

Activity Sheet 1

Sandlapper Solutions

OVERVIEW

Katie and Ben are spending the summer with their Aunt Sissy Ravenel. Aunt Sissy is picking them up in their hometown of Beaufort where they will begin their trip. They will spend several days visiting sites in South Carolina as they travel to Aunt Sissy's summer home in Caesar's Head. Throughout their trip, Katie and Ben have many opportunities to apply the mathematics they learned in school.

Use the Internet to take a virtual field trip to tourist attractions in South Carolina. Challenge classmates to solve the math problems you develop based on your Internet field trip. See listed Web sites on page ?

Beaufort

Aunt Sissy wants to see the sights in Beaufort before beginning their trip. With so much to see and so much good seafood to eat, it is hard to know where to begin!

1. During the Civil War, in November 1861, Union forces shelled and occupied the Port Royal area. In June 1862, the first freedmen school, with nine adult enrollees, was established on St. Helena Island. Known as the Penn School, it closed as an independent school in 1948.

How many years did the Penn School operate? _____

2. Aunt Sissy would like to bring her book club to Beaufort for the "Bubba Gump" Shrimp Festival. Tickets cost \$10 each.

If she orders a ticket for each of the 12 members, how much will it cost? _____

If each member brings her husband, how much will it cost? _____

If Aunt Sissy puts down a 10% deposit on the tickets and pays the balance later, how much will the deposit be? _____

3. Katie and Ben would like to take Aunt Sissy to visit the Penn Center on St. Helena Island. The bridge to the island lifts at 11:00 a.m. to allow tall ships to pass. The speed limit in town is 40 miles per hour and they are 12 miles from the bridge. If they leave home at 10:30, will they cross the bridge in time or have to wait? _____

Charleston

Aunt Sissy wants Katie and Ben to learn more about the history of South Carolina so they begin their vacation with a trip to Charleston.

1. Fort Moultrie was completed in 1809 and is the third fort on this site. The original palmetto log fort was started in 1776 and was only half completed when attacked by a British fleet on June 28, 1776.

How many years did it take to build Fort Moultrie? _____

2. The Fort Moultrie visitor's center is located opposite the fort. A 20-minute film shows on the hour and the half-hour.

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Ben decides that they should watch the film when they arrive at 10:00 a.m. If they plan to eat lunch at 12:00 noon, how long will they have to tour Fort Moultrie after watching the film?

Katie thinks her class would enjoy a field trip to Fort Moultrie. It is located 10 miles east of Charleston, South Carolina. Cost: Adults, \$2; children under 16, \$1 each. Since the 26 students in her class are 12 years old, how much will the total cost be for her class? _____

3. Katie and Ben are excited to hear that the new South Carolina State Aquarium has opened. Aunt Sissy agrees that this should be their next stop.

The aquarium has 65 different exhibits. Ben estimates that they will need to spend an average of three minutes at each of the exhibits. If they allow an additional 15 minutes for a snack break, how much time will they need for their visit to the aquarium? _____

Katie and Ben's parents have given them \$25 each for spending money. After a visit to the gift shop, Katie selects a stuffed porpoise for \$8.95. Ben decides to save his money. If Katie buys the porpoise and pays 5% sales tax, how much of her spending money will she have left? _____

4. Aunt Sissy thinks that no trip to Charleston is complete without a visit to a historic plantation. Magnolia Plantation features the year-round blooms of America's oldest gardens (c. 1680).

How old are the Magnolia Gardens? _____

Ben's new Nike's have worn blisters on his feet and he insists he has taken 10,000 painful steps around the gardens. The children estimate they have been walking at a rate of three miles per hour. If there are 5,280 feet in a mile, and they have walked one hour, how many feet have they walked? _____

If each footstep is approximately two feet long, how many footsteps have they taken in the one-hour walk through Magnolia Gardens? _____

Is Ben correct in his estimate of 10,000 painful steps? _____

Columbia

Being the capital of South Carolina, Columbia has many government buildings and offices to visit. Aunt Sallie feels their first visit should be to the newly renovated South Carolina State House or "Capitol Building."

1. The South Carolina State House is 143 years old. It was designed by John Rudolph Niernsee and took 56 years to complete.

When was the State House built? Begun? Completed? _____

2. The State House weighs more than 70,000 tons and cost more than \$3,450,000 to build.

If there are 2,000 pounds in a ton, how many pounds does the building weigh? _____

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3. The building is approximately 300 feet long, 100 feet wide, and 180 feet tall. It has 130,673 total square feet.

There are 43,560 square feet in an acre. How many acres are in the Capitol Building? _____

4. Riverbanks Zoo is a welcome relief to the children who are ready to relax and enjoy the animals. More than 2,000 animals are housed in natural habitat exhibits.

Ben wonders what would happen if the animals got loose in the 70-acre botanical garden that joins the zoo! How many wild animals would be roaming each acre? _____

5. Riverbanks Zoo uses psychological barriers such as moats, water, and light to create an environment free of bars and cages for animals. Visitors see the animals in a natural habitat. With an annual attendance of approximately 850,000, what is the average daily attendance? _____

6. Riverbank's admission gates open daily at 9:00 a.m. On the weekends during daylight savings time, the park closes at 6:00 p.m.

If our trio arrives at the zoo as soon as it opens, takes one hour for a picnic lunch and two 15-minute snack breaks, how much time will they have to watch the animals? _____

7. Riverbanks Admission Rates:

| | |
|------------------------------|-----------------|
| Adults (13 years and older) | \$4.50 – \$6.25 |
| Children (3–12 years) | \$3.25 – \$3.75 |
| Children (2 years and under) | FREE |

If Ben's class of 25 students and five parent chaperones visit the zoo next year, what will the total admission be? _____

What if the group rate is 20% less than the regular total? _____

Greenville

Driving up I-85 toward the upstate, Aunt Sissy, Katie, and Ben marvel at the differences in geography and habitats in their home state. From the mountains to the sea, this truly is an interesting state to live in.

1. The BMW Zentrum is a beautiful building from the outside and that is as far as they get! Ben is disappointed to learn that there is more than a one-year waiting list to take a tour. Instead, he begins to plan to buy a red BMW on his 21st birthday.

If Ben is 10 years old now, how much will he need to save each year to buy a \$50,000 car on his 21st birthday? _____

2. The Greenville County Museum of Art is featuring an exhibit of illustrations by children's authors and illustrators. "Just the perfect mix of culture and fun," exclaims Aunt Sissy Ravenel.

From the gift shop, Ben selects two posters for \$3.95 each and six postcards to send his friends. The postcards are \$.50 each, or 3 for \$1. After adding the 5% sales tax, how much of Ben's \$25 spending money is left? _____

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3. As they head up the mountains toward Caesar's Head, Katie begins to calculate their arrival time. This is complicated! The trip will be about 40 miles. The first half of the trip their speed will average 50 miles per hour. The second half they will be slowed on the winding two-lane roads. Katie estimates they will average 35 miles per hour on the second half.

If they leave Greenville at 1:00 p.m., when will they arrive? _____

4. The Caesar's Head overlook is an amazing sight for the two Lowcountry children. At 3,208 feet, the overlook provides a breathtaking view of the Blue Ridge Mountains. A trail marker reminds the children that the highest point in South Carolina is Sassafras Mountain at 3,560 feet.

How much higher is Sassafras Mountain than Caesar's Head? _____

Can you express this as a percent? Sassafras is _____ % higher than Caesar's Head.