



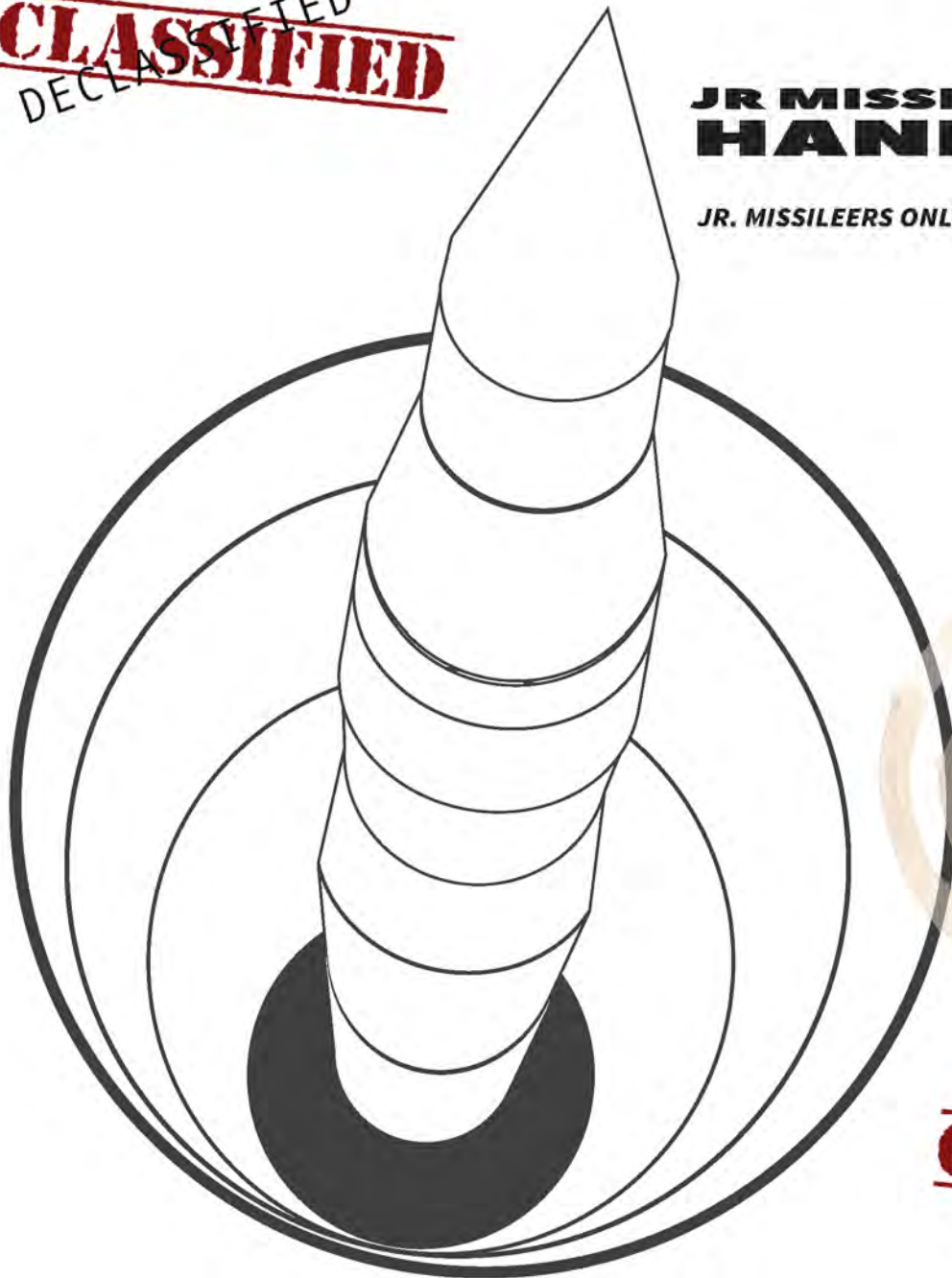
INSTRUCTIONS AND EDUCATIONAL MATERIAL FOR PEOPLE WHO WANT TO LEARN MORE ABOUT THE LGM-30F MINUTEMAN MISSILE PROGRAM - VERSION 30-09-20

DELTA -01 LAUNCH CONTROL CENTER (LCC) DELTA-09 LAUNCH FACILITY (LF)

~~CLASSIFIED~~
DECLASSIFIED

JR MISSILEER HANDBOOK

JR. MISSILEERS ONLY - DO NOT DISTRIBUTE



~~CLASSIFIED~~
DECLASSIFIED

DEPARTMENT OF THE MINUTEMAN MISSILE NATIONAL HISTORIC SITE (MMNHS)

PREFACE

In 1957, Americans trembled in fear as the Soviet Union launched the first ever man made satellite into orbit. Why was this so terrifying? Satellites are great for communications, but they could also be used to spy on your enemies. And if you can put a satellite on a rocket and launch it into space, what else could you put on the rocket? Atomic bombs, like the ones the United States dropped on Hiroshima and Nagasaki during World War II.

President John F Kennedy was elected president in 1960, and he emphasized the need to close the “missile gap” that existed between the United States and the Soviet Union. If the Soviet Union really was turning out “missiles like sausages”, the threat of nuclear attack was never higher. We needed to have enough of our own missiles in order to defend ourselves and “deter” our enemies from thinking of attacking. We already had some missiles being developed, but most of them used a liquid fuel. This made them very unstable and dangerous, and they took longer to launch because they had to be fueled right beforehand. They used too much money, too many people, and too big of a facility to make them work.

The first Minuteman Missile was launched on February 1, 1961, from Cape Canaveral, Florida, turning out to be a complete success. What made it better than the other missiles? It was smaller, more accurate, easier and faster to launch, and used a solid fuel which was very stable and not as dangerous. Now, America had a powerful missile that could compete with anything the Soviet Union came up with. Within six years, America had built over 1,000 missile sites to house their Minuteman missiles and 100 Launch Control Centers to launch them from if the threat arose.

Today, America still has 400 Minuteman missiles on alert that continue to defend the United States, although we would hope we never have to use them. The missiles have served to encourage peace and prevent World War III. It is up to us to continue to preserve that peace.

As a junior missileer, it is your mission to be “on alert” and to help protect America by learning about the history of the United States and its special places.

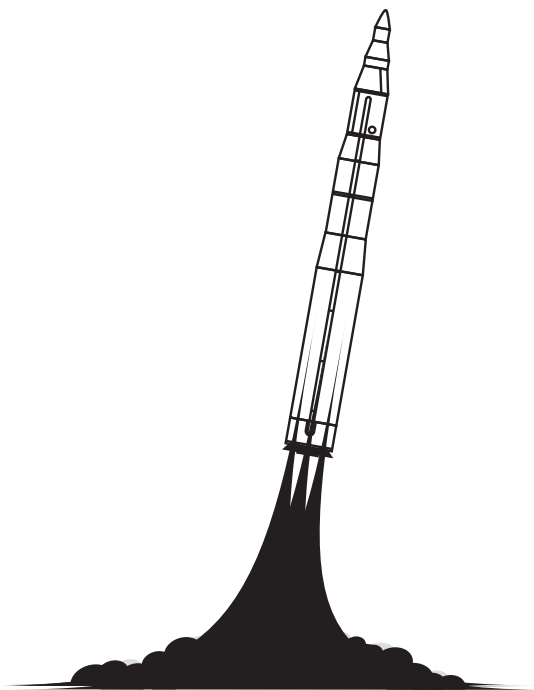




Image: MMNHS file photo

PHOTO: MINUTEMAN MISSILE NATIONAL HISTORIC SITE SOUTH DAKOTA, USA

JR. MISSILEER ACTIVITY BOOK

What you're holding is an activity book created to help all ages understand the history behind the Minuteman Missile system.

Everything, from design to activity, has its roots in the actual stuff that American servicepeople experienced during the Cold War.

The Cold War spanned more than forty years and affected the entire planet. Two giant political, geographical and military powers squared-off to out-scare each other with the goal of never having to actually go to full-out war. It has worked. So far.

When the Minuteman Missile National Historic Site (MMNHS) was created in 1999, its goal was to preserve and promote the history and relevance of this important time in world history.

All of us at the MMNHS hope this book helps you think deeper about the role of national defense in an international world.



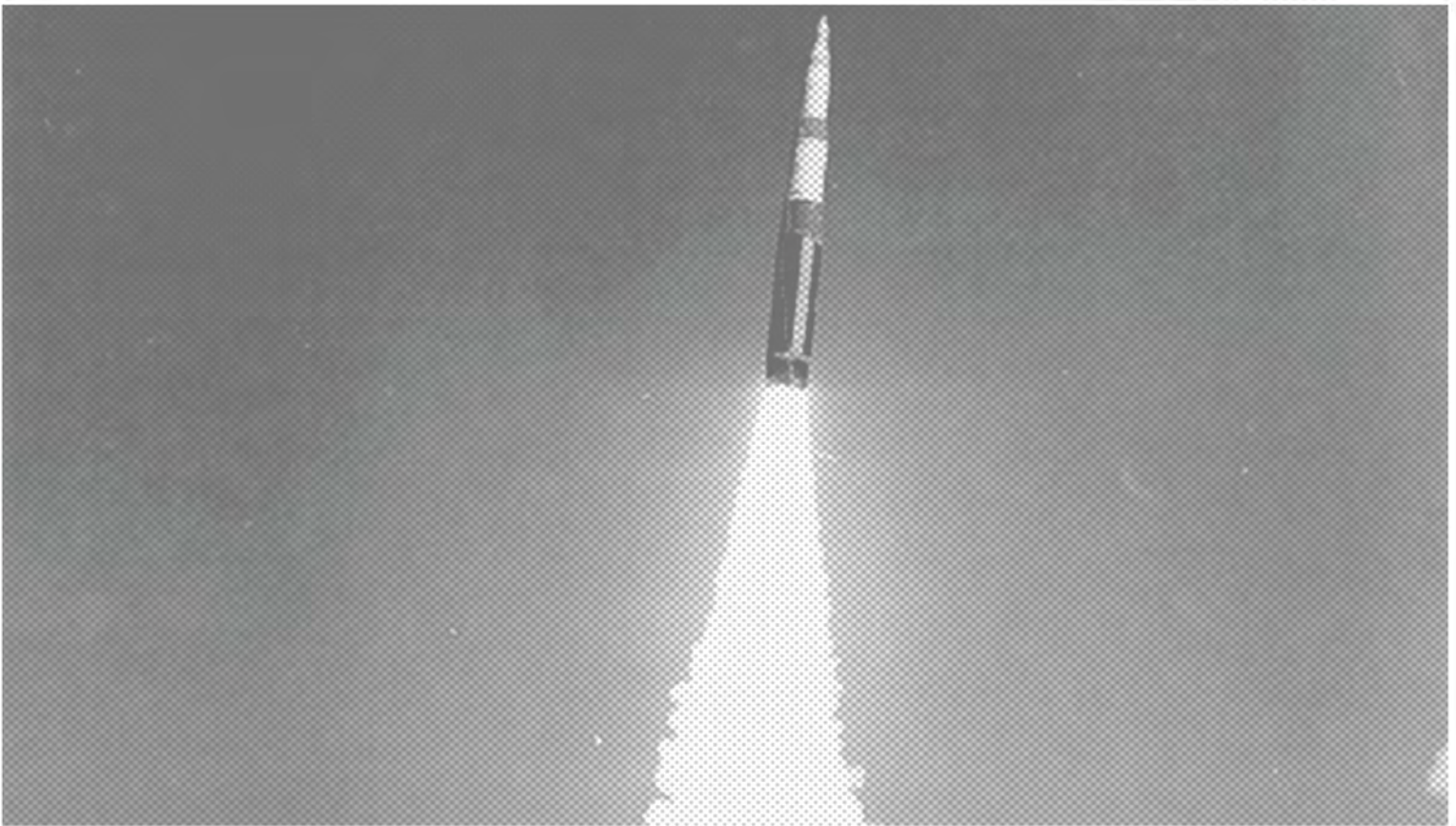


Image: U.S. Air Force PHOTO: BOEING LGM-30F MINUTEMAN MISSILE TEST LAUNCH

KNOW YOUR COLD WAR FACTS

- Called “Cold War” because it didn’t involve big battles or open military action between the two major opposing powers
- The two major opposing powers were “NATO” (an alliance of nations lead by the United States) and “The Warsaw Pact” (an alliance of nations lead by the Union of Soviet Socialist Republics - USSR)
- A war mostly fought through making sure each side was so strong, actually going to war would be unthinkable (this is often called “Deterrence”)
- Involved spies, high tech and deployment of Intercontinental Ballistic Missiles (ICBMs)
- Started in 1947 and ended in 1991 with the breakup of the USSR
- Required huge amounts of money and science to sustain but helped fuel advances in computers, communications and diplomacy

KNOW YOUR JR MISSILEER HANDBOOK



This Jr. Missileer program is made up of different Missions for you to complete.

