

Dear Educator:

Let the delightful characters from the critically acclaimed animated film *Surf's Up* help your students catch the next wave to becoming "math mavericks" with this fun and educational program brought to you by Young Minds Inspired (YMI), in partnership with Sony Pictures Home Entertainment and Sony Pictures Animation.

This highly entertaining and visually appealing film, available on DVD beginning October 9, 2007, tells the story of Cody Maverick, an up-and-coming penguin surfer, as he enters his first pro competition.

Followed by a camera crew to document his experiences, Cody is shown leaving his home in Shiverpool, Antarctica, to travel to Pen Gu Island for the Big Z Memorial Surf-Off. Along the way Cody meets memorable characters such as the Sheboygan-based surfer Chicken Joe, larger-than-life surfing promoter Reggie Belafonte, and charming yet spirited lifeguard Lani Ali'ikai, all of whom recognize Cody's passion for surfing, even if it's a bit misguided at times. But it's a most unlikely encounter with his surfing hero that helps Cody discover that a true winner isn't always the one who comes in first.

An exciting math adventure awaits your students as they journey along with Cody in this free program for grades 1-6 and discover the fun of using logic, arithmetic, map-reading, and measurement skills to help Cody achieve his dream. Extensions are provided for older students, as well as a take-home connection on each sheet so that parents can join in the fun of *Surf's Up* while reinforcing math skills at home.

Please share this program with other teachers, and return the enclosed reply card. Although the learning materials are copyrighted, you may copy them for educational purposes. We welcome your comments and suggestions.

Sincerely,


Dr. Dominic Kinsley
Editor in Chief

SURF'S UP™

Program Objectives

- To use logic and reasoning skills to identify and predict patterns.
- To practice addition, calculation, and numerical ranking skills.
- To use a map legend to calculate distances.

Standards Alignment

This program aligns with national standards for mathematics for grades 1-6 (see www.ymiteacher.com/surfsupstandards.pdf)

How To Use This Program

Display the wall poster to introduce the program, generate student interest, and engage students in additional math-based exercises. Review, photocopy, and distribute the reproducible master sheets at the beginning of each activity. Tailor the activities to the age and ability of your students, using the suggestions in this guide. Assign the Parent Connection activities at the bottom of each sheet as homework and ask students to report the results.

Activity 1 Gnarly Surfboards

This activity prompts students to use their logic and reasoning skills to identify and predict number patterns. Ask students to count the number of shells on each surfboard and identify the

relationship between them. (The shells increase by two.) How many shells should appear on the fourth and fifth boards? (There would be 9 and 11 shells, respectively.) Tell students to draw those numbers of shells on the blank boards. Brainstorm other numerical patterns with

students and have them use the five blank surfboards on the second line to create their own patterns.

Extension: Challenge older students to subtract, multiply, or divide the numbers shown in various combinations as you wish.

Activity 2

Surf-Off Scores

Have students use their math skills to rank the three surfers who compete in a mock trial leading up to the Big Z Memorial Surf-Off featured in *Surf's Up*. Tell students that three judges have each given a score to the surfers listed. As head judge, students must complete the scorecard by totaling each score, then ranking them from highest to lowest to determine the winner—the surfer with the highest score.

Extension: Ask older students to calculate each surfer's average score and fill in the appropriate column. Students can also graph the averages on the back of the paper.

Answers:	Total Score	Rank	Average
Chicken Joe	27	1st	9
Tank Evans	27	1st	9
Cody Maverick	24	2nd	8

