

Vintage Math, Science and Technology Magnet School

Jr. Meteorologist Club



Hey, you 5th Grade WeatherBugs...

**Complete the four required activities
plus two activities of your choice
in this Jr. Meteorologist Activity Packet
to become a full-fledged
Vintage Jr. Meteorologist**

Packet Revised September 2016

5th Grade - Jr. Meteorologist Club – Revised September 2016

Open to: Fifth Graders

Meets: School mornings: 7:45 – 8:10 (Note: You do not need to come every morning. The Computer Lab will be open during this time to work on the Jr. Meteorologist Activity Packet, to update the Vintage Weather Corner and to announce the weather report).

Location: Vintage Computer Lab

Staff Contact: Mrs. Stone

Below are the requirements to be a full fledged Jr. Meteorologist and receive your official Vintage Jr. Meteorologist Certificate:

1. Complete the **four WeatherBug Achieve Required Activities** listed below.
2. Complete **two or more of the Your Choice Weather Activities**. Be sure to have Mrs. Stone sign off when you complete the task. *Forms, worksheets, etc. are available in the Computer Lab.*

Teacher Signature	WeatherBug Achieve Required Activities: Do all 4
	1. Become familiar with WeatherBug Achieve by completing the WeatherBug Achieve Scavenger Hunt worksheet (available in the Computer Lab)
	2. In Lab before school, fill out a weather report form to be used the Meteorologist of the Day.
	3. In Lab, update <i>one</i> or more of the weather data posters on the Vintage Computer weatherboard using the Internet WeatherBug & Achieve, NOAA websites. <ul style="list-style-type: none"> ○ School Days Forecast, ○ Monthly Max./Min. Temperature, ○ Daily Historical High/Low, ○ Sunrise & Sunset ○ Today's Forecast map
	4. Watch the WeatherBug Achieve weather videos (in Activities, Weather Videos) listed on the worksheet and summarize what you learned on the Weather Video Worksheet. Use

Teacher Signature	Your Choice Weather Activities: Do 2 or more
	1. In Lab, announce the weather report (over the PA) and/or In Lab, announce the school week's forecast (to be video taped)
	2. Perform a play using the WeatherBug puppets for lower grades.
	3. Define Weather Terms (Worksheet provided)
	4. Make a poster that shows and explains the water cycle.
	5. Mark the US map (provided) with symbols showing highs, lows and fronts using data from the WeatherBug Achieve Tools – Map Gallery > Weather Maps > Latest North America Surface map and explain what kind of weather can be expected in our state based on the information your mark.
	6. Make a poster explaining the different kinds of clouds (stratus, cumulus, cumulonimbus, cirrus), how they are made and the weather associated with them (worksheet provided)
	7. Any approved project you or Mrs. Stone think of.

5th Grade WeatherBug Achieve – Scavenger Hunt

Did you know Vintage has a weather station on top of the auditorium? We do! We provide weather data to people like you and your family and to meteorologists all over the world. Just visit the Internet and you can see how hot (or cold) it is and so much more!!!. [Hunt around the WeatherBug Achieve web site to become weather smart!](#)

1. Use the Safari browser and go to: <http://achieve.weatherbug.com/>
 - a) If prompted, to use Flash for Weatherbug, click Use Every Time.
 - b) If prompted, click Enter the classroom.
2. US Students enter your **zip code**: type **91343** and click **Submit**.
3. Select **your school name**: **Vintage Magnet School** and click **Submit**.
4. Select **your grade**: **5** and click **Submit**.
 - a) If asked to select a tracking station, pick Vintage Math, Sci, Tech, CA
 - b) If asked to select a camera, pick any of the choices then click Submit.

NOTE: Use the web browser Refresh/Reload arrow if you get the message that Observation currently unavailable.

1. Click on the Left side menu: **Home page**. You will notice a table of the **current weather data**, which should be from Vintage’s weather tracking station atop the auditorium. You can also see how hot (MAX) and how cool (MIN) the weather has been so far. Do not become confused with how hot and cool the weather is forecast (suppose to be) for the whole day/24 hours versus how hot or cold it currently is. Record the following “Current” weather data from Vintage’s weather station:
Temperature: _____ F, Dew Point: _____ F, Sunrise: _____ AM, Sunset _____ PM;
Wind _____ MPH, Direction _____; Relative Humidity _____%, Pressure _____”; Daily rain _____”, Monthly Rain _____”; Feel Like: _____ F

Record the UV (Ultra Violet) Index for the current day: _____.
Exposure to **ultraviolet (UV)** radiation is a major risk factor for most skin cancers. Sunlight is the main source of **UV rays**. Recommend sunscreen, hats, protective clothing.

