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AUTHOR Lawlor, John M., Jr.
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ABSTRACT

In August 1945, the United States unleashed an atomic weapon against the Japanese at Hiroshima and Nagasaki and brought an end to World War II. These bombs killed in two ways -- by the blast's magnitude and resulting firestorm, and by nuclear fallout. After the Soviet Union exploded its first atom bomb in 1949, the Cold War waged between the two superpowers. The arms race resulted in nuclear weapons testing. These tests consisted of above ground and below ground explosions of nuclear devices. The above-ground explosions generated nuclear fallout. This lesson relates to the duties and powers of the president and Congress, to provide for national civil defense in the event of war, as set forth in the Preamble, in Article I, Section 8, Paragraph 18, and in Article II, Section 3, Clause 1 of the Constitution. The lesson uses eight primary source documents dealing with nuclear fallout, six photographs, an artist's rendering of a fallout shelter, and a pamphlet entitled "Facts about Fallout." It correlates to the National History Standards and to the National Standards for Civics and Government. The lesson provides the historical background about the atom bomb (with three resources); and suggests diverse teaching activities for classroom implementation, including pamphlet analysis, compare and contrast, photograph analysis, and student research projects. Appended are a photograph analysis worksheet and the primary source documents. (BT)



National Archives and Records Administration

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THE CONSTITUTION COMMUNITY

Postwar United States (1945 to early 1970s)

Photographs and Pamphlet About Nuclear Fallout

By John M. Lawlor, Jr.

National Archives and Records Administration
700 Pennsylvania Avenue, N.W.
Washington, D.C. 20408
1-866-325-7208

<http://www.nara.gov/education/classrm.html>

2000

The Constitution Community is a partnership between classroom teachers and education specialists from the National Archives and Records Administration. We are developing lessons and activities that address constitutional issues, correlate to national academic standards, and encourage the analysis of primary source documents. The lessons that have been developed are arranged according to historical era.

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THE CONSTITUTION COMMUNITY



Photographs and Pamphlet About Nuclear Fallout



Constitutional Connection

This lesson relates to the duties and powers of the president and Congress, to provide for national civil defense in the event of war, as set forth in the Preamble , in Article I, Section 8, paragraph 18 , and in Article II, Section 3, Clause 1 of the Constitution.

This lesson correlates to the National History Standards.

Era 9 -Postwar United States (1945 to early 1970s)

- **Standard 2A** -Demonstrate understanding of the international origins and domestic consequences of the Cold War.

This lesson correlates to the National Standards for Civics and Government.

Standard I.A. 2. -Evaluate, take, and defend positions on why government is necessary and the purposes government should serve.

Standard III.B.1. -Explain the major responsibilities of the national government for domestic and foreign policy.

Cross-curricular Connections

Share this exercise with your history, science, and government colleagues.

List of Documents

1. Pamphlet entitled "Facts about Fallout" (page 1) (page 2) (page 3) (page 4) (page 5) (page 6) (page 7) (page 8)
2. Photograph [Operation Cue]: Two-story wood frame house at 5,500 feet (from blast site), May 5, 1955.
3. Photograph [Operation Cue]: A few minutes after detonation the atomic blast in Operation Cue looked like this, May 5, 1955.
4. Photograph [Operation Cue] - Two-story wood frame house at 5,500 feet after the blast, May 5, 1955.
5. Photograph of the Office of Civil and Defense Mobilization exhibit at a local civil defense fair. ca. 1960.
6. Photograph of a display of survival supplies for the well-stocked fallout shelter, ca.1961.
7. An artist's rendition of a temporary basement fallout shelter, ca.1957.
8. Photograph of a basement family fallout shelter that includes a 14-day food supply that could be stored indefinitely, a battery-operated radio, auxiliary light sources, a two-week supply of water, and first aid, sanitary, and other miscellaneous supplies and equipment, ca.1957.

Historical Background

In August 1945 the United States unleashed a new weapon of mass destruction against the Japanese at Hiroshima and Nagasaki and brought an end to World War II. Unlike conventional bombs, these new atomic bombs killed in two ways. They killed by sheer magnitude of the blast and the resulting firestorm, and they killed by means of nuclear fallout. In 1945 the United States possessed a monopoly on this new dreadful weapon.

The exclusiveness was short-lived, however. In 1949 the Soviet Union exploded its first atomic bomb. Although the United States and the Soviet Union had been wartime allies, by this time they had become peacetime enemies with conflicting ideologies and competing global interests. In an attempt to get or maintain an advantage in the power and numbers of nuclear weapons, both nations embarked on an arms race while at the same time preparing their citizens in the event that nuclear weapons were deployed. In effect, a Cold War was being waged, and civilian populations could no longer be shielded from the violence of war.

The arms race resulted in nuclear weapons testing. These tests consisted of above-ground and below-ground explosions of nuclear devices. The above ground explosions generated nuclear fallout.

