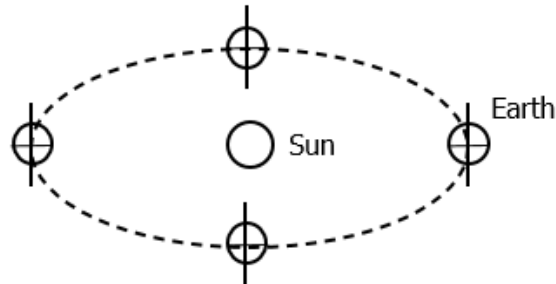




1. A student designs a model that shows the different positions of Earth and the Sun to demonstrate the cause of the different seasons.



While testing the model, the student discovers an error. There is an equal duration of day and night at all four positions of Earth.

Which step should the student perform next to improve the model?

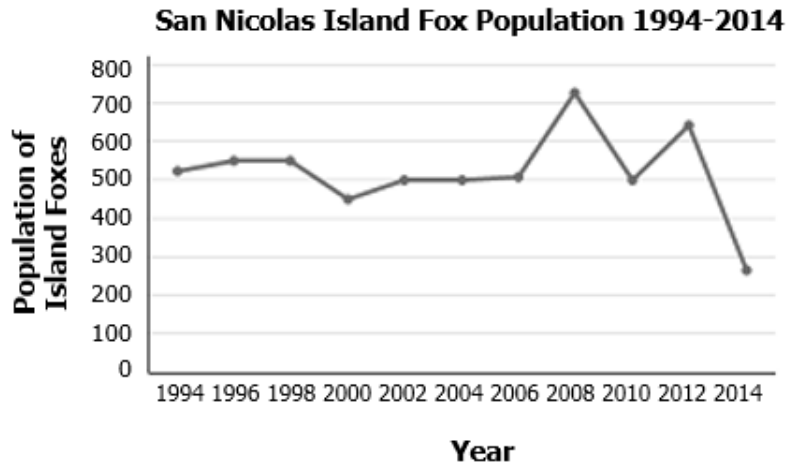
- A Revise the model to have the axis of Earth tilted.
 - B Revise the model by changing the position of the Sun.
 - C Revise the model by labeling the different hemispheres on Earth.
 - D Revise the model to have Earth revolve around the Sun in a larger orbit.
2. A student places a glass of water on a speaker. The student turns on the speaker and plays the same note at two different volumes and observes the ripples the sounds make in the water. The student records the results in a table.

Volume	Height of Ripple
softer	2 mm
louder	4 mm

Why do the ripples increase in size as the volume of the speaker increases?

- A Increasing the volume decreases the energy of the sound wave, which moves the water more.
- B Increasing the volume increases the energy of the sound wave, which moves the water more.
- C Increasing the volume decreases the energy of the sound wave, which moves the water less.
- D Increasing the volume increases the energy of the sound wave, which moves the water less.

3. **Island foxes on San Nicolas Island feed on cacti, saltbushes, sea figs, insects, and deer mice. The graph shows the population of island foxes on San Nicolas Island from 1994 to 2014.**



A scientist notes that the population of these foxes, nearly stable over the years, has declined since 2012 due to drought. What would have been the *approximate* population in 2015 if the drought had continued?

- A 145 foxes
 - B 285 foxes
 - C 365 foxes
 - D 412 foxes
4. **A teacher wants to perform a demonstration to show that a magnetic field exists around a permanent magnet, even when it is not in contact with another object. Which demonstration should the teacher use?**
- A Demonstrate how the south pole of one magnet is attracted to the south pole of another magnet.
 - B Demonstrate how a magnet can make iron filings on top of a piece of paper move when the magnet is under the paper.
 - C Demonstrate how when a pile of paper clips is touched with a magnet, some of the paper clips stay attached as the magnet is lifted.
 - D Demonstrate how two magnets stay together as they are pulled across a table.