

Common elementary student science misconceptions:

1. Stars and constellations appear in the same place in the sky every night.
2. The sun rises exactly in the east and sets exactly in the west every day.
3. We experience seasons because of the earth's changing distance from the sun (closer in the summer, farther in the winter).
4. The moon can only be seen during the night.
5. The phases of the moon are caused by the shadow of the earth on the moon.
6. The phases of the moon are caused by the moon moving into the sun's shadow.
7. Dinosaurs and cavemen lived at the same time.
8. Humans are responsible for the extinction of the dinosaurs.
9. Some human races have not evolved as much as others.
10. There is no relationship between matter and energy.
11. If energy is conserved, why are we running out of it?
12. Any crystal that scratches glass is a diamond.
13. Rocks must be heavy.
14. Materials can only exhibit properties of one state of matter.
15. Melting/freezing and boiling/condensation are often understood only in terms of water.
16. The metric system is more accurate than the other measurement systems.
17. The English system is easier to use than the metric system.
18. Mass and weight are the same and they are equal at all times.
19. Mass is a quantity that you get by weighing an object.
20. Heat and temperature are the same.

*Taken from *Operation Physics* at www.amasci.com/miscon/opphys.html.