Use the information in this booklet, website and museum to complete each Mission present to your Park Ranger (or mail to the address on the back cover) for an award!



GREEN border Missions
suggested: age 6 and under



BLUE border Missions
suggested: age 7 - 11



RED border Missions
suggested: age 12+



MISSION 1: CHECKLIST BINGO


Your mission is to complete a task in a square to fill an entire row (up, down or diagonally). Once you have completed this mission, find a Park Ranger to be awarded your Rank Badge!



Even the smartest, most courageous soldiers forget stuff! "Checklists" are part of every-day military activity to help insure that everyone remembers their important tasks and keep everyone on the team safe.

R A N G E R

O

SIG HERE GET A RANGER'S AUTOGRAPH	SIG HERE WRITE YOUR OWN AUTOGRAPH	HIT THE WEB! (nps.gov/mimi)	WHAT STATE IS THE MMNHS LOCATED?	DRAW THE LGM-30F (next page)
RECORD YOUR AGE	WHAT COLOR IS THE MISSILEER'S CHAIR?!	DRAW THE AMERICAN FLAG (next page)	ASK A RANGER WHERE "DELTA 9" IS LOCATED	DRAW AN OBJECT IN THE VISTOR CENTER (next page)
FIND AND TRASH SOME TRASH (thank you)	WHAT LAUNCHES AN ICBM? (Button or Key?)	 FREE SPACE!	SIG HERE TOUR DELTA 1 AND GET THE RANGER'S INITIALS	RIDE THE MINUTEMAN ELEVATOR!
AGE HERE RECORD YOUR AGE	DRAW A MISSILE SILO (next page)	DESIGN A JR. MISSILEER BADGE! (next page)	WATCH THE VIDEO IN THE VISITOR CTR!	UNSCRAMBLE THE WORD IMTEMNUAN
EXAMINE THE 90 TON BLAST DOOR (@Delta 9)	WHAT STATE ARE YOU FROM?	WHAT OTHER NAT'L PARKS TO VISIT?	DRAW THE NAT'L PARK ARROWHEAD (next page)	PLACE YOUR PASSPORT STAMP HERE

L I N E U P



**ART PAGES
USE THIS SPACE
TO DRAW**



Artists can play an important part in national defense by helping others visualize different weapons and events. During the Cold War many spies were appreciated for their ability to paint or draw things when a camera couldn't be used!

**DRAW:
THE AMERICAN FLAG**

HINT: THERE'S ONE OUTSIDE THE VISITOR CENTER

**DRAW:
THE NATIONAL PARK ARROWHEAD**

HINT: THERE'S ONE AT THE BOTTOM OF THE PAGE

**DESIGN:
A JR. MISSILEER BADGE**

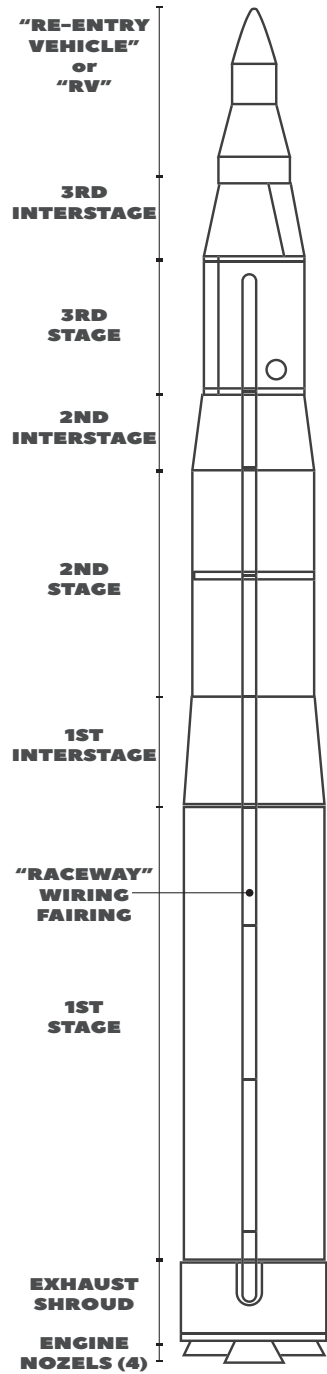
**IDEA: START WITH A SIMPLE OUTSIDE SHAPE LIKE A
CIRCLE, SQUARE, SHIELD or TRIANGLE**

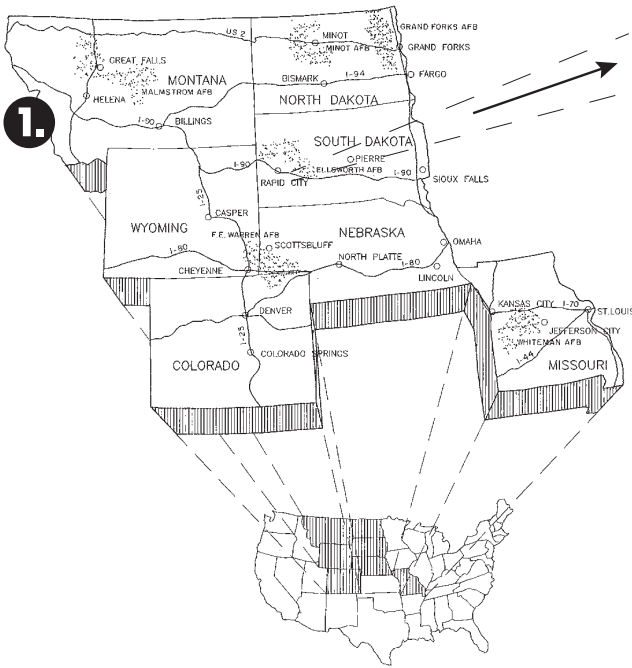
**DRAW:
SOMETHING IN THE VISITOR CENTER**

IDEA: THE GIFT SHOP HAS MANY THINGS TO DRAW



**DRAW:
THE BOEING LGM-30F
MINUTEMAN MISSILE II
LAUNCHING FROM ITS SILO**



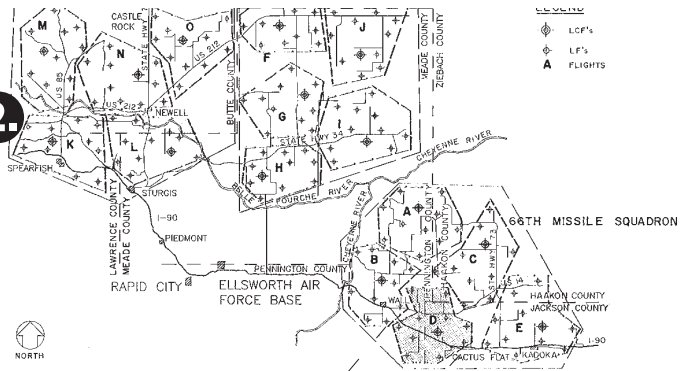


MINUTEMAN MISSILE FIELDS IN THE UNITED STATES

NOT TO SCALE



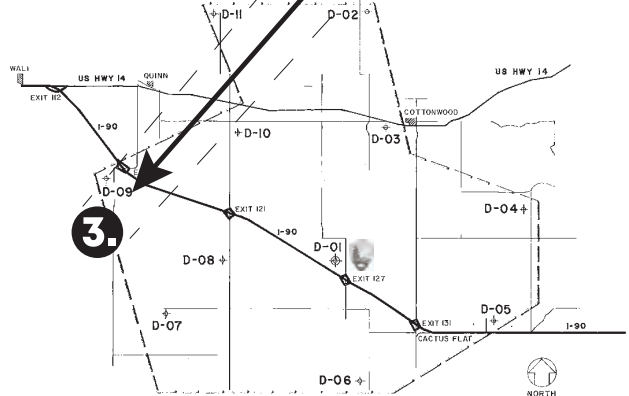
2.



MINUTEMAN II MISSILE SITES IN SOUTH DAKOTA



3.



KNOWING WHERE YOUR MISSILES ARE

The 44th Missile Wing in western South Dakota was the home of 150 missile silos. There were three squadrons within the wing — the 66th Missile Squadron (MS), 67th MS, and 68th MS.

Each squadron had five flights. Each flight contained a launch control facility (LCF) with an LCC and ten missile silos. The LCC included the two-officer capsule crew. Each missile silo used the flight name followed by the silo's number. For example: D (flight name) 09 (silo number) = D09.

The 66th MS flights were A01, B01, C01, D01 and E01. The Minuteman Missile NHS preserves Delta flight's (D01) history.

D01's missiles were separated in concrete silos to protect against attack and connected by underground cables. The missile silos were located from four to fourteen miles from the launch control center (LCC).

As you can see by the map above, deploying a missile field occupied huge tracts of space! Though the MMNHS focuses only on Delta Flight (#3 on the map above), you can see that it was part of a much, much bigger organization of missile deployment across seven states.

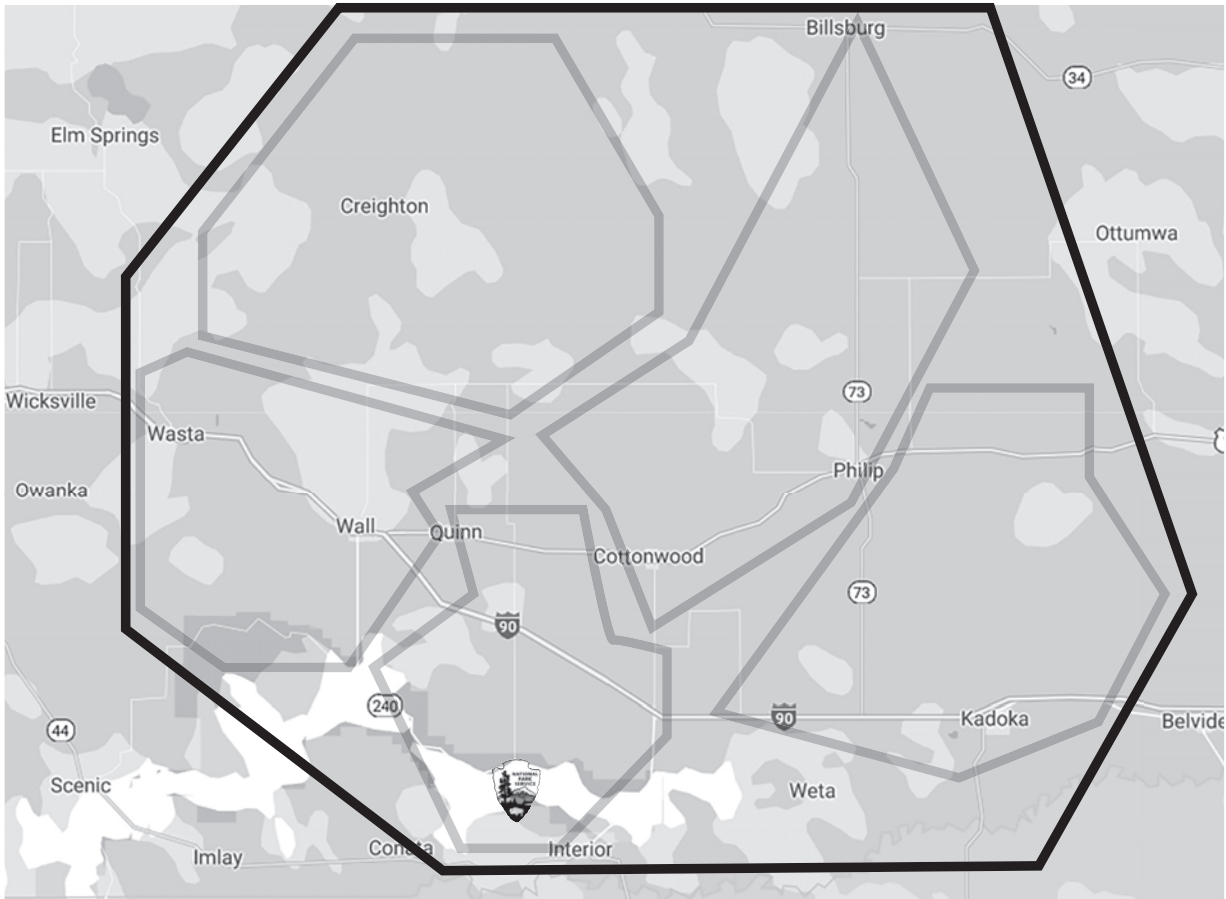


MISSION 2: MAP IT OUT!

Your mission is to answer the following questions using information found in this booklet. Use the space provided on the opposite page for drawing.



