

<b>CHAPTER 16</b>	<b>Thought Lab 16.2: Comparing Reproductive Strategies Answer Key</b>	<b>BLM 16.4.8A</b>
<b>ANSWER KEY</b>		

### Answers to Analysis Questions

1. It is unlikely that all groups will come to the same conclusions, as there will be many different advantages and disadvantages of the reproductive strategies used by the various organisms researched. You could identify factors that account for these differences as environment, characteristics of the organism itself and the population as a whole, etc.
2. There are advantages and disadvantages to both sexual and asexual reproductive strategies. The advantages and disadvantages of sexual and asexual reproduction could be listed as follows:  
Sexual reproduction provides populations with a means of adapting to a changing environment (some offspring, for example, may have a greater ability to resist parasites or toxins in the environment or to take advantage of new food sources); competition among siblings may be less if they are genetically diverse; and pairing of homologous chromosomes and crossing over offer opportunities to replace or repair damaged chromosomes. However, sexual reproduction requires the presence of a second organism, may take more time and energy than asexual reproduction, and offspring must often fend for themselves in the environment after birth.  
Asexual reproduction is often faster and requires less energy than sexual reproduction; does not require the presence of a second parent organism; and because the daughter organism does not fully separate from the parent until it is capable of independent survival, asexual reproduction may increase chances of survival in some cases. However, asexual reproduction does not allow for genetic variation (offspring are genetic duplicates of the parent).
3.
  - a) You could choose any of the forms of reproduction covered in the text (sexual reproduction, asexual reproduction, alternation of generations, or alternation of reproductive cycles).
  - b) Your description/illustration should include the complete cyclical lifecycle and details explaining each stage of the cycle.
  - c) Your answer should clearly explain how the chosen form of reproduction would benefit your organism with specific reference to the organism's environment.