Surfing at Sunrise



Supplemental Activities Packet

This packet contains classroom activity suggestions and worksheets to reinforce concepts from the Playbook® story and to go beyond the story into the content areas of Language Arts, Math, Science, Social Studies, Art, Health, etc., as well as Character Development.

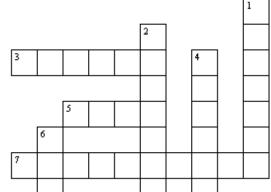
Activities range in age appropriateness and skill level so that teachers can choose activities that best suit their particular students. An Answer Key is provided on the last page.

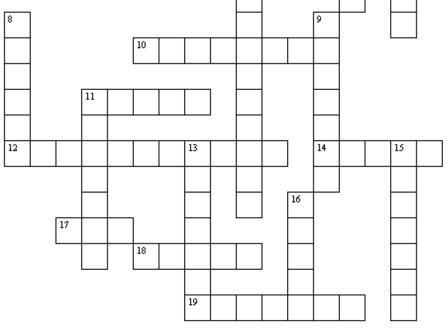
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Killer Crossword Puzzle

Directions: The following crossword puzzle quizzes you on both **vocabulary words** and **plot information** from *Surfing at Sunrise*. The vocabulary words are shown in a word bank below, but try to complete the puzzle using the bank as little as possible! Read the clues and write the correct word or name in the boxes.







saunter retreat sponsor scholarship blare compensate

Vocabulary Words

Down:

- 1 This character is saving up money for a wet suit.
- 2 _____ is not what is important.
- 4 Chad most of what Derek says.
- 6 Derek and Cody arrange their own personal
- 8 Cody says that you can't buy these.
- 9 When Cody and Derek try to surf the same wave, they
- 11 An organization that finances a person or group.
- 13 To walk or stroll leisurely
- 15 Uncle Kana says that the ocean treats everyone .
- 16 A loud noise like a siren or trumpet

Across:

- 3 The place Cody grew up
- 5 Uncle Kana's name in English
- 7 To make up for something
- 10 The location of the surf competition
- 11 Cody's father thinks Cody should do this more
- 12 Sum of money given to help a student pay for school
- 14 The character is arrogant and is a bad sport.
- 17 The responsibility that keeps Adult Cody from surfing very often anymore
- 18 Joey is very curious about hearing Uncle Kana's ______ before the end of the story.
- 19 To draw back or leave

Who's Having the Most Fun?



In *Surfing at Sunrise*, Uncle Kana's motto is, "The best surfer is the one having the most fun." At the beginning of the story, Cody and Kristie feel they need to win the competition to show the bullies, Derek and Chad, that they aren't as great as they think. When Uncle Kana lends Cody his surf board and gives him the motto, Cody realizes he doesn't need to win to be a successful surfer. Cody and Kristie learn that the most important things are trying their best and handling conflicts maturely, as they do when they release Derek and Chad from the bet.

Kana's motto a nd goals. Also pon the circun	out the best being "the one having the most fun" to your explain whether you agree or disagree with this motto. D stances?	own activities oes it depend

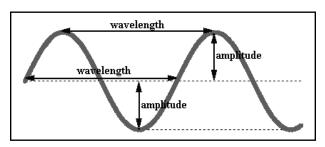
The Science of Surfing

Cody, Kristie, and Joey all love surfing, and sometimes it distracts them from their studies. However, they might just be learning a lot by riding those waves! Laws of science are what make surfing work!



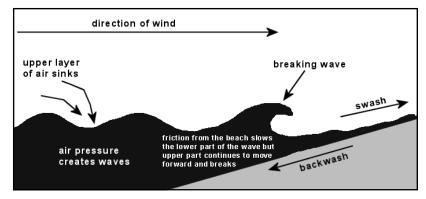
Source: http://www.explainthatstuff.com/surfingscience.htm

Waves in the ocean are caused by energy in one spot spreading out to other places. The source of the energy is wind! The waves you see on the shore do not have to be from anywhere nearby; they can travel for over 9,000 miles before reaching the beach. This is similar to light waves. For example, when you turn a light on in the middle of a room, the waves of light travel in all directions and the room becomes bright. Light travels so fast that you cannot see the waves the way you see waves in water.



As shown in the diagram, all waves have an **amplitude** (height from center line to top or bottom), **wavelength** (distance from the top of one wave peak to another), and **frequency** (number of waves that go by in a certain period of time). You can see these easily in ocean waves, which are relatively slow-moving.