From shopping malls to highways to national parks to missile fields, maps help people plan to use space in the most effective way possible.



MAPPING AND LOCATION QUESTIONS:

1.) How many flights are represented by the 66th Missile Squadron?

2.) How many missile silos were in the whole of Delta Flight?

3.) Put a dot (.) where each missile silo was located...





Image: U.S. Air Force photo/Beau Wade) **PHOTO: A MODERN-DAY MINUTEMAN MISSILE CREW AT WORK**

SYMBOLS AND COMMUNITY

The Air Force personnel that served in the Minuteman Missile Fields took great pride in protecting the United States.

One way to show their sense of mandatory duty and pride was to wear a squadron patch on their uniform. The squadron patch was often represented with an aspect of the missile and their mission. Other times, the patch design might have a back-story known only to the unit. And still other designs were professionally created by artists to create a look that truly set the unit apart.

The patches of the Strategic Missile Squadrons (SMS) deployed in the missile field represented by the MMNHS are a significant part of history, for those who served as well as those that want to learn more about the history.



MISSION 3: SYMBOLS OF STRENGTH

Your mission is to study the patches below, then design, draw and color a patch that best represents a community you belong to. It could be your town, a group or a hobby you share with others.



Military patches come in all all basic shapes - circles, triangles, squares, rectangles, ovals, shields... some are even irregular shaped. There is no "one way" to make a patch!



PATCH: 66th SMS



PATCH: 67th SMS



PATCH: 68th SMS

**DESIGN, DRAW, COLOR
YOUR OWN PATCH DESIGN HERE**





Image: Federal Civil Defense Administration (defunct)

PHOTO: A SCENE FROM THE FAMOUS CIVIL DEFENSE FILM "DUCK AND COVER" WITH BERT THE TURTLE

USE ONLY IN DEFENSE

From the beginning the United States was ready to defend its people from an attack by the Soviet Union. The Air Force bought property from land owners to build missile fields in preparation for a potential war.

They then built launch control facilities (LCFs) and launch facilities (LFs). The first Minutemen missile was ready to launch in 1962. By 1968, a total of 1,000 were operational across the Great Plains.

United States policy was to only use Minuteman missiles if the Soviet Union first attacked with their nuclear weapons. Missileers were trained to launch missiles after receiving proper authorization from the President of the United States.

Civilian Defense organizations in both countries prepared communities for attack by practicing drills in schools and using information campaigns.



MISSION 4: SCAVENGER HUNT

Your mission is to answer at least five (5) questions below. You're free to use information in the MMNHS Visitor Center as well as park website and printed materials.



Finding the answers to questions is a job that everyone must master. One of the quickest ways to get an answer is to ask someone for help!

MMNHS QUESTION:

1.) When did the Delta Flight Minuteman Missile facility become a National Historic Site?

MMNHS QUESTION:

2.) Name the three MMNHS locations:

COLD WAR QUESTION:

3.) Who were the main nations involved in the Cold War?

COLD WAR QUESTION:

4.) When did the first Minuteman missile become operational?

COLD WAR QUESTION:

5.) How many Minuteman missiles were operational?

COLD WAR QUESTION:

6.) What cities are the only two places atomic weapons ever used in war?

COLD WAR QUESTION:

7.) The START Treaty was signed by President George H. Bush and Mikhail Gorbachev in what year?

COLD WAR QUESTION:

8.) The START Treaty stands for:

MISSILEER QUESTION:

9.) What was the formal name for the MPT?



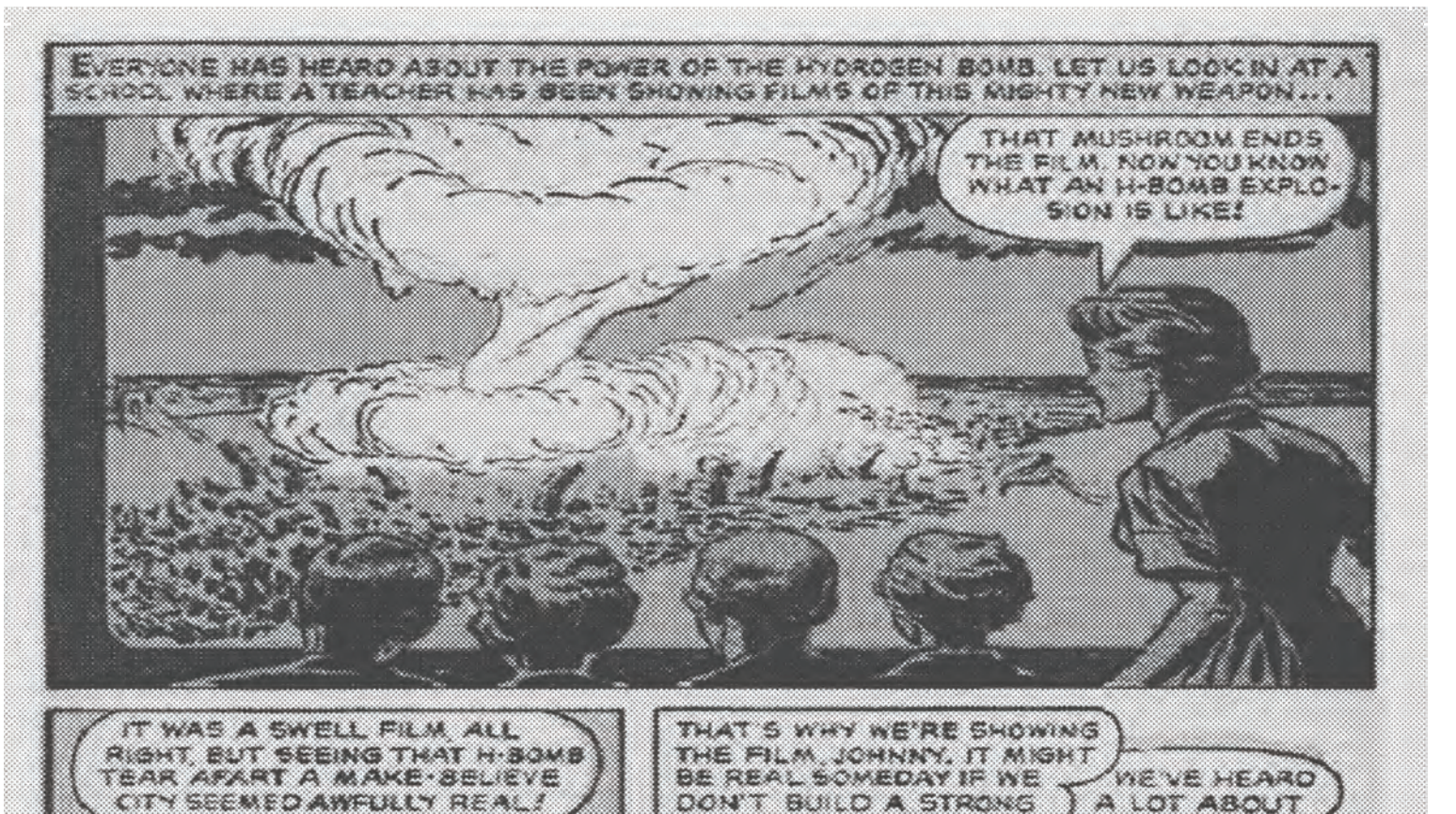


Image: Maryland Civil Defense Administration (defunct) PHOTO: A FRAME FROM A COMIC BOOK ISSUED TO HELP SCHOOLCHILDREN PREPARE FOR NUCLEAR WAR

ON ALERT, 24 HRS

During the *Cold War* between the U.S. and former Soviet Union, the U.S. maintained up to 1,000 Minuteman missiles in seven Midwestern states as a deterrent force to prevent attack by the Soviet Union.

Awaiting launch orders from the President of the United States in response to a Soviet first-strike nuclear attack, Minuteman was on alert and ready to go 24 hours seven days a week for almost 30 years on the plains of South Dakota.

The Minuteman *missile* system played a major role in deterring, or preventing, World War III in that both sides understood the power of nuclear weapons and that their use would have resulted in the mutually assured destruction of each nation.

During the height of the Cold War, there were 15 underground launch control centers and 150 missile silos in *South Dakota* ready to respond at a moments notice. Each *silo* contained one missile, capable of reaching its target in 30 minutes or less. Atop each Minuteman II missile was a 1.2 *megaton* nuclear warhead, 80 times more powerful than the first nuclear weapon detonated over Hiroshima in 1945.

The major effects of a nuclear explosion are heat, blast, electro magnetic pulse (EMP) and radiation. As tensions between both countries increased, the U.S. Federal Civil Defense Administration issued plans for building fallout shelters and guides for surviving in a contaminated environment.

The Minuteman missile stood alert as a silent sentinel during the Cold War – preserving the peace and deterring nuclear war.



MISSION 5: WORD SEARCH

Your mission is to read the “On Alert, 24hrs” page and find all of the words that have been **boldened** and *italicized* in the Word Search below.



Finding the answers to problems is like a word-search — patience and seeing things in a different perspective are important for success.

A	L	I	T	N	L	D	T	M	O	T
O	D	G	K	L	S	E	I	E	D	I
M	G	A	K	R	K	O	U	G	T	A
I	L	G	A	E	O	R	E	A	L	I
S	C	T	W	O	C	O	S	T	M	A
S	O	U	T	H	D	A	K	O	T	A
I	L	D	D	L	S	T	U	N	E	A
L	D	I	N	S	I	L	W	C	I	G
E	W	L	I	M	N	W	L	T	A	K
A	A	S	I	L	O	T	I	M	C	A
G	R	K	M	H	O	S	N	T	O	E



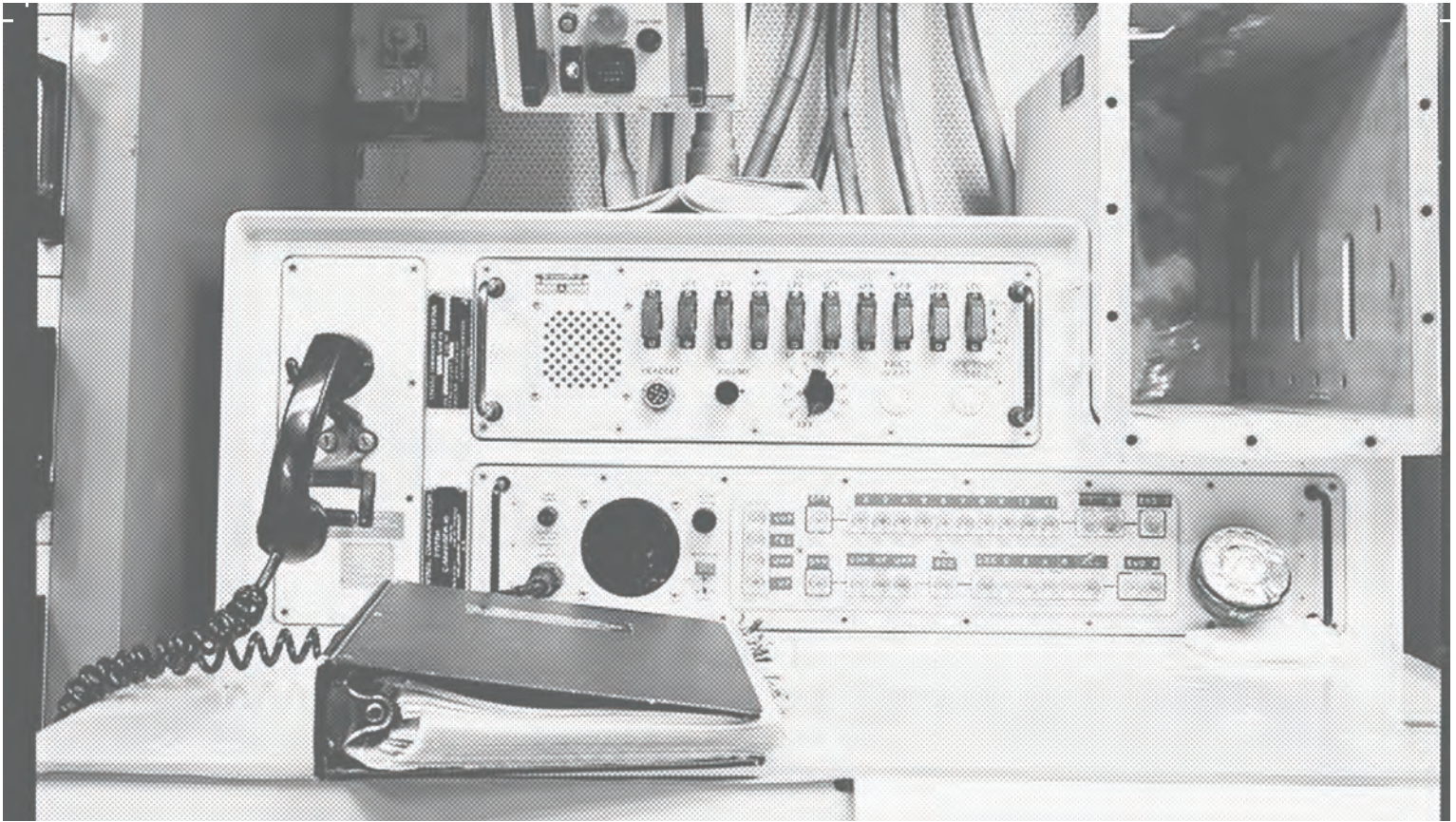


Image: John Mollison **PHOTO: INSIDE A MISSILE "CAPSULE."**

WORK AROUND THE MISSILE

There were 10 Air Force personnel stationed at the Launch Control Facility (LCF) and Launch Control Center (LCC).