Activity 3

Tubular Travels

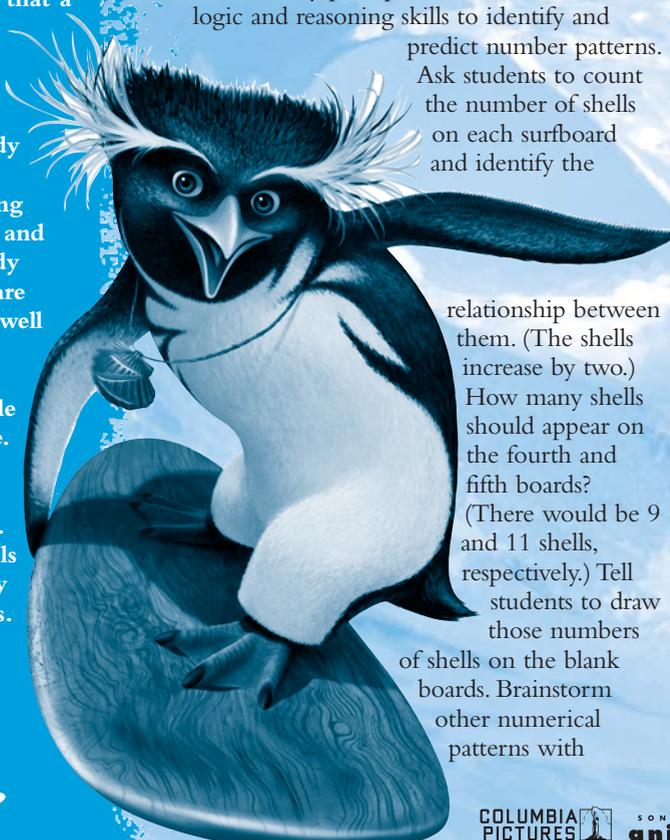
Tell students that in *Surf's Up* the Big Z competition draws surfers from all over the world to Pen Gu Island (for activity purposes, cited here as being located near Taiwan). First point out to students the continents of Australia and Antarctica. Antarctica, the world's southernmost continent, is home to Cody Maverick. Guide students to cut out the ruler on the sheet and use it to calculate how far Cody traveled to get to Pen Gu Island. Then have them do the same for each of the other locations listed on the sheet (students may work in small groups). Help them rank the distances by writing them on the board and ordering the locations from nearest to farthest from Pen Gu Island.

Extension: In the film, surfers come from all over the world for the competition. Pick two additional places on the activity map and have students measure those distances to Pen Gu Island as well.

Answers: Approximate distances in miles to Pen Gu Island from: Sheboygan—8,000; Shiverpool, Antarctica—9,000; Bells Beach, Australia—4,000; Waikiki, Hawaii—4,000; Huntington Beach, California—6,000

Answers to Poster Questions

- (1) at least 3 (2) The wave is 20 mph faster than Lani can swim. (3) approximately 3 (4) 18 inches tall



