

Name _____ Date _____

Activity 1.4.2 Highs, Lows, Winds and Jet Streams (Student Worksheet 1.4.2.1 "High")

OBJECTIVE

Students will apply the "hand-twist" model to determine wind direction around high and low pressure centers.

Students will predict changes in surface wind direction caused by movements of high and low air pressure systems.

MATERIALS

- The map of the U.S. that is labeled 1.4.2.1 High
- Pencil
- WEATHERLogs

PROCEDURE

1. Draw a small circle around the large "H" appearing on the map and place the map on a desk top or other smooth table surface.
2. Bring the thumb and fingertips of your left hand close together and place them on the circle.
3. Slowly rotate your hand (not the map) in a clockwise manner and gradually spread out your thumb and fingers as you lower your palm to the surface. Practice this motion until you can comfortably achieve a full twist.
4. Place your thumb and fingertips back in the starting position in the circle. Mark and label the positions of your thumb and fingertips 1, 2, 3, 4 and 5 respectively.
5. Slowly rotate your hand clockwise while gradually spreading your thumb and fingers and lowering your palm. Stop, mark and label the new positions 1, 2, 3, 4 and 5 respectively. (If you labeled your thumb 1, continue using 1 for your thumb's new positions, etc.)
6. Follow the same procedure in quarter steps until your palm rests on the surface.
7. Connect the numbers for each finger and thumb, successively, resulting in five smooth curved lines. (Connect all the 1's together, all the 2's together, etc.) Draw arrows on the lines showing the directions your thumb and fingers moved.
8. The spiral you have drawn represents airflow *out* of a high pressure system.
9. Proceed to Worksheet 1.4.2.1 Low.