Though the actual facilities were scattered throughout Western South Dakota “in the middle of nowhere,” technically, the personnel were stationed at Ellsworth Air Force Base near Rapid City. These personnel drove out or flew out on helicopters to the LCF and LCC for their duty.

Depending on the job, they served at the posts for three days at a time, or 24 hours at a time. No one lived permanently at the LCF or LCC. However, due to South Dakota’s unpredictable weather, there were times when replacement crews were unable to get to their post on time. This meant that the crews had to be prepared for unexpected changes in their work schedules, especially in winter.



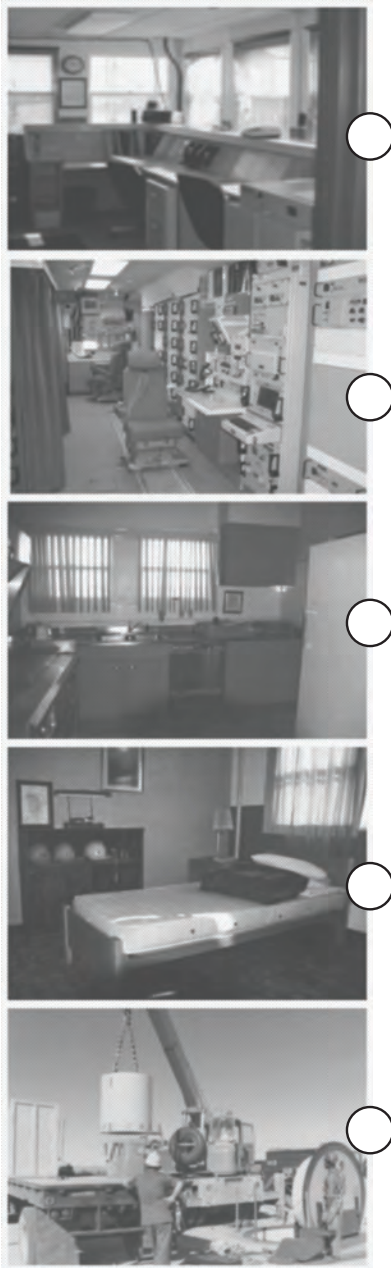
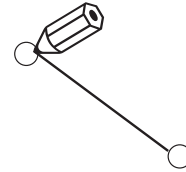
MISSION 6: FIND YOUR SPACE AT WORK

Your mission is to use the job descriptions on the right of the photos to help you decide which of the people at the LCF and LCC would live and work in these areas in the picture. Draw a line connecting the job description with the correct picture.



The military has jobs just like civilian businesses or organizations. What a person learns in the military is often transferred to civilian life as great work experience.

LIKE THIS



Images: MMNHS

JOB: Facility Manager

responsible for managing all topside support operations. They oversaw maintenance of the LCF and LCC so the other personnel had a safe/secure place to eat, sleep and perform their duties. Because of the seriousness of their job and their long workday, they were assigned their own bedroom.

JOB: Flight Security Manager

worked in the Security Control Center (SCC) in the LCF. They supervised a two-member security team which responded to alarms at their flight's 10 missiles. The large windows in the SCC allowed easy viewing of the area around the LCF.

JOB: Maintenance Crew

responsible for working on the systems that made the Minuteman missile ready for launch. Some of their work included: Operating heavy machinery to load the missile, testing electrical equipment, and maintaining the computer guidance and control system. They occasionally stayed overnight at the LCF.

JOB: Cook

responsible for serving four meals a day... including: Breakfast, lunch, dinner, and midnight "chow". During holidays, they were in charge of preparing special meals.

JOB: Missile Combat Crew

worked in the underground LCC. Their duty was to monitor the status of their 10 missiles and to be prepared to launch them on the orders of the President of the United States. They served 24-hour tours of duty in a confined capsule, surrounded by electronic equipment.



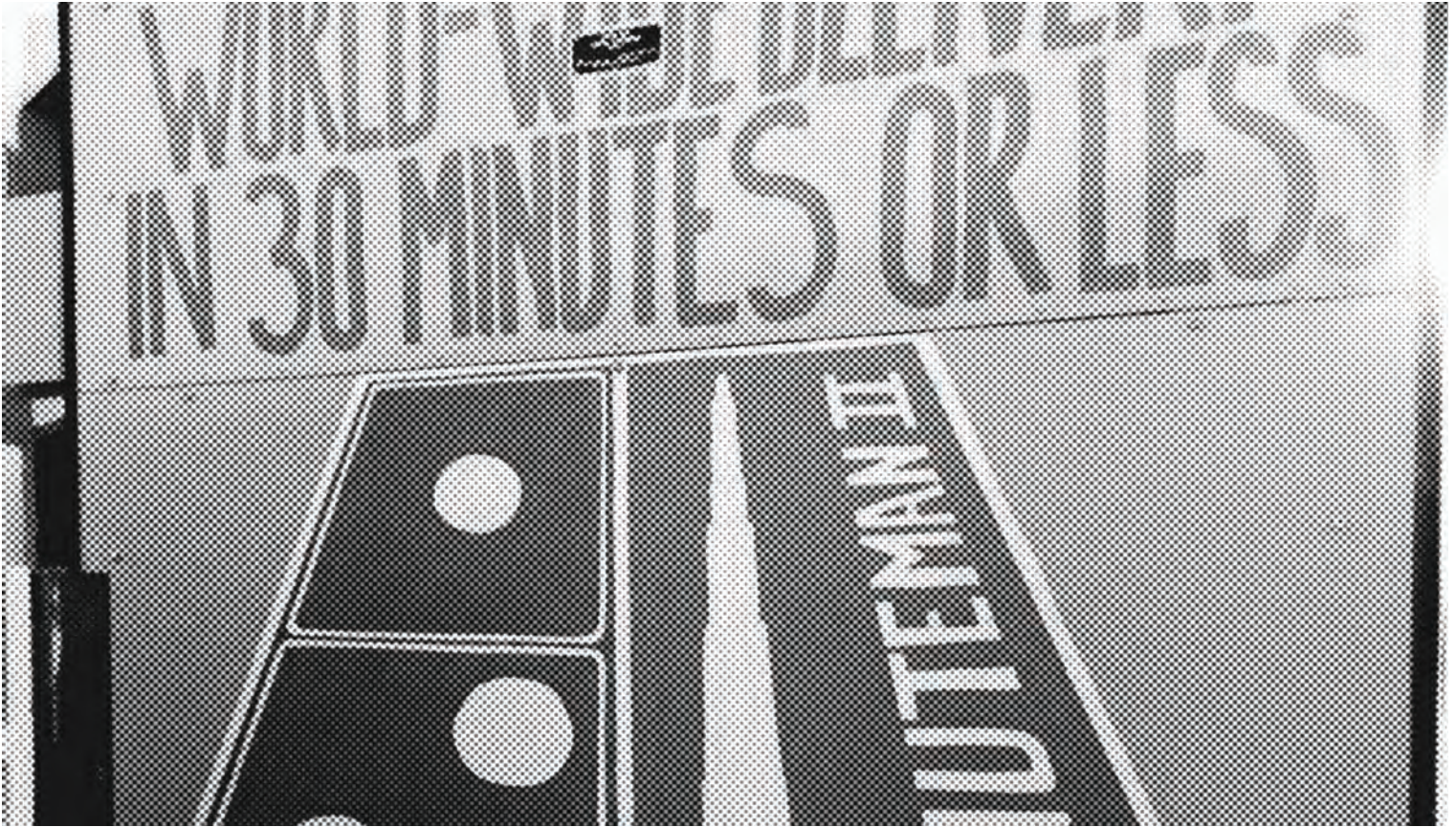


Image: John Mollison PHOTO: DECORATED BLAST DOOR FROM A DELTA LAUNCH FACILITY

HAVING A BLAST AT WORK

The Missileers in the 44th Missile Wing took great pride in protecting the United States. Launch crews reflected this pride by painting their 16,000-pound blast doors with motivational artwork.

A replica of the Delta Flight blast door (left) is displayed in the Visitor Center museum. The actual door weighed 16,000 pounds and protected the crew from intrusion and nuclear blast.

One of the interesting features of the huge, heavy blast door is that, once it was unlocked, the clever hinge mechanism made it relatively easy for one person to open and shut the blast door.

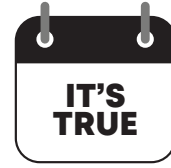


Image: MMNHS

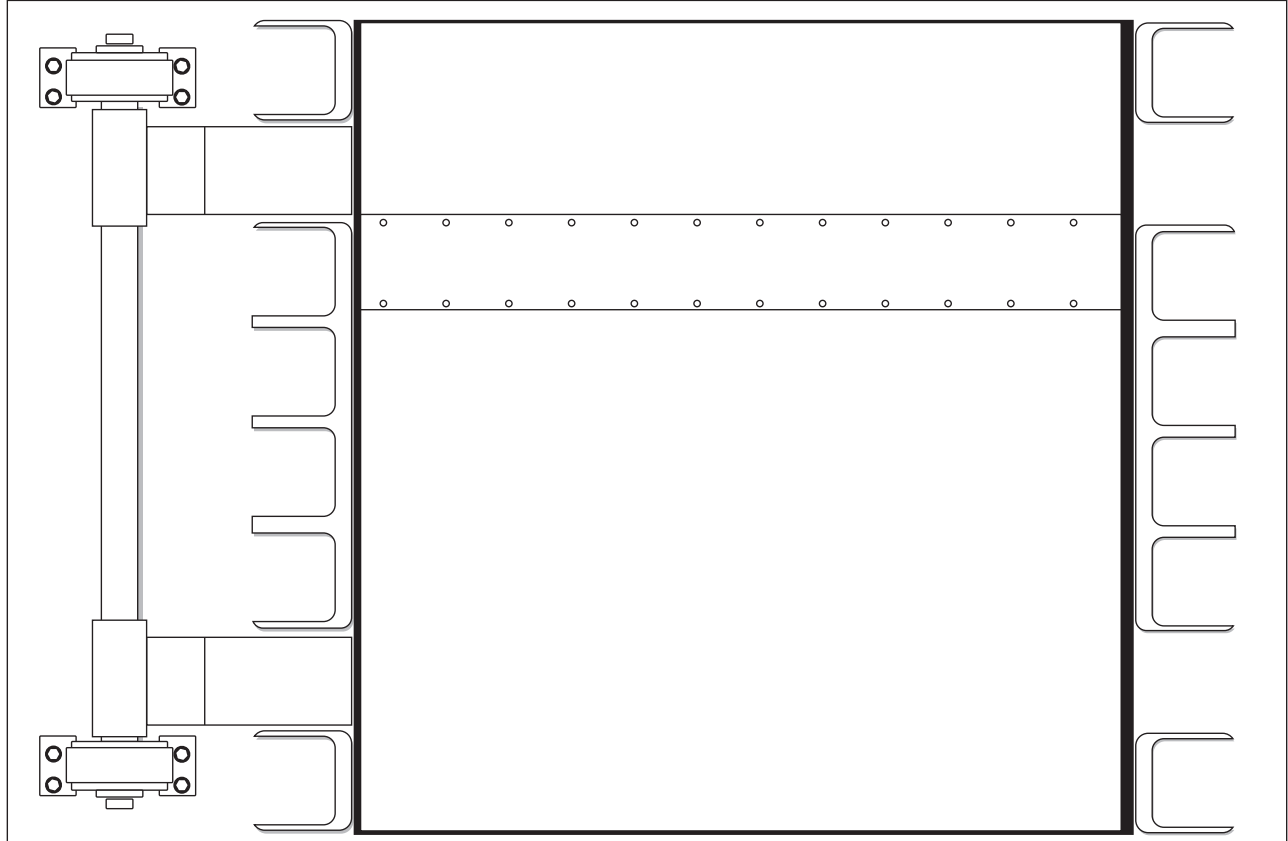


MISSION 7: DECORATE YOUR BLAST DOOR

Your mission is to study the design on the blast door (left), then design, draw and color your own blast door in the drawing below. Think about how you'd keep morale high as the missile crew prepared to enter the capsule for long-periods of time.



