



The Winston Churchill Experience at the Winston Churchill Memorial and Library

The Changing World of Winston Churchill: From the Horse to Nuclear Weapons



Churchill and the New Technologies

Team Member Name _____

Why study Winston Churchill in Missouri?

At a young age, Winston Churchill said, “I have faith in my star that I am intended to do something in the world.”

If you lived in the United Kingdom, you would know this man as one of your country’s greatest heroes. Many historians believe Churchill changed the course of history during World War II through his leadership and commanding speeches. Why study Churchill here in Missouri?

After this experience, you will be able to answer why everyone in Missouri should know Churchill AND why the world knows Fulton and Westminster College because of Churchill. You will see how one person, with vision and energy, can make a difference throughout his or her life.



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The Changing World of Winston Churchill

tech-nol-o-gy (tĕk-nŏl'ə-jĕ)

Technology is the use of engineering and science to make life, society, or the environment more efficient by creating new systems or machines

In 1874, Winston Churchill was born in England. During his life, technology played a critical role as nations engaged in great wars that would change Western culture, geographic boundaries, and the balance of world power forever. In this experience, you will follow technologies that were already evolving or created during Churchill's lifetime. For example, when Winston began his military career in 1894, he joined the cavalry (soldiers who rode horses). By the time he died in 1964 at the age of 90, he saw many, many technological changes including the capability of nuclear attack.

Step One: Your teacher has divided you into teams, with each team studying a particular type of technological advancement in Churchill's life. In this experience, you will gather information about the **new technologies** including **radar**, the **computer**, **medical advances** and **high-performance materials** such as stainless steel, aluminum and Plexiglas. To help you look at Churchill's world, including the technologies he encountered, use the historical timeline (on the right side) and circle any reference to the new technologies. Compare your results with your team's results.

	Churchill's Timeline	Historical Timeline
1874	April 15, 1874 – Winston Spencer Churchill's parents marry November 30, 1874 - Winston Spencer Churchill (WSC) born in Blenheim Palace, Oxfordshire, England	
1876		March 7, 1876 - Alexander Graham Bell receives a patent for the telephone
1877	January 1877 - WSC's grandfather, the 7th Duke of Marlborough, appointed Viceroy of Ireland	November 21, 1877 - Thomas Edison announces invention of the phonograph
1879		Thomas Edison develops the first practical incandescent lamp
1880	February 1880 - WSC's brother John, called Jack, born	January 29, 1886 - German Karl Benz patents the gasoline-powered car
1884		Hiram Maxim designed the machine gun which bears his name
1889		April 20, 1889 - Adolph Hitler born in Austria
1891		While working for Thomas Edison, British inventor William K. L. Dickson produces the

1893	WSC enters Royal Military College at Sandhurst	Kinetograph and Kinetoscope, a motion-picture camera and viewing machine
1895	WSC commissioned as second lieutenant in 4th Hussars, a cavalry regiment October - December 1895 -WSC's first visit to the U.S. and Cuba	German physicist Wilhelm C. Roentgen accidentally discovered a form of electromagnetic radiation that could pass through the body and leave an image of its bones or organs on a photographic plate--the birth of the X ray.
1896	1896-1898 - WSC travels with regiment to India; works as newspaper reporter	June 2, 1896 - Italian Guglielmo Marconi patents his "Black Box" radio in Great Britain
1898	WSC participates in the British army's last great cavalry charge at the Battle of Omdurman	
1899	WSC resigns from the army, runs for Parliament as a Conservative. Loses. In South Africa, WSC reports for newspaper on Boer War, is captured, scales a prison wall, and escapes	October 1899 - Anglo-Boer War begins
1900	WSC elected to Parliament as M.P. from Oldham (Conservative party) February 12, 1900 - as cavalry officer and correspondent, WSC participates in the Battle of Hussar Hill; his brother, Jack, is wounded in the same battle December 1900 - Lecture tour of U.S. and Canada. Meets President McKinley, Vice President Theodore Roosevelt, and Mark Twain	April 14, 1900 - The Paris Exposition opens. More than 50,000,000 people eventually view the exhibits from 76,000 exhibitors and 40 nations.
1901	February 14, 1901 - WSC takes up seat in Parliament WSC gives maiden speech in the House of Commons	First Nobel prizes awarded January 22, 1901 - Queen Victoria dies; Edward VII becomes King
1903		December 17, 1903 - Wright Brothers make first powered flight at Kitty Hawk, North Carolina
1905	December 1905-April 1908 - WSC serves as Under-Secretary of State for the Colonies	Albert Einstein publishes his theory of relativity
1906		A German metallurgist named Alfred Wilm discovered a strengthening method for aluminum by mixing it with a small amount of copper
1908	April 1908-February 1910 - WSC is President of the Board of Trade September 12, 1908 - WSC marries Clementine Hozier Elected as M.P. from Dundee (Liberal party). Serves until 1922.	Henry Ford manufactures the Model T
1910		First antibiotic marketed Irving Langmuir of General Electric experiments with gas-filled lamps, using nitrogen to reduce evaporation of the tungsten filament, thus raising the temperature of the filament and producing more light -- the light bulb is invented
1911	October 1911-May 1915 - WSC is First Lord of the Admiralty	December 14, 1911 - Norwegian Roald Amundsen arrives at the South Pole
1913		Henry Ford introduces first moving automobile assembly line
1914		August 4, 1914 - United Kingdom enters World War I The Brits launch HMS <i>Ark Royal</i> , the world's first aircraft carrier
1915	WSC urges attack on the Dardanelles and Gallipoli. Resigns Admiralty position after attack fails and Prime Minister Herbert Asquith reshuffles government. November 1915 - WSC joins army in France, fights in the trenches, is promoted to 2nd Lieutenant Colonel, and commands battalion of 6th Royal Scots Fusilliers	May 7, 1915 - German U-boat sinks the <i>Lusitania</i>
1917	July 1917-January 1919 - Lloyd George appoints WSC to Minister of Munitions.	Ernest Swinton, British soldier and scholar, invents the tank April 22 First use of chlorine gas