The picture on the right shows how waves break because the water underneath the surface is held back by the sloped shore, while the surface of the water keeps moving forward. Sometimes waves break all at once, leaving nothing for surfers to ride on. Surfers like waves that break gradually, starting from either the left or



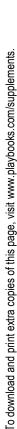
the right. Different breaking patterns are caused by both the shape of the ocean floor and shore. For example, reefs tend to cause waves to break gradually from one side to the other, making them great for surfing!

The Mechanics of Surfing: Surfing works a lot like skateboarding—the surfboard slides down the slope of the wave just like a skateboard would slide down a hill, as a result of gravity. The difference is that the slope is moving! To keep riding the wave a surfer must slide downwards at the same speed as the wave moves up beneath the board.

Surfers have to paddle to catch a wave, or the wave will leave them behind. This is because you need to start out with a certain amount of **momentum** to be able to adjust quickly to the wave's speed when it hits you. If you already have **kinetic energy** (motion), it makes it much easier for the wave to move you forward with some more. The faster you paddle, the easier it will be to catch your wave!

Directions: Use the Internet to research some basic information about kinetic energy. On a separate sheet of paper, write two paragraphs outlining what you find out!

Science Physics

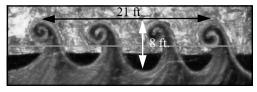




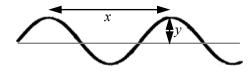
Math at Sunset

Part A: Solve the problems below using what you learned from the "Science of Surfing" page and your math skills. Write the answers in the spaces provided.

1. In the picture of the waves on the right, find the wavelength and amplitude.



2. If x = 7 - 5 + 4 and y = 6 + 1 - 3 - 4 + 2 find the amplitude and wavelength (in feet) of the wave shown on the right.



- 3. The frequency of a wave in the ocean is 4 waves per minute. How many waves go by each hour if the rate remains constant?
- 4. Cody enters 10 surfing competitions. The scholarship money for winning five of them is \$1,500 each. The prize for winning the other five is \$800 each. If Cody wins all 10 competitions how much money will he win? If one year of college costs \$15,000, how much money in addition to the winnings will Cody have to pay for one year of school?

Part B: Kristie and Cody need to finish their math homework so they can go surfing in the morning. They don't want to be doing math at sunrise instead! Try to complete the problems below quickly and accurately so you will have some free time, too!

- 1. $\frac{1}{4} = \frac{1}{64}$ Fill in the missing number in the proportion.
- 2. $\underline{\underline{6}} = \underline{\underline{54}}$ Fill in the missing number in the proportion. 108
- 3. Is a triangle with side lengths 21 inches, 21 feet, and 24 inches isosceles, scalene, or equilateral?
- 4. Find *n* in the following set of numbers: *n*, 2, 5, 5, and 4. range = 17, median = 5 n =
- 5. Multiply: $1.63^2 =$ _____ 6. Multiply: $2.001 \times 6.0064 =$ _____
- 7. Find the square root: $\sqrt{289}$ = 8. Find the square root: $\sqrt{484}$ =

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Hawaii: Origin of Surfing

Surfing is a popular sport among kids and adults in many countries today, but do you know how it started? The first account of surfing found in Western history is an entry from the *Journal of Captain King, Cook's Voyages*, during his explorations of Hawaii in 1779. He observed the native people swimming into the ocean and letting the waves carry them back to shore while riding on long wooden boards. Sound familiar? King and his sailors were astounded at the difficulty and danger involved in riding on the waves and avoiding the rocks at shore, especially since most European sailors of the time could not even swim!



Hawaiian **petroglyphs** (rock carvings) like the one shown on the left, and chants which tell tales of great surfing accomplishments, suggest that surfing was practiced even earlier than the year 1500! Surfing was regulated by the Hawaiian code of laws called the **Kapu system**, which ranked royalty above commoners and was a very strong force in society. Surfing and other sports were tools for those in charge of the kingdom to improve and maintain their strength. According to the code of law, surfboards had to be constructed in very specific ways depending on the rider's position in the kingdom. Boards for highest-class members of society were 14 to 16 feet long and made of the best

Source: http://www.coffeetimes.com/surf.htm; http://www.alternative-hawaii.com/hacul/history.htm

quality wood. People lower in social status used shorter boards of only 10 or 12 feet, made of heavier wood. Today, surfboards come in various sizes, classed as long boards or short boards. Modern long boards are easier to use than short boards, and the same was probably true of ancient Hawaiian surfboards. The chiefs not only used the best surfboards but also reserved the best beaches for their own use.

Surfing was first brought to California in 1907 when a land developer arranged a surfing demonstration to be given at the opening of the Redondo-Los Angeles Railroad at Redondo Beach. Around this time, shorter surf boards of only 8 feet were developed, and surfing began gaining popularity.