Once inside the Missile Capsule, the Missile Crew are 'sealed' inside where they sleep, eat and work until relieved by a fresh crew.





The
United
States
Jr. Missileers

CERTIFIES THAT



HAS SUCCESSFULLY COMPLETED THE
JUNIOR MISSILEER HANDBOOK
AND IS HEREWITH AWARDED THIS

Certificate of Training

Ranger Signature

Date

NON-SEQUENTIAL SECTION BREAK

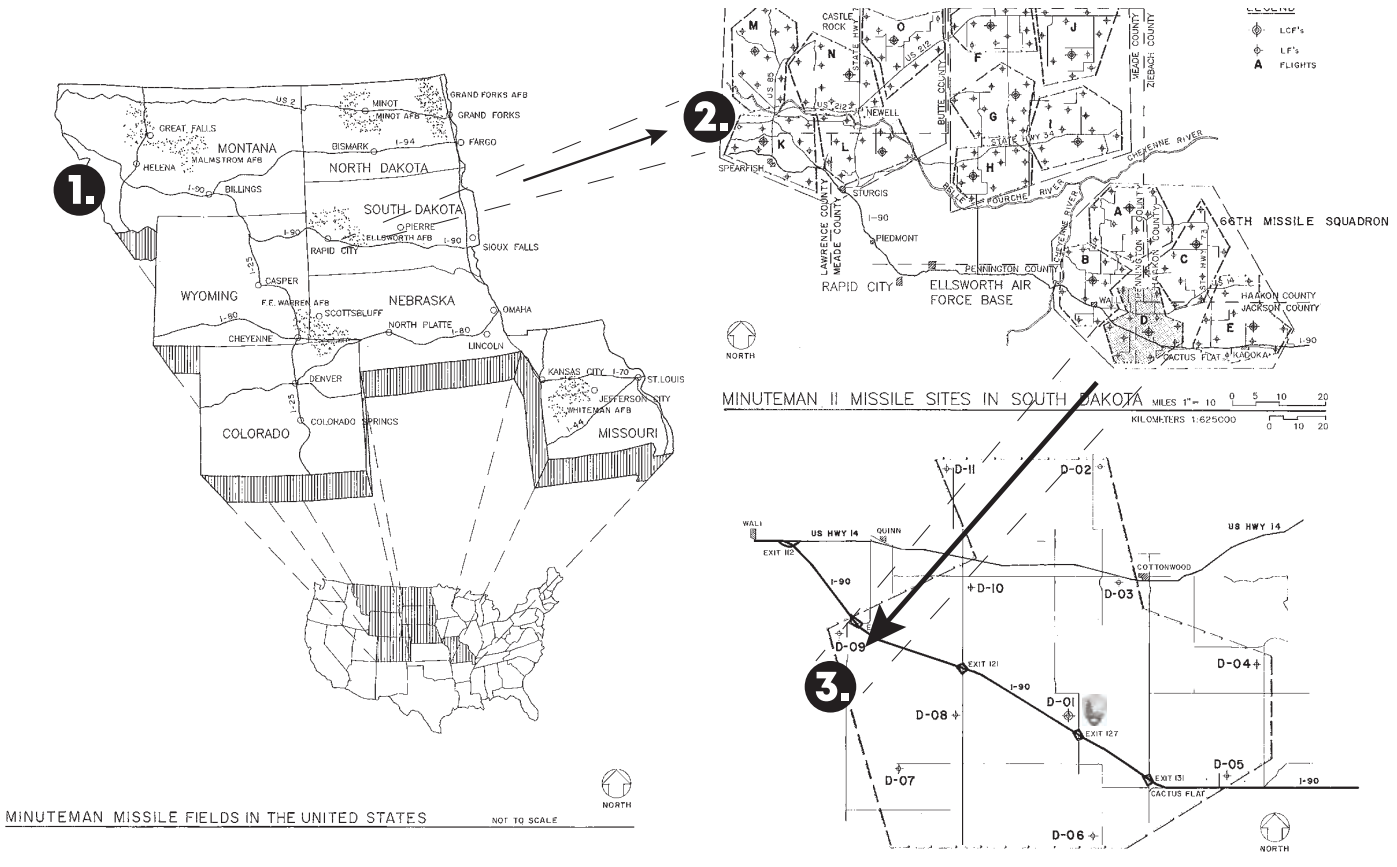


RED border Missions
suggested: ages 12+

DECLASSIFIED
CLASSIFIED

**SEE SECTIONS BLUE AND GREEN FOR
AGE APPROPRIATE MATERIAL (APM) FOR ALL OTHER AGES
(REFERENCE BEGINNING OF THIS MANUAL) - REV. 20/10/21**

DELTA -01 LAUNCH CONTROL CENTER (LCC) DELTA-09 LAUNCH FACILITY (LF)



HISTORIC AMERICA
ENGINEERING RECORD
SHEET 2 of 4
ELLSWORTH AIR FORCE BASE DELTA FLIGHT (MINUTEMAN II ICBM)
SOUTH DAKOTA
INTERIOR VICTORY
DENVER REGIONAL OFFICE
MINUTEMAN II ICBM
SOUTH DAKOTA
MINUTEMAN II ICBM
SOUTH DAKOTA
MINUTEMAN II ICBM
SOUTH DAKOTA

KNOWING WHERE YOUR MISSILES ARE

The 44th Missile Wing in western South Dakota was the home of 150 missile silos. There were three squadrons within the wing — the 66th Missile Squadron (MS), 67th MS, and 68th MS.

Each squadron had five flights. Each flight contained a launch control facility (LCF) with an LCC and ten missile silos. The LCC included the two-officer capsule crew. Each missile silo used the flight name followed by the silo's number. For example: D (flight name) 09 (silo number) = D09.

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D01's missiles were separated in concrete silos to protect against attack and connected by underground cables. The missile silos were located between four and fourteen miles from the launch control center (LCC).

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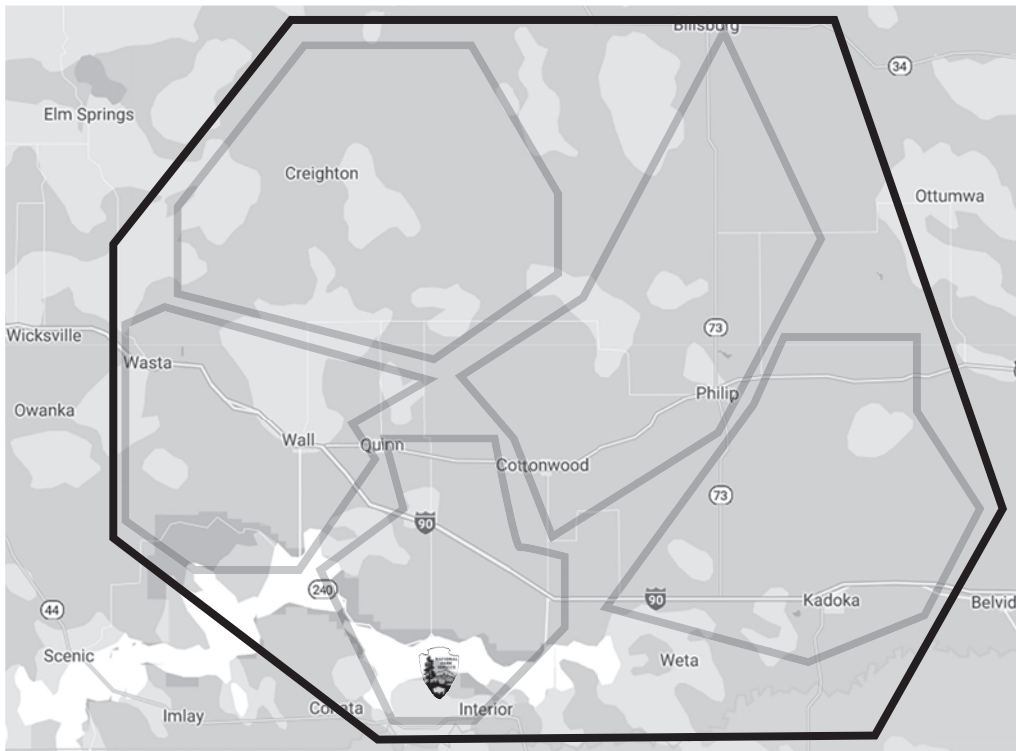


MISSION 8: MAP IT OUT!

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From shopping malls to highways to national parks to missile fields, maps help people plan to use space in the most effective way possible.



MAPPING AND LOCATION QUESTIONS:

1.) How many flights are represented by the 66th Missile Squadron?

2.) How many missile silos were in the whole of Delta Flight?

3.) Put a dot (.) where each missile silo was located..

4.) Describe why the missiles were separated from each other by at least 4 miles..



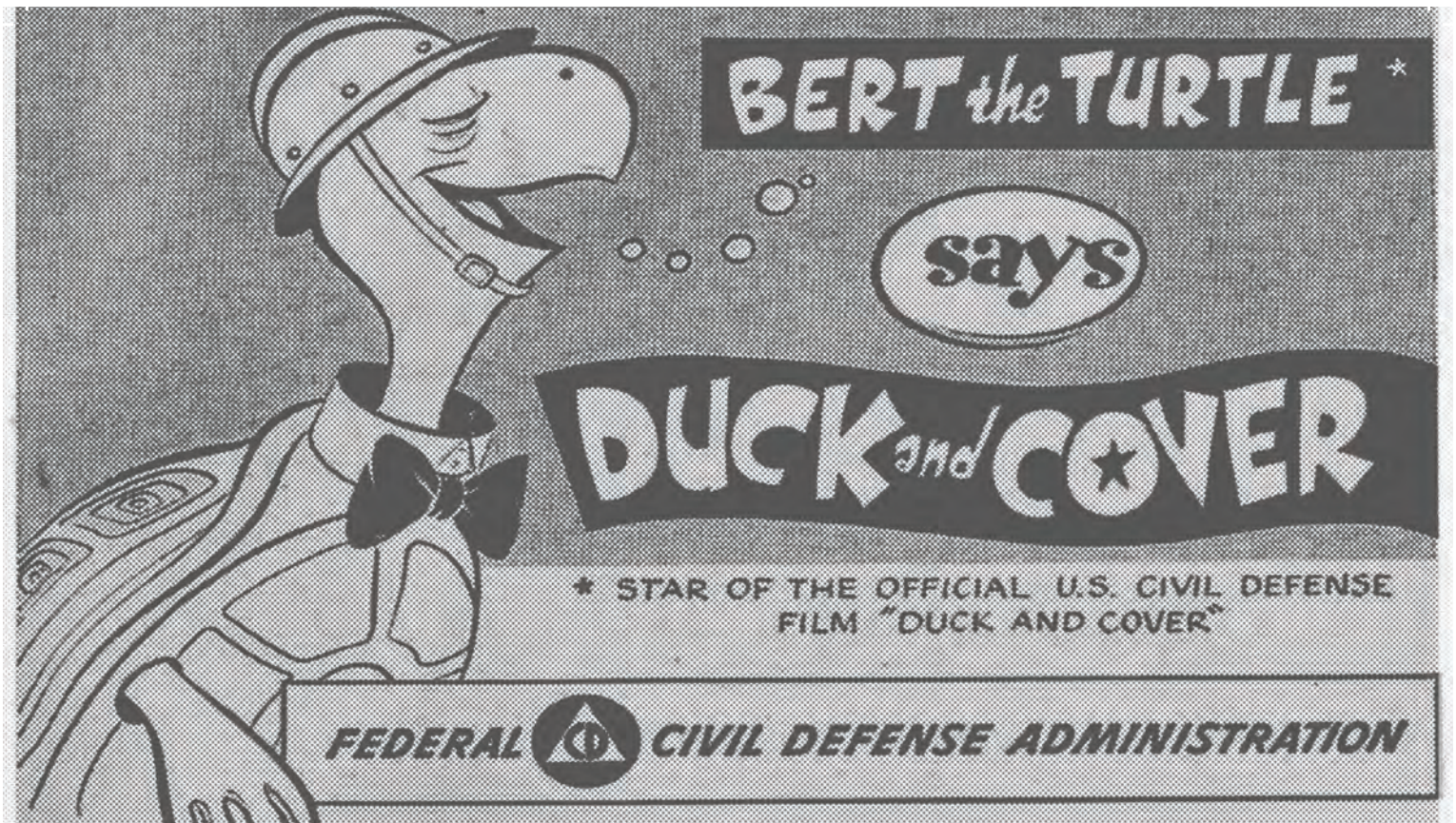


Image: Federal Civil Defense Administration **PHOTO: ADVERTISEMENT FEATURING BERT THE TURTLE**

USE ONLY IN DEFENSE!

