# Find these words in the word search

	Atmosphere Climate Forecast Moisture Pressure Temperature										Barometric Energy Meteorology Precipitation Radar Weather								
Е	М	Н	K	А	С	А	W	Ζ	K	С	Т	С	Е	Е	Т	G	W	D	G
R	В	U	Е	Ι	K	Н	F	K	V	Ν	I	R	Ι	Е	G	0	E	U	K
Е	R	Т	K	М	А	Н	J	0	А	F	U	R	М	K	W	D	А	G	М
Н	R	D	Ν	Ρ	А	W	С	D	R	Т	Е	Ρ	Т	В	Х	Ρ	Т	В	М
Ρ	Μ	Q	Х	R	Ν	Ε	N	Т	S	Ε	Ε	Ν	K	Е	С	F	Н	W	V
S	Y	Ρ	В	Ε	I	S	Е	I	K	R	С	Ν	R	W	М	S	Ε	Ν	۷
0	W	J	Х	С	Y	А	0	М	А	U	W	А	W	Ν	K	0	R	G	L
Μ	Ζ	S	K	I	V	М	М	Т	Ρ	R	Ε	S	S	U	R	Е	R	Μ	Ν
Т	Q	А	I	Ρ	Х	V	U	K	Η	U	Х	D	Ν	Т	D	В	I	А	Е
A	Т	Х	В	I	Ρ	R	Y	G	0	L	0	R	0	Ε	T	Ε	М	Т	В
Е	U	Ζ	D	Т	E	Х	G	Т	R	U	Η	V	D	Ρ	Ι	0	Q	Ε	S
K	F	J	Q	А	Μ	U	М	Ζ	Ρ		U	T	J	В	L	K	V	K	J
W	Ζ	R	U	Т	Η	U	E	S	Ν	L	S	U	K	Т	F	T	U	V	Ρ
S	J	С	W	Ι	Х	В	М	С	0	Τ	K	W	L	Y	Y	U	F	L	0
Η	V	D	С	0	K	W	L	Y	G	R	E	N	Ε	K	L	F	В	A	В
Y	R	T	S	N	N	I	0	S	K	Ν	J	В	N	T	A	L	T	L	0
A	L	A	С	G	М	L	Ζ	Ρ	U	Х	Р	W	S	В	0	В	F	S	J
K	Y	D	D	Α	J	S	J	Ι	R	Ν	D	S	А	G	S	Y	Κ	Х	0
G	Κ	0	Т	A	В	Р	В	Т	Е	L	С	G	С	Ρ	В	Е	D	L	В
С	Ζ	Е	Е	Κ	R	Т	D	Ν	Х	Q	R	Т	А	В	С	Ρ	Ρ	Ν	Р

Teachers can order free class sets of this teaching poster by emailing ordernie@ tampabay.com.

Times

ous individual, corporate and foundation sponsors. NIE

provides supplemental materials and educator workshops

free of charge. Our teaching materials cover a variety of

subjects and are consistent with Florida's Next Generation

Sunshine State Standards and Common Core Standards.

The *Times* and our NIE curriculum are rich educational

resources, offering teachers an up-to-the-minute, living

text and source for countless projects in virtually every

For more information about NIE, visit tampabay.com/nie.

check out the NIE Blogging Zone at tampabay.com/ blogs/

niezone. To learn how to sponsor a classroom or education

supplement or receive NIE resources at your school, go to

tampabay.com/nie, email ordernie@tampabay.com or call

Follow us on Twitter at Twitter.com/TBTimesNIE, and

content area

800-333-7505, ext. 8138.

#### **Newspaper in Education**

The Tampa Bay Times Newspaper in Education (NIE) program is a cooperative effort between schools and the Times Publishing Company to promote the use of newspapers



Since the mid-1970s, NIE has provided schools with class sets of the newspaper, plus our award-winning original curriculum, at no cost to teachers or schools. With evershrinking school budgets, the *Tampa Bay Times* and our curriculum supplements have become an invaluable tool to teachers. In the Tampa Bay area each year, more than 5 million newspapers and electronic licenses are provided to teachers and students free of charge thanks to our gener-

# Technology: A body of knowledge

Technology is a body of knowledge used to create tools, develop skills and extract or collect materials, according to the National Institutes of Health National Center for Research Resources. Technology also is a combination of the scientific method and material (in other words, the application of science) to meet an objective or solve a problem.

