

Wonders of Weather; Video

The Weather Machine

_____ ; condition of air around us.

Conditions of weather; temperature, air pressure, _____, & _____

_____ ; a shield that traps the sun's heat, protects the earth, thin layer.

_____ ; site of all weather, 8 miles high.

_____ ; drives all weather.

_____ ; measure of hot and cold.

Earth's position and tilt in relationship to the sun changes _____ & _____.

Lowest recorded temperature; _____ degrees F

Highest recorded temperature; _____ degrees F

Temperature changes _____ ;

_____ air is light; becomes an area of low pressure

_____ air is heavy; becomes an area of high pressure

_____ ; narrow band of fast moving air, powerful force, like a river
planes use to fly east, avoid to fly west

jet streams travel fast in a straight line; travel slow they meander

_____ ; movement of air from high to low pressure.

_____ ; Coriolis effect, wind going toward the equator, travel west; wind
going away from the equator, travel east.

Cells ; masses of air traveling in circular motion

_____ cells; loops of air at the equator

_____ cells; loops of air at the poles

_____ ; areas between the polar and Hadley cells

_____ ; line of air mass where warm and cold air clash

Moisture

Air over the oceans absorb _____.

_____ ; temperature air becomes too saturated with moisture.

when temperatures fall below the dew point - condensation occurs causing rain, sleet or snow.

Hurricane

Hurricanes forming in the ; Atlantic Ocean - _____

Pacific Ocean - _____

Indian Ocean - _____

Hurricanes form when the ocean is _____ degrees.

Forms a _____ pressure area.

_____ air rises.

Large _____ clouds form.

_____ cause the spinning.

Winds shoot up and fall through the _____ of the hurricane.

_____ are huge waves that cause 90% of the deaths.

Preventative measures; 15' _____ built, homes on _____ & _____ >

_____ or _____ water weaken a hurricane.

Intensity scale; category _____ - _____ mph

category _____ - _____ mph

Wonders of Weather ; Part II

Tornado

Formation;

Begins when _____ humid air meets _____ dry air.

Produces _____ or _____

_____ draw air up.

The rising and falling air is _____

The violent rotating storm forms a _____ cloud.

It becomes a tornado when it touches the _____.

There are many shapes and range in size from _____ yards to _____ miles.

Most common in _____; _____ per year.

33 % of U.S. tornadoes are in _____; Kansas, Oklahoma, Texas.

Most tornadoes occur from _____ to July.

Tornadoes usually only last minutes; can travel _____ to _____ miles.

Best defense is _____ warning.

Weather teams use radar to track severe _____ and high _____.

There are 700 - _____ tornadoes each year; _____ % are powerful enough to kill.

Prime conditions; increase in surface _____
 change in _____
 change in atmosphere _____

Rule of thumb; if you are within 1 mile, you are in _____ danger.

Things That Fall From the Sky

Examples; hail, rain, ash

Volcanic eruptions; 20 million tons of ash, _____ miles high, circle the earth in _____ wks
cover half the earth in _____ months.

Sulfuric acid; shields the earth; changed the _____,
avg. temp dropped 1/2 degree.

Sahara sand; 30 sand storms per year, 10 mph, 3 - 5 hour storms.

1980; _____ rain in London, sand carried _____ miles.

Hail; sever damage

1984; Munich 240,000 _____, 70,000 _____, 200 _____.

Most hail occurs in Hail Alley; _____, Nebraska, _____.

Formation of hail; heat rises forming _____.

_____ push air _____ miles high.

At that level, temperatures are _____ degrees F.

Water vapor turns into ice _____ called embryos.

Updrafts shoot the embryos back up where another _____ of ice is formed.

Weak updrafts form _____ hail; strong form _____ hail.

Strong updrafts can be more than _____ mph.

Hail falls at _____ mph, hail can last from 1/2 hour to 12 hours.

_____ sized hail or smaller is most common.