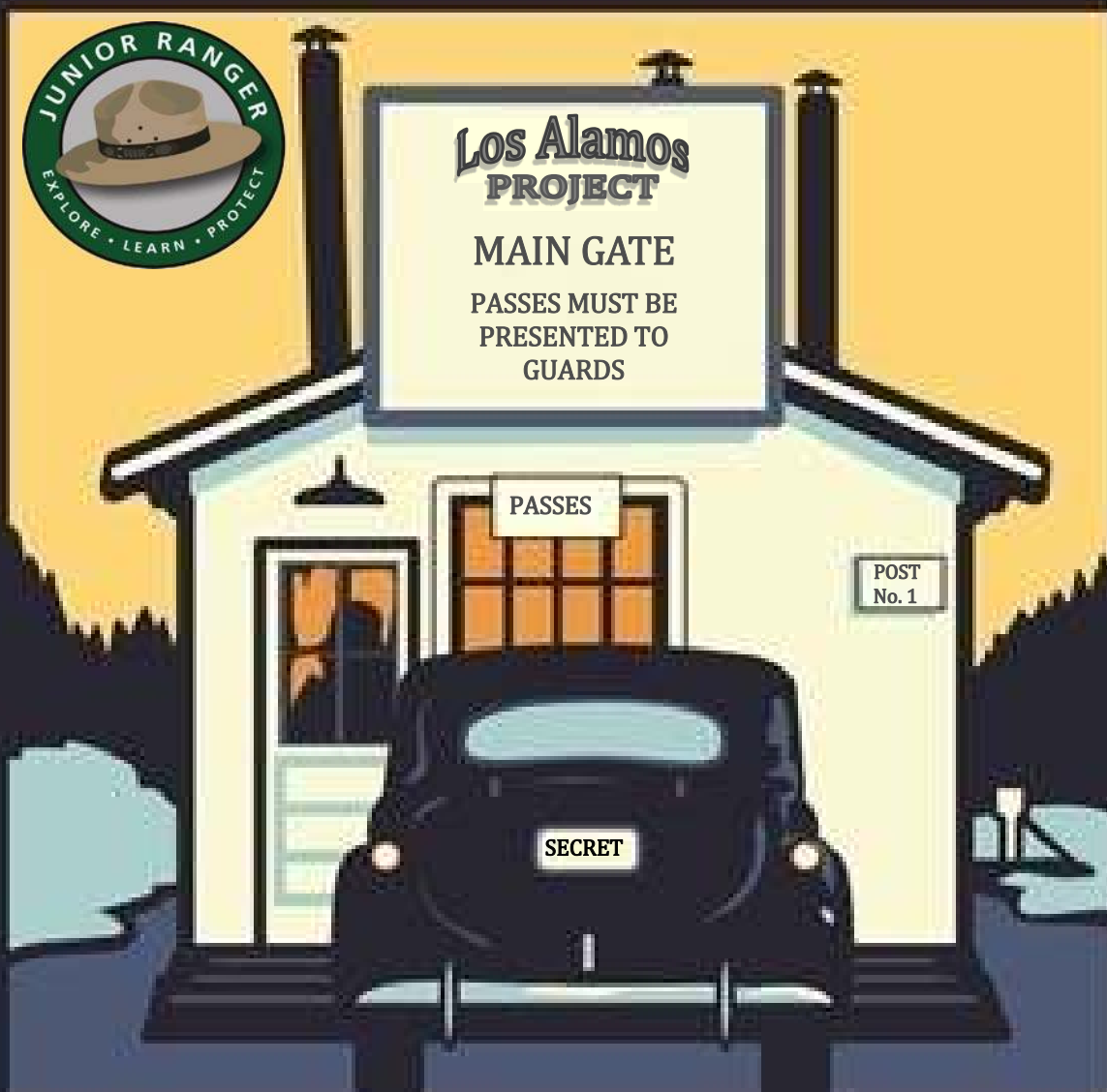


Manhattan Project National Historical Park Los Alamos, New Mexico

National Park Service
U.S. Department of the Interior

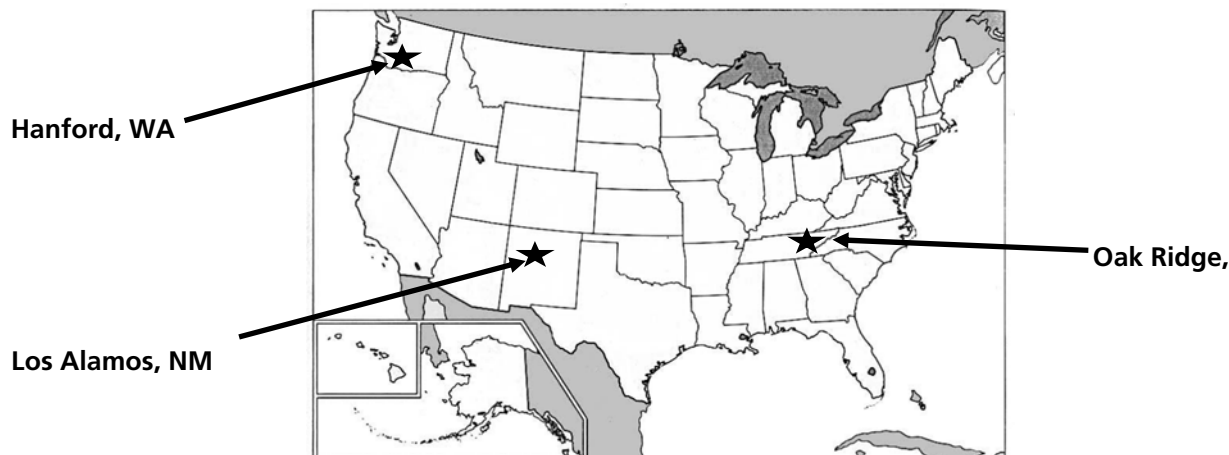


Courtesy of the Atomic Heritage Foundation

Manhattan Project National Historical Park Los Alamos, New Mexico JUNIOR RANGER BOOK

Manhattan Project National Historical Park is a partnership park between the Department of Energy and the National Park Service.

Three separate sites were located in Los Alamos, NM; Oak Ridge, TN; and Hanford, WA. Each site contributed significantly to scientific study and defense during World War II. Download Junior Ranger books from other sites to learn more!



Junior Rangers are a very special group of people who promise to care for our National Parks so that future generations can enjoy and learn from them too! To become a Junior Ranger, you will need to read information about the Los Alamos Manhattan Project site, answer questions and complete activities. It is OK for parents to help! When you are finished, bring the completed booklet to the visitor center, or mail it in to the address below to receive your badge. **Please tell us where to mail your badge:**

Name _____

Address _____

City _____

State _____ Zip _____

How many pages do I
complete to earn my badge?
9th grade and up - All pages
4th-8th grade - 5 pages
Under 4th grade - 3 pages

For questions, contact the Los Alamos, NM Visitor Center at:
