**REVOLUTION: PUNCHED CARDS**

**Hollerith Electric Tabulating System, 1890**
This device helped the US government complete the 1890 census in record time and, in the process, launched the use of punched cards in business. IBM used the Hollerith system as the basis of its business machines.

**REVOLUTION: BIRTH OF THE COMPUTER**

**ENIAC, 1946**
Used in World War II to calculate gun trajectories, only a few pieces remain of this groundbreaking American computing system. ENIAC used 18,000 vacuum tubes and took several days to program.

**REVOLUTION: BIRTH OF THE COMPUTER**

**ENIGMA, ca. 1935**
Few technologies were as decisive in World War II as the top-secret German encryption machine known as ENIGMA. Breaking its code was a full-time task for Allied code breakers who invented remarkable computing machines to help solve the ENIGMA riddle.

**REVOLUTION: REAL-TIME COMPUTING**

**Raytheon Apollo Guidance Computer, 1966**
This 70 lb. box, built using the new technology of Integrated Circuits (ICs), guided Apollo 11 astronauts to the Moon and back in July of 1969, the first manned moon landing in human history. The AGC was a lifeline for the astronauts throughout the eight day mission.

**REVOLUTION: MEMORY & STORAGE**

**IBM RAMAC Disk Drive, 1956**
Seeking a faster method of processing data than using punched cards, IBM invented the world’s first disk drive in its San Jose laboratories. This stack of 50 disks held about 3.8 MB—or enough space for one song today.

**REVOLUTION: SUPERCOMPUTERS**

**Cray-1 Supercomputer, 1976**
The stunning Cray-1 was the fastest computer in the world. Its legendary inventor, Seymour Cray, designed it in a circular shape to keep the interconnecting wires short, increasing speed. It was used in weather forecasting, bomb design, and cryptography.

**REVOLUTION: MINICOMPUTERS**

**Kitchen Computer, 1969**
Made by Honeywell and sold by Neiman Marcus, this fanciful computer was designed as a system for housewives to store their recipes. None were sold.

**REVOLUTION: AI & ROBOTICS**

**SRI Shakey the Robot, 1969**
Shakey was the first robot that could reason about its actions without human control. Special software let it create a “map” of its environment, which let it move about freely, even avoiding obstacles placed in its path.

**REVOLUTION: COMPUTER GAMES**

**Atari Pong Prototype, 1972**
Remember Pong, the must-have gift of 1975? See Atari’s original Pong prototype and play a live Pong game with a friend!

**REVOLUTION: PERSONAL COMPUTERS**

**Apple-1, 1976**
This simple-looking circuit board is the genesis of Apple Computer. Designed by Apple co-founder Steve Wozniak, users just needed to add a keyboard, power supply, and a TV set to have a working computer system.

**REVOLUTION: MOBILE COMPUTING**

**Osborne 1, 1981**
This was one of the first commercially successful portable minicomputers. How portable was it? Lift one for yourself in our Mobile Computing gallery!

**REVOLUTION: NETWORKING & THE WEB**

**Google Server Engine, 1999**
In its early days, Google was on a tight budget and built its own servers out of easily available commercial computer parts. This server engine, one of many identical systems, used 80 PCs and some networking equipment to answer search requests sent to Google.