

# Christina School District Assignment Board

Student's First & Last Name \_\_\_\_\_ Student ID/Lunch # \_\_\_\_\_ School \_\_\_\_\_ Grade \_\_\_\_\_

Grade Level: 11th

Week of May 25<sup>th</sup>, 2020

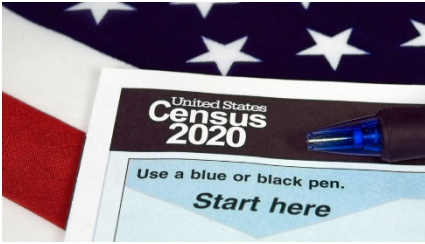
	No School	Day 1	Day 2	Day 3	Day 4
<b>ELA</b>		<p>This week we will explore the 2020 US Census and main ideas and themes. Read and respond in a paragraph to both of the prompts below.</p> <p>1. Can you think of any groups that are kept from being citizens or having the full rights of citizens in the United States today?</p> <p>2. Why do you think there are still restrictions given the laws protecting citizenship?</p>	<p>Read the article <b>"Pro/Con"</b>. As you read underline examples of people facing challenges with accessing citizenship or the rights of citizenship. Annotate questions, comments or connections you have to these challenges. Summarize the text and answer questions 1-4.</p>	<p>Read the article <b>"We are Still Here"</b>. As you read underline examples of people facing challenges with accessing citizenship or the rights of citizenship. Annotate questions, comments or connections you have to these challenges. Summarize the text and answer questions 1-4.</p>	<p><b>Writing</b> Which citizenship issues do you feel are most important to address right now? Cite evidence from the articles in your response.</p>
<b>Math (IM3)</b>		<p><i>Congruence of Triangles Revisited</i></p> <p>Answer "Which One Doesn't Belong?" and justify your choice. (attached) Review Concept Summary: Triangle Congruence Criteria. (attached)</p>	<p>Complete Triangle Congruence Worksheet 2 #1-7. (attached) Reference Concept Summary if needed.</p>	<p>Complete Triangle Congruence Worksheet 3 #1-2. (attached) Reference Concept Summary if needed.</p>	<p>Complete CC Standards Practice Week 8 Worksheet #1-3. (attached)</p>

# Christina School District Assignment Board

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		Complete Triangle Congruence Worksheet 1 #1-3. (attached)			
<b>Science</b>		<b>Chemistry Group Offers Seat at Periodic Table to 4 New Elements (part 1):</b> Read article. Highlight, underline and/or annotate for understanding.	<b>Chemistry Group Offers Seat at Periodic Table to 4 New Elements (part 2):</b> Reread article and/or notations as necessary. Then read the following claim: Element 116 holds more historical significance than the other elements recently added to the periodic table. What evidence from the article supports this claim? Explain why the evidence supports the claim.	<b>Four New Elements Added to Periodic Table Have Formal Names (part 1):</b> Read article. Highlight, underline and/or annotate for understanding.	<b>Four New Elements Added to Periodic Table Have Formal Names (part 2):</b> Reread article and/or notations as necessary. Then read the following claim: The public suggestions for names were not accepted because they did not abide by the IUPAC nomenclature standards. What relevant data or evidence from the article supports this claim? Justify why the data or evidence supports the claim.
<b>Social Studies</b>		Complete Activity 1 and Activity 2 from the document titled, "Remembering the Atomic Bomb"	Complete Activity 3 from the document titled, "Remembering the Atomic Bomb"	Complete Activity 4, Part 1 & Part 2 from the document titled, "Remembering the Atomic Bomb"	Complete Activity 5 & Activity 6 from the document titled, "Remembering the Atomic Bomb"

## PRO/CON: Should our next census ask about citizenship status?



### **PRO: The question allows the government to properly disburse needed funds and services**

Commerce Secretary Wilbur Ross, at the request of the Justice Department, has instructed the U.S. Census Bureau to include a question on the 2020 decennial census asking whether the respondent is a U.S. citizen.