Combining science, technology, engineering and mathematics is what STEM education is all about. Not only does the morning crew at Bay News 9 use STEM concepts every day to bring you weather, traffic and breaking news, but they also bring the final piece of the puzzle, art, to the mix: STEAM (science, technology, engineering, arts and mathematics).

# Informational text: Close viewing and reading

Watch Bay News 9 and go to baynews9.com. Make a list of all of the different ways science, technology, engineering and math are used at the television station. Then look for art. What are the different types of art used in a television broadcast?

Next, read the *Tampa Bay Times* and make a list of all of the examples of science, technology, engineering, art and math you can find. Use specific examples from all sections of the newspaper on your list. Share what you discover with your class.

#### Learning with the *Times*

#### Encountering new words

When you study new things, you can come up against some tough vocabulary words. Most vocabulary words are learned from context clues or good old-fashioned dictionary work. While you read this poster, be sure to highlight or circle words and terms you don't know. You can begin with the list of words in the word search. Try to figure out their meanings by looking for clues in the sentences around these unknown words. Write down your best guess, and then look the words up in a dictionary. Remember, many words have multiple definitions, so you must use context clues to know which definition to select. As a group activity, make a list of the words your classmates identified and see which ones stumped the class. Use the print or electronic editions of the *Tampa Bay Times* to search for articles using these words. Make a chart showing how often these words were used in today's *Times*.

#### **Newspaper in Education staff**

Jodi Pushkin, manager, jpushkin@tampabay.com Sue Bedry, development specialist, sbedry@tampabay.com

© Tampa Bay Times 2013

This publication incorporates the following Sunshine State Standards: Science: SC.3.N.1.1-7; SC.3.N.3.1-3; SC.4.N.1.1-8; SC.5.N.1.1-6; SC.5.N.2.1-2; SC.5.E.7.3-7; C.6.E.7.5; C.6.E.7.6; C.6.E.7.7 Language Arts/Reading: LA.3.1.4.1 4; LA.3.1.5.1-2; LA.3.1.6.1-10; LA.3.1.7.1-8; LA.3.2.2.1-4; LA.3.3.1.1-3; LA.3.3.2.1-2; LA.3.3.3.1-4; LA.3.3.4.1-6; LA.3.4.2.1-2; LA.3.5.1.1; LA.3.5.2.1; LA.3.6.1.1; LA.3.6.3.1-2; LA.3.6.4.1; LA.4.1.4.1-3; LA.4.1.5.1-2; LA.4.1.6.1-10; LA.4.1.7.1-8; LA.4.2.2-2; LA.4.3.1.1-3; LA.4.3.2.1-3; LA.4.3.3.1-4; LA.4.3.4.1-6; LA.4.2.1-2; LA.4.5.1.1; LA.4.5.2.1-5; LA.4.6.1.1; LA.4.6.3.1-2; LA.5.1.4.1-3; LA.5.1.5.1-2; LA.5.1.6.1-11; LA.5.1.7.1-8; LA.5.2.2.1-4; LA.5.3.1.1-3; LA.5.3.2.1-3; LA.5.3.3.1-4; LA.5.3.4.1-5; LA.5.4.2.1-2; LA.5.5.1.1; LA.5.5.2.1-2; LA.5.6.3.1-2

This publication incorporates the following Common Core Standards: Reading: RI.3.1; RI.3.2; RI.3.3; RI.3.7; RI.4.1; RI.4.2; RI.4.3; RI.4.7; RI.5.1; RI.5.2; RI.5.3 Writing: W.3.1a; W.3.1b; W.3.7; W.4.1a; W.4.1b; W.4.7; W.5.1a; W.5.1b; W.5.7 Speaking and listening: SL.3.1; SL.3.4; SL.4.1; SL.4.4; SL.5.1; SL.5.4

#### Credits

Written by Jodi Pushkin, Times staff Designed by Stacy Rector, Fluid Graphic Design

#### **Project Weather and you**

Weather can be mysterious, exciting and sometimes dangerous. That's why Bay News 9 created Project Weather to help provide kids with the information they need to stay safe. Project Weather is made up of interactive educational resources to help prepare students for the future.



