

Ionic and Covalent Bonds Ted Ed 3 min

<http://www.youtube.com/watch?v=NgD9yHSJ29I>

Polarity and hydrogen bonding in water. Bozeman 8 min

<http://www.youtube.com/watch?v=iOOvX0jmhJ4>

Biomolecules Crash Course Carbs, Protein, Fats 14 min

<http://www.youtube.com/watch?v=H8WJ2KENIKO>

Carbs Bozeman 9 min

http://www.youtube.com/watch?v=_zm_DyD6FJ0

Penguin Prof Lipids 12 min

<http://www.youtube.com/watch?v=ulIjtI4FPDQ>

Bozeman Lipids 7 min

<http://www.youtube.com/watch?v=VGHD9e3yRIU>

Bozeman Protein 9 min

http://www.youtube.com/watch?v=2Jgb_DpaQhM

Penguin Prof What is DNA 14 min

<https://www.youtube.com/watch?v=59XnRgnkcB8>

DNA The secrets of Photosynthesis 51 - 53 minutes (start at 2:35 min)

https://www.youtube.com/watch?v=o25Nda3OHcM&ab_channel=MrDavenportSCH
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Nucleic Acids Bozeman 8 min

<http://www.youtube.com/watch?v=NNASRkIU5Fw>

Crash course DNA structure and replication 13 min

<http://www.youtube.com/watch?v=8kK2zwjRVOM>

Intro to PS 3 min

<http://www.youtube.com/watch?v=suN-sV0cT6c>

Crash Course Protein Synth. 14 min.

<http://www.youtube.com/watch?v=itsb2SqR-R0>

Amoeba Sisters 7 min

<http://www.youtube.com/watch?v=h5mJbP23Buo>

Protein Synthesis Animation 3 min (good wrap up)

<http://www.youtube.com/watch?v=nHM4UUVHPQM>

Sci-show - **History the first vaccine** - 11 min

https://www.youtube.com/watch?v=jtqAqL3fn64&ab_channel=SciShow

Nutshell - **The Side Effectes of Vaccines** - 11 min

https://www.youtube.com/watch?v=zBkVCpbNnkU&ab_channel=Kurzgesagt%E2%80%93InaNutshell

Sci-show - **How do mRNA Vaccines work** - 6 min

https://www.youtube.com/watch?v=z0kfdZ8o_j4&ab_channel=SciShow

Sci-show - **Why it Took 50 years to make the covid mRNA vaccine** - 12 min

https://www.youtube.com/watch?v=XPeeCyJReZw&t=51s&ab_channel=SciShow

Simply Explained - **how mRNA Vaccine works** -4 min

https://www.youtube.com/watch?v=WOvvyqJ-vwo&ab_channel=SimplyExplained

Sci show - **The Delta Vriant** - 7 min

https://www.youtube.com/watch?v=tVRjB-hv4BE&ab_channel=SciShow

Intro GMO

Sci Show 11 min

<https://www.youtube.com/watch?v=sH4bi60alZU&t=85s>

Bill Nye GMO -2017 GMO - 5 min

<https://www.youtube.com/watch?v=6tn6ohImsZO>

In a Nutshell 9 min

<https://www.youtube.com/watch?v=7TmcXYp8xu4>

Recombinant DNA 6 min

<http://www.youtube.com/watch?v=8Dd7M9PGhgQ>

CRISPR Cas9

https://www.youtube.com/watch?v=UKbrwPL3wXE&ab_channel=MayoClinic

https://www.youtube.com/watch?v=jAhjPd4uNFY&ab_channel=Kurzgesagt%E2%80%93InaNutshell

https://www.youtube.com/watch?v=IiPL5HgPehs&ab_channel=ProfessorDaveExplains

https://www.youtube.com/watch?v=6tw_JVz_Iec&ab_channel=TED-Ed

https://www.youtube.com/watch?v=MnYppmstxIs&ab_channel=BozemanScience

https://www.youtube.com/watch?v=NrDM6Ic2xMM&ab_channel=BrainCraft

Bozeman DNA Fingerprinting 6 min

<http://www.youtube.com/watch?v=DbR9xMXuK7c>

Bozeman Mutations 7 min

<http://www.youtube.com/watch?v=eDbK0cxKKsk>