

Quiz Rubric

Each answer worth 5 pts - Total Points = 20 - Total Extra Credit – 8

Mistaken Device 1 pt ea	Correct Location – 2 pts ea	Reason – Why each is a mistake – 2 pts ea	Extra Credit – 2 pts ea
Doppler	In Plains	<p>A Doppler radar is a specialized radar that uses the Doppler effect to produce velocity data about objects at a distance. It does this by bouncing a microwave signal off a desired target and analyzing how the object's motion has altered the frequency of the returned signal.</p> <p>How does the radar work? NEXRAD (Next Generation Radar) obtains weather information (precipitation and wind) based upon returned energy. The radar emits a burst of energy (green). If the energy strikes an object (rain drop, bug, bird, etc), the energy is scattered in all directions (blue). A small fraction of that scattered energy is directed back toward the radar.</p>	<p>Radar System – Best in plains due to ability to predict incoming storm, tornado, hail damage. Close to city. A tornado is a violently rotating column of air extending from the base of a thunderstorm down to the ground. Tornadoes are capable of completely destroying well-made structures, uprooting trees and hurling objects through the air like deadly missiles. Tornadoes can occur at any time of day or night and at any time of the year. Although tornadoes are most common in the Central Plains and southeastern United States, they have been reported in all 50 states. This website is designed to teach you how to stay safe in a tornado. If you know what to do before, during, and after a tornado you can increase your chances of survival. A thunderstorm is considered severe if it produces hail at least 1 inch in diameter or has wind gusts of at least 58 miles per hour.</p>
Tiltmeter	Volcano nearest to city	<p>A tiltmeter is a sensitive inclinometer designed to measure very small changes from the vertical level, either on the ground or in structures.</p>	<p>Tiltmeters will determine the slightest deviation in the level of the earth. Any change could result in a significant change to the pressure, magma chamber, and possible gaseous explosion. When a reading reaches a substantial level of danger, nearby cities should be evacuated and warned of possible eruption.</p>
Avalanche Mortor	Near or at the ski resort	<p>Avalanche Mortors used to cause avalanches within a controlled environment in order to prevent major avalanches from causing fatalities</p>	<p>http://www.nsa.org/media/209454/AvalancheFactSheet10_1_2014.pdf In class- Discussion of avalanche survival techniques.</p>

DART	Deep in the ocean	A DART® system consists of a seafloor bottom pressure recording (BPR) system capable of detecting tsunamis as small as 1 cm, and a moored surface buoy for real-time communications. An acoustic link is used to transmit data from the BPR on the seafloor to the surface buoy.	Deep – Ocean – Assessment and Reporting of Tsunamis. The BPR collects temperature and pressure at 15-second intervals. The pressure values are corrected for temperature effects and the pressure converted to an estimated sea-surface height (height of the ocean surface above the seafloor) by using a constant 670 mm/psia. The system has two data reporting modes, standard and event. The system operates routinely in standard mode, in which four spot values (of the 15-s data) at 15-minute intervals of the estimated sea surface height are reported at scheduled transmission times.
Seismograph or seismometer	To produce the highest quality seismic records, a seismometer must be placed in an area that has a low amount of ground vibration	Seismometers are instruments that measure motion of the ground, including those of seismic waves generated by earthquakes, volcanic eruptions, and other seismic sources. Records of seismic waves allow seismologists to map the interior of the Earth, and locate and measure the size of these different sources.	Seismometers are instruments that measure motion of the ground, including those of seismic waves generated by earthquakes, volcanic eruptions, and other seismic sources . Records of seismic waves allow seismologists to map the interior of the Earth, and locate and measure the size of these different sources. The word derives from the Greek σεισμός, <i>seismós</i> , a shaking or quake, from the verb σείω, <i>seíō</i> , to shake; and μέτρον, <i>métron</i> , measure and was coined by David Milne-Home in 1841, to describe an instrument designed by Scottish physicist James David Forbes . ^[1]
Water Gauge	Placed in river outside city	To predict that water is rising and a flood may be entering the area.	A computer tool known as the Global Flood Monitoring System, or “GFMS,” which maps flood conditions worldwide, is now available online. Users anywhere in the world can use the system to determine when flood water might engulf their communities. “On our global interactive map, you can zoom into a location of interest to see whether the water is at flood

			stage, receding, or rising,” explains the University of Maryland’s Robert Adler, who developed the system with colleague Huan Wu. “You can also look around to see whether there is a rain event upstream, whether the rain is over, and how the water is moving downstream.”