		<p>April 6, 1917 - U.S. declares war on Germany Great Britain begins large scale tank production First use of poison mustard gas in the trenches Hugo Junkers, a German professor of mechanics introduces the Junkers J4, an all-metal airplane built largely of a relatively lightweight aluminum alloy called duralumin.</p>
1918		November 11, 1918 - Armistice signed formally ending World War I
1919	January 1919-February 1921 - WSC is Secretary of State for the War and Air	June 28, 1919 - Treaty of Versailles signed ending World War I
1920		August 18, 1920 - 19th Amendment ratified giving women in the U.S. the right to vote First scheduled commercial radio is sent over the airwaves
1921	February 1921-October 1922 - WSC is Secretary of State for the Colonies	
1922	WSC loses election, out of Parliament	November 14, 1922 - British Broadcasting Company (BBC) begins daily broadcasts Scottish inventor John Logie Baird successfully transmits the first recognizable image—the head of a ventriloquist’s dummy—at a London department store, using a device he calls a Televisor
1925		Hitler publishes first volume of <i>Mein Kampf</i>
1927		18/8 stainless steel adopted by chemical industry later used to make jet engines for World War II May 20-21, 1927 - Charles Lindbergh makes first solo flight across the Atlantic Ocean Warner Brothers releases <i>The Jazz Singer</i> , the first major sound film First demonstration of television in the U.S.
1931	December 1931-March 1932 - On lecture tour of nineteen U.S cities, WSC is hit by car and hospitalized. Visits Bahamas	
1932	May 8, 1932 - WSC's first radio broadcast to the U.S.	
1933	1933-1938 - WSC publishes <i>Marlborough, His Life and Times</i> , a six volume set about his ancestor	June 30, 1933 - Adolph Hitler becomes Chancellor of Germany
1935		British scientist Sir Robert Watson-Watt patents the first practical radar (for radio detection and ranging) system for meteorological applications. During World War II radar is successfully used in Great Britain to detect incoming aircraft and provide information to intercept bombers
1936		Rohm and Haas Company press polymethyl acrylate between two pieces of glass, thereby making a clear plastic sheet of the material (Plexiglas) which is used to make stronger airplane and automobile windows.
1939	September 1939-May 1940 - WSC is First Lord of the Admiralty	August 23, 1939 - Stalin and Hitler sign Nazi-Soviet Pact September 3, 1939 - Britain and France declare war on Germany
1940	May 10, 1940 - WSC becomes Prime Minister when Neville Chamberlain resigns, also serves as First Lord of the Treasury and Minister of Defense WSC named <i>Time Magazine's</i> "Man of the Year"	April 9, 1940 - Germany invades Norway and Denmark
1941	August 1941 - WSC's first meeting with Roosevelt (off the coast of Newfoundland) December 1941 - WSC meets FDR in Washington, D.C., addresses U.S. Congress, travels to Canada	November 18, 1940 - Royal Air Force use airborne radar successfully June 22, 1941 - Germany invades the Soviet Union December 7, 1941 - Japanese attack Pearl Harbor; U.S. enters World War II December 11, 1941 - Germany declares war on U.S.
1942	June 1942 - WSC meets with FDR at Hyde Park	August 7, 1942 - U.S. Marines first use Navajo Code Talkers to transmit telephone and radio messages

