

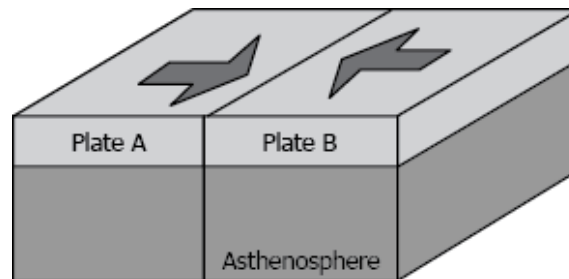


1. A student performs an experiment to study how sound waves are transmitted by placing a ringing buzzer inside a bell jar and sealing the jar. The student then connects the bell jar to a vacuum pump to remove the air from inside of the jar. The table shows the student's observations before and after removing the air from the bell jar.

Bell Jar with Buzzer	Is the Sound of the Buzzer Heard?
before removing air	yes
after removing air	no

What can be concluded from the experiment?

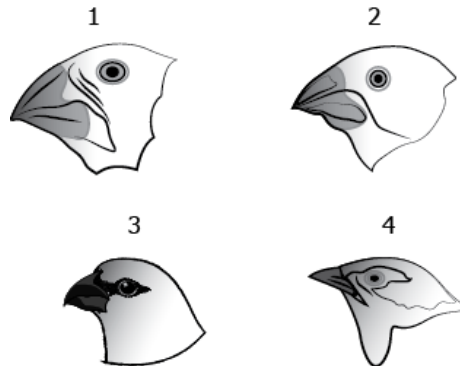
- A Sound waves are transverse waves.
 - B Sound waves do not carry energy when they are transmitted.
 - C Sound waves do not transmit through material mediums.
 - D Sound waves transfer energy through the vibration of particles in mediums.
2. A student prepares a model to show a convergent boundary between two plates, A and B.



What would happen if Plate A is a continental plate, and Plate B is an oceanic plate?

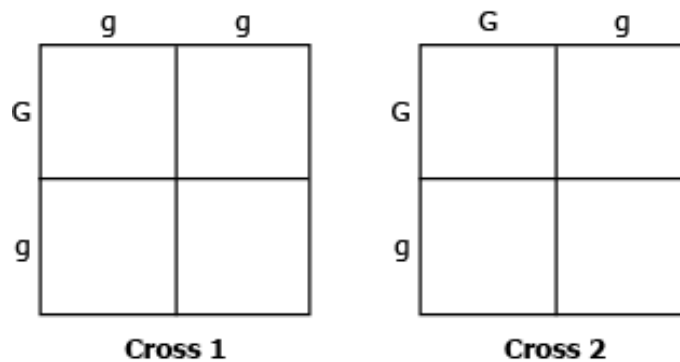
- A Plate B would subduct beneath Plate A, forming a deep trench.
- B Plate A would subduct beneath Plate B, forming an oceanic volcano.
- C Plates A and B would collide, forming an oceanic ridge and a volcanic arc.
- D Plates A and B would thrust rocks upward, forming a fold mountain.

3. The image shows the beak shapes of four different finches observed by Charles Darwin on the Galapagos Islands. Darwin observed that broad-beaked finches prefer to eat large, hard seeds, while finches with narrow beaks eat small, soft seeds.



What did Charles Darwin infer from this study that led to the development of the Theory of Evolution?

- A Finches with broad beaks have higher survival rates than finches with narrow beaks.
 B Finches with narrow beaks gradually evolve broader beaks to feed on all types of seeds.
 C The finches evolved from different ancestors with different shapes of beaks.
 D The finches evolved from a common ancestor and developed different beak shapes to adapt to the food available.
4. In pea plants, the trait for green pods (G) is dominant over the trait for yellow pods (g). The Punnett squares show crosses a gardener makes between two pea plants.



Which cross will produce more pea plants that have genotypes *most* similar to the parents' genotypes?

- A Cross 1; the gardener will obtain pea plants with the genotype gg only.
 B Cross 2; the gardener will obtain pea plants with the genotype Gg only.
 C Cross 1; the gardener will obtain pea plants with the genotypes Gg and gg.
 D Cross 2; the gardener will obtain pea plants with the genotypes Gg and gg.