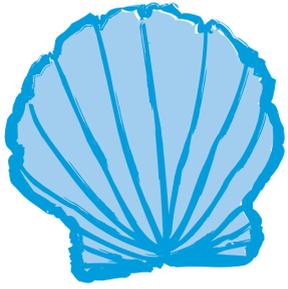
COLUMBIA PICTURES

SONY PICTURES animation

made at imageworks

SONY PICTURES HOME ENTERTAINMENT

YMI YOUNG MINDS INSPIRED

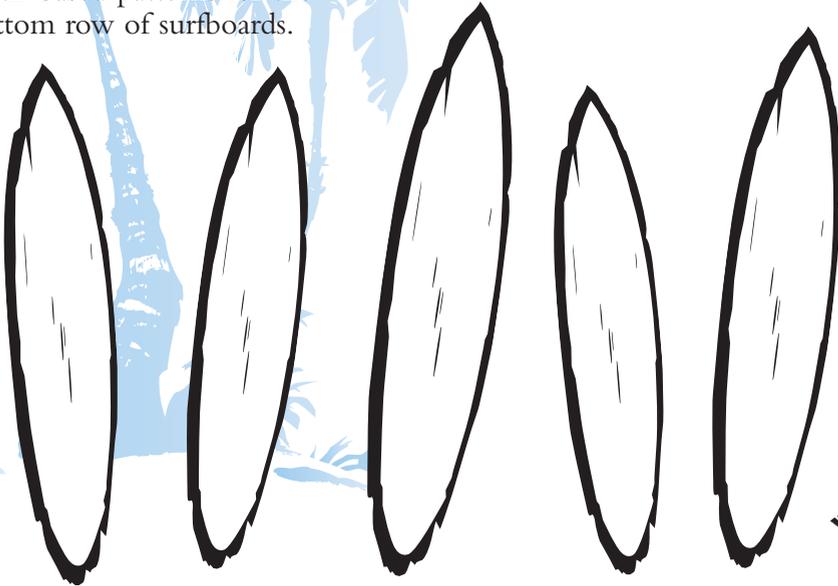
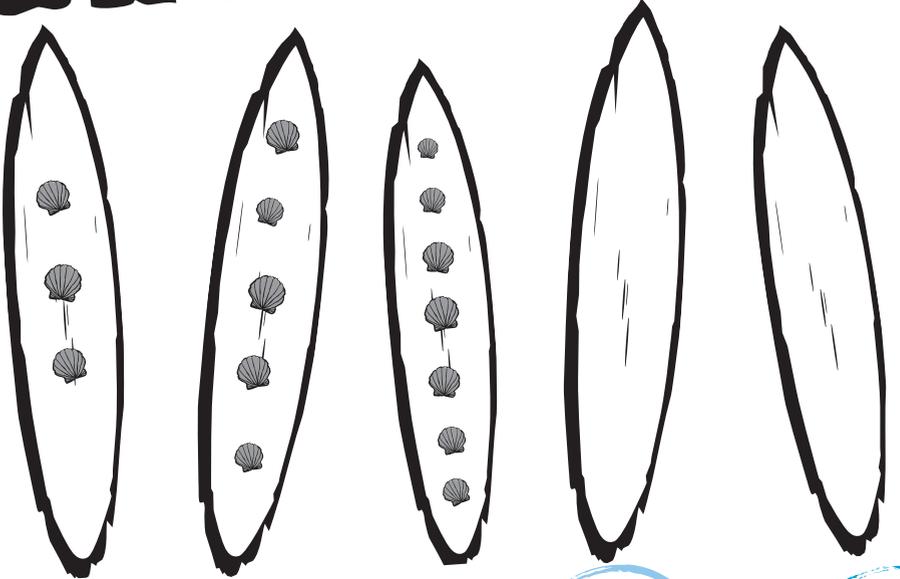


Activity 1

Gnarly Surfboards

In the new DVD of the fun film *Surf's Up*, Cody and other surfers decorate their surfboards with their own unique patterns. The designs often tell about each character's personality. For instance, the aggressive surf champion Tank Evans's board is decorated with tiger stripes.

Numbers have patterns, too. Understanding the patterns helps you figure out how the numbers relate to each other. Look at the pattern of shells on each surfboard in the top row. Use your math skills to decide how many shells should be on the fourth and fifth surfboards. Then make up your own math-based patterns for the bottom row of surfboards.



Catch the wave at www.sonypictures.com/surfsup when *Surf's Up* is available on DVD on October 9th



Parent Connection: Recognizing patterns is an important skill in math and science. Watch the DVD of the fun animated film *Surf's Up* with your child to find out how many different types of penguins you can spot in the film, based on the patterns of their unique markings. For example, Rockhopper penguins like Cody Maverick sport long yellow feathers over their eyes. You can also reinforce your child's math skills by playing pattern recognition games such as finding the patterns in your child's clothing. (See the answer at right.)

Answer: In addition to the Rockhopper penguin, there are three other different types of penguins in the movie: Emperor penguins (Tank Evans) have two golden stripes on each side of their head. Gentoo penguins (Lani) have wide white stripes like a bonnet over their eyes. King penguins (Geek) have vivid orange patches on either side of their head.



Activity 2 Surf-Off Scores



As Cody Maverick swims out to catch the big wave in the Big Z Memorial Surf-Off, sports announcer Rob Machado comments that “Maverick is going to have to stay focused and channel his energy to good things.” Will Cody pull it off? You be the judge!

Pretend that you are the head judge in a trial competition leading up to the Big Z Memorial. Help the other judges add up each surfer’s score below to find out who the winner is. Under the column marked “Rank,” number the surfers’ scores from highest to lowest. If directed, find the average score for each surfer.