With each incremental increase in the level of hostility between the two superpowers, the need to develop and popularize civil defense procedures became more apparent. Of the two outcomes of a nuclear explosion, firestorm and fallout, techniques to defend against radiation poisoning resulting from nuclear fallout had the only real possibility of success. One technique was to shield oneself from the blast by means of a barrier such as a "fallout shelter." Where a "fallout shelter" was not available, virtually any barrier would have to do, even a school desk or a kitchen table. Students practiced drills called "duck and cover" to prepare for the possibility of a nuclear attack. Private homes and public buildings had fallout shelters that were stocked with canned goods and other necessities. Drilling for nuclear war became a part of life's routine in the 1950s and like fire drills today in the schools was taken very seriously.

Resources

CNN Web Site -- Cold War Series at <http://cnn.com/SPECIALS/cold.war/>

Judge, Edward H., and John W. Langdon. *The Cold War: A History through Documents*. New Jersey: Prentice-Hall, 1999.

Schaller et al. *Coming of Age: America in the Twentieth Century*. Boston: Houghton Mifflin Company, 1998.

Teaching Activities

1. Direct the students to read the "Facts about Fallout" pamphlet and create a running list of terms in the pamphlet for which they need definitions. Allow the students to research these terms.
2. Direct the students to analyze the "Facts about Fallout" pamphlet and to list any questions that either were not answered by the pamphlet or arose as a result of materials provided therein. Students will then discuss their questions, research any that remain unresolved through their discussions, and report their solutions to the class.
3. Direct the students to compare/contrast the definition of "nuclear fallout" in the pamphlet with one in an encyclopedia or other reference work. Students may wish to consult science reference works to learn what a "half-life" is. Instruct students to write a one-page report about the similarities and differences. The report should be used to generate class discussion to ascertain the accuracy of various definitions. The objective is to determine how scientifically useful the "Facts" pamphlet was.
4. Divide the class into seven groups and provide each group with one of the images and a Photograph Analysis Worksheet . Instruct the each group to analyze its image and

complete the worksheet. Regroup the students with one member from each of the seven previous groups serving as expert on that group's image. Allow students to compare and discuss the images in order to discover the relationships among the images. Ask each student to write a brief essay explaining the relationships.

5. Direct students to conduct at least two interviews with adults who were in elementary or high school during the period 1955-1965 to determine what the interviewees did at home and at school to cope with the threat of nuclear war. Alert students to inquire about how the subject felt during the drills. Require students to record their questions and the responses of their subjects. Ask student volunteers to describe their interviews to the class.

6. Divide the students into two groups and assign each group one of the following tasks:
a. Research the history of your school (or another local school that existed in the 1950s and 1960s) to determine procedures that were implemented to deal with the threat of nuclear war in the 1950s and '60s and prepare a brief pamphlet on the procedures as though you were participants in the drills in 1955.

b. Research current school and community emergency preparedness procedures and write a report that sets forth the basics of the plans such as warning sirens and evacuation. Ask students to consider nonmilitary emergencies such as hazardous-material spills, nuclear power plant "events," and natural disasters such as floods, hurricanes, earthquakes, or tornados.

7. Direct the students to use the display, diagram, and photograph of a "fallout shelter" to create a bill of materials to construct and stock an atomic bomb shelter at today's prices. As a concluding exercise, permit the students to report on items missing from the bill of materials that they think are essential for survival and to defend their suggestions. (Students should assume that electricity is not available.)

The documents included in this project are from Record Group 287, Records of the Government Printing Office; Record Group 304, Records of the Office of Civil and Defense Mobilization; and Record Group 311, Records of the Federal Emergency Management Agency. They are available online through the National Archives Information Locator (NAIL) [<http://www.nara.gov/nara/nail.html>] database, control numbers

NWL-287-FCD1(2)-F19

NWDNS-304-OC-408

NWDNS-304-OC-703

NWDNS-304-OC-737

NWDNS-311-D-9(1)

NWDNS-311-D-9(2)

NWDNS-311-D-14(1)

NWDNS-311-D-15(1).

NAIL is a searchable database that contains information about a wide variety of NARA holdings across the country. You can use NAIL to search record descriptions by

keywords or topics and retrieve digital copies of selected textual documents, photographs, maps, and sound recordings related to thousands of topics.

This article was written by John M. Lawlor, Jr., a professor at Reading Area Community College in Reading, PA. Dedicated to John M. Lawlor, Sr. 1919-1999.



Photograph Analysis Worksheet

Step 1. Observation

A. Study the photograph for 2 minutes. Form an overall impression of the photograph and then examine individual items. Next, divide the photo into quadrants and study each section to see what new details become visible.