2. Click on the Left side menu: **Media page**, then click “**News**”. Read an article and write down the topic of the article.

3. Click on the Left side menu: **Tools** and click **Weather Summaries** to find weather data for Local, U.S., and World tracking stations. The U.S. is a big place with a wide range of weather. Let’s find out where it is the coldest and the hottest so far today.
 - a. Click the tab for **U.S. Summary**. Write down the U.S. Weatherbug site city & state that has the coldest weather TEMP and the warmest weather TEMP. When done click “Close” in the upper, right corner of that window.
 - i. Coldest: _____ F
 - ii. Warmest: _____ F

4. For detailed weather data specifically for Vintage’s tracking station, Click **Tools Button** and select **Weather Observations**. Let’s find out the hottest and coldest temperatures for the previous month at our school. Click **Monthly Obs** and click the *previous month name*. In the month of _____, the hottest (Max.) temp was _____°F on ___/___/20___ and the coldest (Min.) temp was _____°F ___/___/20___ . When done, click “Close” in the upper, right-hand corner of the window.
5. On the left, click the **Activities Button**, then select **Activity Explorer**. Scroll down to Weather Symbols and Maps interactive lesson. Click the green symbol on the right to start. Use the next arrow and complete all sections including the quiz. After quiz is done, do not submit. Write how many correct answers _____ and incorrect answer _____ you had. *Close the window*.
6. On the left side, Click **Activities Button**, select **Weather Casts**. Click the icon to the right. The announcer in the weather cast has what kind of job?

7. Click the **Tools button**, from the drop down menu. Click **Storm Central**. With *Current Storms* selected, click **Interactive Storm Tracker**. Select a Storm. Click **Track** to see the path. Draw the path of the storm on the map. What is the name of the storm: _____ and what was the speed of the winds _____ mph. *Close the window*.



8. Click the **Library Button** and select **Extreme Weather** to record extreme weather information for Weatherbug sites. Write the city name and state.
 - a. Current Hottest Spot is: _____ F
 - b. Current Coldest Spot is: _____ F
 - c. Current Rainiest Spot is: _____ ”
 - d. Currently Windiest Spot is: _____ MPH
9. Under the **Library Button**, select the **Weather Fact** to write down (in your own words) what you learned from the fact. _____

Congratulations! You have finished your first assignment, the scavenger hunt.
Remember to have Mrs. Stone sign off that you completed it.

Today's Weather Report

Good morning. This is _____, your Vintage Jr. Meteorologist with your Vintage Magnet School weather. Let's take a look at what is happening right here in North Hills:

The sunrise today was at _____ AM. The sun will set at _____ PM.

_____.

The current temperature is _____ degrees *with* the humidity at _____ percent.

The wind is blowing at _____ miles per hour, so _____

_____.

Looking at the precipitation, we have had _____ inches of rain today.

_____.

Today's high is expected to be _____ and the low is expected to be _____.

_____.

_____.

_____.

Looking ahead to tomorrow, we can expect a **hot day** / **warm day** / **cool day** / **cold day**.

The high is expected to be _____ degrees and the low is expected to be

_____ degrees. No **rain / rain** is expected.

_____.

_____.

_____.

Don't forget to check the WeatherBug Corner in the computer lab for more weather information.

WeatherBug Achieve – Weather Videos

Use Safari browser. Log on to WeatherBug Achieve. Click **Activities** and then click **Weather Videos**.
READ THE VIDEO DESCRIPTION THEN CLICK ON “**View in QuickTime**” for Apple Computers

Weather Video Name	Summarize below, something you learned about the video’s topic.
Indian Summer	
Hurricane Names	Skip – Not working
Hurricane Damage and Categories	
Tornadoes	Skip – Not working
Severe Thunderstorms	
Wind	
Nor'easters	
El Niño	
Lake Effect Snow	
Fog	Skip – Not working
Hurricanes	Skip – Not working

Weather Terms

For help completing these terms, use www.achieve.weatherbug.com and log in.