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MISSION 9: SCAVENGER HIUNT

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7.) The START Treaty was signed by President George H. Bush and Mikhail Gorbachev in what year?

COLD WAR QUESTION:

8.) The START Treaty stands for:

MISSILEER QUESTION:

9.) Though women have always served in some capacity in the military, in what year did the first women begin serving as missile crewmembers?

COMMUNITY QUESTION:

10.) Examine the list at right and circle all those that were impacted by the cold war:

LAND OWNERS
KIDS IN SCHOOL
FAMILIES
MISSILEERS
PEOPLE IN OTHER COUNTRIES
AMERICAN CITIZENS





Image: John Mollison PHOTO: WARNING SIGN OUTSIDE OF AN ACTIVE MISSILE BASE

ON ALERT! 24 HOURS A DAY

During the *Cold War* between the U.S. and former Soviet Union, the U.S. maintained up to 1,000 Minuteman missiles in seven Midwestern states as a deterrent force to prevent attack by the Soviet Union.

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Your mission is to read the “On Alert, 24hrs” page and find all of the words that have been **boldened** and *italicized* in the Word Search below.



Finding the answers to problems is like a word-search — patience and seeing things in a different perspective are important for success.

T	L	R	O	C	A	A	U	S	L	E
L	L	M	I	S	S	I	L	E	O	G
S	O	U	T	H	D	A	K	O	T	A
H	T	D	A	E	H	R	A	W	R	T
L	T	W	I	D	H	S	T	A	D	O
R	A	W	D	L	O	C	E	R	O	N
K	D	I	A	R	A	L	S	N	S	A
M	K	I	R	I	C	A	I	U	R	M
S	U	N	S	U	A	T	O	S	A	I
E	T	K	N	C	E	A	A	O	K	L



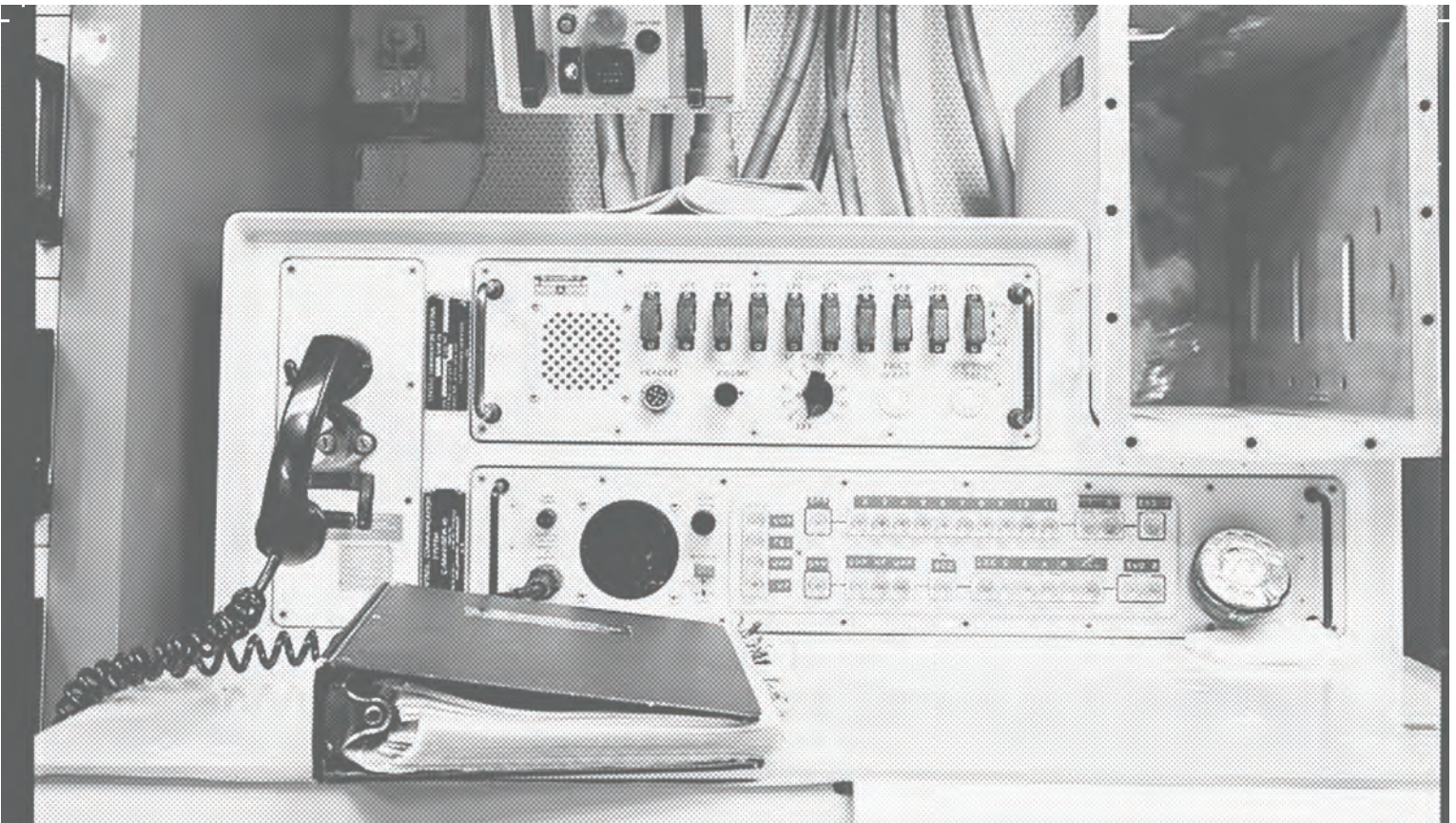


Image: John Mollison **PHOTO: INSIDE A MISSILE “CAPSULE.”**

KNOW THE CODE!

Codes were used by Missileers when working on the missile or preparing to launch.

The phonetic alphabet code was used by Missileers when decoding these messages. This code can be used to assign a number to the letters of the alphabet.

By pronouncing the letters as words, voice messages by radio or telephone are easier to understand. Study the phonetic alphabet at right as you prepare to decode messages in the next mission.

NATO Phonetic Alphabet

A	Alpha	N	November
B	Bravo	O	Oscar
C	Charlie	P	Papa
D	Delta	Q	Quebec
E	Echo	R	Romeo
F	Foxtrot	S	Sierra
G	Golf	T	Tango
H	Hotel	U	Uniform
I	India	V	Victor
J	Juliett	W	Whiskey
K	Kilo	X	X-ray
L	Lima	Y	Yankee
M	Mike	Z	Zulu



MISSION 11: CODES

Your mission is to study the NATO Phonetic Alphabet chart on the page at left and use it to figure out the answers to the questions.

HINT: Alpha = 0 Bravo = 1... Zulu = 25



Codes have many uses in military life and many of them aren't to preserve secrecy. Sometimes, codes are used to speed up or clarify communication.

QUESTION

1.) How many Minuteman missiles were deployed in South Dakota during the Cold War?



CODED ANSWER: BRAVO FOXTROT ALPHA

2.) When was the "ground breaking" event that began the building of Minuteman missiles across South Dakota?



CODED ANSWER: LIMA TANGO GOLF BRAVO

3.) What year were Minuteman missiles taken off alert in South Dakota?



CODED ANSWER: TANGO JULIET BRAVO

4.) How many Minuteman missiles are still operational in the United States?



CODED ANSWER: ECHO FOXTROT ALPHA





Image: Ohio Bell Telephone Co.

PHOTO: ARTWORK FROM THE COVER A CIVIL DEFENSE MANUAL

CIVIL DEFENSE AND YOU.

As the Cold War progressed, the fear of a missile attack from the Soviet Union also increased. Regular people were looking for a way to protect their families from a nuclear attack. Many communities referred to the guidance of the civilian defense leaders. The Civilian Defense Administration (CDA) was created in World War II.

The CDA was a collection of community organizations run by volunteers. The volunteers job was to make sure communities of people could respond in case of an attack. They did this by encouraging activities such as “duck and cover” drills in school and bomb shelters for families and communities.

There were many different kinds of bomb shelters built in the United States. Estimates show there were 1,500 bomb shelters across the country in 1960. In five years that figure increased to over 200,000. A shelter was typically an underground room that needed to contain enough supplies for a family to live for two weeks without ever leaving. Essential daily supplies were stored as well as sanitary and medical items.

The bomb shelter became a constant reminder that the frontlines of the Cold War was everywhere. In the picture to the right, you can see an example of family in a bomb shelter filled with supplies.



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MISSION 12: TAKE IT WITH YOU!

Your mission is to think about what it would be like to outfit a bomb shelter for you and the people you love. List 3-5 items you'd make sure it contained and explain "Why?"



It's not uncommon for homes built in the 1950s and early 1960s to have bomb shelters in their basements and backyards.



Image: Unknown

Have a look at the photo above — it was obviously taken in the 1950s.

What do you see that's similar or different than if the photo would be taken today?

Notice the four bunks — how long do you think you could live like that with your friends and family?

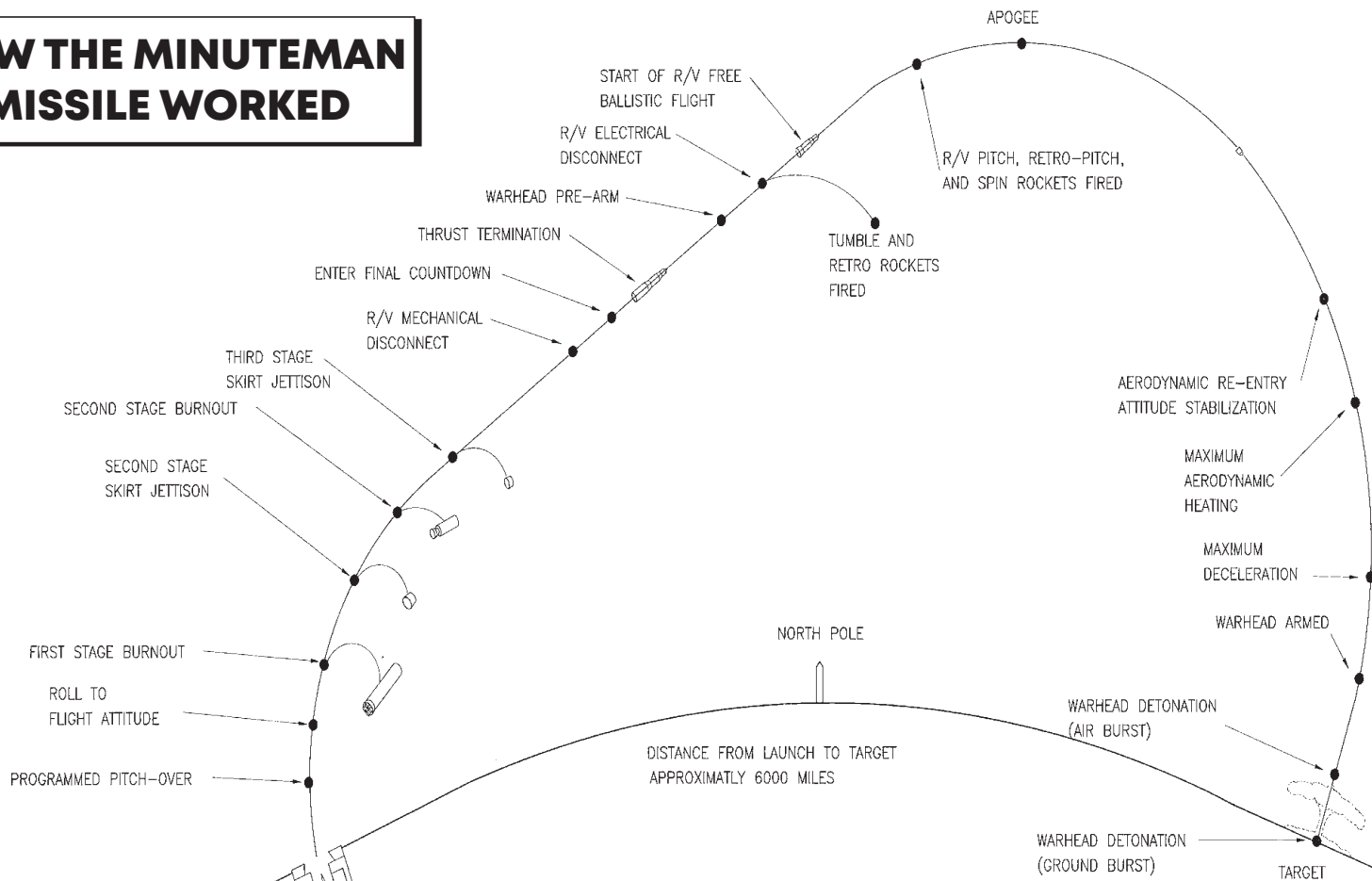
WHAT WOULD YOU PACK?