Students will need skills in science, technology, engineering or math for 80 percent of jobs in the next 10 years. Therefore, educating kids about weather sciences is the perfect subject for the Bay News 9 weather experts!

The Project Weather Scholarship Contest is a one-time award of \$1,000 presented to seven high school seniors who excel in science. The scholarship is granted as a part of Bay News 9's commitment to educating children about science and weather. For more information, go to baynews9.com/ projectweather.

# BAY NEWS 9 project Sweather

**Bay** JEWS



Tampa Bay Tomes Tomes The second seco

Exclusively on **brighthouse** 



# Weather is everywhere

ccording to the National Oceanic and Atmospheric Administration, weather is the state of the atmosphere; in other words, the air surrounding the earth, in regards to wind, temperature, cloudiness, moisture and pressure. When we speak about weather, we are referring to these conditions at a given point in time. For example, when we mention today's temperature or tomorrow's rain forecast.

time. How hot or cold is the air? How much dampness, or moisture, is in the air? How fast is the air moving? How heavily does the air press on the earth? Weather is what happens in the air from minute to minute. The weather can change a lot within a very short time, especially in Florida.

Weather includes daily changes in precipitation (rain), barometric pressure, temperature and wind conditions in a given location. Weather is fueled by the sun. Other factors also affect weather, such as friction, or resistance, daily weather. between the land and sea: the rotation of the earth and the shifting of wind. These cycles and forces create complex and ever-changing patterns.

Weather is the way water changes in the air. Without water, there would be no clouds, rain, snow, thunder or fog. In fact, weather affects our lives and all things on

Earth, plays a big part in our lives and affects many of the things that we do.

Sources: National Oceanic and Atmospheric Administration, United States Environmental Protection Agency and ThinkQuest

#### Weather vs. climate

Weather is what the air is like in any one place at any one While weather refers to atmospheric conditions at a given point in time, climate refers to the "average" weather conditions for an area over a long period of time. A measure of time is the difference between weather and climate.

> Weather is what conditions of the atmosphere are over a short period of time, while climate is how the atmosphere acts, or behaves, over relatively long periods of time. When people on the news talk about climate change, they are referring to changes of long-term averages of

Climate change is nonrandom change in climate that is measured over several decades or longer. There is evidence of changes in the climate that go back thousands of years.

Sources: National Oceanic and Atmospheric Administration and NASA

## **Predicting the Weather**

Radar is an electronic instrument that determines the direction and distance to objects that reflect radio energy back to the radar site. Radar is an acronym meaning radio detection and ranging. Doppler radar detects precipitation intensity, wind direction and wind speed, and provides estimates of hail size and rainfall amounts.









computer to get the job done.

"Engineers are taught to attack problems from every possible angle to find the best solution. It's a mindset that I apply to news stories and issues within our communities. Our stories also require significant research, analysis and critical thinking to study and present the problem, along with possible solutions, to our viewers. Again, these are more problem-solving skills that my engineering background helped strengthen."



One good thing about hurricane preparedness is that we have plenty of advance warning when a hurricane is on the way. Pretend you are preparing for a hurricane or a storm that's approaching your area. Go through the advertisements in the Tampa Bay Times and find products you would need to stock up on. Remember the essentials as well as the "comforts" you might need if displaced or without power and supplies for several days. Create a poster with the items you find. Share the poster with your class.

#### Think about it

What exactly is technology and how do people use it in their everyday lives? Does technology play a big part in your life? How about in the lives of your parents: at home and at work? What does technology do for you and your family? Technology is used to develop skills or tools, both in our daily lives and in our occupations. At Bay News 9, technology is an intricate part of the news, weather and traffic reports.



