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Integrated Science Mid-Term Study Guide

Branches of Integrated Science

Matching

_____ 1. The study of outer space
_____ 2. Uses the Metric System
_____ 3. Records & explains the motions of the Earth's atmosphere
_____ 4. Evaluates the laws of nature
_____ 5. Determines the best place to drill for oil
_____ 6. The study of matter
_____ 7. The study of hurricanes

A. geology
B. all sciences
C. astronomy
D. physics
E. meteorology
F. chemistry

Measurements

_____ 8. Measure this line in mm: _____
_____ 9. Measure this line in cm: _____
_____ 10. Measure the area of this box in mm:

Density Measurements

11. A 100 gram rock has a volume of 70 cubic centimeters. What is its density? _____
12. A rock has a density of 2.5 g/ml & a volume of 30 ml. What is its mass? _____
13. Why is the density of an object the same after breaking it in pieces? _____

Scientific Method

Matching

____14. the question or problem you are trying to answer
____15. information obtained from observations
____16. judgment or decision based upon your analysis
____17. an educated guess

A. conclusion
B. analysis
C. data
D. observation
E. hypothesis

18. *Scientific Notation*

a. 0.012 = _____ x 10 b. 123.56 = _____ x 10

19. *Conversion*

a. 1.2 g = _____ kg b. 567 hm = _____ mm

20. What depends on the # of atoms that makes up an object	_____	A. density
21. This depends on mass ----- by volume (m/v)	_____	B. volume
22. The displacement of an object is known as	_____	C. mass

Relative Humidity & Clouds

Matching

___23.	When the temp = dew point and moisture appears	A. dew point
___24.	When a cloud forms and touches the ground	B. RH
___25.	The temp the air must cool to for condensation	C. condensation
___26.	The % of water vapor the air can hold	D. fog
___27.	The cloud that is lumpy & bumpy and low in the sky	E. cirrus
___28.	The cloud that is made of ice crystals	F. cumulus
___29.	The cloud that is flat and sheet-like	G. cumulonimbus
___30.	The thunder cloud	H. nimbostratus
___31.	A flat pancake type rain cloud	I. stratus

32. Know how to determine relative humidity from a chart

33. Know your 10 clouds (stratus, cumulus, cirrus, nimbus type)

Pressure & Temperature

Matching

____34. wind is created by this
____35. pressure does this as you go up in elevation
____36. lines connecting points of equal temperature
____37. wind does this as isobars get closer together
____38. wind blows out of this pressure center
____39. lines connecting points of equal pressure
____40. wind blows into this pressure center
____41. due to the PGF wind blows

A. isotherms
B. increases
C. isobars
D. decreases
E. change in press
F. low pressure
G. high pressure
H. low to high
I. high to low

Global & Local Wind Patterns

Matching

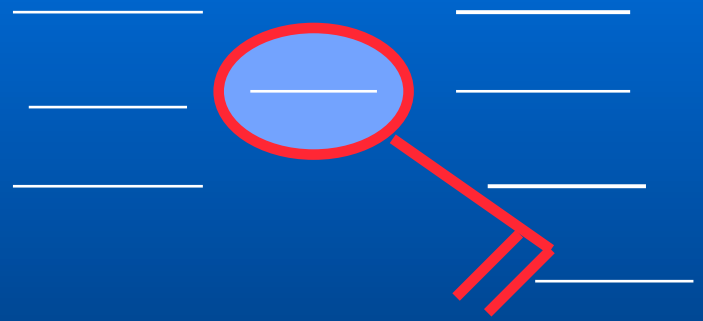
_____42. this pressure system brings good weather
_____43. wind blows from land to the sea
_____44. this pressure system brings rain & bad weather
_____45. wind blows from sea to land
_____46. this belt of wind is at NJ's latitude
_____47. this belt of wind blows in the tropics
48. Differentiate between convergence & divergence

A. trade winds
B. sea-breeze
C. westerlies
D. land-breeze
E. low pressure
F. high pressure

Weather Station Model

_____49. temperature
_____50. pressure tendency
_____51. cloud cover
_____52. dew point temp
_____53. wind direction
_____54. wind speed
_____55. pressure
_____56. present weather

