Meteorology Sea and Land Breeze Questions? (Local Winds)

1. What is the definition of the atmospheric pressure?
2. What is the surface pressure in millibars?
3. What is the pressure when only 50% of the atmosphere is above you?
4. Define an isobar:
5. Is the layer of air between 2 isobars thicker or thinner when the temperature is colder? Explain.

1. At a particular elevation in the atmosphere, is the pressure higher or lower in a colder region? Explain.

1. Does air within a relatively warm region rise or fall? Explain

1. Does air within a relatively warm region diverge or converge? Explain
2. Does the mass greater in a warmer or colder region? Explain.

1. Make a sketch of a Lake Breeze circulation in Layton, Utah. (Indicate the time of day)
2. Make a sketch of a Land Breeze circulation in Layton, Utah and the Great Salt Lake.

1. We’ve always heard that heat flows form warm to cold, but we’ve experienced cold winds as well, so is that statement, in fact, always true? Explain

1. Which would better eliminate temperature differences if you could only accomplish one, to blow warm air to the cold place, or to blow cold air to the warm place? Explain.

1. Is the dry adiabatic lapse rate also 10°C per kilometer (30°F per mile on Venus, Mars, or Jupiter? Why or why not?

1. How would the Santa Ana winds be different if you flattened the topography of the western United States? Explain.