Supplemental Test Items to accompany OpenStax College *Concepts of Biology*. Note that not all chapters of OpenStax College *Concepts of Biology* have accompanying test items. Building on the community-oriented nature of OpenStax College resources, we invite you to submit items to be considered for future inclusion.

**Chapter 06: Reproduction at the Cellular Level**

1. Researchers found that a certain species of sea slug, *Elysia chlorotica*, has in its genome a gene for repairing and maintaining chloroplasts. The gene is identical to one found in the algae from which the slugs steal chloroplasts for performing photosynthesis during periods of dietary shortfall. How did the slugs get the gene? (Outcome #4b) (DOK 2) (Paired Item 1)
2. through vertical gene transfer
3. through horizontal gene transfer\*
4. through diagonal gene transfer
5. A certain sea slug, *Elysia chlorotica,* “steals” chloroplasts from algae it normally feeds upon, and then uses the chloroplasts to conduct photosynthesis during times of low food availability. Scientists found that the slug carries a chloroplast-maintenance gene in its genome, a gene identical to one found in the algae. The process by which the slug first acquired the gene is called what? (Outcome #4b) (DOK 2) (Paired Item 2)
6. horizontal gene transfer\*
7. mutation and natural selection
8. vertical gene transfer
9. Which of the following types of cell division actually contains two rounds of cell division? (Outcome #2) (DOK 1)
10. mitosis
11. meiosis\*
12. cytokenesis
13. The separation of the cytoplasm of a cell during cell division is known as: (Outcome #2) (DOK 1)
14. mitosis
15. meiosis
16. cytokenesis\*
17. Inhibitors of microtubule synthesis inhibit mitosis by preventing the formation and function of the: (Outcome #2) (DOK 2)
18. chromosomes
19. centrioles
20. spindle\*
21. How would you determine if the number of chromosomes in a certain life stage of an organism exhibiting alternation of generations was diploid or haploid? (Outcome #2) (DOK 3)
22. compare the chromosome number before and after mitosis
23. compare the chromosome number before and after meiosis\*
24. compare the chromosome number before and after cytokenesis