Such a request should be relatively uncontroversial, since census takers have been asking that question on one survey or another since the very first census. But these days, even the uncontroversial is controversial.

Most of the pushback is coming from the left, especially politicians and rent-seeking groups that thrive on redistributing taxpayer dollars. But such a question could be very helpful for those who work in public policy — for example, in counting the uninsured.

The Census Bureau included a citizenship question through 1950, stopping in 1960, as it sought ways to increase response rates. But the question was included on what is called the "long form" census in 1970, which went to fewer households.

In 2005, the citizenship question was added to the American Community Survey, an annual survey of a very small percentage of households.

Because the Census Bureau's decennial census has not included a citizenship question for decades, analysts and elected officials do not know how many of the respondents are (1) citizens, (2) aliens in the U.S. legally, or (3) undocumented and in the U.S. illegally.

Thus, when the Census Bureau releases its annual survey of health coverage and the uninsured, it simply ignores how many of the uninsured are here illegally.

During health care reform debates in the past, some of us pointed out that perhaps 25 percent of the uninsured were undocumented aliens and so unlikely to be covered by health insurance reform efforts — and sure enough, "Obamacare" excluded illegals from receiving health insurance subsidies.

Even today, of the roughly 27.6 million (2016) uninsured, perhaps 8 million or so — a guesstimate — are illegals ineligible for taxpayer subsidies. Very few of them are going to spend their own money, especially given the high cost of Obamacare coverage. They will simply remain uninsured.

And yet those pushing for some type of big-government solution to the uninsured — including those who backed President Barack Obama's Affordable Care Act — use the larger uninsured number to make the problem look bigger than it is, or at least bigger than any likely legislative solution would address.

To be sure, the Census Bureau's annual American Community Survey does ask a citizenship question. But while more frequent, those surveys are limited samples, about 3.5 million out of roughly 126 million households. The sample numbers are then extrapolated for the country as a whole. But even then, the bureau doesn't include an estimate of the uninsured who are in the U.S. illegally.

The result is that estimating the number of uninsured who are illegal has mostly been a guessing game.

But the issue is not limited to the uninsured. The federal government funds a number of programs where taxpayer money supports illegal immigrants, either directly or indirectly. Knowing how many undocumented people are receiving those funds could help inform policy decisions.

Those opposing a citizenship question claim that the U.S. Constitution requires the government to count everyone who resides in the country, legally or not.

Ironically, these are mostly the same people who long ago abandoned the notion of a literal interpretation of the Constitution for what they call a "living Constitution," defined as "one that evolves, changes over time, and adapts to new circumstances, without being formally amended."

While a citizenship question might discourage some participation, the Census Bureau has increasingly used various methods, statistical and otherwise, to fill in the gaps.

Some form of a citizenship question has been around for two centuries. Stressing it once again would help take a little of the guesswork out of many of our public policy challenges.

Merrill Matthews is a resident scholar with the Institute for Policy Innovation. He holds a Ph.D. in the Humanities from the University of Texas.

### **CON: Such questions don't belong in a free country's census**

For the first time since the 1950 decennial census, the 2020 census will include a question on a respondent's citizenship status.

The Trump administration enunciated some worrying plans for the 2020 census when Commerce Secretary Wilbur Ross testified before the Senate in 2017 that he wanted census data to be "strategically reused" by other government departments and the private sector.

The inclusion of a citizenship question in the 2020 census and the willingness of Ross and Trump to "re-use" census data for other purposes, including informing the Department of Homeland Security and its Immigration and Customs Enforcement agents where pockets of non-citizens are located — right down to 9-digit ZIP code addresses — is worrying.

Federal law prohibits sharing census data with other government agencies. For those who believe census data abuse cannot happen, it should be noted that it has already occurred — and quite recently — in the United States.

In 2004, DHS requested 2000 census data on Americans of Arab descent, right down to the 9-digit ZIP code level, that is, individual street addresses.

