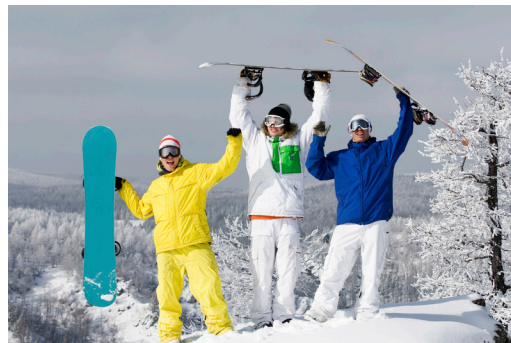


Sample Lesson #2

Potential Energy

Potential (pə ten' shəl) energy is stored-up energy. It is waiting to be in motion; then it becomes kinetic energy. A common example of potential energy is a snowboarder perched at the top of a hill. The snowboarder may not be moving at all, but she has *potential* energy. The moment the skier points her board and shifts her weight in a downhill direction, gravity will pull her toward the bottom of the hill and kinetic energy will be present. Potential energy is a very useful thing.



Kinetic Energy

All energy is either potential or kinetic. **Kinetic** (ki net' ik) energy is energy in motion. It lights up houses, moves cars along the road, and melts the snowman in your yard. A baseball flying through the air has kinetic energy. A person running down the stairs, a wave crashing on a shoreline, and a bird soaring across the sky all have kinetic energy. Nothing can move without energy, and the faster something is moving, the more kinetic energy it has.



1. Why is potential energy considered to be very useful?

2. Two types of energy are _____ and _____.

3. A definition of energy is the _____ to do _____.

4. Birds need energy to fly. Which of these is a source of energy for birds?

wind food steam instinct

5. Green plants make their own food through photosynthesis. Where do plants get the energy to make their own food?

seeds sun water carbon dioxide

6. An explanation that can be tested is called a(n) _____.

hypothesis experiment demonstration conclusion

7. Which of the following are abiotic factors that can cause change in an environment?

flood drought overpopulation photosynthesis

Remember, a solid keeps its shape and volume. A liquid keeps its volume but takes the shape of its container. A gas expands in both shape and volume to fill whatever space is available.



8. Which state of matter has a definite mass, a definite volume, but no definite shape?

gas liquid solid all three

9. The Law of Conservation of Matter says that when a sheet of paper is burned,_____.

its atoms are destroyed its atoms are rearranged

10. You know that burning a sheet of paper is a chemical reaction because during burning _____.

- A) carbon is formed and water vapor is released
- B) the paper looks different
- C) the temperature is very high
- D) the paper does not change

The faster something is moving, the more kinetic energy it has.

