7th grade district assessment study guide.

1. The Angle of Reflection is equal to the Angle of Incidence
2. Pollen tubes develop that allow sperm to reach the ovule. Fertilization is required to produce seeds.
3. Recognize the process of mitosis and how the resulting daughter cells have identical chromosomes.
4. Many cells lack the ability to synthesize food molecules.
5. Asexual reproduction results in identical genes to the single parent plant.
6. Most DNA is in the nucleus. To study the human genome, a scientist needs to obtain DNA from the nuclei of cells.
7. Differentiation occurs within embryonic cells as the organism develops. Embryonic cells differentiate into cells that become specialized (fixed).
8. Chloroplasts convert sunlight into food (sugars).
9. Recessive alleles can be hidden by dominant alleles, an offspring inherits an allele from each parent.
10. Mitosis produces two daughter cells that are genetically identical to the parent cell.
11. An ovary becomes the fruit of a plant.
12. Budding is a form of asexual reproduction; meiosis and fertilization do not occur. Instead, the offspring is produced directly from the parent by mitosis.
13. Baby rabbits derive about half of their genetic material from their mother (about half of the cellular DNA and all of the mitochondrial DNA).
14. Most of a cell's DNA is contained in the chromosomes.
15. Refraction is the bending of light as it passes from one medium to another.
16. Several genes in a cat determine fur color, rather than a single gene.
17. The dominant trait will be expressed in a heterozygous individual.
18. Animal cells do not have a cell wall.
19. The greater magnification of the objective lens will provide more detail of the specimen.
20. Only a small portion of the electromagnetic spectrum is visible to humans.
21. The main function of the umbilical cord is to bring nutrients from the placenta to the fetus.
22. Examining cells under a microscope could help you determine if the organism is an animal or a plant. Plant cells will have cell walls and chloroplasts.
23. In sexual reproduction, each parent contributes one set of genes to the offspring.
24. Light travels in a straight line within a medium, such as water or air.
25. If freckles are a dominant trait, one parent must be heterozygous if the other parent has no freckles and some of the children have no freckles. (Punnet square)
26. Recognize from a diagram the reflection of light.
27. During cellular respiration mitochondria release energy stored in food and produce ATP, the energy source used by cells to perform their activities.
28. All plant cells are surrounded by cell walls, which is not true of animal cells.
29. All organisms contain (or are) cells that can replicate.
30. Chromosomes are found in the nucleus and are composed of DNA.

Function of flower plants during pollination and fruit development.

Pollen is made in the anther, both pollen and the anther are MALE structures. Pollen needs to be transferred to the stigma, which is the end of the pistil, both the stigma and the pistil are FEMALE structures.
Fruits develop from ovaries and seeds develop from the ovules, which are contained within the ovaries. Pollination and fertilization are required before seeds and fruit are developed.
Mitosis is a process of cell division (or cell reproduction), two cells with identical DNA (or chromosomes) result from each cell that undergoes mitosis.