

Shadowing a Musher for Nine Days – No Deodorant Required Middle School Math Application

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Discipline / Subject: Math

Topic: Middle School Math- using percentages, averages, and proportions

Grade Level: Seventh Grade

Resources / References / Materials Teacher Needs:

Daily race updates <http://www.iditarod.com/2007/> (click on race updates),

Daily checkpoint <http://www.iditarod.com/learn/iditarodtrail.html> (distances from one checkpoint to another)

Daily checkpoint temperatures and sunrise-sunset times

<http://www.iditarod.com/2007/weathercenter.html> ,

Musher bios <http://www.iditarod.com/2007/> (click on Musher listing then click on specific musher for bio)

Lesson Summary:

This lesson provides the middle school student an opportunity to apply math principles learned in a lightly competitive way. While choosing one musher to follow through the entire race, the student will have opportunity to observe when their musher speeds up, slows down, the amount of sunlight and severity of weather the musher experienced, when the musher chooses to take a dog out of the race, in addition to basic personal information about their musher. All the information is readily available on the Iditarod.com web site—this lesson simply puts the information in a format that enables the student to apply what they know.

Standard's Addressed: (Local, State, or National)

1. real world use of distance (speed) formula
2. real world use of finding averages
3. real world use of proportions
4. real world use of percentages

Learning objectives:

1. The student will be able to demonstrate application of the speed formula in determining a given musher's overall speed.
2. The student will be able to determine the current percent of the trip traveled by a given musher.
3. The student will be able to determine the daily average temperature and daily hours of sunlight
4. The student will complete a basic survey of a given musher.

Assessment:

The student will complete the daily portions of the attached packet using data provided by the teacher.

(idea: 10 points for each completed page for a total of 40 points. Partial points awarded for partial work)

Procedural Activities

1. Choose a musher from the current list
2. Complete the bio questionnaire using information from the bio site
3. Gather required daily information from the race update site
4. Using a calculator, complete the daily table
5. At the end of the race complete the bio questionnaire

Materials Students Need: copies of packet containing Iditarod Musher questionnaire, distance chart, daily speed chart, temperature and sunrise/set chart, calculator, posted daily results or access to internet site

Technology Utilized to Enhance Learning: computation on calculators, obtain needed race information from given web sites

Other Information: The two documents attached were made into a single packet for the students. We used the packet in class each day during the race. This only took about ten minutes, more on the first day due to instructions and initial modeling. Students can also gather this data on the provided web sites. Info could also be displayed using an LCD. I provided the daily stats, (current standings and weather) from the web sites. This only took five minutes each morning. Students from all my classes ran to the room each morning to check the standings before going to their first hour. Conveniently we had a middle school assembly (the Thursday after Jeff King pulled in first place--2006)...so I took the opportunity to recognize the students whose mushers came in first second and third. They were called to the front and presented gold, silver, and bronze medals. Back at class, all the students received candy for participating. All in all, they enjoyed the activity and learned about the Iditarod.

Modifications for Special Learners/ Enrichment Opportunities: Students can team up with other students and compute data together. Students can do only 1 or 2 of the charts as instructor sees their ability. Enrichment opportunities: download daily photos from Iditarod site for class and/or investigate the environment of the front-runners checkpoint.

XXXIV Iditarod Race

The Iditarod is a dog sled race from Anchorage, Alaska to Nome, Alaska. In 1925 diphtheria spread throughout the city of Nome. Serum to vaccinate the population had run out. Airplanes were not yet reliable transportation in the harsh weather of Alaska. A rescue relay of mushers pulled by trained teams of sled dogs delivered serum and stopped the spread of the deadly disease. This race is to commemorate the mushers and their dogs who raced against time to help the people of Nome.

There are two different routes that are used for this race, a north and a south route. This year the race will take place on the _____ route. Don't be bothered if your musher does not progress on a certain day. During the race they will be required to take a 24 hour rest and an 8 hour rest.

You are to look over the mushers that are presented. Choose one to follow during the race. On the following pages, you will compile information about your musher and their progress.

Name of Musher you chose to follow in the race: _____
Where is this person from?

What mushing experience do they have?

Why did you choose this musher?

Answer this question at the end of the race.

How do you feel your musher
did? _____

Explain: _____

Would you like to try being a musher sometime?

Distance to each checkpoint

Day	Checkpoint Name	Distance from Start	Total Distance	Proportion	% Complete
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					

Daily Speed

Distance formula _____ Speed formula _____

Day	Current # of dogs	Distance completed to date	Hours in race	Current speed	Previous speed	Change in speed
1					NA	NA
2						
3						
4						
5						
6						
7						
8						
9						
10						

Temperature and Daylight Hours

Day	Today's High Temp	Today's Low Temp	Today's Average Temp	Sunrise	Sunset	Total amount of daylight
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						