Place number on the line provided



Fronts & Air Masses

_____57. an air mass that is moist & cold
_____58. an air mass that is dry & cold
_____59. this front - 
_____60. this front - 
_____61. an air mass that is v. cold & dry
_____62. this front - 
_____63. an air mass that is hot & dry
_____64. this front - 

_____65. an air mass that is moist & warm
_____66. warm air replacing cold air
_____67. cold air replacing warm air

A. warm
B. stationary
C. continental polar
D. maritime tropical
E. cold
F. occluded
G. continental tropical
H. continental arctic

I. maritime polar
J. cold air advection
K. warm air advection

Hurricanes

_____68. T-storms lasting for 24 hrs
_____69. winds > 73 mph
_____70. warm water > 80 deg F
_____71. winds > 38 mph
_____72. winds < 39 mph
_____73. June through end of November
_____74. storm is given a name

A. depression
B. tropical storm
C. disturbance
D. hurricane
E. source of energy for hurricanes
F. hurricane season

75. Review reference tables (planet chart, life cycle of a high/low mass star, comet's orbit & parts, parts of our sun, etc & planet chart characteristics)
76. Gas giant planets: _____, _____, _____ & _____.
77. Terrestrial planets: _____, _____, _____, & _____.
78. Differentiate between a terrestrial & Jovian planet. _____
79. Review structure of a comet: _____
80. Review the orbit of a comet: _____
81. Difference between a meteor, meteoroid, & meteorite.
82. Know the temp characteristics of stars & planets.
83. Review life cycle of a star. Low mass Star: _____
_____;
High mass Star: _____
_____
84. How does a star produce its light? _____
85. Be able to describe the "Bode-Titius" rule.
86. Where is the Asteroid belt is found: _____
87. Where is the Kuiper belt is found: _____
88. Name all the members of our solar system: _____
_____
89. Review all handouts covering the moon, moon phases, eclipses, tides & the Big Bang.
90. Review the moon characteristics: _____
_____
91. Know the 8 moon phases: _____
_____
92. Differentiate between waxing & waning phases of the moon: _____
_____.
93. Know the difference between Spring & Neap tides: Spring: _____
_____ Neap tide: _____

94. What phase of the moon is occurring during spring tide: _____
95. What phase of the moon is occurring during neap tide: _____
96. Know the difference between a solar & lunar eclipse.
97. Which phase of the moon is occurring during a lunar eclipse? _____
98. Which phase of the moon is occurring during a solar eclipse? _____
99. Know the difference between an umbral shadow & penumbral shadow & which moon phase?
100. A red shift is when: _____
101. A blue shift is when: _____
102. Describe the Big Bang theory:_____
_____
103. Know the proper order of the universe: _____
_____
104. *Review P, S, & L waves.* The fastest wave is: _____; The most destructive wave is: _____; The shadow zone is: _____;
P waves go through _____, S waves go through _____; The distance between the P & S waves increases as you: _____. Review the earthquake P & S wave travel time graph to determine the distance the earthquake was from the epicenter.
105. The point on the surface directly above the earthquake is known as the: _____; The point in the earth (origin) where the rocks move causing the earthquake is known as the _____.
106. The 4 layers of the Earth: _____, _____, _____, _____.
107. The continental crust is thicker/thinner than the oceanic crust? _____
108. The continental crust is more dense or less dense than the oceanic crust: _____.

109. The name of the one super-continent some 225 mil years ago: _____.
110. What is the force that was necessary to move the continents? _____.
111. Review the 3 types of plate tectonic boundaries: _____, _____, & _____. The plate boundaries that collide into each other is known as: _____; The plate boundary moving away from another boundary and is located at the mid-ocean ridge is known as : _____
112. Review the 3 types of convergent boundaries. What two convergent boundaries create subduction & trenches? _____- & _____. Which convergent boundary creates a folded mountain? _____.
113. What is the mid-ocean ridge? _____ _____.
114. How are convective currents moving beneath the lithosphere? _____.
115. After Pangaea broke up, the 2 large land masses were called: _____ & _____.
116. Review evidences of continental drift. (similar mountain ranges, fossil remains, continents fit like a puzzle). Know the 5 evidences.
117. _____ rocks are found at the mid-ocean ridge, and _____ rocks are found farther away. Why? _____.
118. Review triangulation. 3 recording stations are needed to locate the exact earthquake position.

Study