

Mountain Man Measurement Rendezvous

Summary

Students will participate in several classroom Mountain Man Measurement Rendezvous activities where they will apply measurement skills.

Group Size

Small Groups

Materials

- Pompoms
- Paper plates
- Craft sticks
- Straws
- Marshmallows
- Sponge
- ml measuring container
- Container for water
- Bowl
- Cans
- Beans
- Balance
- Marbles
- Metric weights
- Meter and yard sticks
- Measuring tape
- Measuring wheel
- Graph paper
- Pencil
- [Rendezvous Event Directions](#)
- [Rendezvous Recording Sheet](#)

Additional Resources

Books

How Tall, How Short, How Far Away, by David A. Adler; ISBN-10 0823416321

Measuring Penny, by Loreen Leedy; ISBN-10 0805065725

It's Probably Penny, by Loreen Leedy; ISBN-10 0805073892

Twelve Snails to One Lizard, by Susan Hightower; ISBN-10 0689804520

Background for Teachers

The Mountain Man played an important part in the history of the American frontier. The era of the Mountain Man/Trapper lasted about 40 years from 1820 - 1840. They made many contributions to history by exploring the entire western part of the United States. They discovered easier ways to get through the mountains, made maps, kept journals, and served as guides and scouts for pioneers, the army, and the government.

The Mountain Man also introduced the Rendezvous to the history books. Rendezvous were gatherings held each summer where mountain men would meet with fur traders to trade their furs for supplies. The trappers would trade their furs for the "possibles" needed for the coming fur season. "Possibles" were such things as Galena lead for rifle balls, black powder, traps, "rendezvous whisky,"

coffee, sugar, pemmican, jerky, clothing, blankets, horses and mules and other items that allowed them to live through the coming winter.

The life of a trapper was tough, lonely, and dangerous. The rendezvous gave these mountain men an opportunity to come together to swap stories of the year behind them; test their skills against each other, brawl, drink, and resupply for the coming year.

What kind of measurement would a mountain man have used? It was unlikely that they carried the common measurement tools of the time. In most cases, they did not need precise measurements in their daily activities. They generally used the measurement "tools" that mankind has over time to measure, parts of the human body. For example, the length of the tip of the index finger to the joint is a "digit" and the width of four fingers is a "palm." The distance from the tip of the thumb to the end of the little finger is a "span." The width of the thumb is about an inch. The distance from the elbow to the tip of the middle finger is called a "cubit." Distance was measured by the length of a person's foot. Three feet equaled about a yard. Longer distances were measured in paces. Two steps is a "pace." These were good enough for their daily activities.

At the time of the mountain men, there were other areas of life and commerce that required more precise measurement. It is likely that at the rendezvous, where commodities were being traded, such as lead for bullets, bottles of whiskey, salt, flour and other commodities, standardized measurements, such as pounds and quarts were no doubt used.

In different times and places in the world, there have been many systems of measurement. Today we use only two systems, the customary system in the United States and the metric system, which is, used almost everywhere else in the world. In all cases, measurement systems are tools that are used to help achieve specific objectives. How precise they are is entirely dependent on how precise they must be to achieve these objectives. The measurement systems necessary for the day-to-day life of the mountain men illustrate these differing needs.

Intended Learning Outcomes

1. Develop a positive learning attitude toward mathematics.
5. Connect mathematical ideas within mathematics, to other disciplines, and to everyday experiences.

Instructional Procedures

Invitation to Learn

Invite students to make a list in their journals all of the ways they use measurement in a day. After completing the list, instruct them to mark five items they would not like to live without. Discuss how prevalent "measurement" is in our lives and how almost everything we do involves measurement in some way.

Instructional Procedures

Mountain Man Measurement Rendezvous

The Mountain Man Measurement Rendezvous is a hands on, active learning measurement activity designed to give children the opportunity to demonstrate their measurement skills in a classroom version of a measurement Rendezvous. This activity would be good to have outside. A classroom, gym or hallway could be used if they are available

Students will participate in several classroom Mountain Man Measurement Rendezvous activities where they will apply measurement skills. (The teacher may need to limit the number of the events that can be reasonably completed on the time allotted for this activity.)

Lead class in discussion about a Mountain Men Rendezvous. Make connections to Utah History. Explain that students are going to use their measurement skills to see how well they will do in a classroom version of a measurement rendezvous.

Give each student a copy of *Rendezvous Recording Sheet*.

Students should refer to the recording sheets while teacher describes procedures and materials

for each event.

Divide class into pairs or small groups. Set up rules for changing stations so that all groups have enough time to complete each task.

Remind students that they will usually get only one try in each event, and they need to record this attempt.

Laminate student directions and post them at each station. Each student or pair of students should keep track of their work on *Rendezvous Recording Sheet*.

Extensions

Curriculum Extensions/Adaptations/ Integration

Mountain Man Measurement Rendezvous activity could be done using only metric or standard measurement.

Invite students to make up their own measurement activities and game.

Family Connections

Students and families can create measurement activities around a different theme, such as a carnival, sports, winter or summer events.

Bath time provides good opportunity to practice measuring capacity.

Assessment Plan

The teacher will assess the students' understanding of various measurements through observation during the events. The teacher will assess the student's estimation ability and the understanding of different measurements by checking the recording sheet for accuracy.

Bibliography

Research Basis

Boulton-Lewis, G. M., Wilss, L. A., & Mutch, S. L. (1996). An analysis of young children's strategies and use of devices of length measurement. *Journal of Mathematical Behavior*, 15, 329-347

Measurement is one of the principal real-world applications of mathematics. It bridges two critical realms of mathematics: geometry or spatial relations and real numbers. Done well, education in measurement can connect these two realms, each providing conceptual support to the other.

Indications are, however, that this potential is usually not realized. U.S. students study geometric measurement less than those in most other countries (National Center for Education Statistics, 1996).

Bonwell, C. C. & Eison, J. A., (1991). *Active Learning: Creating Excitement in the Classroom*, ASHE-ERIC Higher Education Report No. 1. Washington, D.C.: The George Washington University.

Active learning is simply that--having students engage in some activity that forces them to think about and comment on the information presented. Students won't simply be listening, but will be developing skills in handling concepts in our disciplines. They will analyze, synthesize, and evaluate information in discussion with other students, through asking questions, or through writing.

Authors

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