1943	January 1943 - WSC meets with FDR in Casablanca November 1943 - First meeting of the "Big Three" -Roosevelt, Stalin, and Churchill - in Tehran, Iran	August 1942 - Manhattan project, code name for U.S. project to produce an atomic bomb, begins December 1943 - "Colossus," a British computer used for code-breaking, is operational
1944	June 12, 1944 - WSC travels to Normandy beaches October 1944 - WSC and Stalin meet in Moscow	February 1944 - <i>Luftwaffe</i> makes heaviest raids on London since 1941 June 6, 1944 - D-Day invasion into Normandy, France
1945	February 1945 - Big Three meet in Yalta, Soviet Union February 15, 1945 - WSC's final meeting with FDR (off coast of Alexandria, Egypt) July 1945 - WSC meets with Truman and Stalin in Potsdam, Germany	April 12, 1945 - President Roosevelt dies; Harry S Truman becomes 33rd U.S. President May 8, 1945 - Germany surrenders August 6 and 9, 1945 - U.S. drops atomic bombs on Hiroshima and Nagasaki, Japan September 2, 1945 - World War II ends when Japan formally surrenders onboard U.S. battleship <i>Missouri</i>
1946	March 5, 1946 - WSC gives "Iron Curtain" speech at Westminster College in Fulton, Missouri	
1947		India gains independence from Great Britain
1948		January 30, 1948 - Gandhi assassinated April 3, 1948 - Harry S Truman signs European Recovery Act, authorizing the Marshall Plan aid for Europe
1950		June 25, 1950 - Korean War begins August 1950 - British Commonwealth troops arrive in Korea
1951	WSC elected Prime Minister again at age 76	
1952		February 6, 1952 - King George VI dies; Elizabeth II becomes Queen
1957		October 4, 1957 - Soviet Union launches Sputnik I
1959	April-May 1959 – WSC meets with Eisenhower in Washington, D.C.	February 16, 1959 - Fidel Castro becomes leader of Cuba
1960		John F. Kennedy elected 35th U.S. President
1961	WSC makes last trip to the U.S., visits New York	April 12, 1961 - In first manned space flight, Soviet Cosmonaut Yuri Gagarin orbits the earth August 13, 1961 - Berlin Wall construction begins
1962		October 18-29, 1962 - Cuban Missile Crisis
1964	WSC retires from Parliament	Nelson Mandela sentenced to life in prison in South Africa (released 1990)
1965	January 24, 1965 - Sir Winston Spencer Churchill dies in London at age 90	January 29, 1965 - Memorial service held for Churchill at the National Cathedral in Washington, D.C.; BBC broadcasts Eisenhower's speech

Step Two: Your teacher will give you a packet of *New York Times* newspaper articles about the new technologies. Each team member should take one article and answer the following questions:

Your technology:

1. Title of the article

2. Subtitle (if one)

3. Date:

4. Why do you think this was written? Why was this technology important enough to be reported in the *New York Times*?

5. What did you learn?

6. How might Churchill have used this technology?

The Winston Churchill Memorial and Library

At the Memorial, you will see Churchill's world as he witnessed a remarkable shift in the way vast numbers of people lived, because of technological, medical, military, social, and political innovations. More technological advances occurred in any 10-year period following World War I than the sum total of new technological development in any previous century. Churchill and other leaders of his times commonly used these new technologies, influencing the lives of everyday people. Starting with the Industrial Revolution producing new goods and services, technology was a driving force in Winston Churchill's world.

How different would Churchill's world have been if the weapons technologies were not in place? Use the grid below, along with Churchill's Timeline on the previous pages and the information at the Memorial, to record his involvement with new technologies and predict how they might have changed his world if they did not exist. **You have to use a different prediction each time the technology is used.** We provide an example using this picture from the exhibit.:



Technology	Date (if not listed, use the timeline)	What was Churchill doing with this technology?	How would his world have been different if this technology did not exist?
The airplane	After December 17, 1903	It looks like he is going to fly or ride in the plane	He would not have easily traveled to other countries

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On March 5, 1946, Churchill made a speech, often called *The Iron Curtain Speech*, in Fulton, Missouri that he said was one of his most important. Provide the following information about this speech:

1. Year Churchill came to Westminster College: _____

2. What major event ended six months before? _____

3. Check the victors (winners) in World War II:

United Kingdom

Germany

United States

Japan

Soviet Union

France

4. The following are words from Churchill's speech in Fulton. "If the population of the English-speaking Commonwealths be added to that of the United States with all that such co-operation implies in the air, on the sea, all over the globe and in science and in industry, and in moral force, there will be no quivering, precarious balance of power to offer its temptation to ambition or adventure. On the contrary, there will be an overwhelming assurance of security."

Summarize Churchill's position on the importance of technology for peace:

Reflection: The World of Winston

1. Why study Churchill in Missouri?

2. How did technology affect Churchill's life as a leader?

3. Get a newspaper or news magazine. Look for one technology not present in Churchill's world and imagine how he might have used it in his position as a world leader.
