Influenza evolution: Pre- and posttest.

1. A virus can be described as
   a. A protozoan that always causes illness in its host.
   b. A disease-causing agent that can only infect humans.
   c. A nonliving agent, though this designation is currently under debate.
   d. An organism that is killed by antibiotics.

2. A virus can ensure its evolutionary survival by
   a. Evolving to be as virulent as possible.
   b. Evolving to be as nonvirulent as possible.
   c. Evolving slowly to evade detection from its host.
   d. Evolving quickly to evade detection from its host.

3. A pandemic can be described as
   a. An epidemic that spans the entire country.
   b. An epidemic that affects humans and animal populations.
   c. An epidemic that kills at least 1% of the population.
   d. An epidemic that crosses continental borders.

4. The method that many viruses use to enter host cells is
   a. Through receptor-binding proteins that attach to host cell binding sites.
   b. Through lysing host cell phospholipid layers.
   c. Through engulfment by the host cell.
   d. Brute force.

5. Draw what you think a virus looks like and label whatever parts you can.

6. List four viruses.

7. Why do we need to get a new flu vaccination each year?

8. Explain why public health officials and physicians recommended that people get two types of flu vaccinations during the 2009–2010 flu season?