The Hawaiian **Kapu system** ruled many other aspects of life besides surfing. It divided society into four groups: chiefs, priests/craftsmen, commoners and outcasts. Chiefs held their power based on family relationships and leadership abilities, and some were believed to be gods. Priests and craftspeople performed religious ceremonies and advised chiefs. Commoners were by far the largest group, and were responsible for producing and preparing food, building houses and canoes, and other daily tasks. Outcasts were forced to live apart from the rest of society. The Kapu code was also closely connected with nature and many of its laws relate to the conservation of natural resources and respect for nature. This makes it one of the earliest social systems designed to protect the environment!

Directions: Your teacher may assign you one or both of the following research exercises.

- A. Use the Internet at home or at your school's library to research the origin of a particular modern sport. Choose a sport that you think has been around a very long time. Write an essay explaining in what forms the sport was first seen, how it fit into society at the time of its origin, and how it developed into the sport we see today.
- B. Use the Internet to research the Hawaiian Kapu system and write an essay describing the different ways it governed Hawaiian society. How did the system begin and end?

Social Studies History/ Writing

Source: http://www.nssia.org/Safety_Rules.html

Safety in the Surf



In the Playbook® story, Cody and Derek collide because they both try to ride the same wave, and they break their surf boards. As you learned in the story, it's considered bad manners to "drop in" on someone else's wave, and for good reason! Collisions not only cause damage to equipment but can also cause injury. If you surf, you should always follow these safety and etiquette guidelines:

- Surf only at beaches where lifeguards are on duty.
- Make sure you do not surf in a "swimming only area." Be careful; sometimes tides will pull you up shore or down shore without your notice.
- Be aware of the current surf conditions by checking for a green, yellow, or red flag, and do not enter the ocean if the conditions are too dangerous.
- Beginning surfers should avoid crowded areas while learning.
- Always be aware of your surroundings and the locations of other people in the water.
- A surfer riding a wave has the right of way. Those paddling should avoid people already surfing waves.
- When two or more surfers try to catch the same wave, the person closer to the peak of the wave has the right of way.
- Do not "snake" waves. This is when someone deliberately moves in front of another surfer who is trying to catch a wave, preventing the surfer who was there first from catching the wave. It is important to let other people have turns to ride waves.
- Do not dive headfirst into the water; always put your hands out in front of you and land flat when falling off a surfboard.
- Cover your head when returning to the surface of the water so your surf board cannot hit it.
- A "rip tide" is a strong current that goes straight out to sea. If you are caught in one, you should swim across it rather than against it. Most rip tides are narrow and swimming parallel to shore will soon bring you to safety.
- Wear sunscreen and drink lots of water to avoid dehydration.
- Take surfing lessons, if possible, so you will learn the best techniques and be less likely to get hurt.

Directions: Choose a sport that is popular in your area, you are familiar with, or you would like to try and make a list of safety and etiquette rules that should be observed when participating in the sport. You may use both your own knowledge and the Internet to compose your list on a separate sheet of paper.

Health Safety

Telling a Story

There are three types of narrative voice to choose from when writing a story or other creative work. In *Surfing at Sunrise*, Adult Cody tells a story in the **first person** narrative form. As demonstrated in the excerpt below, this means the story uses "I" statements and centers around the experiences of the speaker.

"I paddled out and caught the next wave. I did a nice bottom turn and headed up the face of the wave and then continued down the line, building up speed for my trick. I zoomed across the water and right when I had enough speed, turned up the wave and into the air, but my board flew in the opposite direction."

The **second person** narrative form uses "you" statements and commands. An example of this form is: "If you want to win the surfing contest, you should practice every day." This form is rarely used in stories.

The **third person** narrative form uses "he" and "she" statements and shows the viewpoint of an outside person observing the events and the thoughts of the characters.

Directions: On the lines below, write a descriptive essay or story about an important or exciting experience you have had with a sport or physical activity. Use the first person narrative form. Remember to share your feelings as well as the events for a more interesting story. If necessary, continue your story on a separate sheet of paper. Your teacher may assign a more detailed essay project with this activity as your rough draft.

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Language Arts





Like Father, Like Son

Directions: Answer the essay questions below on the lines provided.

1.	Uncle Kana is a friend and a role model for Cody, always encouraging him and giving advice. Do you have a relative or other trusted adult you look up to? How does this person serve as a role model for you?					
2.	At the beginning of the story, Joey just wants to go surf instead of listening to his dad, but as he hears the story, he is intrigued. He begins to understand that his dad was a kid once, and enjoyed some of the same things as Joey does now! Do you remember a time when you suddenly identified with a story your parents or an older relative told about themselves as children or teenagers? Did this change the way you viewed your parent or relative?					