475 20th Street,
Los Alamos, NM 87544
(505) 661-6277

Visit us online at www.nps.gov/mapr
Check out our Facebook page: www.facebook.com/ManhattanProjectNPS
Also find us at [Twitter@MnhnProjectNPS](https://twitter.com/MnhnProjectNPS)



WWII and The Manhattan Project

World War
1939 - 1945.

Two (WWII) was the biggest war in history, fought

between

The Axis Powers (Germany, Italy, Japan and 8 other countries) fought against the Allied Powers (France, Britain, Russia, U.S. and 57 more countries). In the United States, men and women from all cultures worked together to win the war.

It all started on September 1, 1939 when Nazi Germany's leader, Adolph Hitler, ordered the invasion of Poland. Britain and France declared war

on
Germany
two days
later.



On December 7, 1941, (now called Pearl Harbor Day), Japan's Imperial Navy Air Service made a surprise air attack at Pearl Harbor, Hawaii, USA.

The attack drew the U.S. into the war.

The U.S. decided it had to create better weapons to end the war. The U.S. hired scientists to start work on a very special bomb. Secret sites were located in Manhattan, New York, to study how to create atomic weapons. The first secret headquarters base was in a skyscraper hidden in plain sight - right across from City Hall! The "Manhattan Project" was named after the start up location of this scientific mission. Los Alamos was chosen as the main site for the new laboratory named "Project Y". They helped end this terrible war.

