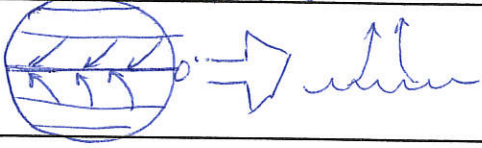




Exploring Wind Energy

Name _____ Date _____ EN _____

Introduction to Wind

- Explain what causes wind. light (radiant) energy turns into thermal!
uneven heating of Earth's surface (albedo) specific heat - water, land, air
- What is the wind speed of a gale force wind? 39-46 mph
- What would you expect to happen when there are gale force winds?
twigs break from trees; difficult to walk
- Winds are heat transfer by convection. (term is not actually used in the text- try to remember!)
- What are three types of locations on Earth that would be best for wind farms? Ridge
prairie coasts mountain valley
- Why are coastal regions so windy?
diff. specific heat of land and water
- Where on earth do we expect very little wind? Why?
Doldrums 
- A North wind blows from the north
- A doubling of wind speed can result in 8 times the power produced.
- Why should wind turbines be placed higher in the sky instead of close to the ground?
wind that is higher is faster, smoother b/c less friction to create turbulence
- Compare and contrast wind shear and turbulence.

	Wind shear 	Turbulence
Similarity	<u>abrupt change in speed and/or direction</u>	
Difference(s)	<u>specific change but maintains a direction</u> 	<u>results in random disordered movement</u>