Think about...

- A. what do you need most: food or water?
- B. what happens if someone gets sick?
- C. will you need electronics? If so, how will they get power?
- D. what will you do for entertainment?
- E. how will you go to the bathroom?



HOW THE MINUTEMAN MISSILE WORKED



FLIGHT CHARACTERISTICS

	TIME	ALTITUDE	RANGE
STAGE 1 IGNITION	0	0	0
STAGE 2 IGNITION	61 Secs	100,000 Ft	18 NAUTICAL MILES (NM)
STAGE 3 IGNITION	125 Secs	300,000 Ft	120 NAUTICAL MILES
STAGE 3/RV SEPARATION	186 Secs	750,000 Ft	210 NAUTICAL MILES

FLIGHT SEQUENCE

NO SCALE

DELINEATED BY: GREGORY S. MACK
 ROCKY MOUNTAIN REGIONAL OFFICE, DENVER
 UNITED STATES DEPARTMENT OF THE ARMY
 HISTORIC AMERICAN ENGINEERING RECORD
 ELLSWORTH AIR FORCE BASE, DELTA FLIGHT (MINUTEMAN II) ICBM
 INTERIOR VICINITY JACKSON COUNTY SOUTH DAKOTA
 SHEET 4 of 4
 HISTORIC AMERICAN ENGINEERING RECORD
 50-50

IF REPRODUCED, PLEASE CREDIT HISTORIC AMERICAN ENGINEERING RECORD, NATIONAL PARK SERVICE, NAME OF DILUMINATOR, DATE OF THE DRAWING



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MISSION 13: MISSILE AWAY! (PUTTING IT TOGETHER)

Your mission is to see if you can put all the missile parts together in the correct order, top to bottom.



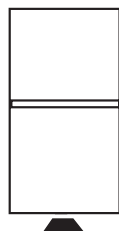
The same technology used in using rockets to launch people and satellites into space are used in sending warheads towards a target.



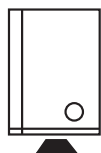
**NOSE CONE:
WARHEAD
OR "RV"**



**2nd INTERSTAGE
CONNECTS STAGES**



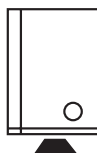
**2nd STAGE MOTOR:
BOOSTS INTO
STRATOSPHERE**



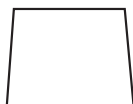
**3rd STAGE MOTOR
PUSHES WARHEAD
INTO SPACE**



**MISSILE
GUIDANCE RING**



**2nd STAGE
PUSHES WARHEAD
INTO SPACE**



**1st INTERSTAGE:
CONNECTS STAGES**



**1st STAGE MOTOR:
LAUNCHES MISSILE
FROM SILO**

TOP PIECE:

NEXT PIECE:

NEXT PIECE:

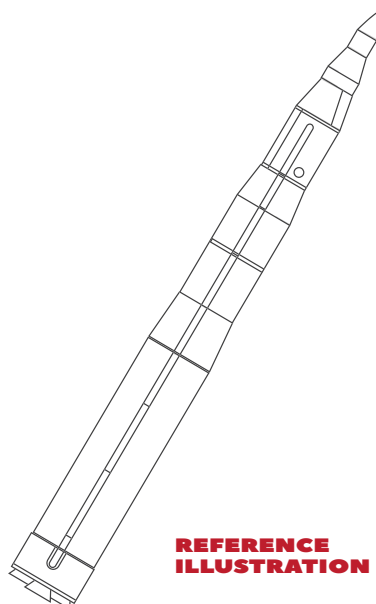
NEXT PIECE:

NEXT PIECE:

NEXT PIECE:

NEXT PIECE:

BOTTOM PIECE:



**REFERENCE
ILLUSTRATION**



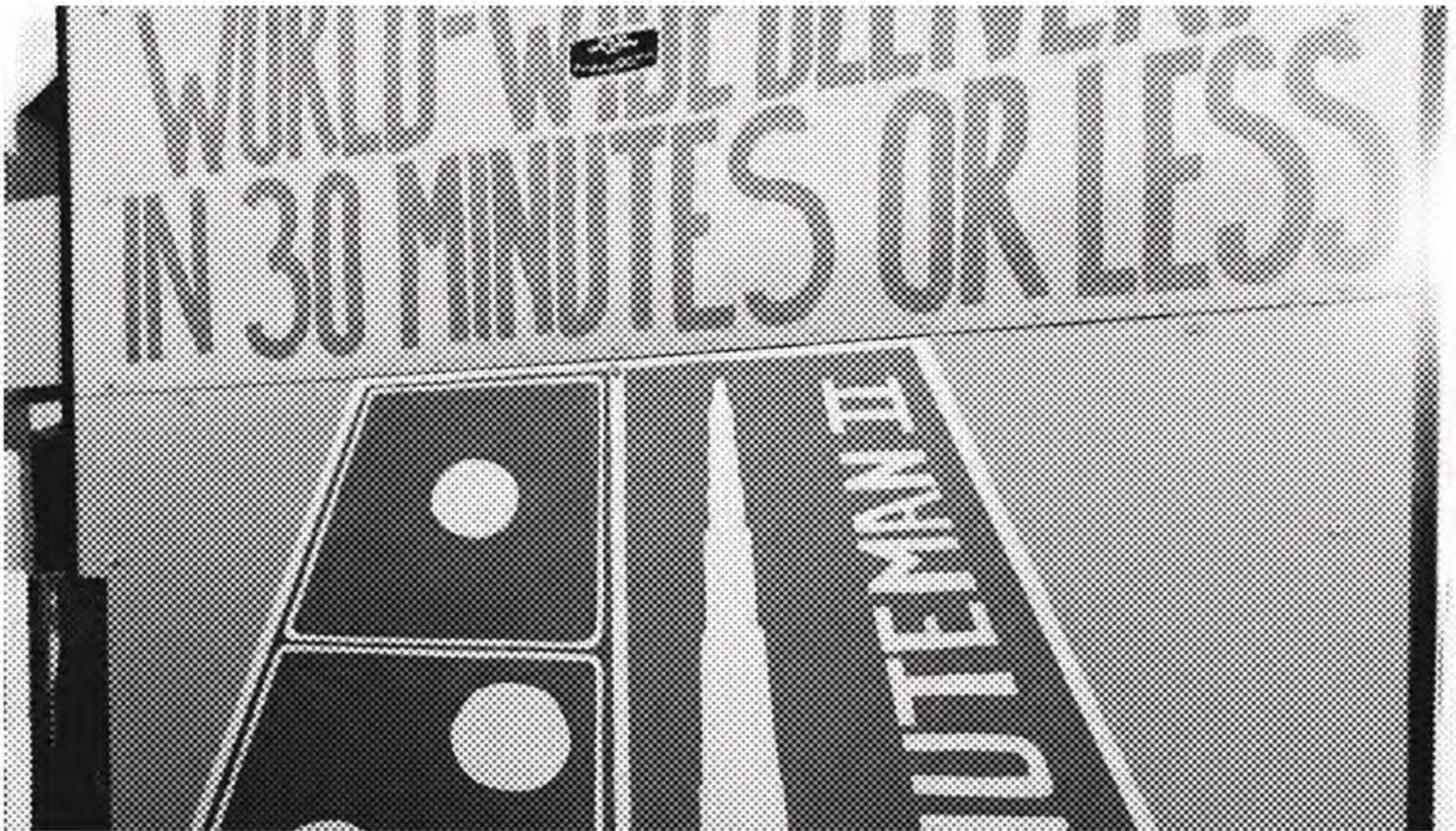


Image: John Mollison PHOTO: DECORATED BLAST DOOR FROM A DELTA LAUNCH FACILITY

HAVING A BLAST AT WORK



The Missileers in the 44th Missile Wing took great pride in protecting the United States. Launch crews reflected this pride by painting their 16,000-pound blast doors with motivational artwork.

A replica of the Delta Flight blast door (left) is displayed in the Visitor Center museum. The actual door weighed 16,000 pounds and protected the crew from intrusion and nuclear blast.

One of the interesting features of the huge, heavy blast door is that, once it was unlocked, the clever hinge mechanism made it relatively easy for one person to open and shut the blast door.

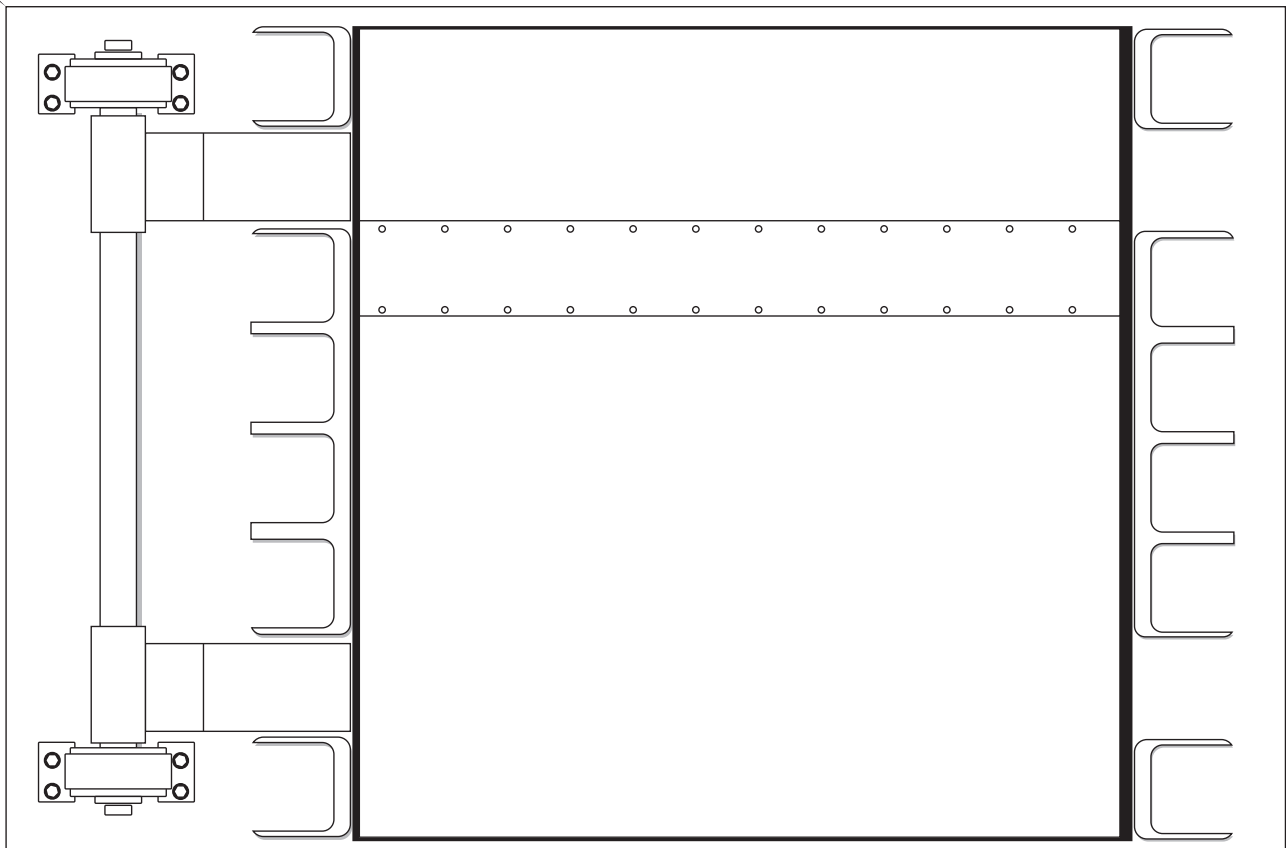


MISSION 14: DECORATE YOUR BLAST DOOR

Your mission is to study the design on the blast door (left), then design, draw and color your own blast door in the drawing below. Think about how you'd keep morale high as the missile crew prepared to enter the capsule for long-periods of time.



Once inside the Missile Capsule, the Missile Crew are 'sealed' inside where they sleep, eat and work until relieved by a fresh crew.





The
United
States
Jr. Missileers

CERTIFIES THAT



HAS SUCCESSFULLY COMPLETED THE
JUNIOR MISSILEER HANDBOOK
AND IS HEREWITH AWARDED THIS

Certificate of Training

Ranger Signature

Date

**SHARE YOUR WORK,
ASK QUESTIONS,
KEEP IN TOUCH!**

Use the address below for all correspondence including mailing in your completed Jr. Missileer Book.

