

NAME _____ CLASS _____

SNOWFALL COMPARISONS AND CONVERSIONS

ACTIVITY INTRODUCTION/EXPECTATIONS

Upon Completion of this unit, you will be expected to know or have an understanding of:

- How snow forms in the atmosphere.
- How snowfall is measured.
- What is meant by dry and wet snow.
- How water equivalent is measured.
- Mean, median, and mode.
- How to convert measurements to the SI system.
- How decisions are made locally during snow events.

ACTIVITY DESCRIPTION

In this activity, you will get actual snow measurements from a CoCoRaHS data map. You will find the mean, median and mode of the snowfall amounts. You will also make a graph of the snowfall in the area. You will find that wet and dry snow do exist, and how to find the water equivalent of snow.

MATERIALS

- CoCoRaHS snow accumulation map from teacher
- Pencil or pen
- Graphing paper

METHODS

1. Obtain a CoCoRaHS map of snow accumulation
2. Make a chart/table of reporting stations and amount of snowfall
3. Make a graph using the data you have on your chart/table.
4. Calculate the mean, median and mode for the snowfall amounts.
5. Answer questions in the REVIEW/CONCLUSIONS section.
6. Convert measurements and water equivalents to SI units.

RESULTS AND CONCLUSIONS

1. What is the average snowfall amount in inches for the area on the map? _____
In cm? _____
2. What is the median snowfall amount in inches? _____ in cm? _____
3. What is the mode for the snowfall amount in inches? _____
in cm? _____
4. What is the average water equivalency for the snow in the area? _____

5. What is meant by wet snow or dry snow?
6. What is the "glue" that holds a snowflake or snowball together?
7. Calculate the average amount of snow in grams.

EXTENSIONS:

Check with your local school administrators and find out what parameters or guidelines are used to determine when and if school is dismissed for snow.

Check with the Department of Transportation in your area to find out at what point or guidelines they use to send out snow plows or sand/salt vehicles.

Contact your local National Weather Service office and ask for data about records from your local cooperative weather observer. Make graphs, spreadsheets, etc. for precipitation, snowfall, minimum and maximum temperatures. Find the mean, median and mode of each.

Use archived newspaper articles etc. to see how your local community has dealt with severe weather events (drought, snowfall, blizzards, hail, etc) how they affected the economy, lifestyles, etc in your area.