

Teacher's Key: Questions and Answers

Including Quizzes 1-3 and End of the Book Assessment Answers

Chapter 1, pp. 7-14

Vocabulary Words:

1. harpoon **B. A spear-like weapon with a barbed head used in hunting whales and large fish.**
2. barnacle **A. Any various marine crustaceans (of the subclass Cirripedia) that in the adult stage form a hard shell and remain attached to submerged surfaces, such as whales, rocks and ships' bottoms.**
3. tail fluke **C. Either of the two horizontally flattened divisions of the whale's tail.**

Story Time:

Q #1: Lily is a _____ foot California gray whale.
A: **26 (p. 9)**

Q #2: Lily came and stayed in the _____ harbor for 2 days.
A: **Dana Point (p. 9)**

End of Chapter Questions:

- Q #1: Why did Lily come and stay in the harbor?
A: **She was hurt due to the netting caught on her tail flukes. (p. 9 and 11)**
- Q #2: What is Arielle's special gift?
A: **She was one of the few able to understand dolphins, whales and other sea creatures. (p. 11)**

Chapter 2, pp. 15-26

Vocabulary Words:

1. lagoon **A. A shallow body of water, especially one separated from a sea by sandbars or coral reefs.**
2. breaching **B. A whale leaping from the water.**

Story Time:

Q #1: But Mom never ate anything because there was nothing to eat in the _____.

A: lagoon (p. 16)

Q #2: We _____ use several different lagoons.

A: gray whales (p. 19)

Q #3: The Lagoon is the only place we are truly safe, and it is the only place we can completely _____ the Caretakers!

A: trust (p. 20)

Q #4: Gray whales can be found _____ outside the entrance to San Ignacio Lagoon, some going back over and over to ride the waves.

A: bodysurfing (p. 24)

End of Chapter Questions:

Q #1: What are 3 characteristics of a mammal whale?

A: They nurse (feed on mother's milk), have live births (not from eggs) and swim to the surface to breathe. (p. 15 and 16)

Q #2: How many pounds a day does a gray whale calf grow feeding on their mother's milk?

A: About 50 pounds a day. (p. 16)

Q #3: How long do 81% of gray whales stay in the San Ignacio Lagoon?

A: They stay for a week or less. (p. 19)

Q #4: San Ignacio Lagoon also known as "Laguna San Ignacio" is located in what ocean?

A: Pacific Ocean (p. 20)

Q #5: What may be the only place in the world where a “non-researcher” can touch a huge baleen whale in the wild?

A: The birthing lagoons in Baja California. (p. 23)

Chapter 3, pp. 27-34

Vocabulary Words:

1. baleen whale **B. Any whale lacking teeth but having baleen for filtering small ocean animals (such as krill) out of seawater.**
2. flipper **A. A broad flat limb (as on a seal or whale) used for swimming.**

Story Time:

Q #1: Dolphins and whales are believed to sleep with only _____ their brain at a time.

A: half (p. 30)

Q #2: Gillnets are one of the worst nets for whale and dolphin _____.

A: entanglement (p. 33)

End of Chapter Questions:

Q #1: Who are the whale killers?

A: Killer whales (p. 27)

Q #2: At what depth do whales swim at while migrating?

A: Two mom-lengths deep (p. 29)

Q #3: How far do the gray whales travel in 24 hours?

A: They average 75 miles (p. 29)

Q #4: Why do gray whales breach?

A: To look around, to remove something irritating (like parasites) from their skin, to let others know of their presence or sometimes, just for the sheer joy of it. (p. 29)

Q #5: How do whales get trapped?

A: Fishing nets (gillnets) (p. 30)

Q #6: Explain why whales are voluntary breathers?

A: They have to think when they take a breath, or they could breathe in water and drown. (p. 30)

Q #7: How do gillnets work?

A: Floats on top keep it afloat and weights on bottom make it hang down like a curtain. The fish try to swim through the net and get caught by its gills. (p. 33)

Chapter 4, pp. 35-63

Vocabulary Words:

1. harbor **B. A part of a body of water protected and deep enough to be a place of safety for ships.**
2. buoy **D. A floating object anchored in a body of water to mark a channel or warn of danger.**
3. kelp **A. Any of various large brown seaweeds.**
4. echolocation **C. Dolphins and other toothed whales, like sperm whales, can find things underwater by sending a series of clicks that bounce back to them.**

Story Time:

Q #1: "I told her that my dad could help. He was just trained to do so in that big _____ in the harbor."

A: blue building (p. 37)

Q #2: As we bolted past a whistle buoy with California _____ on it, I could hear the woo-woo sound the buoy made as it bobbed up and down in the swell.