Who is the winner? _____

Do you think Cody will win when it really counts—in the Big Z? Check out *Surf’s Up* to find out!

Surfer	Scores					
	Judge 1	Judge 2	Judge 3	Total Score	Rank	Average
 Chicken Joe	8	9	10			
 Tank Evans	9	9	9			
 Cody Maverick	9	9	6			



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Parent Connection: Sports and exercise are a great way to improve your child’s math skills, and improve fitness too. Talk about how math is used to keep score for various sports such as the surfing competition in *Surf’s Up*. As an example, watch a favorite sport together with your child and note how it is scored. You might also keep a daily exercise log with your child. And check out the home page for the East Coast Surfing Championships at www.surfesc.com. Help build your child’s math knowledge by following the links to find scores and statistics for real surfers.



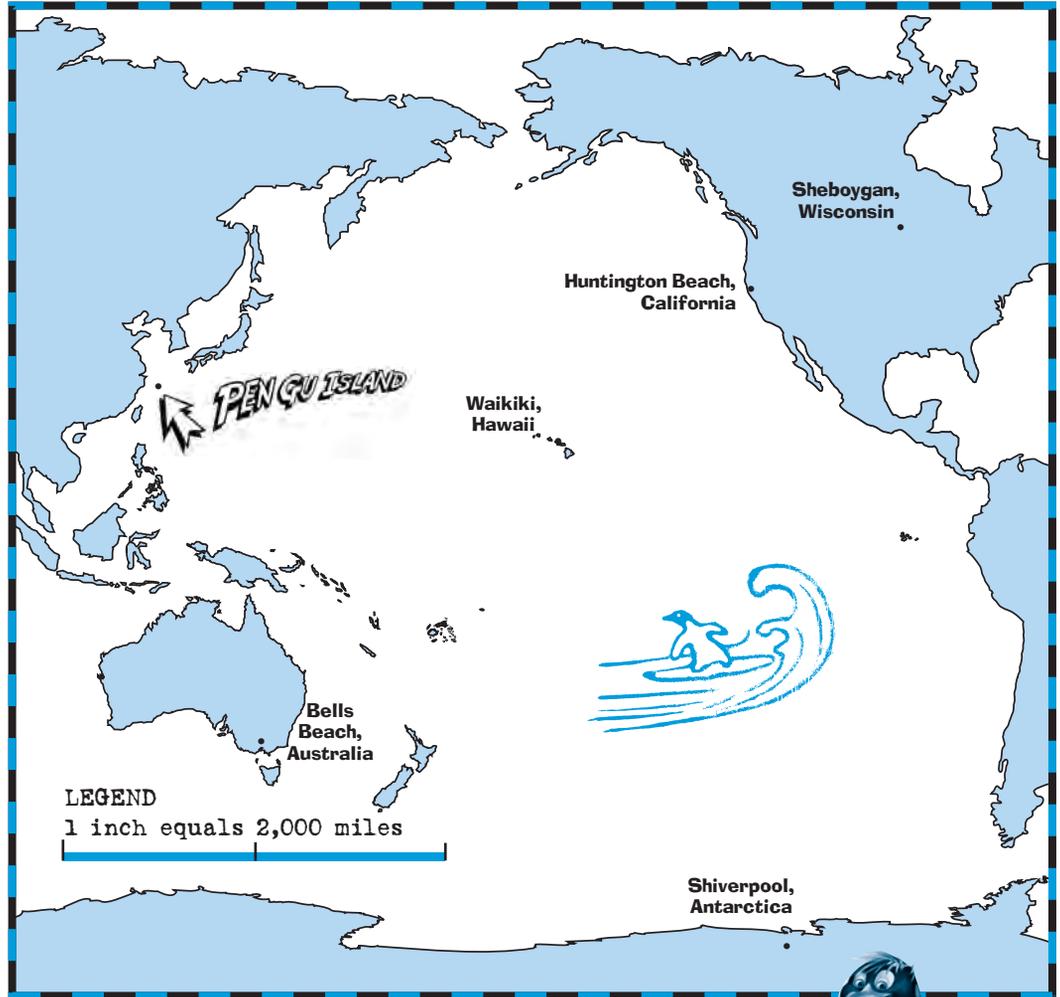
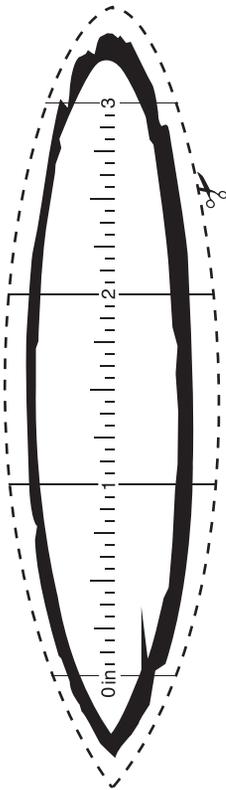
Activity 3

