

## **Mystic Mountains: Scene 1**

“We’ve reached the destination point! Coordinates: \_\_\_\_\_,” the pilot of the helicopter yelled to his four young passengers.

Michael, Juanita, Tiffany, and Carlos looked excitedly at one another even though their stomachs were filled with butterflies. The mountains from above seemed endless, and the four teenagers had to survive on their own for one month. The television station had chosen them to be a team on the next “Survivor” series, in which the setting was the mountains. That was practically the only information they were given about the challenge, so their heads were swarming with ideas of what was to come.

Tiffany was worried, and said, “I hope this pilot knows what he is doing.” The group saw the bare rocks of the mountain top coming closer and closer.

Michael boasted, “I bet he’s done it a hundred times. I’m not afraid at all.”

Juanita chimed in, “Me neither.”

Carlos said, “I don’t know about you guys, but I’m wondering what we are going to eat tonight for dinner.” Carlos was always thinking about food. That was probably because he loved to cook up delicious dishes for his family and friends whenever he got a chance.

Everyone’s attention was suddenly turned to the mountain as the helicopter landed with a loud thud. After a few minutes, the four teenagers began filing off the helicopter. They huddled in a group near some trees not too far from the helicopter.

Juanita asked, “Isn’t he going to shut the helicopter off?” Not a second after she finished speaking, the helicopter lifted off the ground and was out of sight in a matter of minutes.

The group stared at one another for a moment. Michael broke the silence. “Well… I guess we should come up with a plan to survive this mountain.” Michael was determined to survive the mountain and win the game. After all, he was sacrificing precious time he would normally be using to play soccer.

Tiffany exclaimed, “But we don’t even know where we are! The only things we know are the coordinates. I don’t even know what that means!!!” Tiffany probably would have been more worried about the situation at hand, except she was busy missing her Golden Retriever, Champ. At home, she would spend hours teaching him tricks with the Frisbee. He was getting so good that she was considering entering him into a dog Frisbee contest.

Carlos begged, “Please stop freaking out. It won’t do us any good to start worrying. We have to get busy!”

Juanita interjected, “I agree with Carlos. Let’s spread out and see what’s here on this mountain top.” As she leapt across some large stones, she thought of the new

cheerleading routine she and the other cheerleaders were working on last week. She already knew she would miss her friends and activities while trying to survive the mountain. She decided to not think about it for the moment and concentrate on the current task

The group split up and surveyed the breathtaking scenery. The mountains and trees were in every direction and continued on as far as the eye could see. A light breeze blew, and the temperature was quite comfortable even though it was August.

Carlos observed, "I guess it must be cooler at the top of this mountain compared to the bottom."

Michael agreed, "Yeah, you're probably right. There's so much we don't know about his mountain."

Suddenly, Tiffany yelled, "Look over here! Look over here! There's a bag with stuff in it!"

## **Mystic Mountains: Scene 2**

Tiffany opened the bag as the others crowded around. She shook the items out of the bag. The items included water purification tablets, matches, ropes, knives, space blankets, a compass, fishhooks, and a cell phone.

Carlos said, “Look! We have a cell phone. Oh wait, the battery in it is barely charged!”

Juanita disagreed, and said, “No, it’s not cool! What will we do for food, water, and shelter?”

Michael added, “And how will we know where we are and how to find the things we need to survive? How will we know how high we are?” Everyone was worried at this point. Home was so far away. How could this adventure possibly be successful?

Sitting on rocks, the four teenagers wondered what they should do next. The mountain was a very quiet place. Every once in a while, a bird would call out to the other birds, but that was about it.

Tiffany said, “I know! Do you remember what the television producer was telling us before we boarded the helicopter?”

Juanita replied, “Good job, Tiffany! I almost completely forgot that we are allowed to request help once. What should we do?”

Michael exclaimed, “I have some friends taking an Earth Science class at RMS. They’ll know what to do. Let’s call them on the cell phone!”

## CONSTRUCTING A MAP

There are many possible materials your team can use to make a map. Below is a list of media. Some will be available in class, but you are encouraged to be CREATIVE and bring items from home, too.

1. construction paper
2. Styrofoam
3. Foam
4. Clay
5. paper maché
6. foil
7. paint
8. colored markers
9. egg cartons
10. Paper plates
11. Paper towel rolls
12. String/yarn
13. And more....



**Self-Evaluation**

**Name** \_\_\_\_\_

1. What did you contribute to solving the case?
2. What do you feel you did well when solving the case or completing the group assignments?
3. What do you think you could do better?

**Peer Evaluation**

**Name of the peer (fellow student) being evaluated:** \_\_\_\_\_

1. What did your peer contribute to solving the case?
2. What do you think your peer did well when solving the case and completing group assignments?
3. What do you feel they could do better?

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## Topographic Map Application Activity:

Topographic Map Activity  
Renfroe Middle School  
Earth Science

Materials: colored pencils (blue, red, brown, green)

Study the attached map.

1. What is the contour interval of this map? (the numbers represent feet)
  2. What is the highest index contour of this map?
  3. What is the elevation of Renfroe?
  4. Find the hill at Agnes Scott College where the observatory is located (hint: look to the east of the track). What is the elevation of the observatory hill?
  5. Find Shoal Creek. It is indicated by a dashed line. Outline the creek with a blue pencil throughout its length. What is the creek's elevation?
  6. Do you think that water running off the parking lot from Renfroe might eventually run into Shoal Creek? Why or why not?
  7. What symbol is used to indicate a school on this topographic map? Draw the symbol here.
  8. Color all the school symbols on this map with a red pencil.
  9. How can you tell where the tops of hills are located?
- Color in the tops of at least 5 hills on this map with a brown pencil.
10. If you like to ride up and down hilly terrain on your bicycle, what region of this map would be more fun for you, northeast (NE), northwest (NW), southeast (SE), or southwest (SW)?
  11. Can you find a depression on this map? If so, color it green.

JK



Pretend that you are at McKoy Park. Trace the following route with your finger. You exit from the west side of McKoy Park and turn right onto McKoy St. You go one block and turn right on Benson St. You go one block and turn left onto Adams St. You cross over Oakview Rd. and continue straight on Adams St. until you get to Renfro at the intersection of Adams St. and College Ave. If you were riding a bicycle on this route, you just rode up and down some steep inclines. Here is how the elevation changes on this route: at McKoy St., 1030 ft; at McKoy and Benson, 1040 ft; at Benson and Adams, 1020; at Oakview Rd., 950 ft.; then you start climbing back up until you get to Renfro at 1040 ft. Notice that you started at 1030 ft. and your final elevation at Renfro is 1040 ft., just a 10 foot difference. However, you started at 1030, went down to 950, and then went back up to 1040 ft. The elevation change of your ride was 1040 (the greatest elevation on the route) minus 950 (the lowest elevation on your route) or 90 feet; you just climbed a nine story building on your bicycle!

Here is a challenge. You are exiting McKoy Park from the west side of the park on McKoy St. You would like to ride to Renfro on your bike, but you are trying to avoid hills. You sprained your ankle while playing softball, and it hurts when you put pressure on it. You must follow streets, and you don't mind going a little extra distance as long as your route has the least amount of elevation change possible (that is, NO BIG HILLS). Figure out the best route to accomplish this goal, and give directions for your route.