# The Merning Crew



#### **Meteorologist Juli Marquez**

"Technology has changed a lot in meteorology and in how we gather and present the weather information on Bay News 9. Klystron 9, the world's most powerful television radar, is a dual-polarization radar. There have been many improvements to detecting severe thunderstorms and estimating rainfall amounts.

"At Bay News 9, we also have our exclusive 3D technology to show you the inside of a storm, and we use satellite data to show important information that is helpful during hurricane season. The weather maps and animations you see on Bay News 9 every day are more sophisticated and realistic. Our new monitors allow us to touch the screen and interact with the maps, much as you use a mouse with your computer. In addition to Weather on the Nines, you also can get updates on our website, Twitter and Facebook page. All of these improvements allow us to give you important information faster than ever before."

#### **Real Time Traffic Reporter Chuck Henson**

"Never before has technology played such a vital role in reporting Tampa Bay traffic. If you haven't seen Real Time Traffic lately, let me encourage you to watch and see how we are able to integrate traffic flow data, speeds and travel times using touch-screen technology. Bay News 9 is the only station in the United States presenting traffic in this manner. The technology is so advanced, we've been asked to create a behindthe-scenes video to show other stations how to use it effectively. Combining Real *Time Traffic* with the advanced technology of Klystron 9 gives Bay News 9 a distinct advantage in Tampa in reporting traffic and weather. News, weather (and now traffic) on Bay News 9."

#### **News Anchor Erica Riggins**

"The cellphone evolution has been pretty amazing. It was 1989 when my first cellphone was mounted in my Ford Probe. The phone weighed a couple pounds and was only good for a very brief conversation inside the car. Reporters were later issued bulky pagers. Thankfully, that is in the past. We now use our smartphones for accessing urgent data anytime and anywhere. The ability to take pictures and capture video enhances our news reporting from the scene. The financial cost for conversation has dropped dramatically, allowing viewers and journalists to turn their cellphones into microphones for breaking news situations. We no longer need an office and desktop

#### Learning with the Times

#### Being prepared

## Technology and weather: **Klystron 9**



Klystron 9 is the most advanced and powerful TV weather radar, and Bay News 9 is one of three television studio in the world to privately own a weather radar with a Klystron tube.

According to Bay News 9 meteorologist Mike Clay, "The Klystron tube gives our radar the ability to operate as a Doppler radar 24/7. Other radars built for TV stations can't do that. We also use the power we are able to create with the Klystron tube to make this radar the most powerful owned by any TV station. Our 1.25 million watts of peak power is unmatched in the industry."

Klystron 9 is also the first dual-polarization radar in Florida, "Dual-pol" provides more details about the amount of rain falling, the type of precipitation falling and any hail that might be falling from a storm. Another feature unique to Klystron 9 is called pulse compression.

Clay says, "We can electronically take the powerful signal already used by our radar and make it even stronger by using a computer to change the pulse length. Pulse compression has been used for years, but Klystron 9 is the first high-power TV station radar to use this technique to make an even stronger signal."

Remember, though, you can't just depend on computers and technology alone for weather reports. Bay News 9 has a staff of experienced meteorologists who have worked in the Tampa Bay area for years and are familiar with the region's unique climate and weather patterns. Read all about the Bay News 9 meteorologists in the center of this poster.

# **WEATHER** experiments

## **Make it rain**

Measuring the amount of moisture, or humidity, in the air can tell you if precipitation is likely. Hygrometers measure relative humidity, the amount of moisture in the air. You can make a simple one with a glass jar.

#### Materials needed

- glass jar
- ice cubes
- plate (do not use paper) hot water

#### Directions

- **1.** Pour approximately two inches of very hot water into the glass jar.
- 2. Cover the jar with the plate and wait a few minutes before you start the next step.
- 3. Put the ice cubes on the plate.
- The cold plate will create moisture in the warm air, which is inside the jar. Condensation and water droplets will form.

