

**Coronavirus WebQuest (powered by 3DMD), Part III**

**Name:** \_\_\_\_\_

**Videos**

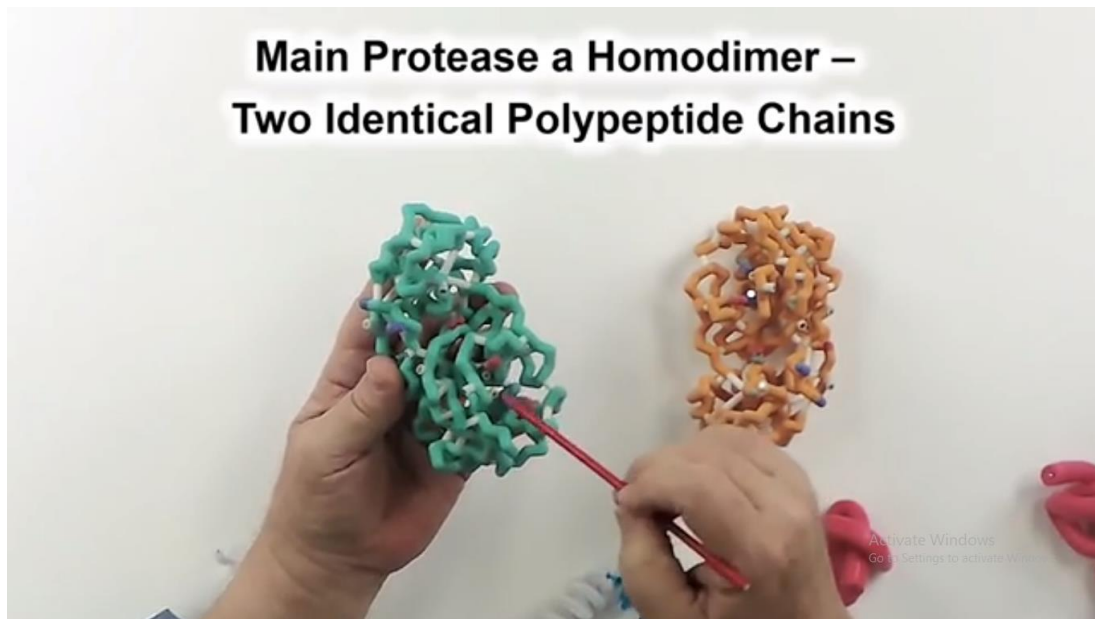
Go to <https://www.3dmoleculardesigns.com/The-Science-of-Coronaviruses/What-Does-A-Coronavirus-Do-Inside-Us.htm>

**Video #1: Replicating and Translating Coronavirus RNA**

1. What does it mean that the viral RNA is “ribosome ready”?
2. The first half of the coronavirus genome codes for a \_\_\_\_\_, which is not one protein, but many.
3. The scissors in the video represents the main \_\_\_\_\_, which recognizes a particular amino acid sequence, and cuts at that location.

**Video #2: Coronavirus Proteins**

4. The main protease is a \_\_\_\_\_, which mean it is made of two identical polypeptide chains.



5. The structure Dr. Herman is pointing at is the \_\_\_\_\_ of the protease (an enzyme).
6. What are the first four proteins that are also coded by the coronavirus genome?

7. What does the virus' RNA polymerase do to make an exact copy of the viral RNA?
  
8. What is the fifth protein in coronavirus? What is its relevance?
  
9. What is the point of studying the coronavirus proteins?

***Modeling-***

Go to <https://www.3dmoleculardesigns.com/3DMD-Files/Science-of-Coronaviruses/ViralGenomeColor.pdf> and print the paper model.

Use the video on the first link to help you assemble:

<https://youtu.be/z46lZ14B4Fk>

OR, go to <http://www.markhoelzer.com/corona/jmol2.html#> and obtain a screenshot of each of the models of the main protease.