

**Weather vs. Climate:**

1. So do you really understand the difference? Write a sentence comparing Colorado's current weather and Colorado's overall climate. \_\_\_\_\_  
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**Temperature Scales:**

2. Using Notes 1, explain how a thermometer works. Be sure to include terms and ideas like density, heat, movement of molecules, etc.

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\_\_\_\_\_  
\_\_\_\_\_

3. Temperature can be measured in one of three scales: Fahrenheit (°F), Celsius (°C), and Kelvin (K). Fill out the chart below. HINT: use the formula  $^{\circ}\text{C} + 273 = \text{Kelvin}$  to determine the Kelvin temperatures.

	<b>Fahrenheit</b>	<b>Celsius</b>	<b>Kelvin</b>
Boiling Point	_____	_____	_____
Freezing Point	_____	_____	_____
Absolute Zero	_____	_____	_____

**Weather Terms:**

4. For each measurement, write the tool used to make the measurement & unit

	<b>Tool</b>	<b>Unit</b>
A. Temperature	_____	_____
B. Wind speed	_____	_____
C. Wind chill	_____	_____
D. Air Pressure	_____	_____
E. Humidity	_____	_____
F. Dew Point	_____	_____

### Convection Currents:

5. Using an explanation involving convection currents, describe how a lava lamp works.

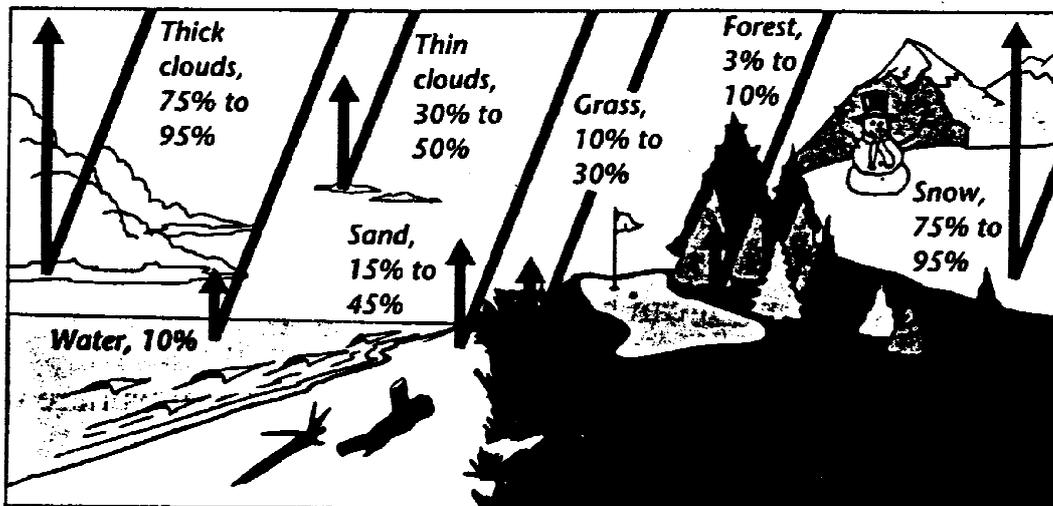
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**Solar Radiation:** Use the figure below to answer the following questions. Remember that the percents listed are the percent of radiation being reflected back into space. For example....for all of the radiation that reaches thick clouds, 75% to 95% is reflected back into space, so 25% to 5% is absorbed as heat.



6. Which two types of surface on Earth, do you think, are most important for absorbing solar energy and keeping the planet warm? Explain your answer.
7. Why do skiers often get sunburned even in the winter when the sun's rays are not very strong?
8. What effect would thick cloud cover have on the temperature of Earth's surface? Explain why.
9. Why might a major volcanic eruption lead to cooler temperatures over a large area around the volcano?
10. Which do you think would be warmer on a winter day when there is no wind—a thick forest or a grassy field? Explain why.