How does a computer work?

Watch this video: <https://www.youtube.com/watch?v=5Sg7udkbvso>

Answer the following questions:

Questions:

1. How does a backplane interconnect different cards in a computer system?

2. What are the connectors on the backplane used for?

3. What are the main components of the CPU that connect to the backplane?

4. What are the main buses in a backplane system?

5. How do devices connect to the address bus and data bus in a backplane system?

6. What other components can be connected to the backplane?

7. How does the CPU ensure that only one device communicates at a time over the backplane?

8. How does the Atari computer differ from a laptop in terms of component swapping?

9. What is the purpose of the address bus pins in the CPU?

10. How did the Atari computer allocate memory addresses for different components?

11. What analogy does the speaker use to explain computer addresses?

12. Why is hexadecimal used in computer systems instead of binary numbers?

Questions:

1. How can you change the number to make the computer look for a different number?

2. How are zeros and ones treated in digital logic?

3. What happens when all the numbers in the logic equation are one?

4. How does the logic determine whether the address is assigned to a specific card?

5. What happens if the address on the address bus does not match the assigned address for a card?

6. How can you program a specific address for a card using dip switches?

7. How does the approach of mixing and matching cards work on the Sun 3160 server?

8. What types of cards could be added to the original IBM PC system?

9. How could you replace the CPU card in the IBM PC system?

10. How do modern PCs automatically configure themselves when a new card is added?