

Name _____



Water Cycle

1. What is the most important thing to understand about weather?

A water cycle

2. When the sun heats the ground and the water, what happens to the water?

It rises vertically into the atmosphere

3. What is the process called when water rises vertically into the atmosphere?

Evaporation

4. How often does this process take place?

Every day

5. What is used to form a cloud?

Tons of water particles all put together

6. When too much water comes together in the clouds the water falls out. What is this called?

Precipitation

Name _____



Weather Balloon

1. What is used to fill a weather balloon?

Hydrogen

2. Name the five things that the weather balloon measures.

Pressure, temperature, relative humidity, wind speed and direction

3. The weather balloon measures from the surface to how many feet high?

100,000

4. What does the National Weather Service want the ascension rate to be on the weather balloon?

1,000 feet per minute

5. How is the ascension rate adjusted?

By putting little weights on it.

6. The radiosonde has something like a computer motherboard inside. What does that do?

It processes and transmits information back down to earth.

7. How often does data come in from the radiosonde?

Every 20th of a second.

8. What happens when the balloon pops?

The radiosonde falls back to earth.

9. Can the balloon launch with thunderstorm clouds nearby?

No

10. About how many places across the country are weather balloons launched?

100

Name _____



Hurricane Hunters

1. Who are the Hurricane Hunters?

An aircrew made up of pilots, meteorologists, and scientists that fly into tropical storms and hurricanes.

2. Why do the Hurricane Hunters fly into dangerous storms?

To collect important forecasting data that will help us prepare for the storm.

3. Where is the Hurricane Hunter's main base located?

MacDill Air Force Base in Tampa

4. How many people at MacDill are alerted when there is a storm to be investigated?

Over 100

5. What are the two types of planes flown by the Hurricane Hunters, and what do they do?

A low altitude and a high altitude plane

The low altitude plane can penetrate the most dangerous part of the storm, the eye wall. And the high altitude plane collects measurements like wind data and air pressure.

6. What does the dropwindsonde operator do?

The operator drops the data collection devices into the storm.

7. How many windsondes are dropped per mission?

25 – 40

8. How is the data collected from the drop windsonde used?

In computer models, spaghetti model plots, and forecast cones.

9. What is the Hurricane Hunter's number one priority?

Safety

Name _____



Hurricane Protection

1. What do you need to do to stay safe before a storm?

Prepare

2. What should you do outside to prepare for a hurricane or tropical storm?

Bring in patio furniture, potted plants, and other loose objects.

3. What should you put in a disaster supply kit?

(Answers: www.baynews9.com/weather/hurricane-center)

- Water
 - at least 1 gallon daily per person for 3 to 7 days
- Food
 - at least enough for 3 to 7 days, non-perishable packaged or canned food / juices, foods for infants or the elderly, non-electric can opener, cooking tools / fuel, paper plates / plastic utensils
- Blankets and Pillows, etc.
- Clothing – seasonal, rain gear, sturdy shoes
- First aid kit, Medicines, Prescription drugs
- Special items - for babies and the elderly
- Toiletries, Hygiene items, Moisture wipes
- Flashlights or Battery Operated Lanterns and Batteries
- Radio – Battery-operated radio
- Emergency phone numbers – relatives and friends
- Cash - Banks and ATMs may not be open or working
- Keys
- Toys, books and games
- Important documents - in a waterproof container
 - insurance, medical records, bank account numbers, Social Security card, birth and marriage certificate, deeds, wills, etc.
- Tools, scissors, gloves, duct tape, plastic garbage bags, fire extinguisher
- Vehicle fuel tanks filled
- Pet care items
 - proper identification, immunization records, medications , supply of food and water, carrier or cage, muzzle and leash

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Sea Breeze

1. What may you notice as the sea breeze passes? (Check one)

_____ Increase in wind
_____ Change in wind direction
_____ Drop in temperature
_____ Decrease in clouds and rain chances
_____X_____ All of the Above

2. The sea breeze forms because land heats up faster than water. The warmer air over land rises. What happens to the air over water?

It moves in to replace the rising air.

3. _____ pressure is over land and _____ pressure is over the Gulf.

Low and High

4. As the sea breeze moves away from the coast it acts like what?

A cold front

5. What does that do?

Helps to lift the air

6. What do you usually see develop along the sea breeze front.

A line of clouds or storms

7. The opposite of a sea breeze happens at night and is called what?

Land breeze

8. Which way does that wind blow?

Off shore

Name _____



General Weather

1. To officially be named a hurricane, the winds of a storm must be at least _____ miles per hour.

74 MPH

2. What is wind and why does it blow?

Wind is the motion of the air. It begins with differences in air pressure. In the northern hemisphere air flows clockwise around high pressure and counter clockwise around low pressure: the greater the difference in pressure the stronger the wind. When a front passes through an area there is a change in wind direction and speed.

3. What happens to marine life if the temperature drops very rapidly?

Cold Stun. They go into a comatose stage, shut down their body functions and become lethargic.

4. Where does lightning come from?

Inside clouds are raindrops, ice crystals and hail. They collide and become charged. Positive charges are at the top of the cloud and negative charges are in the middle and toward the bottom. Lightning is the electric discharge produced by a thunderstorm between the positive and negative charges.

5. What can be one of the most dangerous and devastating parts of a tropical system?

Storm surge

6. What is weather?

Weather is the state of the atmosphere. It deals with short term conditions in the atmosphere in regards to wind, clouds, temperature, air pressure and precipitation.

7. What is climate?

Climate is the average of the weather conditions for an area over a longer period of time.