A: sea lions (p. 41)

Q #3: Killer whales are the _____.

A: largest dolphins (p. 46)

Q #4: Hiding in the _____, my mom looked me over then whispered, "_____."

A: kelp Whale Killers (p. 46)

Q #5: Toothed whales, Odontocetes, have _____ blowhole and Baleen whales, Mysticetes, have _____ blowholes.

A: 1 2 (p. 50)

Q #6: NOAA estimates as many as _____ percent of gray whale calves may be killed by _____.

A: 35 killer whales (p. 57)

End of Chapter Questions:

Q #1: How do gray whales know which direction to migrate?

A: They may use biomagnetic orientation, but no one know for certain how they navigate. (p. 35)

Q #2: Give an example of thermoregulation.

A: California sea lions keep their flippers out of the water to heat or cool themselves. (p. 42)

Q #3: What is the difference between transient and resident killer whales?

A: Transient killer whales eat mammals, like sea lions or gray whales, while resident killer whales eat only fish. (p. 48 and 53)

Q #4: Why was Lily easy prey for the killer whales?

A: Lily was much smaller and weaker. (p. 57)

Q #5: How did Buddy help Lily?

A: He raced over and pressed his body against Lily's. He protected her from the Killers and followed Lily and her mom up the coast to keep them safe. (p. 62)

Chapter 5, pp. 64-75

Vocabulary Words:

1. krill

A. Small crustaceans and their larvae that make up plankton and form a major food of baleen whales.

2. amphipods

B. Any large group of small crustaceans including the sand fleas and related forms.

Story Time:

Q #1: Our flippers and flukes had lots of bite marks from those Killers, but that wasn't the only _____ they left on me.

A: scar (p. 66)

Q #2: At one of the places we stopped, we surfaced to find a _____ of _____ just ahead of us.

A: pod Killers (p. 69)

Q #3: One day we saw a big _____ eating clams on a beach.

A: brown bear (p. 72)

End of Chapter Questions:

Q #1: What is one good thing that happened as a result of the Killers attacking?

A: Lily lost some of the fishing gear. (p. 65)

Q #2: What is usually hard for gray whales to catch and eat?

A: krill (p. 70)

Chapter 6, pp. 76-107

Vocabulary Words:

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|-------------------|--|
| 1. humpback whale | <u>C.</u> A large baleen whale that is black above and white below and has very long flippers. |
| 2. narwhals | <u>B.</u> An arctic sea mammal that is about 20 feet (six meters) long, is related to the dolphins and whales, and the male has a long twisted ivory tusk. |
| 3. walrus | <u>A.</u> A large mammal of cold northern seas that is related to the seals and has long ivory tusks, a tough wrinkled hide with a thick layer of blubber below, stiff whiskers, and flippers used in swimming, diving, and moving about on land. |
| 4. foraging | <u>D.</u> To make a search especially for food or supplies. |

Story Time:

Q #1: But first we had to go through The _____ where Killers often wait for us.

A: Dangerous Pass (p. 78)

Q #2: Close to the action were two terrified Pacific white-sided _____, fleeing toward a nearby kelp bed where they could hide.

A: dolphins (p. 80)

Q #3: In The Coldest Place, we often saw Caretakers setting _____, what you call fishing nets, so we were constantly looking out for them.

A: whale traps (p. 82)

Q #4: Gray whales normally don't need to dive any deeper than about _____ ft. (30 meters) but they can dive to about _____ ft. (120 meters).

A: 100 395 (p. 84)

Q #5: They sometimes even eat us, like the _____

A: whale killers (p. 93)

End of chapter questions:

Q #1: What Strait, near Unimak Island, Alaska, is known for killer whale attacks on gray whales?

A: Isanotski (p. 78)

Q #2: How did the Pacific white-sided dolphin make the Killer's danger call?

A: With a terrible, beautiful, high-pitched scream (p. 82)

Q #3: Approximately how many killer whales have been spotted at False Pass during May and June?

A: 150 (p. 82)

Q #4: How do gray whales eat?

