

NAME _____ CLASS _____

DRAWING ISOPLETHS ACTIVITIES ACTIVITY 1

Upon completion of these activities, you should know or understand:

- How to recognize changes in weather patterns based on analyzed temperature, pressure, and precipitation patterns.
- How to better analyze weather maps by drawing isopleth lines from raw data.
- How forecasters use isopleths to make predictions.
- How significant weather events or changes can change the lives of people, affect crops, livestock, and wildlife.
- How significant weather events or changes can be the cause of disease transfer and wildlife migration.

ISOPLETHS are simply lines that connect values or measurements of equal value. It is a form of graphing areas of equal altitude (topographic maps), temperature, pressure, precipitation, and many other useful measurements.

ACTIVITY DESCRIPTION

In this activity, you may work in groups or alone as directed by your teacher. This activity should show you why precipitation amounts vary greatly sometimes over a small area. You will learn to draw lines of equal precipitation values (isopleths) based on how much "confetti snow" you get in your cup. Be certain to share your amount with all the other groups and get their amounts so you can complete your activity.

MATERIALS

- Confetti snow (your teacher will have this).
- Paper or Styrofoam cup
- Grid or graphing paper
- Pencil and eraser
- Map colors

METHODS/PROCEDURES

- Place your cup in a grid line or area on the floor as directed by your teacher.
- Mark N,E,W,and S around the grid to represent the directions of a compass.
- Your teacher will randomly scatter the confetti snow over the cups.
- Count the number of snow pieces that actually went into your cup and put that number on your grid/graphing paper where your cup was located on the floor grid.
- Get the number of snow pieces from the other people in the class and put their number on your grid sheet where their cups were located.

- Put a colored dot on each number on your grid. If the number is zero, leave it white, if it is a 1 use a red dot on the number, a 2 use orange dots, 3 yellow, 4 green, 5 blue, and so on as directed by your teacher
- Draw a nice curved line to separate the 1's from 2's and 2's from 3's etc

RESULTS

By drawing in the lines for the different precipitation amounts, you should be able to see why various amounts of rainfall, snow, hail, and so on may be reported from different parts of your town.

CONCLUSIONS

1. What part of your grid got the most snow? (North, South, East, West)
2. Why do you think that part of the grid got the most?
3. What part of your grid got the least snow?
4. Why do you think that part of the grid got the least?
5. Could this happen with precipitation over your town or county?
6. Why would it be important to know where the "flood plain" in your area is before building a home?