








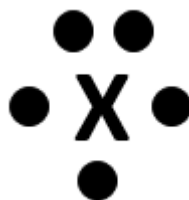
1. The chart illustrates the unique physical characteristics of five species of Cichlid fish.

**Cichlid Fish Species**

	<i>Cheilochromis euchilus</i>
	<i>Champsochromis caeruleus</i>
	<i>Aristochromis christyi</i>
	<i>Diplotaxodon greenwoodi</i>
	<i>Lichnochromis acuticeps</i>

**Which observation *most likely* explains the physical differences among the fish?**

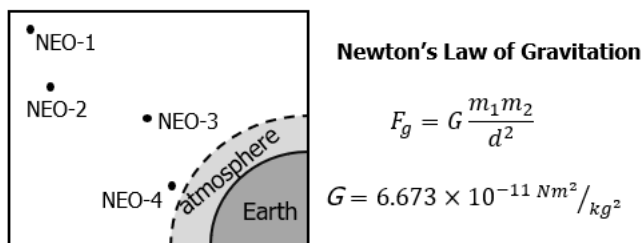
- A** The differences are an adaptation to competition for food.
  - B** The differences are an adaptation to variations in salinity levels.
  - C** The differences are an adaptation to improve camouflage.
  - D** The differences are an adaptation to reproduce in colder temperatures.
2. **Examine the Lewis dot structure of element X.**



**In which group on the periodic table does element X belong?**

- A** same group as phosphorus
- B** same group as boron
- C** same group as calcium
- D** same group as argon

3. The diagram shows the locations of four near-Earth objects (NEOs). The table gives additional data about each NEO and the formula for Newton's Law of Gravitation is shown.



NEO	Width (m)	Mass (kg)	Distance from Earth (m)
1	500	$1.3 \times 10^{10}$	$4.20 \times 10^8$
2	380	$8.6 \times 10^{10}$	$3.85 \times 10^8$
3	230	$3.8 \times 10^{10}$	$3.10 \times 10^8$
4	85	$2.2 \times 10^9$	$1.75 \times 10^8$

The mass of Earth is  $5.9 \times 10^{24}$  kg. Using Newton's Law of Gravitation, which NEO has the *largest* gravitational force with Earth?

- A NEO-1  
 B NEO-2  
 C NEO-3  
 D NEO-4
4. How can a large volcanic eruption impact Earth's climate on a global scale for a short period of time?
- A Lava flows from the volcanic eruption can burn and destroy large amounts of vegetation, preventing the removal of carbon dioxide gas from the atmosphere.  
 B Seismic activity caused by the volcanic eruption can impact the direction of ocean currents, changing the distribution of heat.  
 C The ash from the volcanic eruption can spread across the surrounding landscape, resulting in acidic soil.  
 D The volcanic eruption can eject a high volume of volcanic gases and dust can spread throughout the atmosphere, reflecting sunlight back into space.