Why do you think this conflict was called a "World War"? _____

The Manhattan Project had this name because _____

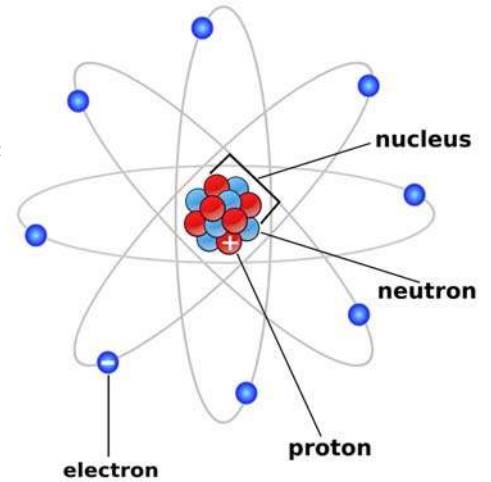
Would you like to be a scientist working on a secret mission for the government? _____

Atomic Science

In 1945, the first atomic bomb was made by studying the new field of nuclear science - the study of the atomic world.

When scientists need to find answers to hard questions, they conduct experiments. New experiments proved what scientists had long suspected - *All matter in the universe is made up of atoms!* Atoms are tiny particles that are too small to see. They are the basic building blocks of all things!

Scientists discovered that when atoms are smashed together (Fusion), or split apart (Fission), they create a lot of energy! Energy is the ability to do work. And the energy from atom smashing or splitting can be used to create a bomb or power your house.