A: They dive down, suck mud from the bottom into their mouth, then push the mud and sediment out through the baleen plates in their mouth, using them as a filter. This leaves lots of amphipods in their mouth which they swallow whole. (p. 84)

- Q #5: What were the aboriginal hunters trying to catch? What weapon did they use?
A: The aboriginal hunters were trying to catch gray whales and used harpoons. (p. 88 and 91)
- Q #6: In Russian waters, how many gray whales can be legally hunted each year?
A: 140 (p. 91)
- Q #7: What are two ways that gray whales sustain their body temperature?
A: Partly by insulation from 5 inches of blubber and partly due to their arteries being surrounded by veins. (p. 94)
- Q #8: In 1988, how were three gray whales rescued after they were discovered trapped in a small hole in the ice near Point Barrow, Alaska?
A: Holes were cut in the ice and the whales were enticed to go from hole to hole until they were freed. (p. 96)
- Q #9: When do gray whales usually begin their long journey back to Baja?
A: October (p. 104)
- Q #10: What is the name of the green lights Lily saw in the sky?
A: Aurora borealis (p. 107)

Chapter 7, pp. 108-121

Vocabulary Words:

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|--------------------|---|
| 1. sea otter | <u>A.</u> A large marine mammal of northern Pacific coasts that feeds mostly on shellfish (as clams, crabs, and sea urchins) and can grow to nearly six feet (two meters) in length. |
| 2. bow (of a ship) | <u>C.</u> The forward part of a ship. |
| 3. peduncle | <u>B.</u> The stock of a whale's tail flukes. |

Story Time:

- Q #1: He vowed to help other _____ in trouble if he ever ran across any.
A: whales (p. 111)

Q #2: Maybe you can have a look and tell me which way to thrash and _____ to untangle myself?

A: turn (p. 113)

Q #3: Buddy even caught a few _____, tore them up a bit and then he spit them out for me to eat.

A: salmon (p. 114)

Q #4: After awhile, I used up what was left of my reserves, and every day that passed I became _____ and weaker.

A: hungrier (p. 117)

Q #5: Usually goodbyes were easy for us whales because we keep running into each other on our _____, but this was the hardest goodbye ever.

A: migrations (p. 118)

End of chapter questions

Q #1: During the gray whale's migration, what kind of food will they stop and eat?

A: Amphipods, herring eggs, krill or shrimp. (p. 113)

Q #2: Do gray whales have tear ducts?

A: No (p. 118)

Q #3: How do gray whales moisten and clean their eyes?

A: They have glands that secrete an oily substance. (p.118)

Chapter 8, pp. 122-143

Vocabulary Words:

1. disentanglement

B. To remove an animal from a fishing net or gear.

2. V-shaped jam knives

A. Have a cutting edge on the inside of the V so that they won't cut into the whale.

Story Time:

Q #1: They called Mr. Joe at the _____

A: National Marine Fisheries Service (p. 123)

- Q #2: Orange County didn't even have a _____
_____ group back then, so I organized one and
convinced Mr. Joe to train us.
A: whale rescue (p. 126)
- Q #3: They found she had _____ wrapped around her tail
flukes and her peduncle area (stock of her tail flukes).
A: netting (p. 130)
- Q #4: Also, if Lily started swimming too fast, they could attach more
_____ to slow her down.
A: buoys (p. 133)
- Q #5: Arielle then explained how the _____ worked.
A: tools (p. 134)
- Q #6: They had to be very careful working so close to Lily's powerful
_____ flukes.
A: tail (p.137)
- Q #7: Lily had thousands of miles to _____ to The
Coldest Place.
A: travel (p. 140)
- Q #8: More whales, porpoises, and _____ die
every year by getting entangled in fishing gear than from any other
cause.
A: dolphins (p. 143)

End of Chapter Questions:

- Q #1: How powerful are gray whales?
**A: Even in a weakened state, gray whales are still powerful: one
third of the weight of a gray whale is in its muscular system.
(p. 125)**
- Q #2: Who trained Captain Dave and others on disentanglements?
**A: N.O.A.A. (National Oceanic and Atmospheric Administration)
(p. 125)**
- Q #3: Why is it dangerous for the rescue crew to get into the water with
the whale?
**A: There could be netting hanging off the whale, and a rescuer
could get tangled in it and drown. (p. 126)**

- Q #4: How does the disentanglement team get the netting and rope off?
A: They attach special hooks and knives to the end of a long pole. (p. 126)
- Q #5: Were the jam knives a success?
A: No (p. 134)
- Q #6: How did the disentanglement team get the nets and ropes off Lily?
A: They were able to cut the netting and the rope off by hand. (p. 137)
- Q #7: What do whale lice eat?
A: Dead skin (p. 138)
- Q #8: What is a marsupium, which is found on female lice?
A: A pouch (p. 138)
- Q #9: How many dolphins and whales are dying in nets and fishing gear every day around the world?
A: 1,000 (p. 143)

Chapter 9, pp. 144-171

Vocabulary Words:

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|---------------|--|
| 1. blue whale | <u>B.</u> A whale that may reach a weight of 150 tons (135 metric tons) and a length of 100 feet (30 meters) and is generally considered the largest living animal. |
| 2. hydrophone | <u>C.</u> An instrument for listening to sound transmitted through water. |
| 3. X-pod | <u>A.</u> The underwater viewing pod on Captain Dave's boat, the Manute'a. |

