Title: **We could kick-start life on another planet. Should we? Betül Kaçar** https://www.ted.com/talks/betul_kacar_we_could_kick_start_life_on_another_planet_should_we	Course: Ontario Extend Name: Adam Date: April 27th 2024

Essential Questions: **What is the essential question or theme this lecture explores?**

Questions/Key Ideas	Notes: Origin of life and where it is headed in our universe. Earth was formed 4.5 billion years ago. 3.5 billion years ago life was formed. Life is a form of chemistry that retains evolutionary solutions over millions of years. Life is chemistry that retains its heritage. Life makes earth an exotic place in the universe. Biology can only be studied here and other sciences can be studied elsewhere. Using statistic and mechanical models along with ancient DNA, activating molecules that were around millions of years ago. Novel biology and chemistry solutions could be studied. Chemistry can be studied as it transforms non-living to living. We might be able to study other environments this way by understanding this process. What can we do with this information? Let other planets have the missing ingredients so they can be terraformed on their own. We could send these ingredients, so life is sparked. This can kickstart a process for thousands or millions of years in the future. Should this be done? A dilemma for what it means to be alive. Life as a chemical system, can it answer questions about its own existence and should we sponsor more life in the universe. Is it ethical to do? Is there a difference between sending ingredients or creating life?
Life is a unique phenomenon that is only found on Earth. There is a process that changes non-living to living that we can investigate further. **How do we do this? We can study ancient DNA and the molecules that may be created. We can get clues about the environment that has allowed life to be created.** **From this information we could help seed life by sending these missing chemicals to other planets to help facilitate the creation of life**	

Summary: **Life is a complex and unique phenomenon known only on Earth. If we look to the DNA of organisms, we may get information that may help tell us about the environment. Our knowledge may help us with helping create environments conducive to life forming on other planets.**