B. Use the chart below to list people, objects, and activities in the photograph.

PEOPLE

OBJECTS

ACTIVITIES

Step 2. Inference

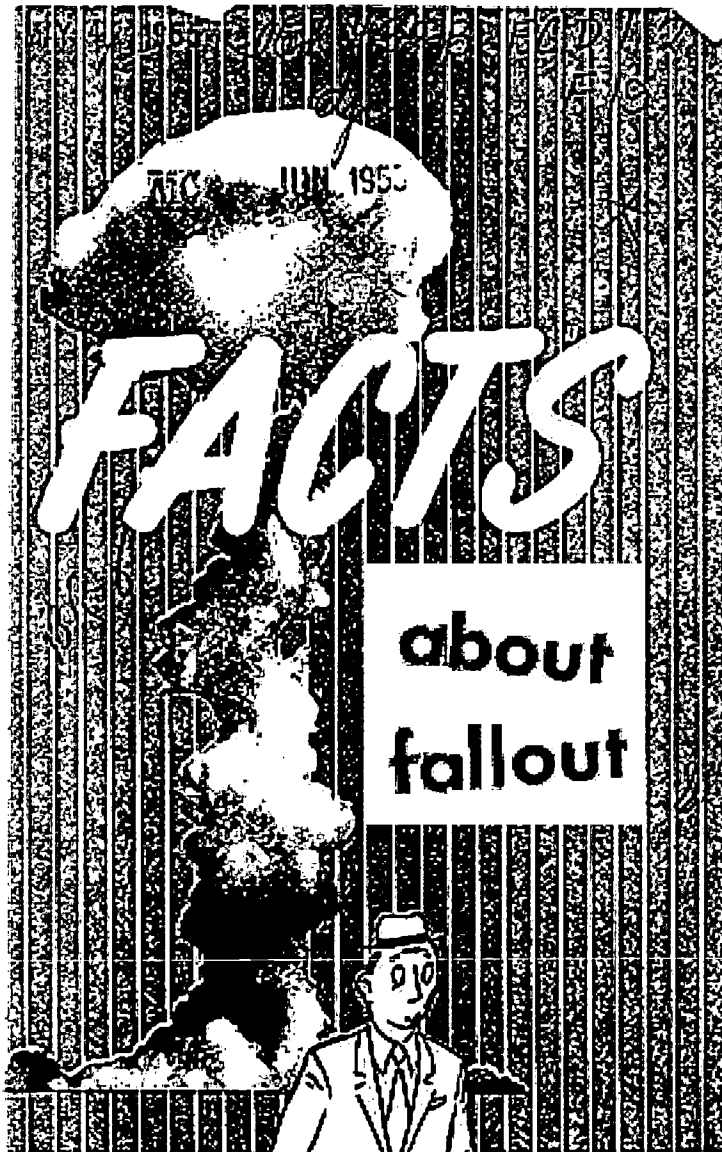
Based on what you have observed above, list three things you might infer from this photograph.

Step 3. Questions

A. What questions does this photograph raise in your mind?

B. Where could you find answers to them?

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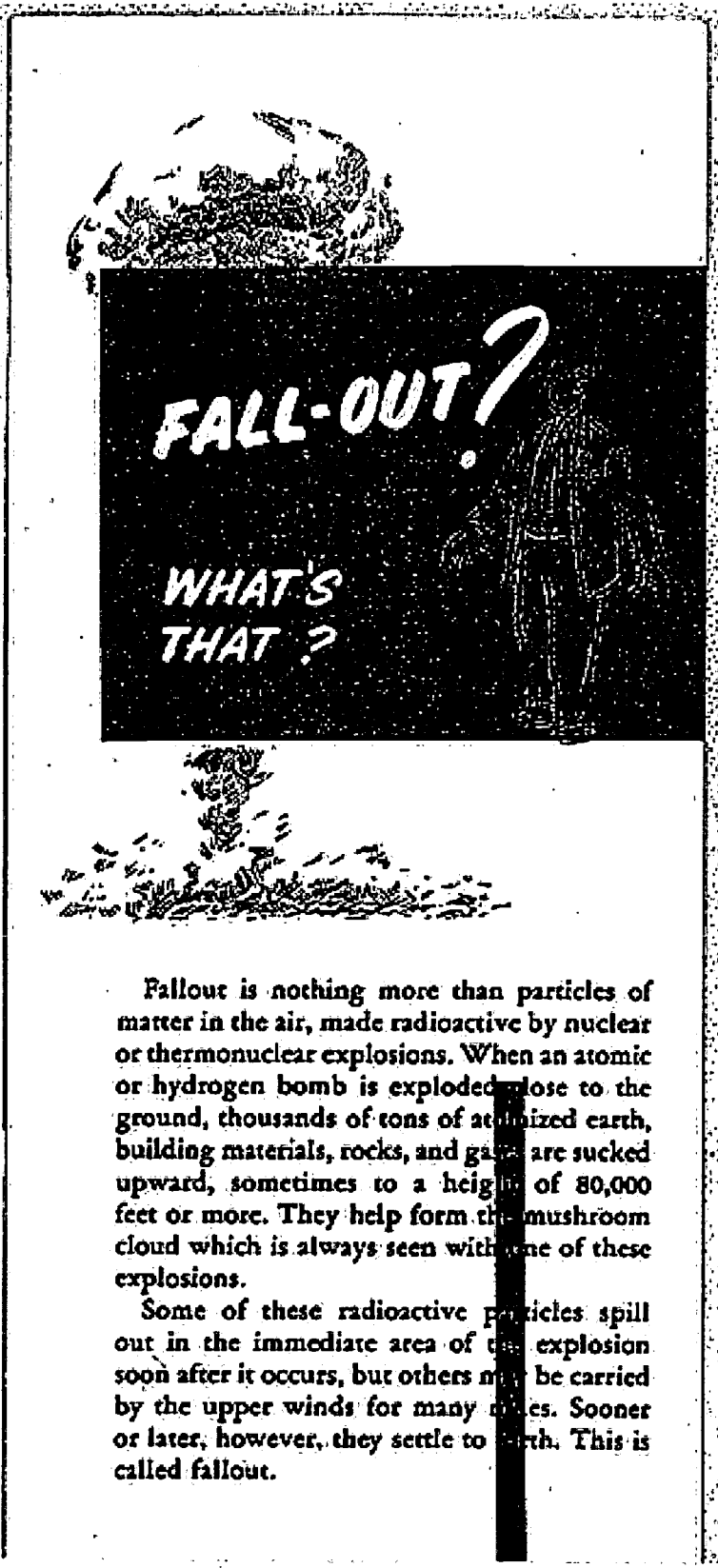