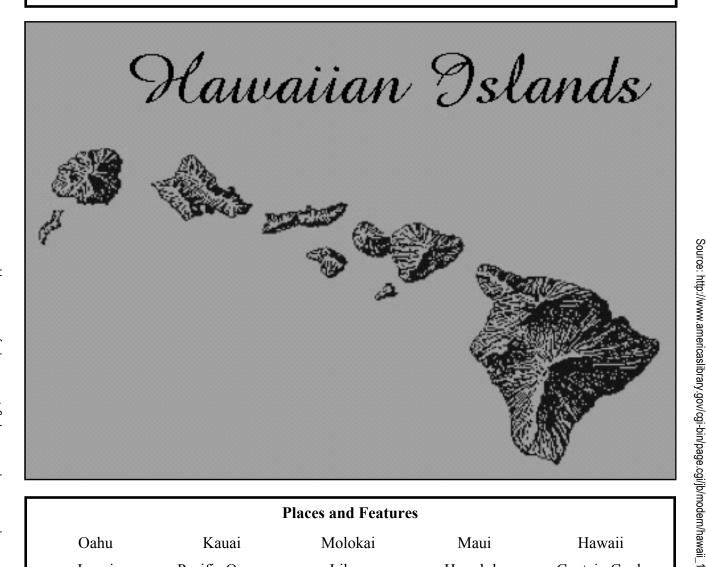
The 50th State

As you have learned, Hawaii has influenced the United States by introducing the sport of surfing. The islands of Hawaii were inhabited by Polynesians for over 1,000 years before Europeans explored them. Captain Cook first named them the Sandwich Islands in 1778 after an English earl,



but that name didn't last! In 1887 the United States built a naval base in Hawaii at Pearl Harbor and it soon became a U.S. territory. Hawaii took a great part in U.S. economy, and finally, Hawaii became our 50th state in August, 1959.

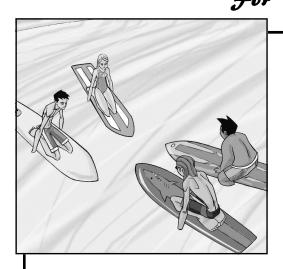
Directions: Trace or copy the outline of the map of Hawaii provided below on a separate sheet of paper and label the island names, cities and geographical features shown in the box on your map. Use an atlas or the following web page as a reference: http://mapoftheunitedstates.files.wordpress.com/2008/01/hawaii_map.jpg



Places and Features									
Oahu	Kauai	Molokai	Maui	Hawaii					
Lanai	Pacific Ocean	Lihue	Honolulu	Captain Cook					
Waialeale	Kailua	Kaneohe	Lahaina	Lanai City					
Pearl City	Waimea	Mauna Kea	Mauna Loa	Hilo					

Social Studies History/ Geography

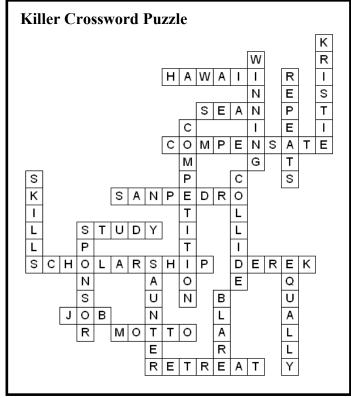
Surfing at Sunrise Answer Key For Teacher Use Only



The 50th State

All Hawaii map features are shown at the following web page:

http://mapoftheunitedstates.files.wordpress.com/2008/01/hawaii_map.jpg



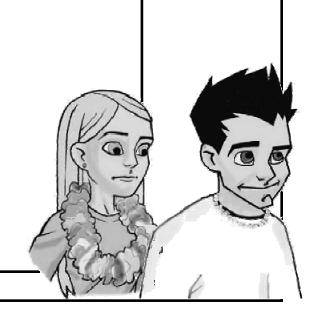
Math at Sunset

Part A:

- 1. wavelength = 7 ft. amplitude = 4 ft.
- 2. amplitude = 2 ft., wavelength = 6 ft.
- 3. 240 waves per hour
- 4. He will win \$11,500; he will need \$3,500 more to pay for a year of school.

Part B:

- 1. 16
- 2. 12
- 3. isosceles
- 4. n = 19
- 5. 2.6569
- 6. 12.0188
- 7. 17
- 8. 22





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