Go to **Library** and then click **Elementary Glossary**. You may also use the “**What is Weather**” handout.

Weather Term	Definition
Thunder	
Tornado	
Hurricane	
Humidity	
Precipitation	
Cold Front	
Cumulonimbus Cloud	
Temperature	
Fahrenheit Scale	
Meteorologist	
Lightening	

WeatherBug Achieve National Weather Map

- Use http://www.weather.gov/outlook_tab.php (use underscore before “tab.php”)
 - 1) Draw on the map: weather cold and warm fronts, plus high and low pressure areas.
 - 2) Draw in other weather symbols such as rain, snow, sun, and clouds.
 - 3) Based on the weather fronts you drew on the map below, answer these questions:
 - i. What is the weather forecast for Southern California?
 - ii. Date you checked the Internet for the information you drew on the map;



Refer to the next page called “What is Weather” symbol sheet for a good explanation of weather related to common weather symbols.

What is Weather – Weather Symbols

What is Weather?

We live and breathe in a blanket of air known as the atmosphere. The atmosphere is constantly moving and changing all around the earth. These changes are called the weather.

No matter if it's rainy, snowy, stormy, or warm and sunny, weather affects everyone all the time! That's why the science of weather, or meteorology, is so important!



SUN The sun is a fiery ball of hot, burning gases. Our sun is about 93 million miles away from earth, but we still feel it's warmth. The sun's heat brings changes in our weather. It makes clouds form that bring rain, it makes plants grow, and it warms the air that causes the wind to blow.



RAIN Rain is water that falls from the clouds in the sky. It is part of a continuous cycle of water that falls to the earth, and then is heated by the sun and evaporates into the air again to form clouds.



CLOUD Clouds that make rain are billions of tiny drops of water floating around in the air. When the tiny water droplets bump into each other, they grow bigger and heavier until they fall to the ground as rain.



THUNDERSTORM Thunderstorms are powerful electrical storms in the atmosphere. In less than an half an hour, a single thunderstorm can drop over 100 million gallons of water and give off more electricity than is used in a large city in an entire week. The booming sound of thunder we hear in these storms is caused by very hot lightning exploding the air.



LIGHTNING Lightning is a giant spark of electricity. In the same way that magnets attract metal, lightning is attracted to the ground. Lightning is created inside thunderstorms and can become very hot. Just one lightning bolt can be 50,000 Fahrenheit . . . that's about 5 times hotter than the surface of the sun!



TORNADO Tomadoes are very powerful windstorms with the most destructive winds on earth. Winds in a tomado rotate violently, spinning at speeds of 100 to 300 miles per hour. Tomadoes occur all over the world, but most tomadoes strike the United States. About one-thousand tomadoes hit the United States each year, most of which happens in April, May, and June.



HURRICANE A hurricane is a giant, powerful storm with very high winds. It forms over warm ocean water, and often causes damage when it moves over the land. Weak hurricanes have wind speeds of at least 74 miles per hour, while very strong hurricanes can produce winds greater than 180 miles per hour. Although it's winds can be very damaging, the most dangerous part of a hurricane is it's storm surge, the wall of water that is blown from the ocean and batters the land. A hurricane is also known as a cyclone.



TROPICAL STORM A tropical storm is a giant storm that forms over the warm ocean. It is weaker than a hurricane, but may strengthen and become a hurricane.



SNOW Snow is made of tiny crystals of frozen water vapor. Lots of ice crystals joined together make a snowflake. Because a snowflake's ice crystals reflect light, we see that reflection as the color white. Snowflakes come in all different shapes, and no two snowflakes are ever exactly the same.



COLD FRONT A cold front is the front edge of a relatively colder mass of air. The triangular points face the direction the cold air is moving.



WARM FRONT A warm front is the front edge of a relatively warme mass of air. The rounded half-moon shapes face the direction the warmer air is moving.



HIGH PRESSURE High pressure is sinking air generally associated with fair weather patterns. Winds around a high pressure center blow clockwise in the northern hemisphere.



LOW PRESSURE Low pressure is rising air. generally associated with stormy weather patterns. Winds around a low pressure center blow counter-clockwise in the northern hemisphere.



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