Reproducible Master

Tubular Travels

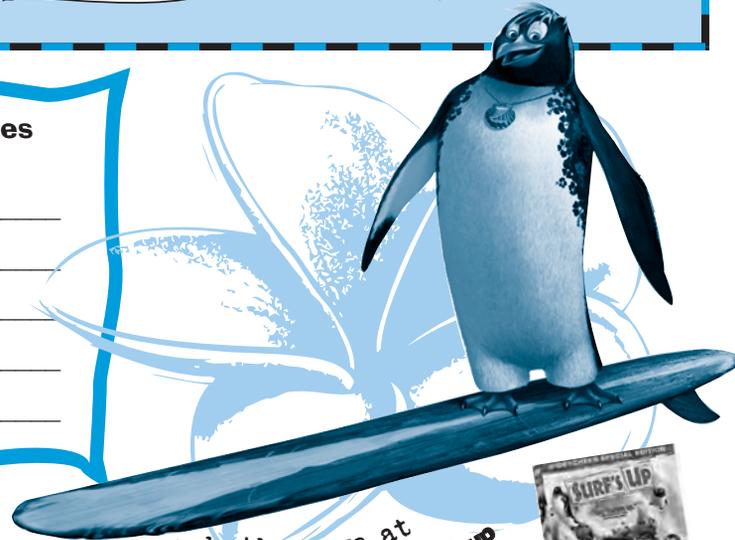
In the DVD of the fun movie *Surf's Up*, talented surfers come from all over the world, including faraway places like Shiverpool, Antarctica, to compete

in Pen Gu Island's Big Z Memorial Surf-Off. How far do they travel? To find out, cut out the ruler on this sheet. Then measure how far surfers traveled from each of the points below to Pen Gu Island. Use the map legend to convert the inches on your ruler into miles.



Home Surfing Base

- | | Distance in Flying Miles to Pen Gu Island |
|------------------------------|---|
| Shiverpool, Antarctica | ➔ _____ |
| Sheboygan, Wisconsin | ➔ _____ |
| Bells Beach, Australia | ➔ _____ |
| Waikiki, Hawaii | ➔ _____ |
| Huntington Beach, California | ➔ _____ |



Parent Connection: Cody Maverick, the main character in the new DVD of the fun animated film *Surf's Up*, calls Antarctica home. Visit www.antarcticconnection.com/antarctic/wildlife/penguins to discover what life is really like for penguins living in Antarctica, Earth's southernmost continent.

Catch the wave at www.sonypictures.com/surfsup when *Surf's Up* is available on DVD on October 9th



There are 17 species of penguins in the world. How many of them appear in *Surf's Up*?