By sifting through such census data, DHS was able to calculate where the Arab-Americans lived, according to individual ancestral homelands of Egypt, Jordan, Lebanon, Iraq, Syria, Palestine and Morocco, as well as "other Arab nation" or generic Arab descent.

Using 1940 census data, the federal government rounded up some 120,000 Japanese-American citizens for internment during World War II.

Given the jingoistic and xenophobic hateful rhetoric emanating from Trump, other high-ranking officials and Republicans in Congress, the interest of Trump's Census Bureau in collecting citizenship information can only have a malevolent intent.

The official reason given by the administration — that Attorney General Jeff Sessions requires citizenship data, so the Justice Department can adequately enforce the Voting Rights Act by determining who is eligible to vote — is laughable on its face.

Nothing in Sessions' shameful record in Alabama of opposing civil rights and voting rights suggests he has had some sort of "sudden awakening" and now wants to assist African-Americans and other minorities to exercise their constitutional franchise.

Nor does Donald Trump's repeated false statements claiming "millions" of non-citizens voted illegally in the 2016 election add any legitimacy to the inclusion of the citizenship question.

States and cities are right in fighting the Trump administration's unconstitutional citizenship question in federal court. At least 17 states have filed lawsuits against the citizenship question. Former Census Bureau directors, in both Republican and Democratic administrations, have cautioned against asking about citizenship.

It is amazing that many conservatives, who constantly argue for a strict interpretation of the U.S. Constitution, are willing to tamper with the framers' original intent regarding the census.

Article 1, Section 2 of the United States Constitution specifically states, an "Enumeration shall be made within three Years after the first Meeting of the Congress of the United States, and within every subsequent Term of Ten Years."

Enumeration, in this context, means a head count of the people living in the United States. The framers were not interested in citizenship status, but wanted a clean headcount of people.

The name Jacques Fauvet is not known to many Americans. However, in France, Fauvet was known for perpetually warning against the misuse of census data.

Fauvet, who oversaw French data protection from 1984 to 1999, pointed out that when the German Nazis took over France in 1940, one of the first acts of the Gestapo was to seize as many detailed census records as possible.

From these records, the Nazis were able to construct their lists of who would be arrested and deported to the concentration camps in the east. Enough said!

*A graduate of the University of Mississippi, Wayne Madsen is a progressive commentator whose articles have appeared in a wide range of American and European newspapers.*

### **Digging Deeper**

**Instructions:** Choose the answer below that best answers the question.

1. Complete the sentence.

The author of the PRO article is MOST concerned with \_\_\_\_.

- A. showing how the citizenship question affects health care
- B. explaining how the citizenship question can aid public policy
- C. contrasting the 10-year census and the long-form census
- D. exploring the effects of estimating statistics on the census

2. Read the sentence from the section "PRO: The question allows the government to properly disburse needed funds and services."

*Ironically, these are mostly the same people who long ago abandoned the notion of a literal interpretation of the Constitution for what they call a "living Constitution," defined as "one that evolves, changes over time, and adapts to new circumstances, without being formally amended."*

How is the author of the CON article MOST LIKELY to respond to this statement?

- A. It is equally ironic that this author defines a living Constitution as one that adapts to new circumstances over time.
- B. It is equally ironic that many conservatives are willing to change the founders' original intent of a simple headcount.
- C. It is not ironic at all because most people no longer believe in a working interpretation of a living Constitution.
- D. It is not ironic at all because enumeration is clearly exempted from interpretation by the language of the 1950 census change.

3. Read the paragraph from the PRO article.

*To be sure, the Census Bureau's annual American Community Survey does ask a citizenship question. But while more frequent, those surveys are limited samples, about 3.5 million out of roughly 126 million households. The sample numbers are then extrapolated for the country as a whole. But even then, the bureau doesn't include an estimate of the uninsured who are in the U.S. illegally.*

How does this paragraph contribute to the author's argument?