# **Building a funnel cloud**

#### **Materials:**

- 2 2-liter clear plastic pop bottles (empty and clean)
- food coloring and glitter (optional)

#### water duct tape

#### **Directions:**

- 1. Fill one of the bottles two-thirds full of water.
- 2. Take the second bottle and use duct tape to fasten the openings of the two containers, so that water will flow from one bottle into the other. Make sure to tape tightly to make sure that no water will leak out when you turn the bottles over. You have created a tornado maker.
- 3. Turn the tornado maker, so that the bottle with the water is on top. Swirl the bottle in a circular motion. A tornado will form in the top bottle as the water rushes into the bottom bottle. The swirling motion you give the bottle forms a vortex, and that is why the tornado forms.

Source: These experiments were taken from Weather Wiz Kids. For more experiments, go to weatherwizkids.com.

# Learning with the *Times*

#### **Energy flow**

A scientific theory of the evolution of Earth indicates that changes in our planet are driven by the flow of energy and the cycling of matter through dynamic interactions among the atmosphere, hydrosphere, cryosphere, geosphere and biosphere, and the resources used to sustain human civilization on Earth. In other words, weather and climate both are affected by energy and its interactions with these other components. Look up the scientific terms used in this definition Then, on a piece of paper, restate the definition in your own words. Look for examples of words and images in the Tampa Bay Times that depict the relationships defined. Create a collage to illustrate what you have learned. Share your newfound knowledge with your classmates

#### The effects of natural disasters

Weather and natural disasters affect our daily lives, health and economy. Many natural disasters occur only in certain parts of the world, but their occurrences can have an impact on the lives of those who have not experienced firsthand the drama and tradedy accompanying these events. Use the Tampa Bay Times to keep track of natural disasters during the next month. Keep a natural disaster journal. In your journal, identify each disaster and its location. Create a chart listing all of the natural disasters. Choose a disaster that did not happen in your area and make a list of some of the ways in which you or other people in your community would be affected by this particular kind of disaster. Write a brief essay outlining the disasters and how they affect communities. Share your information with your class.

# Weather

sically, weather is the condition of the

Datmosphere over a short period of time. Weather is the way the atmosphere is behaving, mainly with respect to its effects upon life and human activities.

Most people think of weather in terms of temperature, humidity, precipitation, cloudiness, brightness, visibility, wind and atmospheric pressure, as in high and low pressure.

In most places, weather can change from minute to minute, hour to hour, day to day and season to season. In the Tampa Bay area, weather can change from city to city and county to county. There are a lot of parts to weather. In Florida, weather includes sunshine, rain, cloud cover, wind, hail, flooding, thunderstorms, steady rains from a cold front or warm front, excessive heat, heat waves and more.

Source: NASA

# **Rain and floods**

Water droplets form from warm air. As the warm air rises in the sky, the air cools. Warm air holds quite a bit of water. That is why the air feels wet, or humid, in the summer. When enough of these droplets collect together, we see them as clouds. If the clouds are big enough and have enough water droplets, the droplets bang together and

form even bigger drops. Once the drops get heavy, they fall because of gravity, and then we have rain.

Not including wind-driven rain, raindrops fall between 7 and 18 miles per hour in still air. The range in speed depends on the size of the raindrop. When there is wind or a great deal of heavy rain, flooding can result. Clogged drains in the streets and overflowing rivers and lakes cause floods.

When the flooding happens quickly, it is called a flash flood. Flash floods are the No.1 weather-related killer in the United States. Most deaths due to flooding in the United States are due to people driving their cars into flooded areas. It may only take 12 to 16 inches of water to cause a car to float!

Source: Florida Division of Emergency Management

# Lightning

As Benjamin Franklin discovered, lightning is a form of electricity. Lightning is created when cold air and warm air meet. The cold air has ice crystals. The warm air has water droplets.



