

**Source:**

#ref #ret #disorganized #incomplete

---

## 1 | Larger themes

Video? perhaps like Melody sheep? <https://www.youtube.com/watch?v=ThDYazipjSI>  
heavy blender

## 2 | General research

start with: How did life start?  
content: theories of how life started,  
explain miller-urey  
end with we are not alone in the universe explanation:  
life is inevitable

### 2.1 | three theories

- Volcanic clay
  - In simulated ancient seawater, clay forms a hydrogel – a mass of microscopic spaces capable of soaking up liquids like a sponge. <https://www.sciencedaily.com/releases/2013/11/131105132027.htm>
  - chemicals confined in those spaces could have carried out the complex reactions that formed proteins, DNA and eventually all the machinery that makes a living cell work. Clay hydrogels could have confined and protected those chemical processes until the membrane that surrounds living cells developed.
  - theorists have shown that cytoplasm – the interior environment of a cell – behaves much like a hydrogel.

## 3 | Outline

Life is amazing, incredibly complex, the question becomes, how did it start?

Three theories:

volcanic clay deep sea vents tides of ponds

But there's more than just theories:

miller-urey experiment

TRANSITION IDEA

At home in the universe

Life, is – inevitable.

Sponsored by shabang studios!