- A. It uses an estimate of the samples currently taken by the government to explore the use of a citizenship question in limited scope.
- B. It uses a comparison to show that many uninsured or illegal immigrants do not respond to the current census truthfully.
- C. It uses a statistic about the number of households that respond to the census, suggesting that number would improve.
- D. It uses a precedent to show that the citizenship question is already being asked, but it is ineffective in its current form.

4. Which detail is LEAST useful for supporting the claim that a citizenship question on the census opens the door for the purposeful misuse of that information?

- A. The Trump administration enunciated some worrying plans for the 2020 census when Commerce Secretary Wilbur Ross testified before the Senate in 2017 that he wanted census data to be "strategically reused" by other government departments and the private sector.
- B. Using 1940 census data, the federal government rounded up some 120,000 Japanese-American citizens for internment during World War II.
- C. The official reason given by the administration — that Attorney General Jeff Sessions requires citizenship data, so the Justice Department can adequately enforce the Voting Rights Act by determining who is eligible to vote — is laughable on its face.
- D. From these records, the Nazis were able to construct their lists of who would be arrested and deported to the concentration camps in the east.

## **“We are still here”: Native Americans fight to be counted in U.S. census**



It was the largest rollback of federal lands protections in U.S. history.

When President Donald Trump signed a 2017 executive order that reduced the size of Bears Ears and Grand Staircase-Escalante national monuments by nearly 2 million acres, he said the move was supported in the state of Utah and by the local county where the monuments were located.

On the ground, however, that statement didn't add up.

San Juan County, Utah, is majority Native American and includes parts of the Navajo Nation's and Ute Mountain Ute Tribe's reservations. Both tribes officially support the protection of Bears Ears. Through gerrymandering, the majority-native county maintained a majority-white county commission, until last year.

The Navajo Nation brought a lawsuit against San Juan, accusing the county of racial gerrymandering under the Voting Rights Act of 1965. The tribe won. The county was forced to redraw its election maps and in the fall of 2018, for the first time ever, elected a majority Native American commission. The county commission now, officially, supports the protection of Bears Ears.

Today, the Navajo Nation is still fighting for political representation, but with a different tool: the U.S. census, which will take place this year. Without census data that proved the county's election maps reduced the voting power of Native American residents, the tribe would not have been able to win its suit. Today, census data also determines tribal citizens' representation in Congress, state and county elections, and even the Navajo Nation's own tribal council.

According to the U.S. Constitution, all residents living in the United States are to be counted every 10 years. The final census count determines seats in Congress, election maps for local and state representatives and the allocation of over \$900 billion in annual federal spending for the next decade, including \$5.6 billion for tribal programs. Despite the sprawling impact of the U.S. census, Native Americans have historically been undercounted.

"It impacts everything," Charlaine Tso said. Tso represents District 9 on the Navajo Nation's tribal council, the section of the reservation in San Juan County. "[The census] is a domino effect. It impacts education, roads and maintenance, elder care, funding for everything on our reservation."

In her role as tribal councilor, Tso serves on the Navajo Nation's Complete Count Commission for the 2020 census. Despite being one of the largest tribes in the United States, Navajos were significantly undercounted in the 2010 census, which ended up lowering federal funding levels for the tribe, Tso said. "We know for sure that it was nowhere near accurate. That margin, imagine what difference it makes in federal funding," she said.

This problem is not unique to the Navajo Nation. An estimated 1 in 7 Native Americans living on tribal lands were not counted in the last U.S. census, according to the Census Bureau's own audit. That made Native Americans, at 2 percent of the U.S. population, the group most likely to be missed.

An estimated 1 in 3 Native Americans live in what the Census Bureau considers "hard-to-count" rural census tracts, representing 80 percent of all tribal lands. In many states with high Native American populations, including New Mexico, Arizona, Alaska and South Dakota, more than half of the Native American residents live in such "hard-to-count" areas.

