

Preparing for Your Energy Test

1. Know the forms of energy.

_____, _____, _____, _____,
_____.

2. What is an energy transformation?

Definition: _____

3. Be able to give examples of energy transformations

4. What is “lost” in every energy transformation?

5. What is the Law of Conservation of Energy and what does it say about the total amount of energy in the universe?

Definition: _____

6. Give examples of change caused by energy. (for example: a ball rolling down a hill is a change caused by energy, however, a ball just sitting at the bottom of a hill is not.)

7. How does friction affect objects in motion and how does that affect the total amount of energy in an energy transformation?

8. How does heat energy factor into energy transformations?

9. What is specific heat?

Definition: _____

10. Why are oceans colder in the summer and warmer in the winter than land or air?

11. What happens to the speed and volume of particles in an object when it is heated?

12. What happens to the mass of an object when it is heated?

13. Be able to DEFINE, EXPLAIN, and GIVE EXAMPLES of Conduction, Convection and Radiation.

Conduction:

Convection:

Radiation”

14. What is temperature?

Definition: _____

15. What is thermal energy?

Definition: _____

16. What is heat?

Definition: _____

17. What are the factors that affect kinetic energy? What happens to the amount of KE when one of those factors is changed?

KE= _____ x _____

18. What are the factors that affect potential energy? What happens to the amount of PE when one of those factors is changed?

PE= _____ x _____

19. Be able to compare the kinetic energy of different objects with different masses but same speeds/ velocity.

Mosquito and baseball traveling at the same speed?

Truck and sports car traveling at the same speed?

20. What is thermal expansion and thermal contraction and what are some real world examples of both?

Definition: _____

Definition: _____

21. Explain how heat moves from one area to another? Think high heat / low heat.

22. What does a radiometer measure?

23. What method of heat transfer is the lava lamp an example of?

24. What is a convection current?

Definition: _____

25. Touching a bottle of water that is in the fridge is an example of what method of heat transfer?

26. Why are oceans cool in summer (compared to land and air) and warmer in winter (compared to land and air)?

27. What method of heat transfer is a boiling pot of water an example of (hint-how does the water boil at the top of the pan)?