about
fallout



FEDERAL CIVIL DEFENSE ADMINISTRATION

Document 1: Pamphlet entitled "Facts about Fallout", page 1.

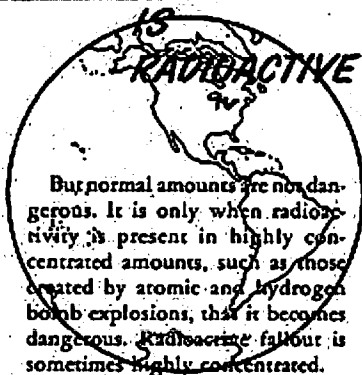
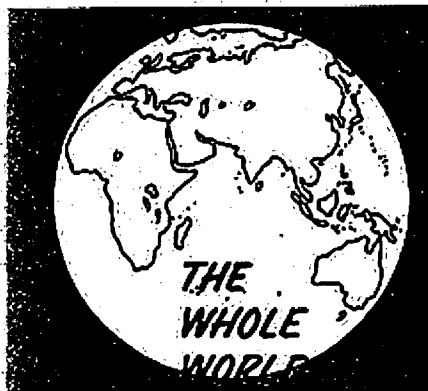


Fallout is nothing more than particles of matter in the air, made radioactive by nuclear or thermonuclear explosions. When an atomic or hydrogen bomb is exploded close to the ground, thousands of tons of atomized earth, building materials, rocks, and gases are sucked upward, sometimes to a height of 80,000 feet or more. They help form the mushroom cloud which is always seen with one of these explosions.

Some of these radioactive particles spill out in the immediate area of the explosion soon after it occurs, but others may be carried by the upper winds for many miles. Sooner or later, however, they settle to earth. This is called fallout.

Document 1: Pamphlet entitled "Facts about Fallout", page 2.

RADIOACTIVITY IS NOTHING NEW...



If you are exposed to it long enough—

IT WILL HURT YOU!

IT MAY EVEN KILL YOU!

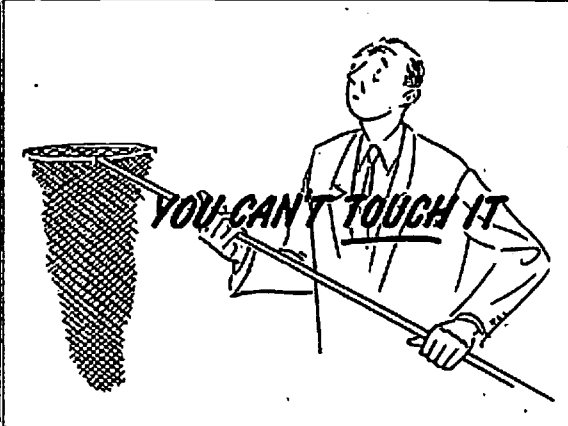
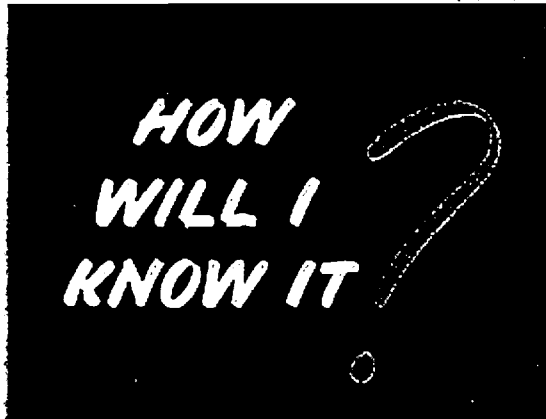
WHOM WILL IT HIT ?

IT COULD HIT YOU!