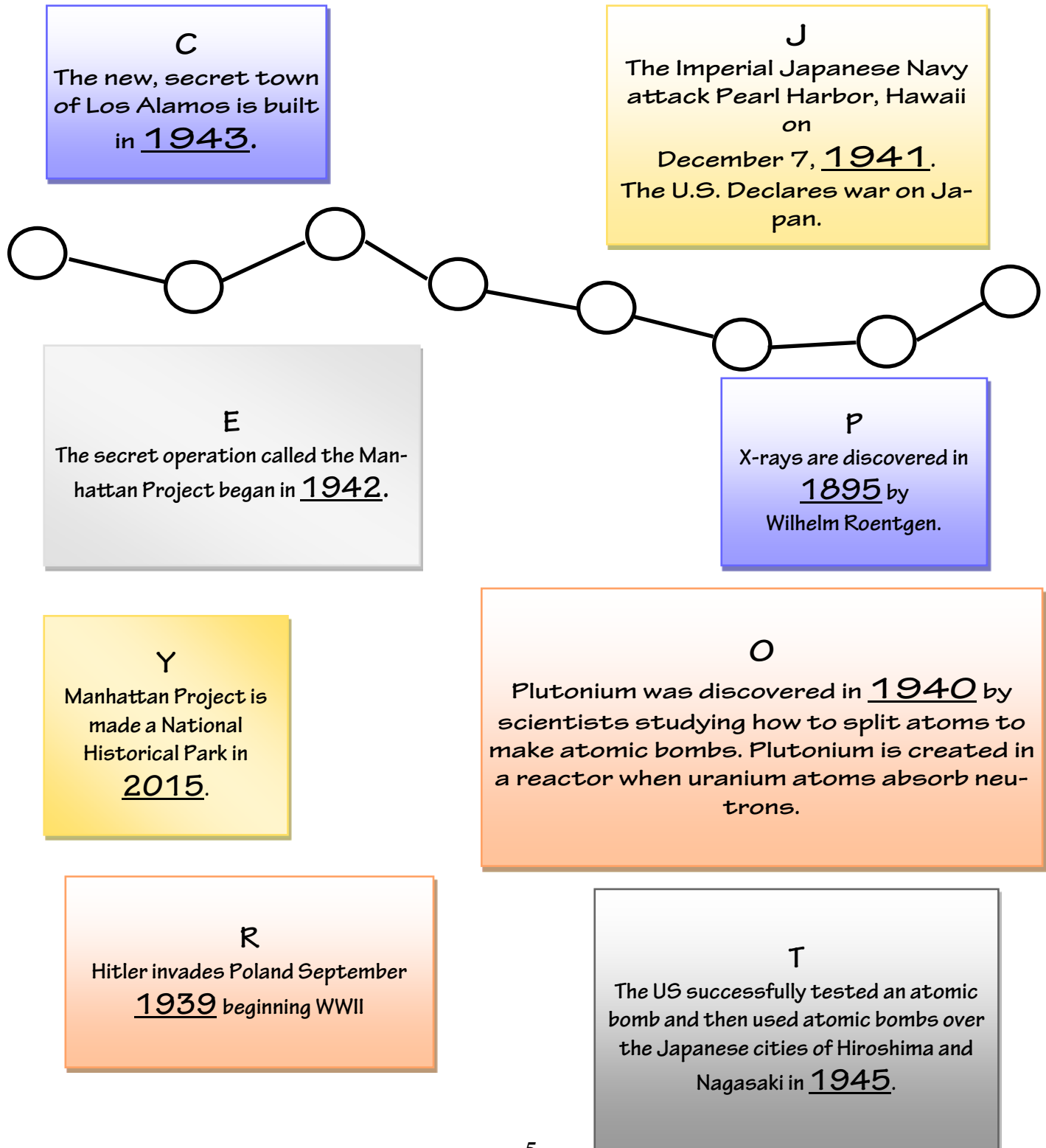


Fill in the Blanks

1. The basic building blocks of matter are called _ _ _ _ _ .
2. Scientists harnessed the power of the atom to create _ _ _ _ _ .
3. Splitting the atom is called nuclear _ _ _ _ _ .
4. The nucleus of the atom has neutrons and _ _ _ _ _ .

Manhattan Project Timeline

Put the letters in the circles on the timeline in order by date. Start with the earliest date first to spell the code



Pajarito Plateau

Los Alamos (the cottonwoods) sits on Pajarito (little bird) Plateau. Native Americans lived here over 10,000 years ago. Some Pueblo ancestors built stone houses and cliff-dwellings here around 800 years ago.

Many of their descendants now live on the nearby Santa Clara and San Ildefonso Pueblos. You can see the ancestral Pueblo dwelling sites beside the old Romero Cabin.



The Manhattan Project chose this site because of its isolation, but the government had to acquire land belonging to people living there. Some older buildings belonged to the Los Alamos Ranch School, a prestigious college prep school, which trained boys in outdoor and ranching skills.

Homesteaders, mostly Hispanos, were also made to sell their land to the government for little payment. Many local Hispanics and Native Americans were hired to work on the Manhattan Project.



The Romero Cabin belonged to homesteaders. They raised crops and grazed livestock here in the summers.

Many years after selling their homestead to the government, this cabin was moved downtown.

You can see this old cabin along the “Town site Properties Walking Tour” behind Bathtub Row.

Why did the Manhattan Project select this location? _____

How would you feel if you had to leave your home? _____

Do you think the government was right to take people's land? _____

Why or why not? _____

Project Y Team

Los Alamos was a unique community that combined ordinary civilians, scientists, engineer detachments, and the military to work together to develop an atomic bomb.



Robert Oppenheimer (left), Scientific Director of the Manhattan Project and Army Lt. General Leslie Groves (right) were the leaders at the Los Alamos secret location.

Local civilians able to pass intense security clearances were issued passes to enter the project area. They performed construction, maintenance, housekeeping and other service positions within the secret city.



The Regular Army and the Women's Army Corps (WACs) performed important work in communications, purchasing supplies and transmitting scientific data in a top-secret environment.



Courtesy of the Los Alamos Historical Society Archives

Which group described above would you choose to work for? _____

Why? _____

Life in a Secret City



From 1943 to 1945, Los Alamos was a top-secret army post isolated from the world and the home of Project Y. The Los Alamos site was hidden by a fence that surrounded the city. Everyone's location and jobs had to be a secret.

Even children had to have a special ID card to live in the town. Kids went to school, played games, went horseback riding and lived in homes just like you, but they could not tell friends or family outside of the town

Courtesy of the Los Alamos Historical Society Archives

Imagine where you live is a secret town and you are writing a letter to someone who does not live there with you. You can write to a friend, relative or even a pen-pal. Tell them about your day, but keep your location, the other people who live there and what they are doing a secret.