Story Time:

- Q: There were over _____ common dolphins in this herd.
A: 5,000 (p. 146)

End of Chapter Questions:

- Q #1: What is the X-Pod and what is it used for on the Manute'a?
A: It is an underwater viewing pod set up for experimental interspecies communication. (p. 148)
- Q #2: How do dolphins catch sardines?
A: Each dolphin will zero in on just one sardine in the middle of thousands and follow that specific sardine until he caught it in his mouth and swallowed it. (p. 151)
- Q #3: According to NOAA, Southern California has the greatest density of what, per square mile, of anywhere in the world?
A: Dolphins (p. 156)
- Q #4: What kind of whale is Big Al?
A: A blue whale (p. 159)
- Q #5: How long is Big Al?
A: Three times the size of Lily (p. 159)
- Q #6: What does a whale's foot print look like?
A: A giant smooth spot on the water. (p. 161)
- Q #7: According to Cascadia Research and NOAA, California has the largest concentration of what on earth?
A: Blue whales (p. 161)
- Q #8: How far can a blue whale's low frequency sound travel?
A: A thousand miles (p. 162)

Chapter 10, pp. 172-183

Story Time:

- Q #1: The boat was almost back to the harbor, and she was supposed to help package meals for _____ in Africa and Haiti with her mom and others from her church.
A: hungry children (p. 173)
- Q #2: "I tell you the _____. What you have done for my Lily will never be forgotten!" proclaimed Lily's mom.
A: truth (p. 181)

End of Chapter Questions:

- Q #1: What organization did Arielle help pack meals for?
A: Kids Around the World (p. 175)
- Q #2: How did Arielle see Lily from home?
A: www.whalewatchingtv.com website (p. 183)
- Q #3: What can you do to help protect the whales, dolphins and other sea creatures that are dying in commercial fishing nets every day?
A: Help others become aware, work toward getting all our fish labeled, sign the petition to get fish labeled and ask how the fish were caught when visiting a market or restaurant. (p. 184-185)

Quizzes 1-3 and End of the Book Assessment Answers

Quiz 1 (Chapters 1-3)

- Q #1: Which harbor did Lily stay in for 2 days?
A: Dana Point
- Q #2: Why did Lily come and stay in the harbor?
A: She was hurt due to netting caught on her tail flukes.
- Q #3: Name one of the three characteristics of a mammal whale.
A: They nurse (feed on mother's milk), have live births (not from eggs) or swim to the surface to breathe.
- Q #4: What ocean is San Ignacio Lagoon located in?
A: Pacific Ocean
- Q #5: What is the name of the worst net for whale and dolphin entanglement?
A: Gillnet
- Q #6: Give one reason why gray whales breach.
A: To look around, to remove something irritating (like parasites) from their skin, to let others know of their presence or sometimes, just for the sheer joy of it.

Quiz 2 (Chapters 4-6)

- Q #1: Why did the killer whales think Lily is easy prey?
A: Lily was much smaller and weaker.
- Q #2: How did Buddy help Lily?
A: He raced over and pressed his body against Lily's. He protected her from the Killers and followed Lily and her mom up the coast to keep them safe.
- Q #3: What came off of Lily as a result of the Killers attacking her?
A: Lily lost some of the fishing gear.
- Q #4: Gray whales find which food hard to catch and eat?
A: krill
- Q #5: During May and June, approximately how many Killers will be seen at False Pass?
A: 150
- Q #6: What weapon do the aboriginal hunters use to catch gray whales?
A: harpoons

Quiz 3 (Chapters 7-9)

- Q #1: What kind of food will gray whales stop and eat during their migration?
A: Amphipods, herring eggs, krill or shrimp.
- Q #2: How do gray whales moisten and clean their eyes?
A: They have glands that secrete an oily substance.
- Q #3: How were the netting and rope removed from Lily?
A: They were able to cut the netting and the rope off by hand.
- Q #4: How many dolphins and whales are dying in nets and fishing gear every day around the world?
A: 1,000
- Q #5: What is the name of the underwater viewing pod set up on the Manute'a?
A: X-pod
- Q #6: What does California have the largest concentration of on earth?
A: Blue whales

End of Book Assessment

Q #1: List three facts about Lily's journey.

A: answers will vary

Q #2: List two facts about gray whales.

A: answers will vary

Q #3: Share two fascinating facts you learned.

A: answers will vary

Q #4: Besides Lily the gray whale, list one other ocean animal from the story.

A: answers will vary

Q #5: List two questions you have after you read the book.

A: answers will vary