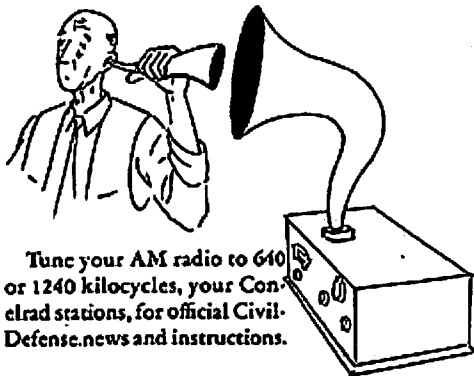
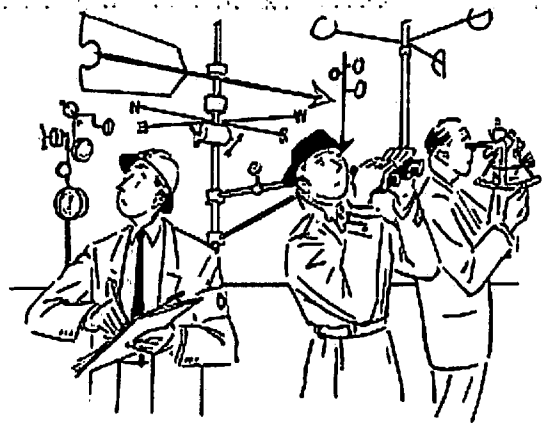
Yes, it could settle anywhere. The upper winds could carry fallout to the most remote parts of the country. Small towns and rural areas many miles from the scene of a nuclear explosion may be endangered by fallout. Every citizen is a potential target for fallout.

Document 1: Pamphlet entitled "Facts about Fallout", page 3.



Document 1: Pamphlet entitled "Facts about Fallout", page 4.

Civil Defense officials and weather experts will estimate the probable path and speed of approaching fallout and keep you posted.



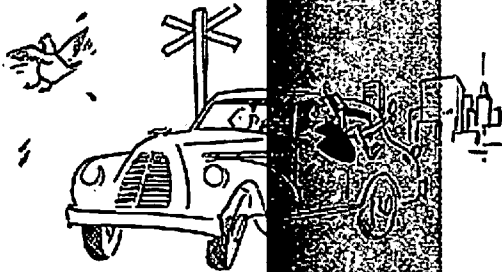
**HERE'S HOW
YOU'LL
KNOW IT**

Civil Defense radiological monitoring teams will detect fallout if it is present in your area. They will tell you when it is safe and when you must take protective measures.



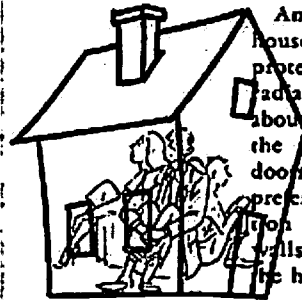
Document 1: Pamphlet entitled "Facts about Fallout", page 5.

**IF IT COMES MY WAY
WHAT DO I DO THEN ?**

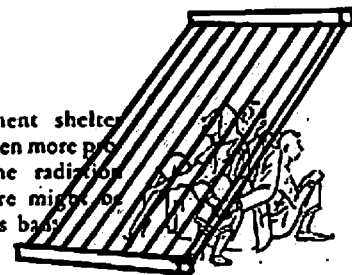


If there is enough warning time, your local Civil Defense director may order a general evacuation for the area to get away from the bomb or its effects, before it

**IF YOU DON'T HAVE
TIME TO EVACUATE,
SEEK THE BEST
AVAILABLE SHELTER**



An ordinary frame-house will offer some protection. It may cut radiation danger by about one-half. Get on the floor, away from doors and windows, or preferably go to a location with additional walls at the center of the house.



A basement shelter will offer even more protection. The radiation danger there might be one-tenth as bad.



An underground shelter with 3 feet of earth above it will give you almost complete protection if it is equipped with a door and an air filter.

Document 1: Pamphlet entitled "Facts about Fallout", page 6.

An old-fashioned
root cellar is ideal. Stock it with food
staples as Grandmother used to do.
water supplies, first-aid kits, blankets,
a lantern, fuel



DON'T GET DISCOURAGED



EVERYTHING YOU NEED TO
LIVE IN IT FOR A FEW DAYS



DON'T GET PANICKY



Document 1: Pamphlet entitled "Facts about Fallout", page 7.

**FOLLOW
THESE
SIMPLE
RULES**

Prepare a shelter area in your home or back yard, whether you live in a city or in the country.

Stock your shelter with a 7-day supply of emergency food and water.

Get a radio, preferably battery-operated, and use it in a safe place. Mark the Commercial Frequencies. Civil Defense news and instructions will be provided at these frequencies.

If you think you have been in a serious fallout area, remove your outer clothing and wash the exposed parts of your body thoroughly. Unless you have been subjected to serious contamination, it may not be necessary to destroy or discard the clothing, since it can be made safe by laundering or by simply waiting for the radioactivity to decay.

TO SUM IT UP...

Americans are hard to scare. Of course, we are worried about the forces science has unlocked. We would not be intelligent human beings otherwise.

