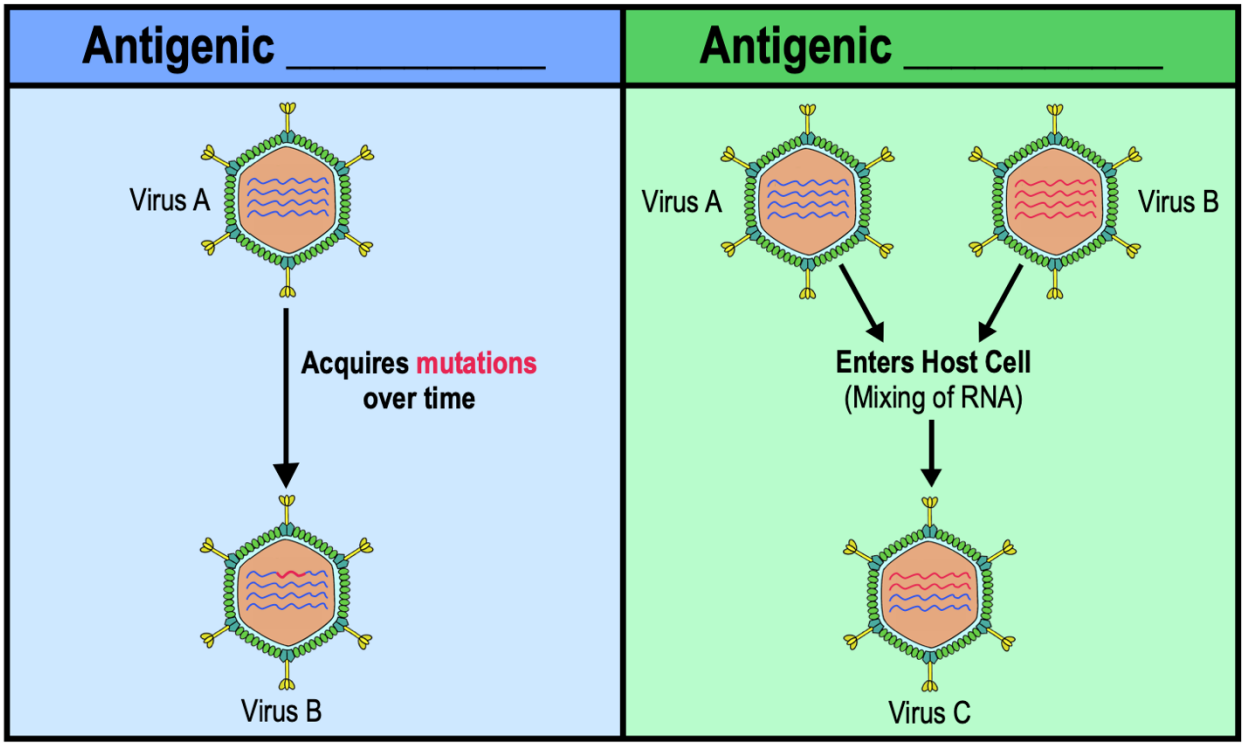
**CONCEPT:** ANIMAL VIRUSES: ANTIGENIC DRIFT & ANTIGENIC SHIFT

- Replicase has no *proofreading* ability, which allows mutations to accumulate that can lead to *antigenic* _____.
  - □ **Antigenic Drift:** *genetic* _____ resulting from *mutations* caused by lack of proofreading in replicase.
  - □ Can allow a virus to _____ immune responses by a host cell.
- Some RNA viruses can have more than one piece of RNA from *different* viruses which causes *antigenic* _____.
  - □ **Antigenic Shift:** formation of a new virus subtype that has RNA from _____ viruses.




**PRACTICE:** Which of the following is a major difference between antigenic drift and antigenic shift in viruses?

a) Antigenic drift results from mutations in the viral genome. Antigenic shift results from combining viral genomes.
b) Antigenic drift results in the deactivation of the virus while antigenic shift results in the reactivation of the virus.
c) Antigenic drift results in a new subtype of virus being created while antigenic shift does not.

**PRACTICE:** What is the major cause of antigenic drift?

a) The mixing of RNA viral genomes from two different viruses.
b) The mixing of viral proteins to form an entirely new virus.
c) Mutations in RNA viral genomes caused by the replicase enzyme.
d) Mutations in DNA viral genomes caused by the replicase enzyme.