Dear _____,

From, _____

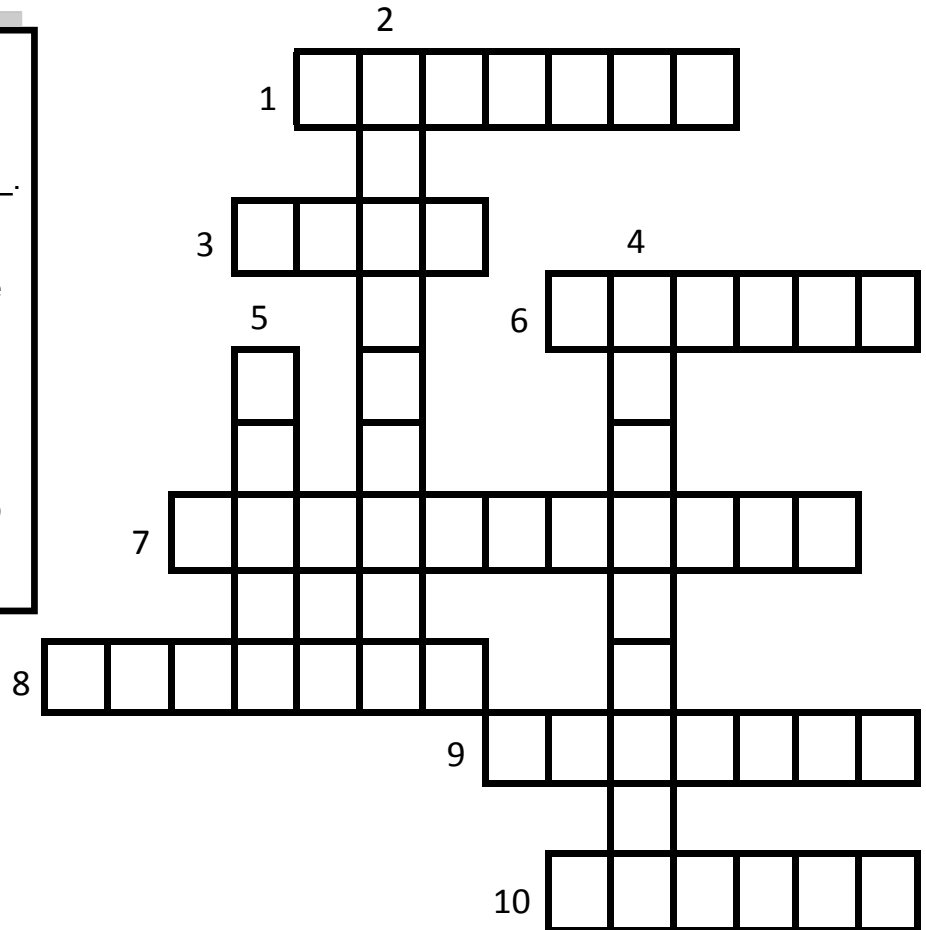
Manhattan Project Crossword Puzzle

Down

2. When World War II began, the U.S. President was Franklin D. _____.
4. After the atomic bomb was dropped on Japan, many people suffered the terrible effects of _____ sickness.
5. An island nation off the east coast of Asia that bombed Pearl Harbor, Hawaii, causing the United States to enter World War II.

Word Bank

atom	energy
uranium	radiation
Oppenheimer	science
Truman	Roosevelt
Japan	trinity



Across

1. A radioactive element (U^{92}) used to create atomic bombs and to fuel nuclear reactors.
3. Smallest bit of matter made of protons, neutrons and electrons.
6. U. S. President, Harry S _____ made the difficult decision to drop two atomic bombs on Japan.
7. The scientist at Los Alamos who headed efforts to develop the first atomic bomb was J. Robert _____.
8. Name of the test and test site for the first atomic bomb detonation.
9. The Manhattan Project required the accumulated knowledge of many branches of physical _____.
10. A nuclear weapon releases great amounts of thermal _____.

