

Grade 4 Aloha 'Āina Pre- Post-Test

1. A testable hypothesis is:
 - A. A wild guess about what I am studying.
 - B. A prediction based on my feelings.
 - C. An educated guess that the class agreed upon.
 - D. A prediction that will guide an experiment.

2. An experimental procedure is:
 - A. A set of directions you follow to test a hypothesis.
 - B. A set of steps you follow from a cookbook.
 - C. A set of directions you follow to build a model.
 - D. A set of steps you follow to test a conclusion.

3. Keoni wants to know more about cordage. He knows that modern cordage is often made from nylon fibers. He learned that cordage in old Hawai'i was made from strong natural plant fibers. He decided to compare their strength by experimenting with the "breakage" points of nylon vs. natural fibers. Which of the following hypotheses would **best** support his investigation?
 - A. If the cordage is made from plant fibers then it is stronger than nylon fibers because natural fibers are more common.
 - B. If the cordage is made of nylon then it would win the experiment because nylon fibers are stronger than plant fibers.
 - C. Cordage made of coconut husk was used to build houses in old Hawai'i.
 - D. Ships once used cordage made from *hau* because it is very strong.

4. Kahea needed to grow ti leaf plants for her hula competition. She was wondering how she could grow big healthy ti leaves quickly. Kahea knew that plants needed sun light, water, and nutrients to grow. Which of the following hypotheses would best support her investigations?
 - A. If I grew the ti leaf plants in the dark, then the ti leaf plant would grow faster because the sun will not dry up the plants.
 - B. If I grew the ti leaf plants in hot water, then the ti leaf plants would grow faster because the plants will be able to absorb hot water faster than cold water.
 - C. If I gave the ti leaf plants fertilizer, then the ti leaf plants would grow faster because the plants will have nutrients to grow.
 - D. If I gave the ti leaf plants salt, then the ti leaf plants would grow faster because the ti leaf plants like to grow in very salty conditions.

5. An observation is:
- A. What you tell your friend that your mom said.
 - B. What you see, hear, taste or smell in the environment.
 - C. An educated guess about what might happen in an experiment.
 - D. A conclusion based on data.
6. An inference is:
- A. An explanation based on evidence
 - B. Not a direct observation
 - C. May or may not be true
 - D. All of the above
7. Caleb and his team were trying to build a model of the irrigation system in old Hawai'i. They used sand for their model, and the sand kept washing away in their model. They had a difficult time creating a model that showed how stream water was used to irrigate *lo'i kalo*. Which of the following statements is the best inference to make?
- A. Sand is not the best material for building a model of the old Hawaiian irrigation system.
 - B. If there were more sand, then it would be easier for a stream to form in our model.
 - C. It is not possible to build a model of the old Hawaiian irrigation system.
 - D. Streams will not form when there is too much rain.
8. Which statement below is an observation?
- A. The fishes in the pond are ready to be harvested.
 - B. The fishes in the pond are hungry.
 - C. The fishes in the pond are sleeping because they are not moving.
 - D. The fishes in the pond are silver in color.
9. Which statement is an inference?
- A. The *lo'i kalo* has dry mud in it.
 - B. All the taro in the *lo'i kalo* are taller because of the rain.
 - C. The *lo'i kalo* has 6 taro plants in it.
 - D. There are five birds and three dragonflies in the *lo'i kalo*.

10. John saw many birds dipping their heads in the shallow area of the fishpond. He knew that many small fish were in the fishpond. Which of the following statements is the **best** inference to make?

- A. The birds like to sit in the shallow area of the fishpond.
- B. The birds were finding food to eat in the fishpond.
- C. The birds were digging holes to hide their eggs in the water.
- D. The birds didn't have anything else to do.

11. Which of the following is **NOT** an example of how farming has affected Hawai'i's people and environment?

- A. Farming influenced where people lived in old Hawai'i.
- B. Farming provided many important products in old Hawai'i.
- C. Farming determined how many boys would be born in one year in old Hawai'i.
- D. Farming fish in fishponds provided a valuable source of food in old Hawai'i.

12. Which of the following is an example of how fishponds affected Hawai'i's people and environment?

- A. Fishponds gave people safe places to swim near the shore.
- B. Fishponds provided a steady supply of fish for the *ali'i* (chiefs) and safe places for small fish to grow.
- C. Fishponds affected people and the environment by changing the tides to be higher and lower.
- D. Fishponds affected people and the environment by increasing the salt water in the ocean.

