

Unit 1

Nature of Science

1. Ada is planning a field investigation to compare the numbers of insects and spiders in a one-square-meter area she has marked outdoors. Ada knows that insects make up the largest group of arthropods. Which would be the MOST accurate prediction for Ada to make before she starts her investigation?

- A The marked area will contain more spiders than insects.
- B The marked area will contain equal numbers of insects and spiders.
- C The marked area will contain more insects than spiders.
- D The marked area will contain more centipedes and millipedes than insects and spiders.

2. Every year, monarch butterflies travel thousands of miles from their summer homes in northern states and Canada to wintering spots in Mexico and southern California. In spring, they make the journey back again. However, the butterflies die before they reach their northern homes. New butterflies, hatched from eggs laid by migrating monarchs, complete the journey. A scientist wanted to know how the new butterflies found their way to their northern homes if they had never been there before. Which of the following is NOT a testable hypothesis about monarch migratory behavior?

- A Monarchs follow routes that have many milkweed plants.
- B Monarchs are prettier than other types of butterflies.
- C Monarchs can sense Earth's magnetic field.
- D Monarchs can smell the remains of the last season's dead monarchs.

3. The table below lists human population figures from 1804 to 1999.

Year	Human Population Growth (Billions)
1804	1
1927	2
1960	3
1975	4
1987	5
1999	6

Which graph MOST CLOSELY represents human population growth based on the data above?