Other factors also disproportionately affect Native Americans, including poverty, housing insecurity, education and even age, as 42 percent of Native Americans are under the age of 24.

Desi Rodrigues-Lonebear, a member of the Northern Cheyenne tribe and a demographer who served on the Census Bureau's national advisory committee from 2013 to 2019, says another big factor is mistrust.

"It's a hard sale," she said. "You're trying to convince people, your own relatives even, who for their whole lives wanted nothing else but to be left alone by the feds. And you're coming to them and saying, 'But we really need you to fill out this form. We really need you to count.'"

Many tribal leaders and advocates are worried the undercount could be even worse in 2020. For the first time ever, the census will be conducted mostly online. The move presents a unique challenge in Indian Country, where more than a third of Native Americans living on tribal land lack access to broadband, making it the least-connected part of the United States.

"It [the census] moving online almost ensures an undercount of Native Americans of historic proportions," said Natalie Landreth, a Chickasaw Nation member and an attorney for the Native American Rights Foundation (NARF).

Raising further alarm bells for Landreth, the Census Bureau canceled two field tests planned for Indian Country that would have been used to identify problems with messaging and on-the-ground rollout.

Funding for translation into Native American languages also narrowed this year. In the past, the bureau has funded translation services into multiple indigenous languages. But this year it is only funding Navajo, according to NARF. "There are census tracts in Alaska where 75 percent of the households don't speak English at home," says Landreth.

NARF has connected tribes in seven states to private dollars for language translation services, but Landreth worries it's not enough. "We have to do gap filling, which is a risky measure," she said. "We're only going to be able to plug the dam in certain locations."

According to Jessica Imotichey, a Chickasaw Nation member and a coordinator for the L.A. region of the Census Bureau, the agency is working to ensure Native Americans are counted in 2020. "[The census] is about representation, not just politically but also visibility," Imotichey said. "Recognizing Native Americans and Alaskan Natives, that we are still here, that we still remain."

In remote Alaska, the census will start three months early in January, where workers will travel to Alaskan native villages to count residents in person. Although only 0.02 percent of the U.S. population will be counted through this "in person numeration," the majority of them will be indigenous.

Still, nationally, funding for census outreach campaigns varies significantly by location. While some states like California are planning to spend \$187 million on census outreach, 24 states have budgeted nothing. Three of those states, Oklahoma, North Dakota and South Dakota, have significant Native American populations.

New Mexico, along with Alaska, was the most undercounted state in 2010, with some counties returning less than 50 percent of census surveys. According to NM Counts 2020, just a 1 percent undercount in 2020 could result in the loss of \$750 million in federal aid to the state. In response, the state has budgeted \$3.5 million for outreach efforts.

Tso sits on a Complete Count Commission for the Navajo Nation, an area larger than West Virginia. The commission, one of the many regional committees working within New Mexico, has already met with U.S. senators and regional Census Bureau representatives to discuss the unique challenges of counting their citizens. The tribal government is looking to hire a sizable outreach team this spring, with an emphasis on hiring fluent Navajo speakers, according to Tso.

"We have to do everything possible to count every Navajo," she says.

### **Digging Deeper**

**Instructions:** Choose the answer below that best answers the question.

Read the following statement.

1. Read the following selection from the article.

*"[The census] is a domino effect. It impacts education, roads and maintenance, elder care, funding for everything on our reservation."*

Which sentence from the article BEST supports this idea?

- A. According to the U.S. Constitution, all residents living in the United States are to be counted every 10 years.
- B. The final census count determines seats in Congress, election maps for local and state representatives and the allocation of over \$900 billion in annual federal spending for the next decade, including \$5.6 billion for tribal programs.
- C. In her role as tribal councilor, Tso serves on the Navajo Nation's Complete Count Commission for the 2020 census.
- D. The commission, one of the many regional committees working within New Mexico, has already met with U.S. senators and regional Census Bureau representatives to discuss the unique challenges of counting their citizens.