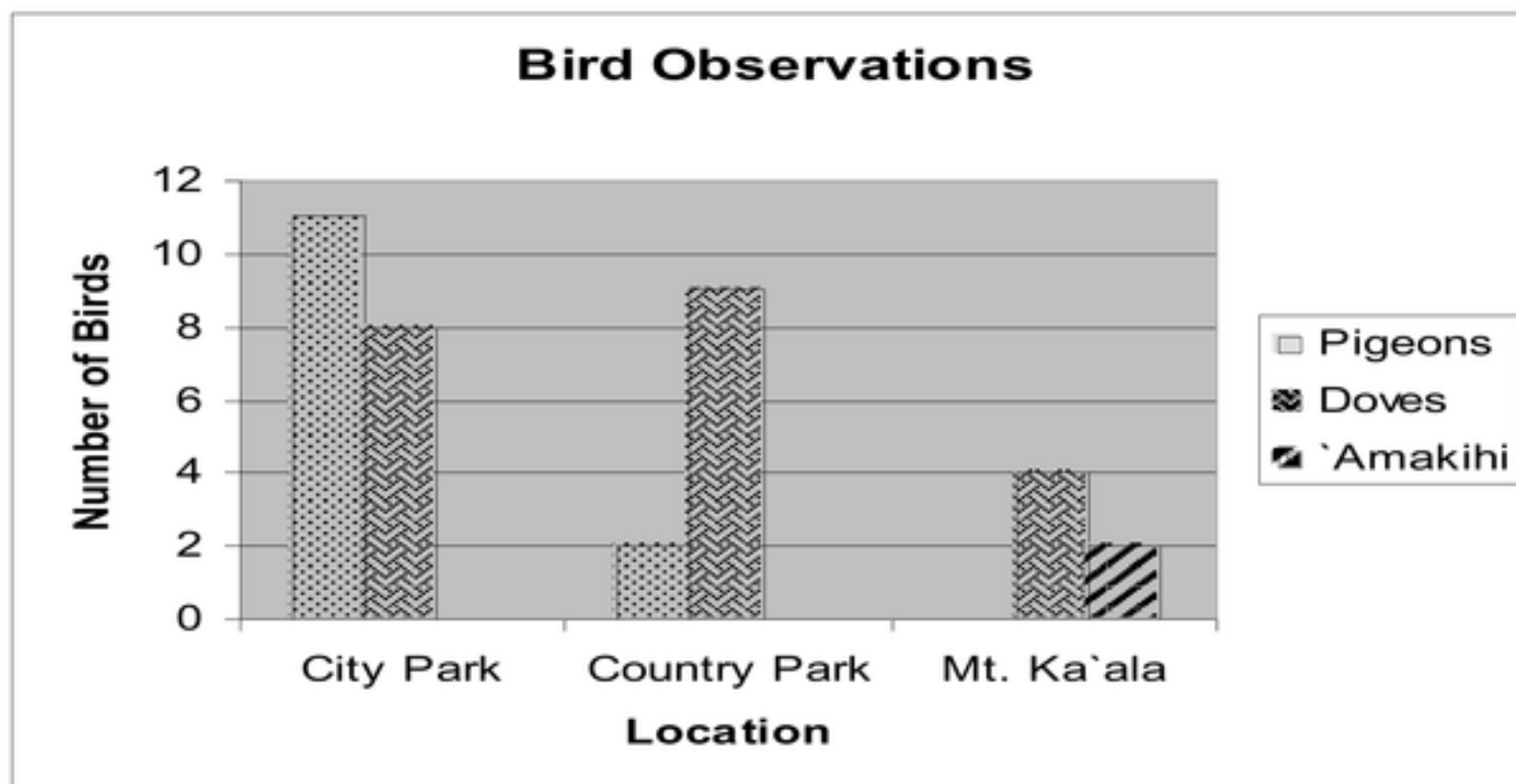
In early Hawai'i, the people had to get all the resources they needed to survive. Some of the people were farmers and they grew *kalo*, breadfruit, and other foods. Other people were fishermen and they gathered fish, octopus, and other seafood. People traded with each other for things they did not have such as ropes, wood to build canoes, *pili* grass for building homes, food to eat, and water to drink. Nothing was wasted and the people took good care of each other.

13. In early Hawai'i, if a farmer needed fish to eat, how will he get the fish?

- A. Go to the market and buy the fish for his family to eat.
- B. Get a bamboo and make a fishing pole to catch the fish for his family to eat.
- C. Go to the *ali'i* fishpond at night and steal the fish his family needs to eat.
- D. Go to a fisherman and trade the *kalo* he grew for the fish that the fisherman caught.

Pua wanted to see different kinds of birds. She visited three places and counted the birds she saw. The first place was a noisy city park in Honolulu. Then she visited a quiet country park in Waialua. Her last visit was to the forest at the top of Mt. Ka'ala, where she saw native honeycreeper birds called *'amakihi*. The city park was visited by lots of people and dogs. The country park was visited by few people and a few dogs. Mt. Ka'ala did not have any people or dogs there. Pua made a table and graphed her data.

	City Park	Country Park	Mt. Ka'ala
Pigeons	11	2	0
Doves	8	9	4
<i>'Amakihi</i>	0	0	2



14. According to the graph, which of the following is a **true** statement?
- The most birds Pua observed were doves.
 - The most common birds at all sites were the *'Amakihi*.
 - The most birds were found at the city park.
 - The country park had the most pigeons.
15. According to the graph and the data from Pua's visits, what would be a good inference to make from her observations?
- Pigeons and doves are not afraid of people and dogs.
 - Pigeons and doves are not adapted to live in most places.
 - Pigeons and *'Amakihi* don't like to fly high into the mountains.
 - 'Amakihi* and doves like the easy life of the city.

