



# High School Science Virtual Learning

## Earth Science

### Weather Maps & Prediction

April 24, 2020



# High School Earth Science

## Lesson: April 24, 2020

### **Objective/Learning Target:**

Students will be able to describe how weather maps are developed and used to predict weather forecasts.



Let's Get Started:

**Watch this video: [How to Read a Weather Map](#)**

[Link to Video](#)

**Questions:**

1. What type of weather is associated with high pressure?
2. What type of weather is associated with low pressure?



## Let's Get Started: **Answer Key**

1. Question 1- **Fair or good weather.**
2. Question 2 - **Cloudy or stormy weather.**



## Lesson Activity: **High and Low Pressure Systems**

**Directions:** Read - *“Origin of Wind”* from the National Weather System *“JetStream”*

[Link to page](#)

Complete the guided reading questions on the following slides.



1. What is an “*isobar*”?
2. How do winds move around a center of high pressure?
3. How do winds move around a center of low pressure?



## Lesson Activity: **Air Masses**

**Directions:** Read “Air Masses” from the National Weather System “*JetStream*”

[Link to Page](#)

Complete the guided reading questions on the following slides.

1. What is an “*air mass*”?
2. Copy and complete the table below.

Air Mass	Name of Air Mass	Temperature (hot/cold)	Humidity (wet/dry)
mP			
cP			
mT			
cT			
cA			





3. What is a cold front?
4. What is a warm front?
5. What is a stationary front?



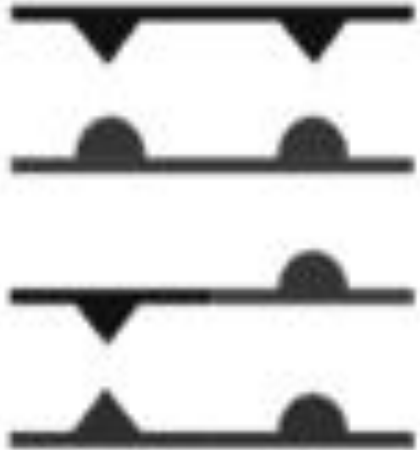
## Lesson Activity: **Weather Maps**

**Directions:** Read “How to Read ‘Surface’ Weather Maps” from the National Weather System “*JetStream*”

[Link to Page](#)

Complete the guided reading questions on the following slides.

1. Identify the symbols below.





# Answers

1. What is an “*isobar*”? "Iso" means "equal" and a "bar" is a unit of pressure so an isobar means "equal pressure". So everywhere along each line is the pressure has the same value.
2. How do winds move around a center of high pressure? **Away and clockwise.**
3. How do winds move around a center of low pressure? **Toward and counterclockwise.**

1. What is an “*air mass*”? **An air mass is a large body of air with generally uniform temperature and humidity.**
2. Copy and complete the table below.

<b>Air Mass</b>	<b>Name of Air Mass</b>	<b>Temperature (hot/cold)</b>	<b>Humidity (wet/dry)</b>
<b>mP</b>	Maritime polar	cold	wet
<b>cP</b>	Continental polar	cold	dry
<b>mT</b>	Maritime tropical	hot	wet
<b>cT</b>	Continental tropical	hot	dry
<b>cA</b>	Continental arctic	very cold	dry



3. What is a cold front? a colder air mass is replacing a warmer air mass
4. What is a warm front? warm air replaces cold air
5. What is a stationary front? means the boundary between two air masses does not move

1. Identify the symbols below.



Cold front



Warm front



Stationary front



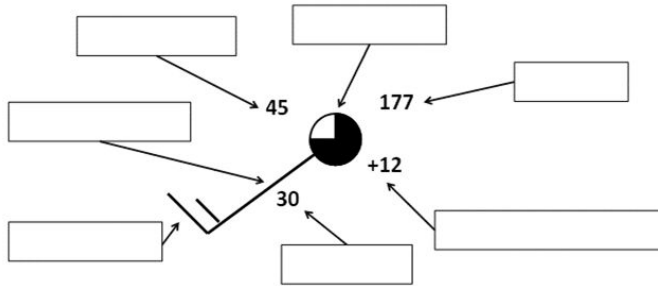
Occluded front



## Extensions:

1. **Station Models - Read “Surface Weather Plots”** [Link to Page](#)

**Label the station model.**



**View real-time weather map - Link to Map** [View real-time weather observation plots \(pdf\)](#)

## Extensions Answers

