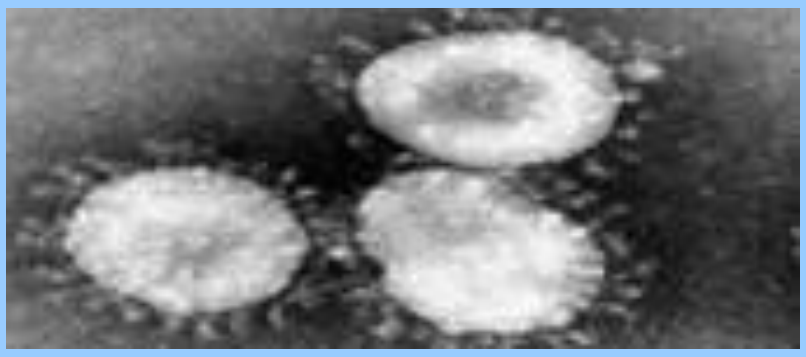
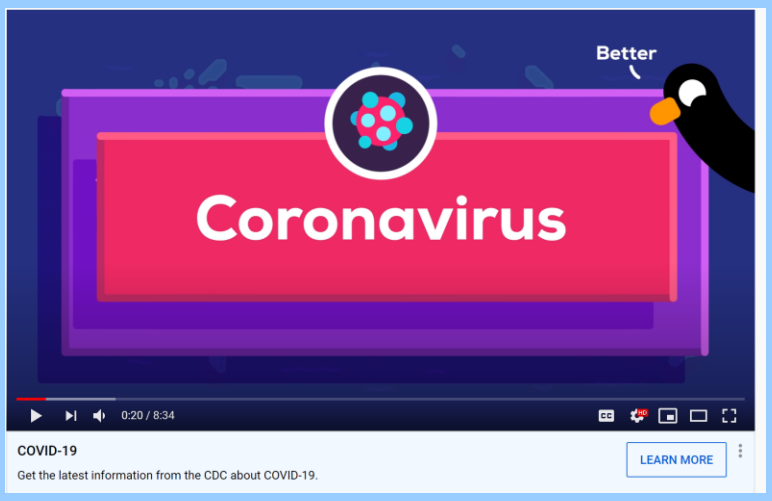
What are Viruses?



Great Overview from Wikipedia

The Wikipedia Page on Viruses is especially good. Well-organized. It covers the three theories about how viruses evolved, how they work in general, how their genomes replicate and the seven "Baltimore" types of viruses. I would say this is a great place to start learning about viruses, so please write that two-paragraph summary of this great resource. Be sure to open all the collapsed sections of the page.



