

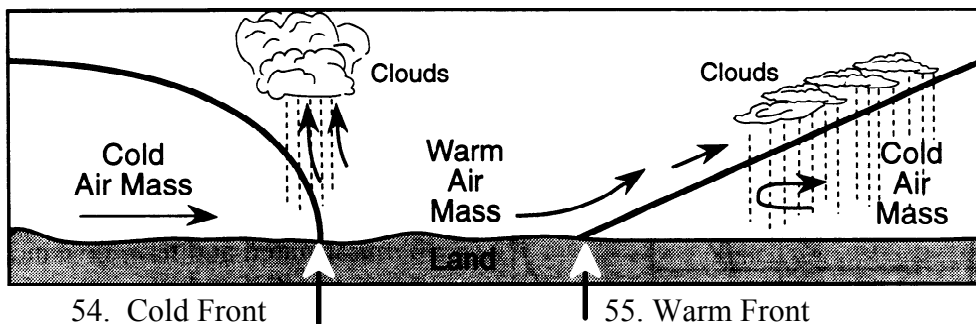
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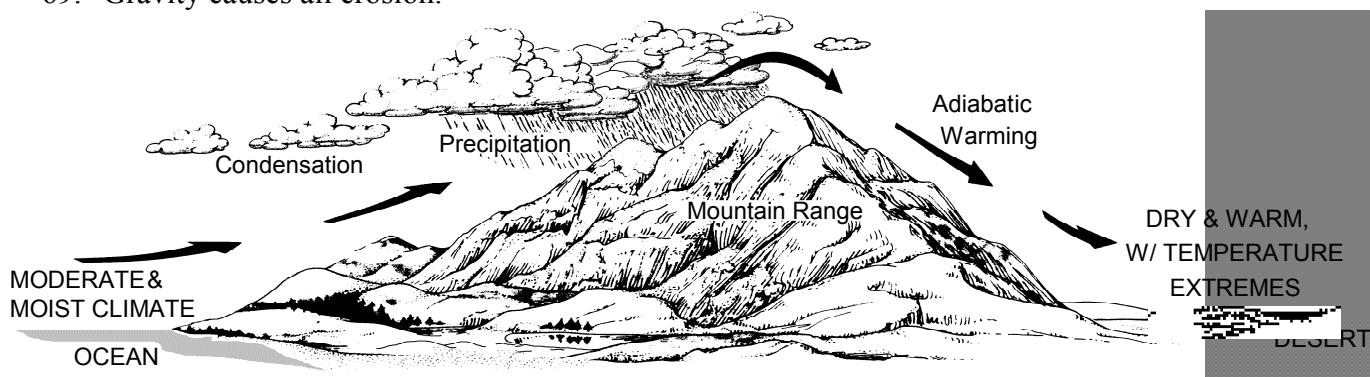
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1. The same solid or liquid substance, such as granite or water, does not change significantly in density.
2. As pressure increases, the density of a gas increases.
3. As humidity increases, the density air, and air pressure, decrease.
4. Water expands when it freezes.
5. Water is most dense at 4° C; when it is a liquid.
6. Most environmental changes are cyclic.
7. The true shape of the Earth is an Oblate Spheroid, but from space it always looks like a perfect sphere.
8. The best model of the Earth is a sphere.
9. The altitude angle of Polaris above the horizon equals your latitude. (north of the equator)
10. To determine the Earth's circumference, the altitude of the sun is needed at two locations.
11. Latitude measures distances north or south of the equator, even although the lines run east-west.
12. Longitude lines go north-south, but measure distances east or west..
13. Longitude is based on observations of the sun.
14. Use the reference tables.
15. The closer the isolines (contour-isobar-isotherms-) are the steeper the slope or gradient.
16. The Earth rotates from west to east. (24 hours)
17. The Earth revolves counterclockwise. (365 1/4 days)
18. Celestial objects, such as the sun, moon and stars, appear to move toward the west.
19. The moon has phases because it revolves around the Earth. (Remember that half *always* is in sunlight.)
20. Planets appear to go backwards (retrograde) as the Earth passes them in their orbits.
21. The summer solstice is June 21st - when the sun rises in the northeast and the noon sun is highest in the sky.
22. The winter solstice is about December 21st, the sun rises in the southeast and the noon sun is low in the sky.
23. On the equinoxes, March 21st September 23rd, the sun rises due east.
24. The equator always has 12 hours of daylight and the noon sun is always high in the sky.
25. The lower the altitude of the sun, the longer the shadow it casts.
26. The Foucault pendulum and the Coriolis effect prove that the Earth rotates.
27. Earth is actually closer to the sun in our winter.
28. The closer the planet is to the sun the greater it's orbital velocity.
31. Black absorbs/white reflects, and black is also the best color to radiate away energy.
32. The half-life of a radioactive element can't be changed by chemical or environmental conditions.
33. the ocean crust is relatively thin and made of basalt.
34. Continental crust is thicker and made of granitic rocks.
35. Energy flows from a source to a sink; from high temperature to low temperature.
36. Mountains form by uplift and folding. (These are generally related to tectonic plate motions.)
37. Chemical weathering occurs mostly in warm, humid climates.
38. Physical weathering occurs mostly in cold, humid climates. (It may be mostly frost wedging)
39. Winds circulate clockwise and outward around a high.
40. Winds circulate counterclockwise and inward around a low.
41. Black is the best absorber *and* radiator of electromagnetic energy.
42. In the northern hemisphere, the hottest part of the year is most often in late July.
43. Hottest part of the day is usually mid-afternoon..
44. As temperature increases, atmospheric pressure decreases.
45. As moisture increases, pressure decreases because water vapor weighs less than dry air.

