







1. An engineer tests four bridge designs.

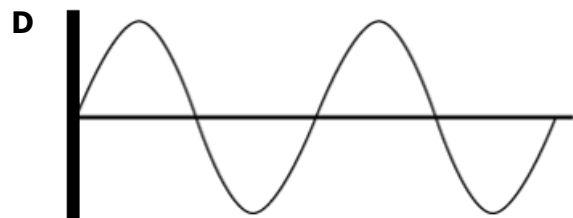
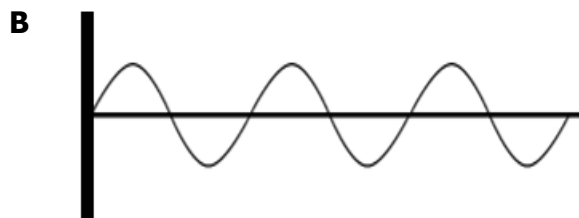
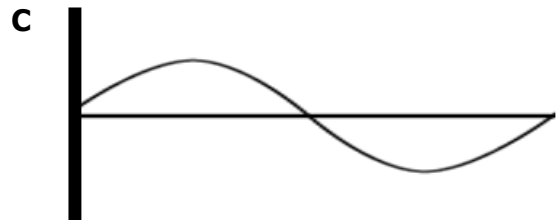
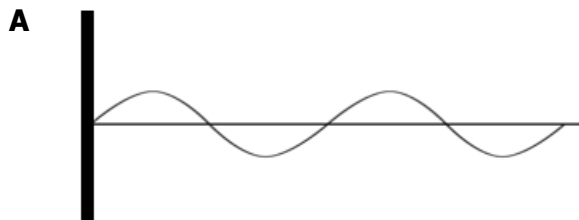
Bridge	Design	Bridge Height	Slowly Moving Water	Quickly Moving Water
1		5 feet	has no impact	has no impact
2		15 feet	breaks one pole	causes bridge to fall
3		25 feet	has no impact	breaks one pole
4		35 feet	breaks three poles	causes bridge to fall

The bridge will be built in an area that has floods of 6 feet with quickly moving water. Which bridge design can the engineer change and test to use in the area?

- A Bridge 1 can be made taller.
- B Bridge 2 can be made wider.
- C Bridge 3 can be made with fewer poles.
- D Bridge 4 can be made with smaller poles.

2. Light travels in waves. As the amplitude of a wave increases, light gets brighter.

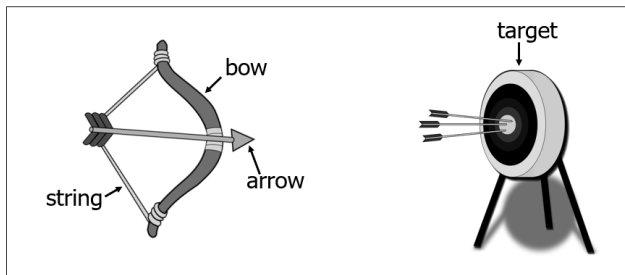
Which image shows the *brightest* light wave?



3. The Arctic fox has thick, white fur and the red fox has thin, orange-red fur. Which statement matches a fox's characteristic with the area where it is *likely* to survive?

- A** The Arctic fox has thick fur that helps it survive in a warm environment.
- B** The red fox has thin fur that helps it survive in a cold environment.
- C** The Arctic fox has white fur that helps it survive in a snowy environment.
- D** The red fox has orange-red fur that helps it survive in a rainy environment.

4. A student pulls the string on a bow to different distances and shoots an arrow. The student records the time the arrow takes to hit a target.



Distance Stretched (centimeters)	Time (seconds)
5	4
7	2
9	1

What is the relationship between the speed of the arrow and its energy?

- A** The arrow moves fastest and has the most energy when the string stretches to 9 centimeters.
- B** The arrow moves slowest and has the most energy when the string stretches to 5 centimeters.
- C** The arrow moves slowest and has the least energy when the string stretches to 9 centimeters.
- D** The arrow moves fastest and has the least energy when the string stretches to 5 centimeters.