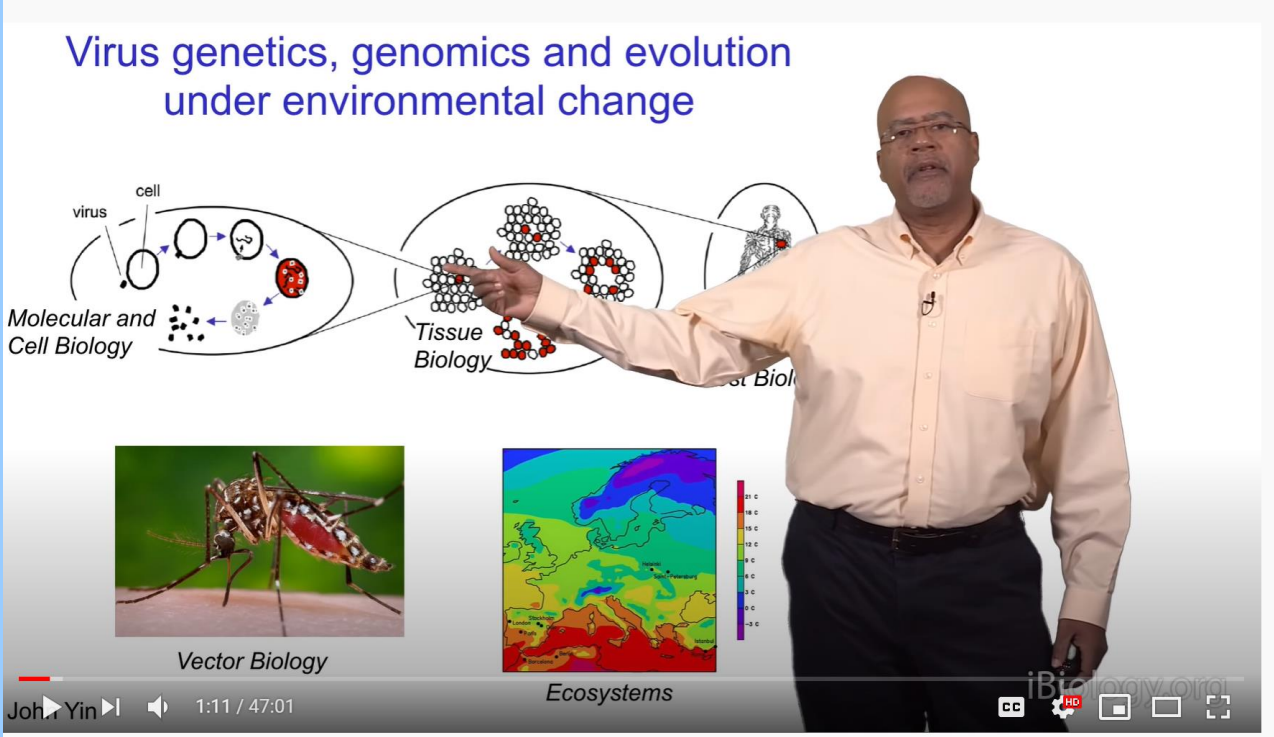
This Kurzgesagt Video with General Information about CoronaVirus is great companion to the Wikipedia article since it talks about viruses in general.

Article from Eugene Koonin making case for viruses as part of Origin of Life

We read the "Two Empires and Three Domains" article from Koonin about the Origin of Life. This one is more focused on viruses, which is his specialty. It will be a little challenging, but interesting. Please, write another two-paragraph summary of this article.

You might find this shorter Nature article from David Wessner about the origin of viruses a great background info for understanding Koonin's article. And it is more open-ended about the evolutionary origins of viruses. Read this to help with your two-paragraph summary of Koonin's article.

Additional Resources



Paul E. Turner (Yale) 2: Virus Adaptation to Environmental Change

47 minutes long, but great multi-media lecture on viruses from Paul Turner, Yale University…well worth watching and well-produced.

The Novel Coronavirus Page

Evolution and Ecology of Coronavirus

Scientific American Evolutionary Tree of how Novel Coronavirus Spread Geographically (June 2020)

Nature news feature…complexity of COVID-19 virus and why difficult to fully understand (May 4, 2020)

Modeling Infectious Disease Dynamics from Sarah Cobey, University of Chicago—emphasis on COVID-19 and what are important factors in modeling and predicting infection pathway.

Origin and Evolution of the 2019 Novel Coronavirus, Chinese Scientists in Nature, (February 3, 2020)

Article from the Bulleting of Atomic Scientists about where virus began,

Containment and Treatment of Coronavirus

How Kids spread Coronavirus, from Nature magazine…important as we consider reopening schools. (May 7, 2020)

Charles Lockwood, the Dean of the USF School of Medicine in Tampa about the right way to open up businesses and institutions

Reliable Data Sources for Local, National and Global Infection Rates

Minute Physics Video about presenting infection rate data

COVID-19 log-log transmission tracking page for countries of the world

World-o-Meter Country data that includes per million in population statistics to compare countries

Johns Hopkins U.S. COVID-19 Data Center with infection data and map for countries and .S. states, by county

Florida Department of Health General Information and Data Dashboard with cases and deaths by county map and data

Alternative Florida State Dashboard from fired data scientist with differing data accounting—see this article explaining difference.

Florida data constantly updated data page, by zip code from Sun Sentinel.

University of Washington Model Projections for healthcare resources and deaths by country and U.S. states

Mass General/Georgia Tech simulator for making policy decisions.