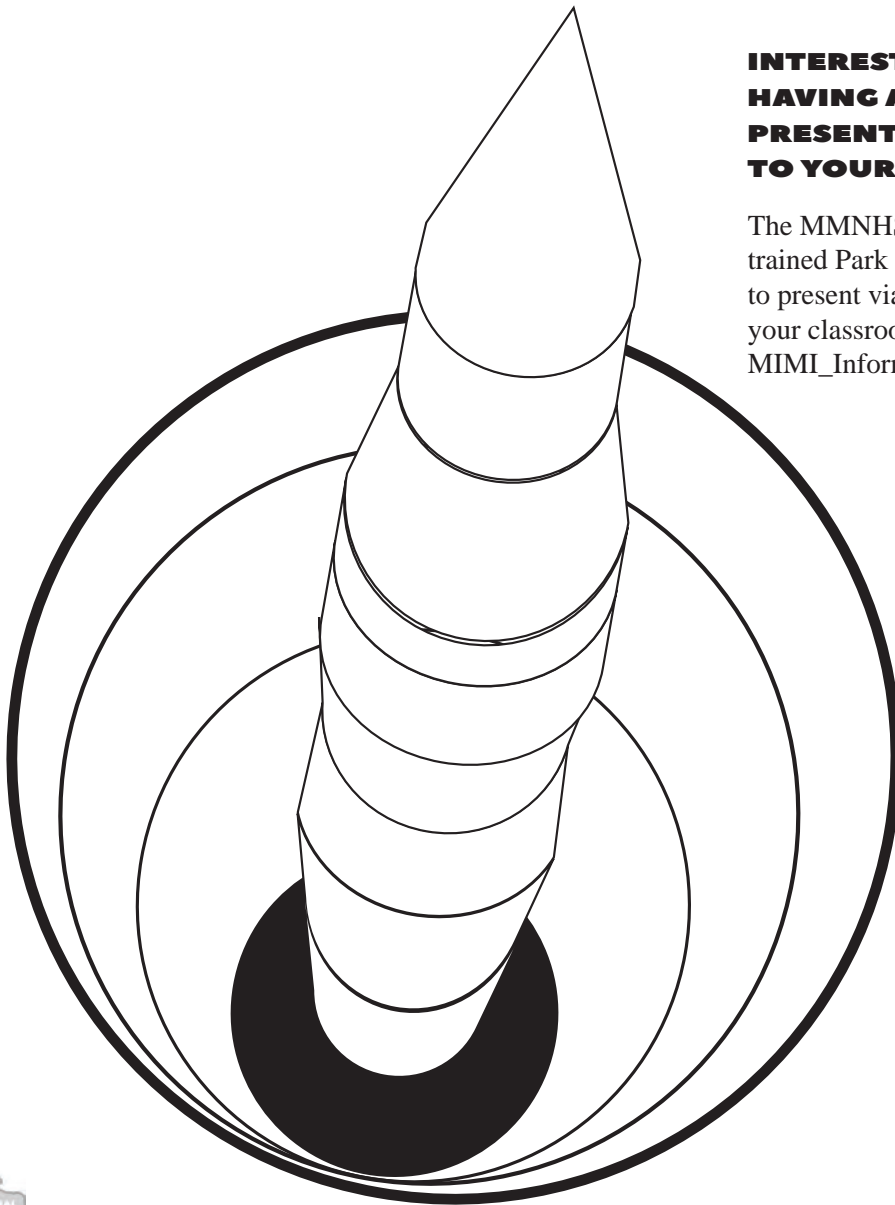
MINUTEMAN MISSILE NATIONAL HISTORIC SITE
24545 Cottonwood Road
Philip, SD 57567

www.nps.gov/mimi/index.htm

Email: missiles@mimi.nps.org

**INTERESTED IN
HAVING A
PRESENTATION
TO YOUR CLASSROOM?**

The MMNHS is happy to provide trained Park Rangers or even Missileers to present via streaming technology to your classroom. Please contact: MIMI_Information@nps.gov



POSTSCRIPT

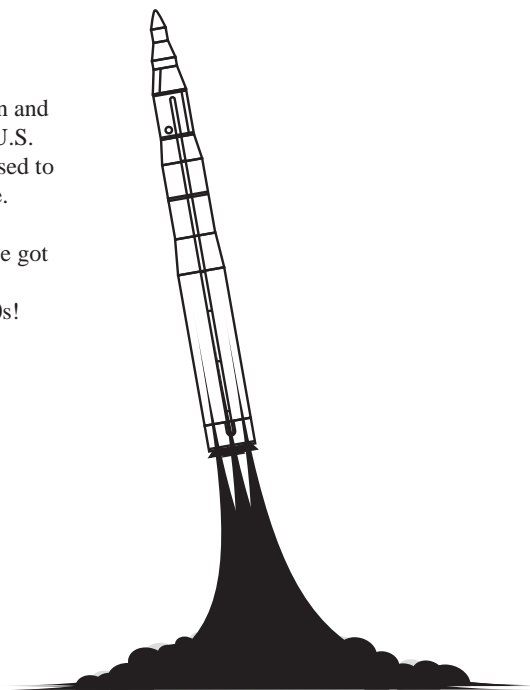
February 1, 2021, marked the 60th Anniversary of the first launch of a Minuteman Missile. In the last 60 years, there have been three versions of the Minuteman Missile created, each with new modifications that made them more precise and accurate. Minuteman III continues to remain one of the major tools to defend the United States. With the United States and the Soviet Union pitted against each other during the Cold War in a great race to create better, faster, and more efficient nuclear weapons, the solid-fueled Minuteman was the result of a great experiment to give us an advantage over the Soviet Union. Before Minuteman, intercontinental ballistic missiles used liquid fuel. This made working with the missiles much more dangerous for crew members, as they would have to fuel the missile before launch. The fueling process could take up to an hour. Minuteman was the first of its kind as it allowed crews to launch the missile from a remote location and could be ready in less than five minutes. This allowed the missile to be ready to launch at a moment's notice. Minuteman missiles were named after the Minutemen militia during the Revolutionary War who were always "ready at a moment's notice".

The Cold War and the arms race between the two superpowers came to an end when President George H.W. Bush and Soviet Union President Mikhail Gorbachev signed the Strategic Arms Reduction Treaty (START) on July 31, 1991. The treaty allowed the United States to keep one Launch Control Facility and one Minuteman Missile silo intact (but deactivated) for historical preservation. In November of 1999, legislation was passed for creating the Minuteman Missile National Historic Site, and in 2002 the property was officially transferred from the United States Air Force to the National Park Service. Today, park rangers share this important part of American history with visitors like you!

DESIGN

Did you notice anything "old" about the graphic design and layout of this booklet? We did it on purpose! Actual U.S. Air Force manuals, bulletins, awards and maps were used to create as much of a "Missileer Experience" as possible.

No one particular era was used as a model but if you've got an eye for design and cultural kitsch, try to see what elements came from the 1950s, 1960s, 1970s and 1980s!

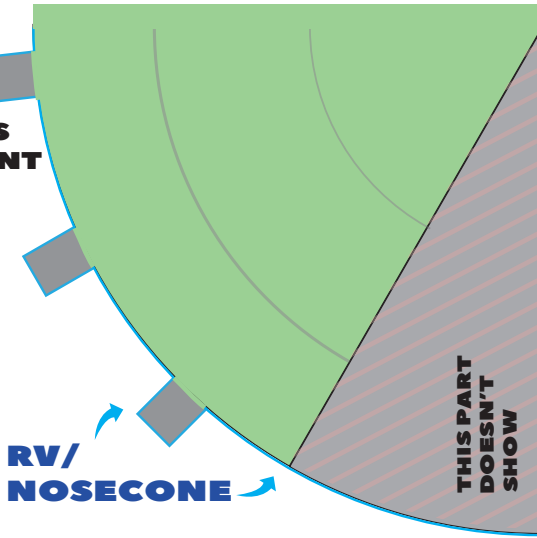


NEEDED TOOLS AND EQUIPMENT

- Scissors
- Clear adhesive tape
- Air launch unit
- Brain

1. CUT OUT PARTS

- Body tube
- Fins
- RV (Nose cone)



BUILD YOUR OWN MINUTEMAN II ICBM

2. ROLL & TAPE BODY TUBE



3. ROLL & TAPE RV—TUCK TABS INSIDE BODY TUBE



BODY TUBE

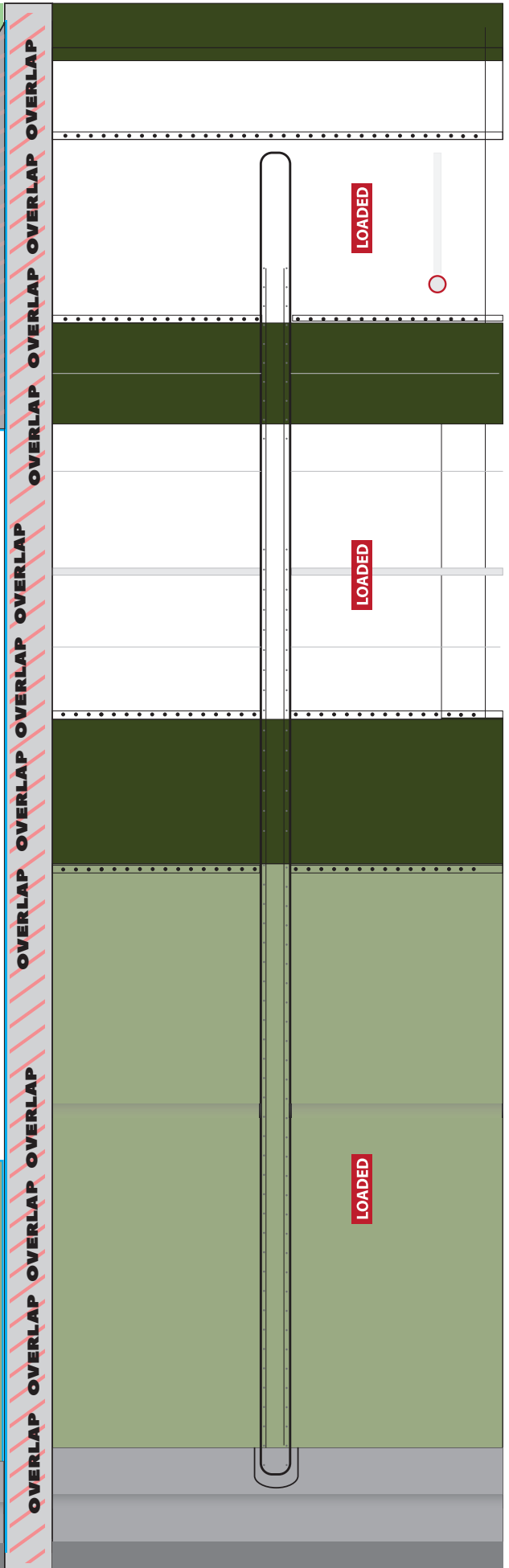
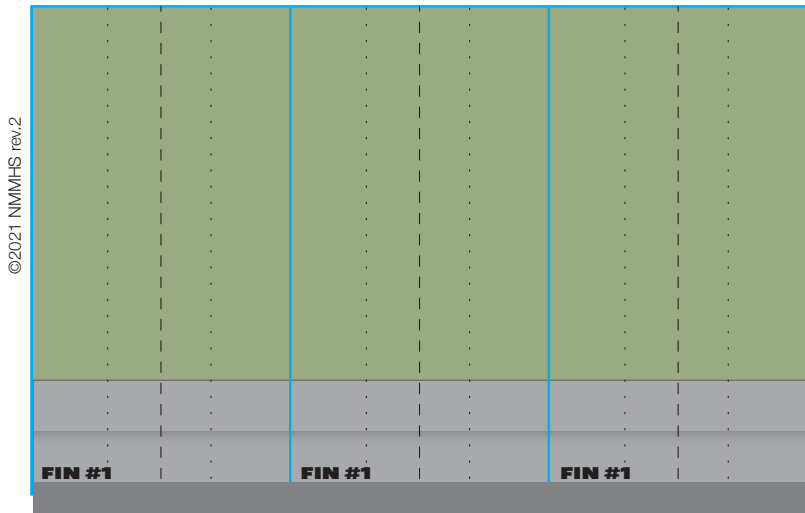
4. CUT, FOLD AND TAPE FINS



5. PLAY IN PEACE!



CUT FOR FINS HERE





**THE JUNIOR MISSILEER
HANDBOOK IS BROUGHT TO YOU
BY THE**



AND MINUTEMAN MISSILE NATIONAL HISTORIC SITE

www.nps.gov/mimi