46. Air pressure decreases with altitude. (It is caused by the weight of the atmosphere above you.)
47. If air pressure is high it is probably cool and dry; Lows are warm and wet
48. Wind is caused by differences in air pressure.
49. The wind always blows from high to low pressure.
50. Wind is named from the direction that it is coming from A north wind is moving southward.
51. In percent error, the accepted value is what is considered the correct answer. The measured value is the guess.
52. The closer the air temperature is to the dew point, the greater the chance for precipitation.
53. Weather systems usually move from west to east in the United States



56. An occluded Fronts occurs when a cold front overtakes a warm front and pushes the warm air aloft.
57. Cold fronts move faster than warm fronts. (This is what causes an occluded front.)
58. Porosity does not depend on particle size.
59. As particle size increases, permeability increases.
60. Capillarity (capillary action) increases when particle size decreases.
61. Ep (potential evapotranspiration) depends on temperature. When it gets hotter, Ep goes up.
62. A dynamic equilibrium means a state of balance in which substances move, but the amount stays the same.
63. Apparent diameters of objects (sun, moon) get larger when the objects are closer to Earth.
64. The vertical rays of insolation only occur between  $23\frac{1}{2}^{\circ}$  N and  $23\frac{1}{2}^{\circ}$  S.
65. Index fossils are good time markers. (They should be widely spread (found world-wide) & lived a short time)
66. Air cools as it rises due to adiabatic expansion.
67. Water bodies moderate temperatures of nearby coastal regions.
69. Gravity causes all erosion.



70. Streams are the number one agent of erosion.
71. Stream velocity depends on slope and the discharge quantity of water.
72. Stream velocity is fastest on the out side of meander bend of a stream.
73. Heavy, round and dense particle settle through a fluid first.
74. In graded bedding (vertical sorting) the biggest sentiments are on bottom of each layer.
75. Glacial sediments are unsorted. Scratched bedrock and U-shaped valleys are caused by glaciers.
76. Sedimentary rocks usually have flat layers and rounded particles.  
Fossils are common only in sedimentary rocks.

77. Igneous rock that cool quickly have small crystals, but slow cooling allows crystals to grow large.
78. Metamorphic rocks show banding, distorted structures and foliation. (crystal alignment).
79. Mineral properties depend on the internal atomic arrangement and bonding of atoms.
80. Silicon + oxygen = tetrahedron. (The basic structure of silicates.)
81. Isostasy: Earth's crust in a dynamic equilibrium. The crust floats on denser, lower layers.
82. At the mid-ocean ridges new crust is constantly being created. This is known as sea floor spreading.
83. At the ocean trenches the crust being destroyed. It occurs at Earth's subduction zones.
84. P-waves travel faster through the Earth than S-waves.
85. P-waves can pass through solids & liquids -- S-waves move through solids only. (Liquids absorb S-waves.)
86. You need at least 3 seismometer stations to find earthquake epicenter.
87. In undisturbed strata, the bottom layer is oldest.
88. Intrusion and faults are younger than the rock in which they are found.
89. An unconformity shows where erosion has occurred and a part of the geologic record is missing.
90. Arid landscape usually have steep slopes with sharp angles.
91. Humid landscape are generally smoother with rounded slopes.
92. When in doubt, see if the Reference Tables will help!!
93. Uranium-235 is used to find the age of (date) very old rocks.
94. Carbon-14 is used to find the age of (date) relatively young rocks that contain organic materials.
95. Convection currents in the mantle move Earth's tectonic plates.
96. When a rock is broken into smaller pieces, surface area increases and the weathering rate increases.
97. Starting with the word "because" may cause a complete sentence to become just a phrase.
98. In spring, the directions of sunrise & sunset move northward as the noon sun gets higher in the sky.

### **Tips for the day of the Regents exam:**

99. USE THE REFERENCE TABLES!
100. You do multiple items by finding one best answer, or you can eliminate the three wrong or poor choices.
101. Relax—you've already completed a quarter of the Regents.
102. In part II, you may want to choose groups A and B. (rocks & minerals, and plate tectonics)
103. Take your time. You have a full three hours to do the exam.
104. Read introductory paragraphs and study diagrams before looking at questions. Underline key words.
105. When possible, draw diagrams to help you visualize the questions.
106. Use the straight-edge of the Ref. Tables to read graphics, to mark points on a graph and to measure distances.
107. If some words cause confusion, cross them out and substitute a synonym, then read the question again. (For example: substitute the word "false" for "not true.")
108. Don't leave any questions blank. You have a 25% chance of getting the answer correct even if it's a guess.
109. Read all choices before deciding on an answer. Sometimes a question has a good and a better answer. Always choose the *best* answer.
110. If you are not sure of an answer, try to eliminate choices that are clearly wrong to narrow down your choices.
111. Ask yourself: "Is it in the Reference Tables, or can the Reference Tables help me?"
112. Check your answers carefully, but only change an answer if you find an obvious mistake. Your first choice is most often correct unless you can find a clear reason to change it.
113. Look up formulas, even if you think you know them. Substitute information from the question into the formula. Most are on the back page of the reference tables. You may use the test as scrap paper.
114. Skip over hard questions that are holding you back. Go back to them later. Something else in the test may give you a clue to the harder questions.
115. Have a healthy and balanced meal the night before. Eat breakfast to help you think more clearly.
116. A good night sleep is very important. Enter the test room rested and calm.

117. Relax. You've seen all this stuff before. Think of the exam as a challenge you *can* conquer!