November 11th

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Quantum Computing

- Quantum Bits
    - These are incredibly "fragile" and even the slightest interruption can disrupt it and render it useless.
    - Molecular transistors are more feasible than Quantum at the moment, because it is more stable and you could *theoredically* have more control.
        - The smallest molecular transitor is a singular carbon atom
    - Things that can be used are a singular electron, a neutron, or an atom too.
    - Quantum mechanics lets you super-position each of the "bits" at the exact same time
- General idea of what is QC
    - Quantum is not a replacement for Classical computers
    - It exists almost entirely for complex calculations and algorithims
- Questions?
    - Why do Neutrons spin?
        - Is the direction of the spin of a electron corrolated with the spin of an proton its bound to?
- Quantum Entanglement
    - Might be the reason that space and time work correctly / feasibly.
    - It is difficult to keep it entangled, but making it coherent allows for it to be a bit more consistant.
        - Coherency means that if you "pin" one atom, all of them will be pinned as well.

The issues with them at the moment is stability.

Explains what the uncertainty of the natural world; the Heisenberg's uncertainty principle.

Why is this history important?

Understanding how we got to where we are is critical

Knowing Moore's law could possibly be close to expiring.

3*5 = 15 is the peak of quantum computing right now.

Knowing that progess is important but cannot completely replace all of the technology/ies we have today because for somethings a Q-Computer is as effective as a standard.

What is so impressive about Einstein to you?

Many of the components from his theories are still being proven as correct as we learn more, and I think that its absoutely incredible that his understanding what this complex and advanced but is able to keep up with the ideas and evidence that is being found today.