But this problem can be solved—as others have been—by American ingenuity and careful preparation—

NOW

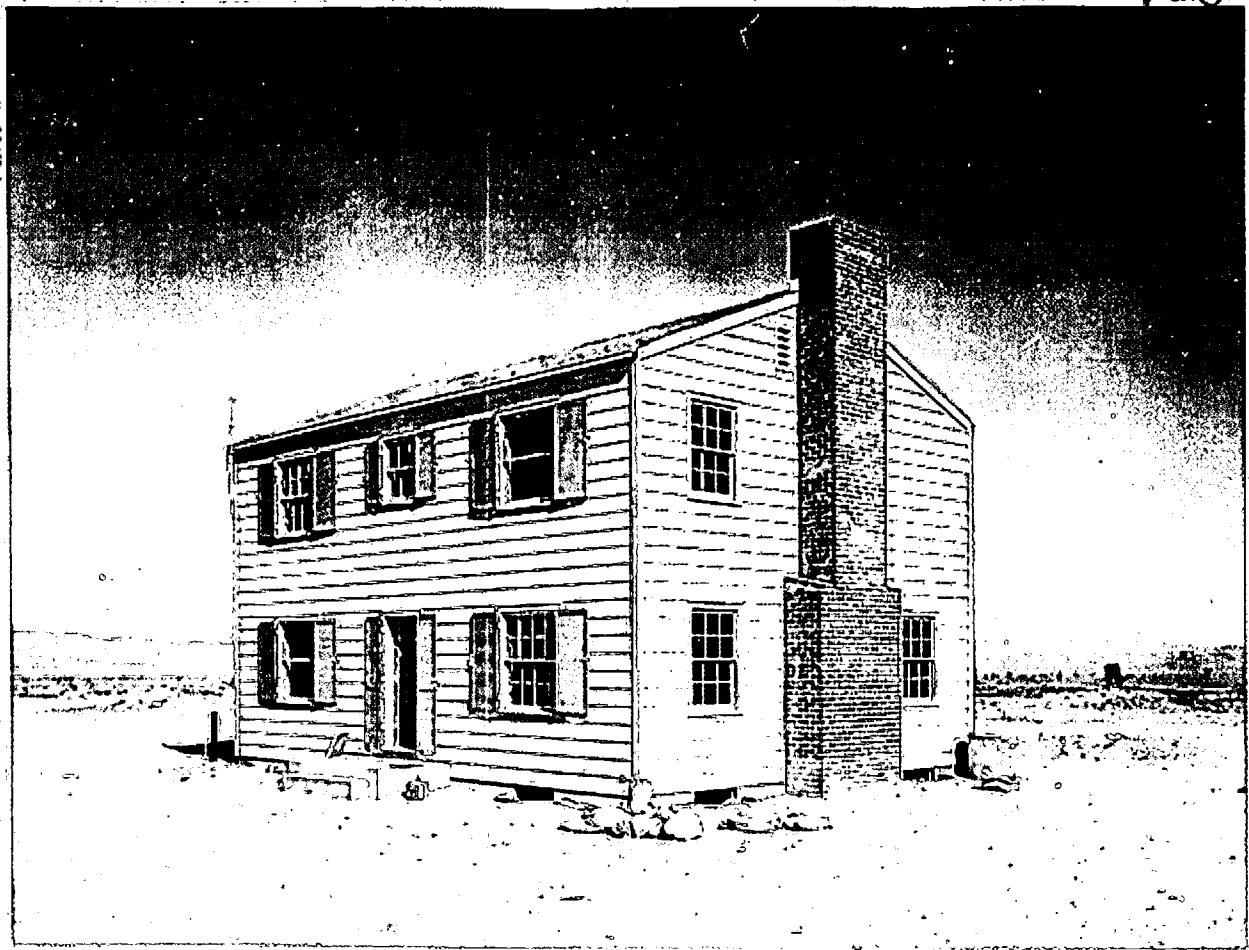
See your local Civil Defense office

TODAY

Let Civil Defense help you to help yourself and the Nation, to be prepared.