CLOUD FLASHES: Cloud flashes sometimes have visible channels that extend out into the air around the storm but do not strike the ground. The terms "sheet lightning" and "intracloud lightning" refer to lightning embedded within a cloud that lights up as a sheet of luminosity during the flash. Heat lightning is lightning-induced illumination that is too far away for thunder to be heard. Lightning also can travel from cloud to cloud. Lightning refers to long, horizontally traveling flashes often seen on the underside of strato-form clouds.

Source: National Oceanic and Atmospheric Administration National Severe Storms Laboratory

# Thunder

A lightning bolt takes only a few thousandths of a second to split through the air. Although the loud thunder that follows the lightning bolt is commonly said to come from the bolt itself, the grumbles and growls we hear in thunderstorms actually come from the rapid expansion of the air surrounding the lightning bolt.

As lightning connects to the ground from the clouds, a second stroke of lightning will return from the ground to the clouds. When that happens, the heat from the electricity of this return stroke raises the temperature of the surrounding air to around 48,632 degrees Farenheit.

Since this happens so quickly, the heated air has no time to expand. The heated air is compressed, and then it explodes outward, forming a shock wave of compressed particles in every direction, which, in turn, creates a loud, booming burst of noise.

Source: Library of Congress

# **Tornadoes and**





#### **Controlling weather**

From rain dances performed by Native Americans to seeding clouds with dry ice to make hail form and fall quickly, the idea of controlling the weather has appealed to a lot of people. Research ways people try to control the weather. Make a list of the different methods you find. Then look in the *Tampa Bay Times* for stories about and advertisements for events that could be affected by the weather. Look for such things as sports competitions, farming activities or political events. If you could control the weather for each event, what conditions would you prescribe? How might ideal weather for that event interfere with other activities? Discuss these points with your class. Write a creative narrative story for one of the scenarios.

#### Working together

The meteorologists and reporters at Bay News 9 work every day to get the weather and community news to you so you can be prepared. Check out the information about them on Baynews9.com and watch them on the air. What skills, interests and knowledge does a successful reporter or meteorologist have? Using the information you observe and read on their website and in this poster, make a list of these skills. Using news articles in the Tampa Bay Times as models, write a summary of these skills in the form of a short news article. Using the information about each member of the Bay News 9 team featured in this publication, create trading cards for each person. Go to readwritethink.org/files/resources/interactives/trading\_cards\_2 and use the interactive trading card creator.

charge. BAD



AHEAD

When the warm air rises, thunderstorm clouds are created. During the storm, the droplets and crystals bump together and move apart in the air. This rubbing makes static electrical charges in the clouds.

Just like a battery, these clouds have a positive and negative end. The positive charges in the cloud are at the top. The negative charges are at the bottom. When the charge at the bottom gets strong enough, the cloud lets out energy. The energy goes through the air to a place that has the opposite

This lightning bolt of energy that is let out is called a leader stroke. The stroke can go from the cloud to the ground. Or, a leader stroke can go from the cloud to another cloud. The main bolt or stroke will go back up to the cloud. It will make a flash of lightning and heat the air.

Source: NASA

### **Strokes and flashes**

Lightning flashes through the Florida sky on an average of 100 days a year. It singes and burns, injures and even kills. As a matter of fact, Florida leads the nation in lightning-related fatalities. But, not all lightning strikes are the same. There are actually three types of cloud to cloud lightning.

**GROUND FLASHES:** There are two categories of ground flashes: Natural and artificially triggered. Natural ground flashes occur because of normal electrification in the environment. Artificially initiated lightning includes strikes to very tall structures, airplanes, rockets and towers on mountains. Triggered lightning goes from ground to cloud, while natural lightning is cloud to ground.

## waterspouts

A tornado, or twister, is a powerful column of winds twisting around a center of low atmospheric pressure. A tornado looks like a large funnel; the narrow end moves over the earth.

The powerful winds inside a tornado spiral upward and inward. These winds create a vacuum that sucks up anything the tornado passes

weather experts who enjoy forecasting Florida's weather on a daily basis.

over. When the funnel touches a structure, such as a house or car, the strong winds have the ability to tear it apart. The winds inside a twister can reach speeds of up to 500 miles an hour.

