

Name: \_\_\_\_\_ Date: \_\_\_\_\_ Period: \_\_\_\_\_

## 3<sup>rd</sup> Quarter Benchmark Test Study Aide

### Study Materials:

- Homework Pages Week 1 through Week 9 for 3<sup>rd</sup> Quarter. Blank homework pages and answer keys are on the class website along with all class presentations and activities.
- Study the concepts included in your two returned tests: the water cycle; atmosphere and the weather

Every group in the class has a different topic. Visit each poster and use their work to help you complete the study aide. All topics may not be covered in the class poster review, but can be found in your old homework pages. Focus on filling out areas where you struggle. Think of this as a practice test.

### Hydrosphere & Parts of a River

What is included in Earth's hydrosphere? Give examples.

How is all of Earth's water distributed around the world?

How is Earth's freshwater distributed around the world?

What is the difference between deposition and erosion?

What and where are the major parts of a river?

How do oxbow lakes form?

Describe wetlands & estuary

What does it mean if water is brackish?

### Currents

How do ocean currents form?

What role does salinity play in ocean currents?

How do ocean currents influence climate of coastal cities?

What is density?

## **Water Cycle**

Describe **all** parts of the water cycle (precipitation, run off, evaporation, transpiration, condensation, infiltration and percolation) and how the sun is the driving force behind the entire water cycle.

Describe watersheds and river basins relationship

Difference between groundwater recharge vs. discharge?

Describe zone of saturation, aeration and water table

Difference between Permeability and Porosity

Describe aquifers

Describe aquifer depletion with its consequences

## **Danger to Water**

*Describe the following hazards to water quality*

Sediment from construction (turbidity):

Nitrates and phosphates from farming:

Runoff from urban and suburban grounds:

Acidification from burning fossil fuels:

Thermal Pollution:

How can improper disposal of chemicals impact the water supply?

What is the difference between Point source and Non Point Source pollution?

Why should we conserve water?

## **Flooding**

How are floods caused?

Where are floods most likely to occur?

Describe the following forms of flood protection:

*Levees*

*Flood Barriers*

<i>flood control channels</i>	<i>dams</i>
<i>Reforestation</i>	<i>controlled flooding</i>

### **Basics of Earth's Atmosphere**

What are the four layers of the atmosphere "in order"?	How are the tropopause, stratopause, mesopause determined?
What does the atmosphere do for us?	How much pressure does the atmosphere exert per square inch?
What is the composition of Earth's atmosphere?	Insolation vs. Albedo
Describe the stages of Earth's early atmosphere	

### **Ozone Layer**

Where is the ozone layer?	What does it do?	Why do we need it?
How is it changing?	What are CFCs?	How do CFCs affect the ozone layer?
How do CFCs affect the ozone layer?	Where do CFCs come from?	

### **Global Winds**

How does wind form?	What is the Coriolis Effect and how does it influence winds?
What are the major global winds and where are they located?	What are some of the main characteristics of the global winds?
What are the Jet Streams?	
Difference between a land breeze and sea breeze?	

### Clouds and Thunderstorms

Describe the different types of clouds including fog	Where does weather and clouds form?
	How does a cloud form?
	What is the difference between weather and climate?
How does thunder form?	How does lightning form?
What is humidity vs. relative humidity?	
What is dew point?	

### Tornadoes and Hurricanes

How do tornadoes form?	What is a cyclone?
Describe the Fujita Scale	Tornado watch vs warning
How do hurricanes form?	Hurricane watch vs warning
Saffir-Simpson Scale	Under what conditions do hurricanes get stronger? Weaker?

### Weather Instruments & Air Masses

What are the different types of air masses?	What is the description and type of weather found at areas of high pressure? Low pressure?		
<i>List what each weather instrument measures:</i>			
wind sock	rain gauge	barometer	thermometer
Campbell stokes recorder	Anemometer	hygrometer	sling psychrometer

### **Fronts & Weather Symbols**

What are the types of fronts and their symbols?	Describe how air masses interact at these fronts
	Describe the weather associated with each type of front
What are some examples of weather symbols?	When will precipitation be snow vs. rain?

### **Air Pollution**

What are the different types of air pollution?	Where do these types of air pollution come from?
Why is carbon monoxide so dangerous to humans?	What is acid rain?
How is acid rain caused?	What are the effects of acid rain on the environment?