2. Read the following selection from the article.

*New Mexico, along with Alaska, was the most undercounted state in 2010, with some counties returning less than 50 percent of census surveys. According to NM Counts 2020, just a 1 percent undercount in 2020 could result in the loss of \$750 million in federal aid to the state. In response, the state has budgeted \$3.5 million for outreach efforts.*

Which of the following conclusions can be drawn from the selection above?

- A. The state budget is not affected much when the census count is off by only 1 percent.
- B. Many estimate that people in New Mexico and Alaska will undercount the Indigenous Americans by half.
- C. Even failing to count Indigenous Americans by a small amount can have a huge effect on federal aid.
- D. New Mexico will spend more on outreach efforts for the census than it will receive in federal aid.

3. Which of the following statements accurately represents the relationship between the article's CENTRAL ideas?

- A. Census data helped Native Americans in San Juan County, Utah, to elect a majority-native commission; the Native American Rights Foundation is using private funding for census language translation services.
- B. Census data helped Native Americans in San Juan County, Utah, to elect a majority-native commission; Indigenous Americans have been undercounted in the census because of a variety of factors.
- C. Groups are working to get political representation for Native Americans through the census; the Native American Rights Foundation is using private funding for census language translation services.
- D. Groups are working to get political representation for Native Americans through the census; Indigenous Americans have been undercounted in the census because of a variety of factors.

4. Read the following two details from the article.

*"It [the census] moving online almost ensures an undercount of Native Americans of historic proportions," Natalie Landreth, a Chickasaw Nation member and an attorney for the Native American Rights Foundation (NARF), said.*

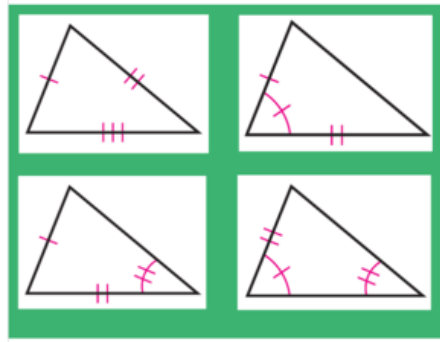
*Funding for translation into Native American languages also narrowed this year. In the past, the bureau has funded translation services into multiple indigenous languages. But this year it is only funding Navajo, according to NARF. "There are census tracts in Alaska where 75 percent of the households don't speak English at home," says Landreth.*

Select the answer choice that BEST explains how these details develop a CENTRAL idea of the article.

- A. They both explain why the 2020 U.S. census could be worse than other years for Native Americans.
- B. They both explain why every U.S. census has failed to count Native Americans accurately.
- C. They both contribute to the idea that undercounting Native Americans will lead to less state funding.
- D. They both contribute to the idea that groups are fighting to get Native Americans counted in the next census.

Congruence of Triangles Revisited

Which One Doesn't Belong? Why?



CONCEPT SUMMARY Triangle Congruence Criteria



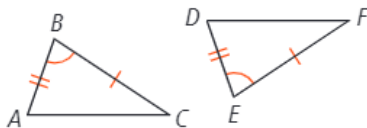
Concept  
Summary



Assess

THEOREM 4-3 Side-Angle-Side (SAS)

If...

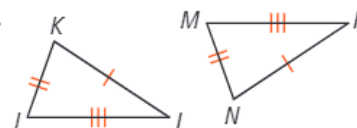


$\overline{AB} \cong \overline{DE}$ ,  $\overline{BC} \cong \overline{EF}$ , and  $\angle B \cong \angle E$

Then...  $\triangle ABC \cong \triangle DEF$

THEOREM 4-5 Side-Side-Side (SSS)

If...