U.S. GOVERNMENT PRINTING OFFICE: 1964 O-347764

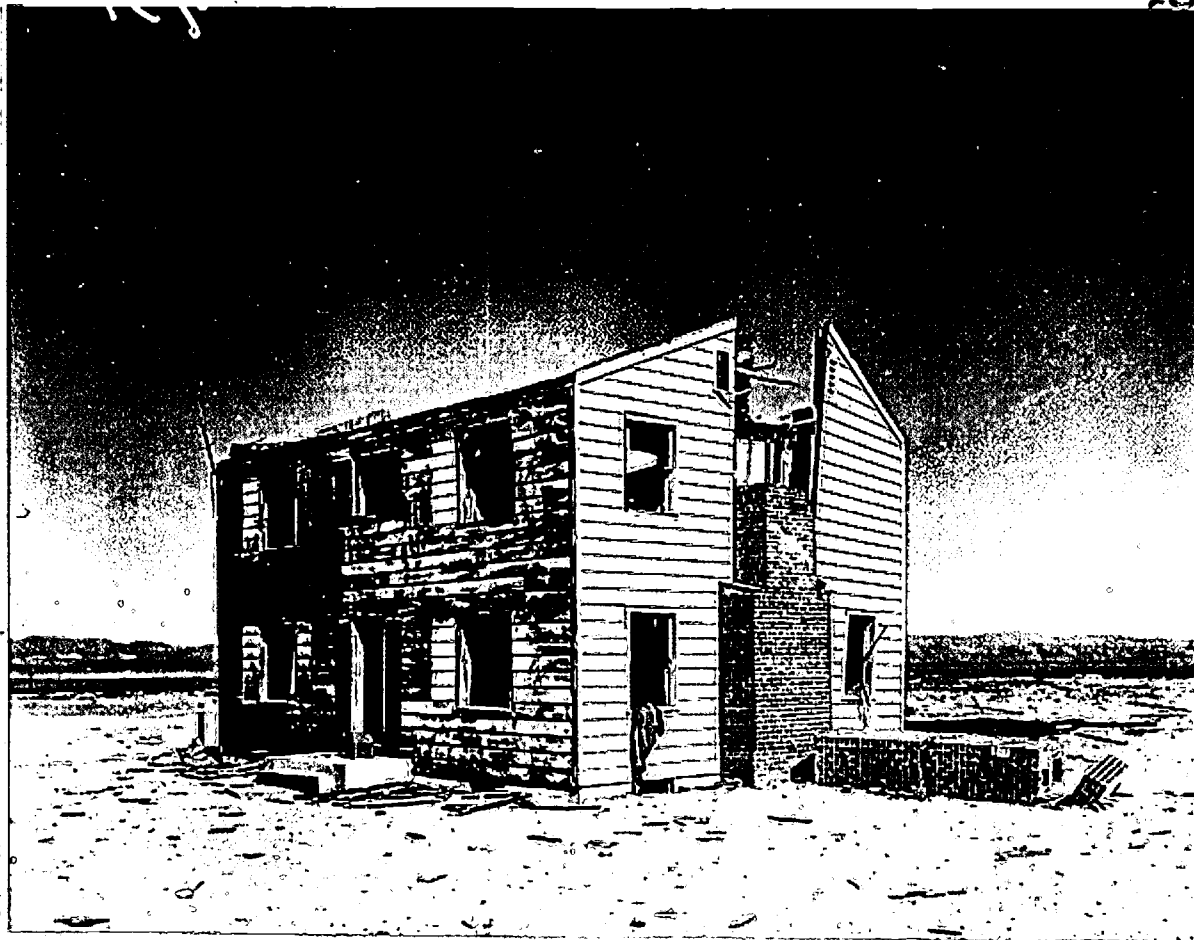
Document 1: Pamphlet entitled "Facts about Fallout", page 8.



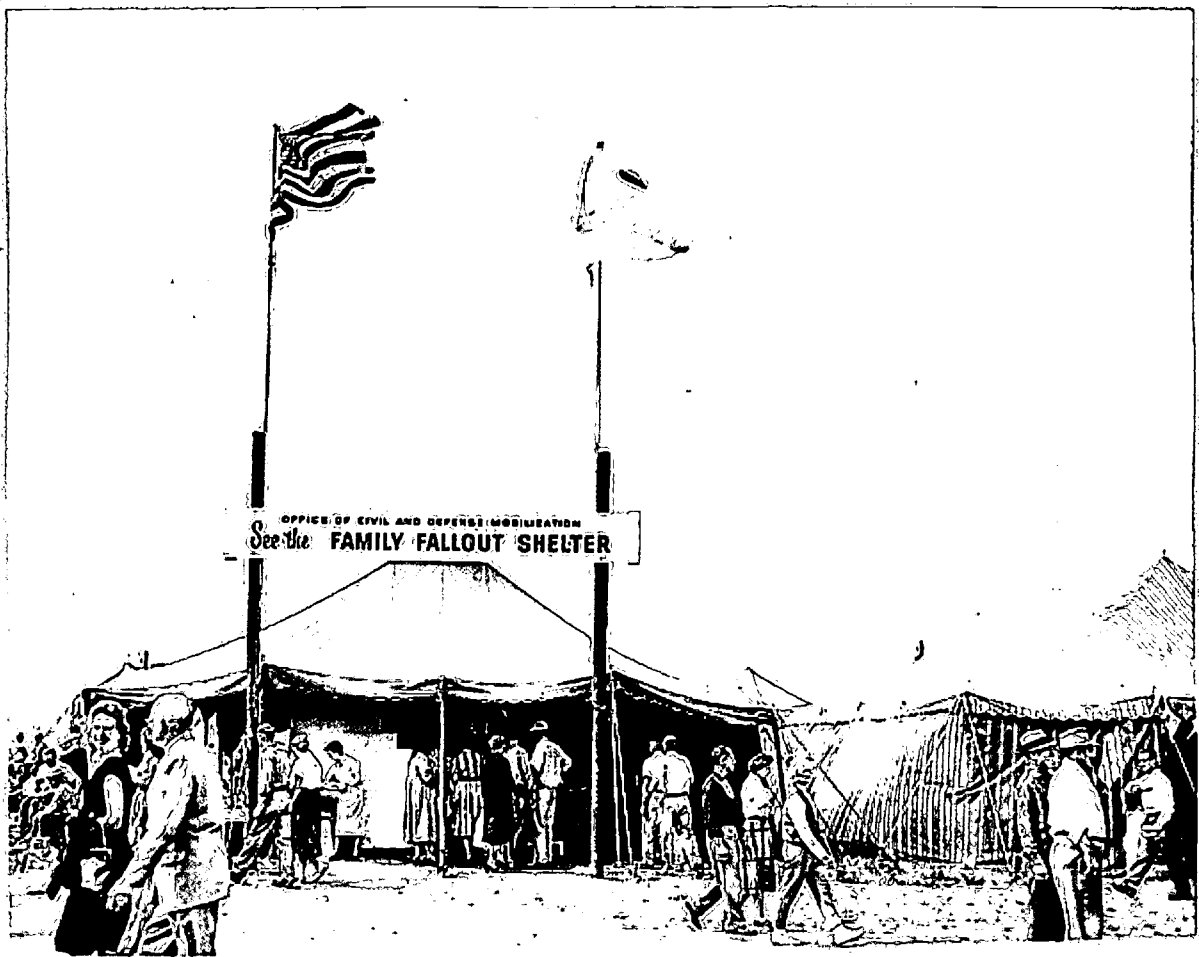
Document 2: Photograph [Operation Cue]: Two-story wood frame house at 5,500 feet (from blast site), May 5, 1955.