16. The *lo'i kalo* and *loko i'a* are examples of how the Hawaiians in the past kept:
- A. A balance between the natural resources and the needs of the people.
 - B. An endless supply of food by controlling the movement of the sun.
 - C. Making inventions to serve the land and water as a gift for the gods.
 - D. A journal of the sun, moon, and tide changes to control the land and water.
17. Unlike the practices of old Hawai'i, people today often affect the environment:
- A. Permanently so that some changes can be reversed.
 - B. Permanently so that some changes cannot be reversed.
 - C. Temporarily so any changes are positive to all the people.
 - D. Temporarily so any changes are negative to all the people.
18. What is another word for conflict?
- A. Description
 - B. Character
 - C. Solution
 - D. Problem
19. In a story, what does it mean when a conflict is resolved?
- A. The characters disappear.
 - B. The conflict happens again.
 - C. The story's problem is worked out.
 - D. The story's character has a problem.
20. In old Hawai'i, what is an example of how the *ahupua'a* system resolved conflicts?
- A. The *konohiki* (land managers) kept order.
 - B. Trading of goods made sharing not an important thing to do.
 - C. Families were able to move up in ranking by working hard.
 - D. Families prepared for the annual harvest festival called the Makahiki.
21. What is the problem that was solved by the formation of the *lo'i*?
- A. Supply and fair use of the land in the *ahupua'a*.
 - B. Supply and fair use of the food in the *ahupua'a*.
 - C. Supply and fair use of the water in the *ahupua'a*.
 - D. Supply and fair use of the labor in the *ahupua'a*.

22. Using parts of bodies to measure things was common in ancient Hawai'i. If you wanted the most cordage, who would you want to do the measuring?

- A. A short old man
- B. An average old lady
- C. A young child
- D. A tall adult man

23. Standard units for measurement are ____.

- A. Needed to have the same results in measuring all the time.
- B. Needed only when measuring things in science.
- C. Useful only in ancient Hawaiian times.
- D. Useful now because of the metric system.

Some fourth grade students wanted to conduct a project to care for the land. They thought about what they had learned about Hawaiian values and traditions. They decided to cooperate on a project that would help protect the fishpond.

24. Which action is an example *laulima* (cooperation) **and** *mālama* (caring) for the fishpond?

- A. Students work together to catch fish in the fishpond.
- B. Students work together to rebuild the fishpond wall.
- C. Students work together to plant mangrove in the pond.
- D. Students work on their own to harvest *limu* from the pond.

25. Which action shows how we can apply what we've learned from the past to our fishponds today?

- A. Students work together to make a *mākāhā* that traps large fish in the pond.
- B. Students show younger students how to make dyes from plants.
- C. Students show younger students how to make cordage.
- D. Students work alone to catch the fish in the fishpond.

Grade 4 Aloha 'Āina Test Answer Sheet

SC 4.1.1 Describe a testable hypothesis and an experimental procedure.

1. D
2. A
3. B
4. C

SC 4.1.2 Differentiate between an observation and an inference.

5. B
6. D
7. A
8. D
9. B
10. B

SC 4.2.1 Describe how use of technology has influenced the economy, demography, and environment of Hawai'i.

11. C
12. B

SS 4.3.2 Explain the history of Hawai'i's early economy

13. D

SS 4.7.2 Collect, organize, and analyze data to interpret and construct geographic representations.

14. C
15. A

SS4.7.3 Analyze the consequences of human modification of the physical environment in Hawai'i using geographic representation (including *lo'i kalo* and *loko i'a*).

16. A
17. B

LA 4.3.1 Explain the problem or conflict in a story and how it is resolved.

18. D
19. C
20. A
21. C

MA 4.4.1 Explain the need to use standard units for measuring

22. D
23. A

Nā Honua Mauli Ola (NHMO) 14-10 Preserve, protect, and sustain a healthy environment.
NHMO: 8-4 Apply the cultural and traditional knowledge of the past to the present.

24. B

25. A

Name: _____ Date: _____

Period: _____ Pre _____ Post _____

Aloha 'Āina Grade 4 Pre-Post Assessment

Answer Sheet

Use pencil to completely darken the appropriate circle for each question.

1. A B C D

14. A B C D

2. A B C D

15. A B C D

3. A B C D

16. A B C D

4. A B C D

17. A B C D

5. A B C D

18. A B C D

6. A B C D

19. A B C D

7. A B C D

20. A B C D

8. A B C D

21. A B C D

9. A B C D

22. A B C D

10. A B C D

23. A B C D

11. A B C D

24. A B C D

12. A B C D

25. A B C D

13. A B C D