes.
4. To cross a desert, you must _______ a lot of sand.

<table>
<thead>
<tr>
<th>Prefixes Used with <em>vert, vers(e)</em></th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>ab-, a-</td>
<td>away from</td>
</tr>
<tr>
<td>extra-, extro-</td>
<td>outside</td>
</tr>
<tr>
<td>re-</td>
<td>again; back</td>
</tr>
<tr>
<td>trans-, tra-</td>
<td>across</td>
</tr>
</tbody>
</table>