Secret Word Find

Los Alamos was a hidden city with a secret laboratory where weapons were being created for defense in World War II. The words below are related to the town, the scientists, buildings and the important work they did to make an atomic bomb before Germany could complete one. Search for the secret words below. Look in all directions!

D	A	D	E	R	F	V	B	D	A	N	H	U	K	L	O	N	W	E	A	P	O	N	
G	J	C	V	B	M	H	I	J	T	M	N	V	C	D	D	O	T	G	G	B	N	J	
Q	N	Q	C	V	B	F	R	G	O	S	D	F	G	H	R	I	B	N	M	K	J	N	
Z	S	B	G	Y	U	J	K	L	M	B	H	M	I	U	Y	S	R	D	F	V	G	T	
B	A	S	D	F	N	O	R	R	I	S	B	R	A	D	B	U	R	Y	C	I	U	O	
M	S	Z	X	C	V	B	N	M	C	E	B	O	V	C	X	F	W	E	R	R	G	T	
L	X	C	V	B	N	X	D	V	B	C	G	B	J	K	L	M	G	D	I	S	B	F	
O	V	G	Y	J	J	T	F	D	E	R	P	E	I	U	Y	T	F	A	T	M	A	N	
F	U	L	L	E	R	L	O	D	G	E	O	R	A	S	D	F	G	H	I	J	K	L	
P	R	X	S	D	C	V	B	N	M	T	L	T	O	T	O	P	S	E	C	R	E	T	
I	A	X	C	D	R	F	T	E	R	L	G	O	I	J	L	M	J	I	A	P	R	I	
N	N	C	V	B	N	M	R	I	K	A	L	P	U	L	E	I	O	P	L	U	H	E	
T	I	X	C	V	B	N	I	N	M	B	N	P	V	I	X	C	Z	C	I	E	O	Q	
Y	U	L	V	D	W	E	N	R	G	O	U	E	K	S	S	M	T	P	T	O	U	U	
F	M	S	O	D	F	G	I	H	J	R	K	N	H	O	G	S	F	Y	Y	D	S	E	
B	Q	O	I	S	Y	T	T	F	G	A	H	H	K	T	L	O	L	N	B	V	E	D	
D	F	G	H	W	A	D	Y	C	V	T	O	E	P	O	W	M	I	O	I	J	H	V	
X	V	B	N	N	H	L	G	F	S	O	D	I	S	P	E	S	D	F	T	G	H	J	
C	Q	X	C	V	B	N	A	B	N	R	N	M	P	E	C	E	D	F	S	I	T	Y	
E	W	E	R	T	Y	I	D	M	P	Y	I	E	D	T	G	S	W	E	F	V	N	N	
R	E	W	A	R	D	O	G	P	O	H	J	R	A	D	I	O	A	C	T	I	V	E	
T	S	A	G	T	D	E	E	K	O	S	L	P	O	V	U	R	B	N	D	I	U	M	R
Y	A	X	W	I	U	N	T	T	J	M	L	P	E	C	D	S	W	E	D	C	V	F	
E	W	O	R	L	D	W	A	R	I	I	S	E	D	T	G	S	W	E	F	V	N	N	

Atomic

Baker House

Criticality

Fat Man

Fuller Lodge

Fusion

Los Alamos

Louis Slotin

Norris Bradbury

Project Y

Radioactive

Robert Oppenheimer

Secret Laboratory

Top Secret

Trinity Gadget

Uranium

Weapon

World War II

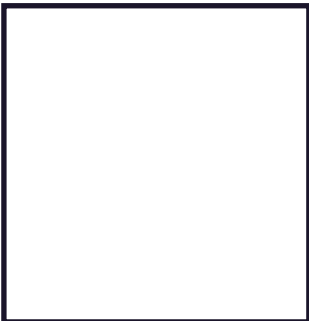
Junior Ranger Pledge

*As a Junior Ranger of the Los Alamos Manhattan Project
National Historical Park, I promise to learn more about the
science and history of the Manhattan Project and World War II. I will explore
many more National Parks and help to protect
and preserve them for future generations.*

**This Certificate is proudly presented
to**



**For completing the
Manhattan Project
National Historical Park
Junior Ranger Activity Booklet
Los Alamos, New Mexico**



Official Park Date Stamp

Park Ranger Name



