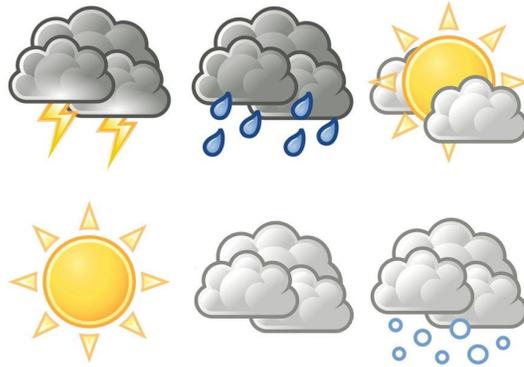




Observing and Predicting Weather



Introduction

Rain, wind, snow, sun and clouds are all common types of weather. The weather is constantly changing because of changes in the earth's atmosphere, the land and human impacts. The daily changes in temperature, precipitation (rain or snow) and air pressure are called weather. The patterns we see over time in our daily weather are called climate or seasonality. Weather can be very difficult to predict. Scientists have developed many different tools and technologies to help predict the weather. We can also use our senses and knowledge of the seasons to inform our daily choices, like what to wear or what activities to do.

Materials:

1. Cloud chart
2. Wind scale
3. Weather data collection page
4. Colored pencils, crayons or markers

Activity:

1. Spend 5 minutes every day for a week going outside or sitting near a window to observe the weather.
2. Use your weather data collection page to record your observations along with your weather charts.
3. At the end of the week use your observations and knowledge of the season to predict the weather for the next day.
4. Want to keep going?!? Keep a "Color of the Sky" chart for a full month! (see attached)

Types of Clouds and the Weather They Make

Low Clouds- Just above buildings



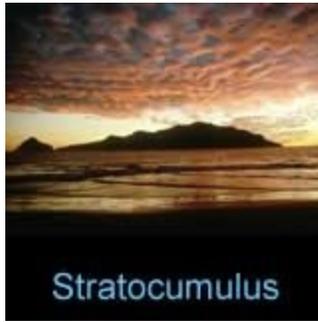
Stratus

*drizzle or fog



Nimbostratus

* rain



Stratocumulus

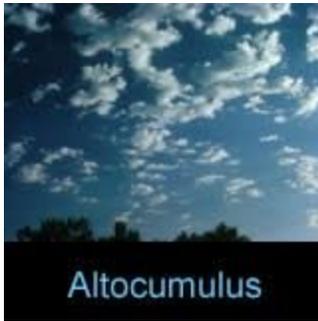
*no rain

Middle Clouds..... Including.....



Altostratus

*rain coming



Altostratus

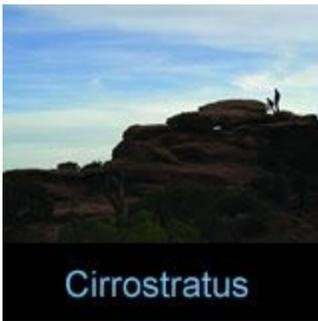
*rain coming

Cumulonimbus



*storm coming (hail, lightning, etc..)

High Clouds- airplane height or higher



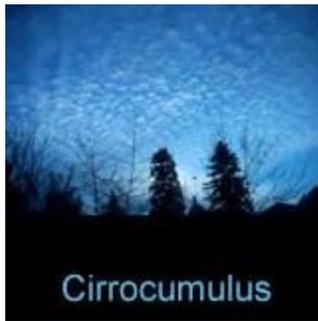
Cirrostratus

*moist weather coming



Cirrus

* fair weather coming



Cirrocumulus

*fair weather coming

Beaufort Scale

Beaufort number	Wind Speed (mph)	Seaman's term		Effects on Land
0	Under 1	Calm		Calm; smoke rises vertically.
1	1-3	Light Air		Smoke drift indicates wind direction; vanes do not move.
2	4-7	Light Breeze		Wind felt on face; leaves rustle; vanes begin to move.
3	8-12	Gentle Breeze		Leaves, small twigs in constant motion; light flags extended.
4	13-18	Moderate Breeze		Dust, leaves and loose paper raised up; small branches move.
5	19-24	Fresh Breeze		Small trees begin to sway.
6	25-31	Strong Breeze		Large branches of trees in motion; whistling heard in wires.
7	32-38	Moderate Gale		Whole trees in motion; resistance felt in walking against the wind.
8	39-46	Fresh Gale		Twigs and small branches broken off trees.
9	47-54	Strong Gale		Slight structural damage occurs; slate blown from roofs.
10	55-63	Whole Gale		Seldom experienced on land; trees broken; structural damage occurs.
11	64-72	Storm		Very rarely experienced on land; usually with widespread damage.
12	73 or higher	Hurricane Force		Violence and destruction.

Name _____

A Week of Weather

Graph the general weather trend each day this week by coloring in one or two sections a day. Start at the bottom of the column and use a different color for each TYPE of weather. (example, rain=blue, sun= orange, ect...)

SUN 	RAIN 	CLOUDY 	PARTLY CLOUDY 	SNOW 	WIND 

Observe the weather each day and record the weather type (shown above), relative temperature, the cloud type and wind speed (using the charts provided). Note any other observations that are weather related in the chart.

Day	Temperature (circle one)	Cloud Type	Wind Speed	Observations
Sunday	T-shirt/ Sweatshirt/ Coat			
Monday	T-shirt/ Sweatshirt/ Coat			
Tuesday	T-shirt/ Sweatshirt/ Coat			
Wednesday	T-shirt/ Sweatshirt/ Coat			
Thursday	T-shirt/ Sweatshirt/ Coat			
Friday	T-shirt/ Sweatshirt/ Coat			
Saturday	T-shirt/ Sweatshirt/ Coat			

Predicting the Weather

It can be difficult to predict the weather exactly, but by using your knowledge of the seasons and your observations you can make a really good guess.

Data Collection

Depending on where you live the seasons will have a general pattern of weather known as the climate.

What season is it where you are? _____

Usually, what is the weather like during this season? _____

If there are clouds, what do they look like today? (describe their shape, height and size)

What type of cloud do you think they are?

What type of weather does that cloud usually mean is on its way?

What is the wind speed today? _____

How do you think that could affect the weather? _____

PREDICTION

I would guess the weather tomorrow will be _____

Because _____

And _____.

Congratulations!

You Predicted the Weather!

My prediction was correct / incorrect. (circle one)

Colors of the Sky

(color in one box each day using a color that is as close as you can match to the color of the sky that day)

Start here!	Then here....	And so on...				