A waterspout occurs when a tornado forms over a body of water. Water spouts form when high layers of cool air meet warm moist air from a body of water. Winds within a waterspout can spin around at 60-120 miles an hour.

Source: ThinkQuest

## The world of meteorology

According to the American Meteorological Society, "Meteorology is the science of the atmosphere." A meteorologist is a person with specialized education "who uses scientific principles to explain, understand, observe or forecast Earth's atmospheric phenomena and/ or how the atmosphere affects the earth and life on the planet." The Bay News 9 meteorologists are

ALTER .

Mike Clay



production. I didn't get into weather until a TV station in Waco, Texas needed a weekend weathercaster and I auditioned. After I saw an opportunity, I went to the Broadcast Meteorology program at Mississippi State University, which was in its second year. So I got into weather the backward way and went back later and got my meteorology training.

"In weather, many of the skills you need as a forecaster aren't taught in school. They come from experience and knowledge of the local area. A good weather forecaster has to have a passion for the science."



"I studied a lot of things in college. I went to North Carolina State University, which is a very strong science-and-math-based university. Therefore, I had to learn a lot about math and science before I could start taking my meteorology classes. My degree was in meteorology. Some people refer to it as atmospheric sciences. I minored in geography and communications.

"I knew going into college that I wanted to become a meteorologist. What I didn't know was what kind of job I would like to do or what I would be best at. While in college, I started to realize which classes I excelled at and which ones I didn't find as exciting. I then found corporate internships, where I could work at a company while still in college. That gave me valuable experience while also showing me what I enjoyed the most. I realized that I was best at communicating in large groups.

"I also found that I was really good at explaining the science of meteorology to others. I briefly worked as a computer scientist writing meteorology programs, but that didn't suit me well. I then worked for a TV station behind the scenes and realized it was a better fit for me. My career took off from there as I worked my way up over the years."

#### **Diane Kacmarik**

"Before I started college, I wasn't sure what I wanted to be. I know that I enjoyed earth science. I checked out Penn State University and found that it had one of the top programs in the country for meteorology. I figured that I would start there and change majors if I needed to. I got accepted into the program and never left! I received a Bachelor of Science in meteorology.

"Before graduating, I wasn't sure exactly what I would do after graduation. I really was not big on public speaking, so being on TV was not top on my list. But I was lucky enough to get an internship with Joe DeNardo at WTAE in Pittsburgh. He encouraged me to pursue a career in television meteorology. Shortly after graduation, I got a job doing weekend weather in Steubenville, Ohio, and another part-time job for a meteorology consulting company."

in New York and seeing the big Nor'Easters was awesome as a kid. I even had the experience, in New York, to see two hurricanes. Gloria was in 1985 and Bob in 1991. When I went to college at the State University of New York at Albany, following my dream to become a meteorologist

atmospheric science. The atmospheric science major was loaded with physics, calculus, and my favorite...thermodynamics. I survived!

"During my time in college I wasn't sure if I wanted to get into television. In my forecasting class there was a forecasting contest for the semester and the top three forecasters got to choose internships. There were two internships at the National Weather Service and one at a local television station. I came in third place in the forecasting contest and the two other students chose the National Weather Service internships. That fortunate experience sealed the deal. I learned so much from the meteorologist I interned for. The rest, as they say is history."

#### **Juli Marquez**



"I had two internships while in college: one at the NBC station in Chicago and the other at a television station in Rockford, Illinois, It was at that station in Illinois that I got my first job after college.

"I first studied at Loyola University Chicago. I graduated with honors with a degree in Communications. I was inducted into Phi Beta Kappa academic honor society. Then I earned my meteorology certification from Mississippi State University. I am a member of the American Meteorological Society and have the AMS Certified Broadcast Meteorologist Seal.

"I was hired at Bay News 9 in 2002 and enjoy bringing you the weather forecast weekdays on Your Morning News."

**Josh Linker** "I was always fascinated with the weather from when I was a young child. I grew up

only seemed natural, so I majored in