Cody

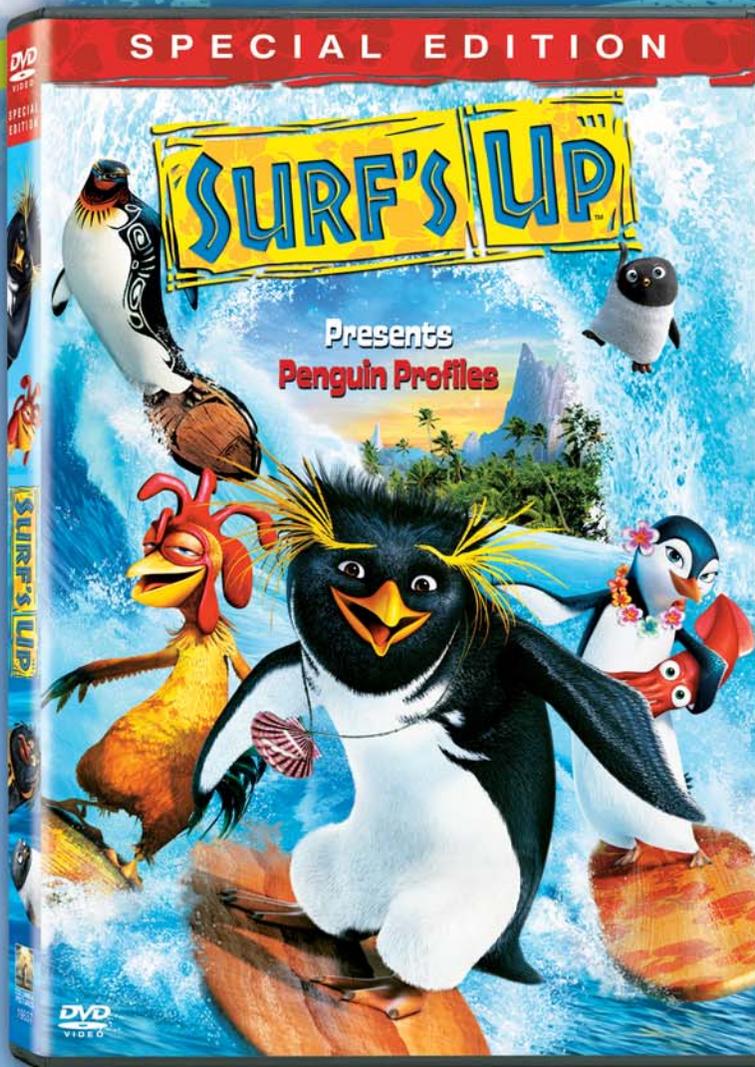


Rockhopper Penguin...
as played in *Surf's Up* by Cody Maverick

- Very energetic and often hops from rock to rock
- **Height:** 18-23 inches
- **Weight:** 5-8 pounds
- **Origin:** Southern islands such as the Falklands and the Antipodes
- **Radical characteristic:** Long yellow feathers over their eyes

Emperor Penguin...
as played in *Surf's Up* by Tank Evans

- The largest of penguins
- **Height:** 40 inches
- **Weight:** 60-90 pounds
- **Origin:** Weddell Sea, Princess Elizabeth Lands, and the Ross Sea regions of Antarctica
- **Radical characteristics:** Two golden stripes on each side of their head



Penguin PUZZLERS

1. How many Rockhopper penguins would you have to stack up so they could hop onto the top of your refrigerator? 
2. As the competition lifeguard, a Gentoo penguin like Lani is well-suited for her job—she is forever rescuing little Arnold from trouble! Some waves that surfers ride have been clocked at 42 miles an hour. How does that relate to how fast Lani can swim? 
3. Tank uses his size to bully everyone on the beach while strutting around with his surfboard. A typical surfboard is about 72-120 inches long. How many Emperor penguins can lie end to end on a surfboard that is 120 inches long? 
4. If the ratio of Cody's height to Lani's height is 1:2, and Lani is 38 inches tall, how tall is Cody? Who is taller? 



Catch the wave at www.sonypictures.com/surfsup when *Surf's Up* is available on DVD on October 9th

Gentoo Penguin...
as played in *Surf's Up* by Lani AN'Yaki

- The fastest swimmers of any penguin species--up to 22 miles an hour
- **Height:** 30 inches
- **Weight:** 12 pounds
- **Origin:** Antarctica and islands in southern areas
- **Radical characteristic:** Wide white stripes like a bonnet over their eyes



Lani