Document 3: Photograph [Operation Cue]: A few minutes after detonation the atomic blast in Operation Cue looked like this, May 5, 1955.



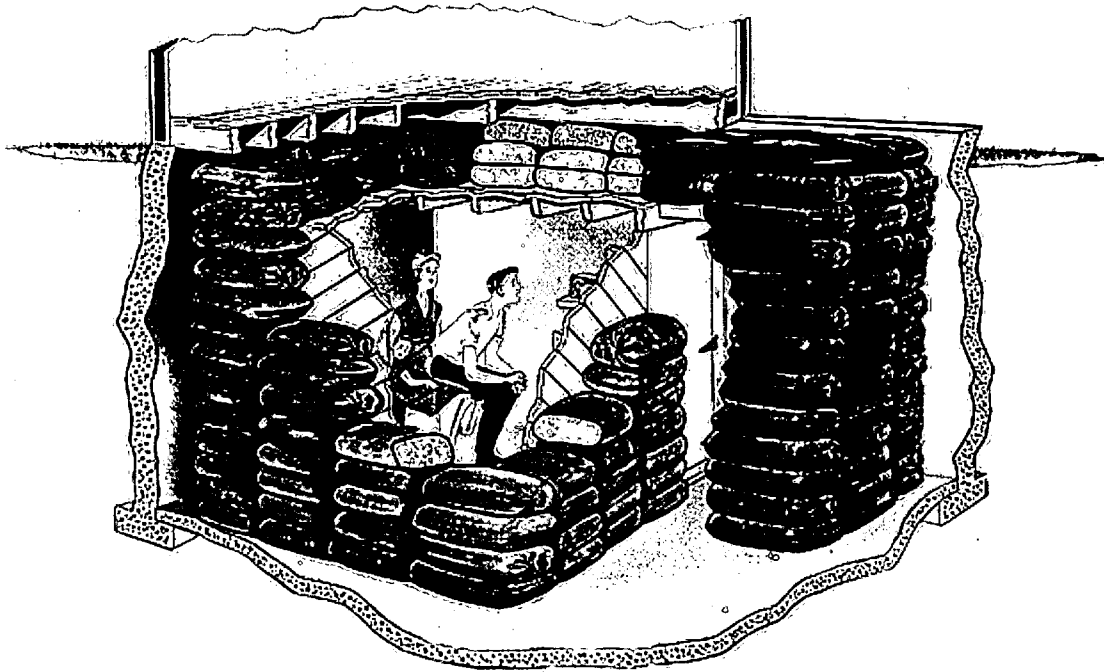
Document 4: Photograph [Operation Cue] - Two-story wood frame house at 5,500 feet after the blast, May 5, 1955.



Document 5: Photograph of the Office of Civil and Defense Mobilization exhibit at a local civil defense fair. ca. 1960.



Document 6: Photograph of a display of survival supplies for the well-stocked fallout shelter, ca.1961.

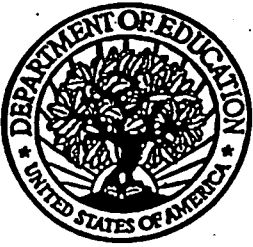


TEMPORARY BASEMENT FALLOUT SHELTER

Document 7: An artist's rendition of a temporary basement fallout shelter, ca.1957.



Document 8: Photograph of a basement family fallout shelter that includes a 14-day food supply that could be stored indefinitely, a battery-operated radio, auxiliary light sources, a two-week supply of water, and first aid, sanitary, and other miscellaneous supplies and equipment, ca.1957.



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