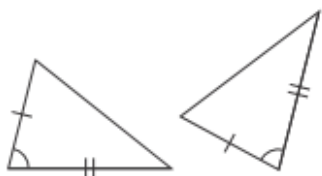


$\overline{JK} \cong \overline{MN}$ ,  $\overline{JL} \cong \overline{MP}$ , and  $\overline{KL} \cong \overline{NP}$

Then...  $\triangle KJL \cong \triangle MNP$

# Triangle Congruence Worksheet 1

1. Are the triangles congruent? Explain.



a. The two triangles are congruent by the \_\_\_\_\_ Triangle Congruence Theorem because two of their corresponding sides and the included angles are congruent.



b. The two triangles are congruent by the \_\_\_\_\_ Triangle Congruence Theorem because all three of their corresponding sides are congruent.

2. Kiyo says that the triangles are congruent by the SAS Triangle Congruence Theorem. What is his error?

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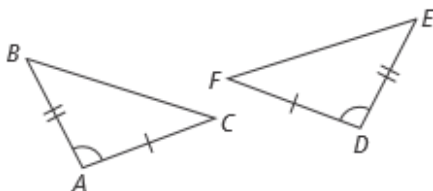
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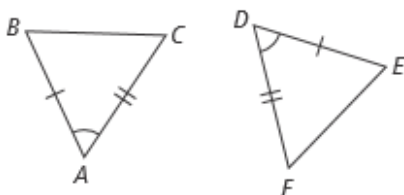


3. Is  $\triangle ABC \cong \triangle DEF$ ? Explain.

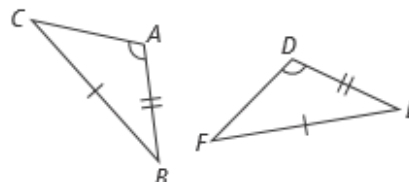


## Example

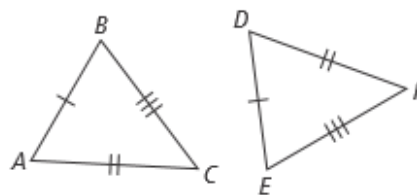
The triangles are congruent by SAS.



b. The triangles \_\_\_\_\_ congruent by \_\_\_\_\_.



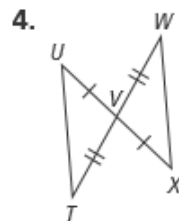
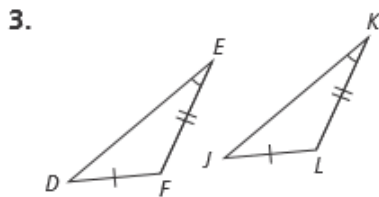
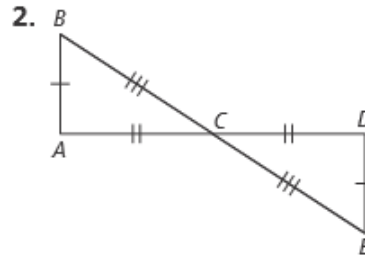
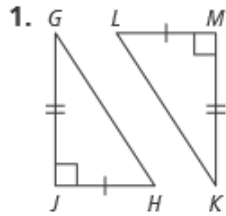
a. The triangles \_\_\_\_\_ congruent by SAS.



c. The triangles \_\_\_\_\_ congruent by \_\_\_\_\_.

# Triangle Congruence Worksheet 2

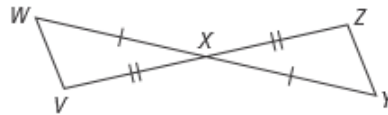
Label each pair of triangles *congruent by SAS*, *congruent by SSS*, or *not enough information*.



5. Complete the proof.

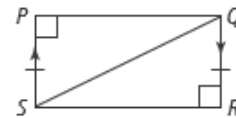
**Given:**  $WX = XY$ ,  $VX = XZ$

**Prove:**  $\angle WVX \cong \angle YZX$

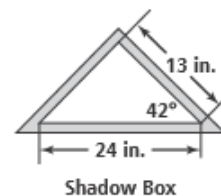


Statements	Reasons
1. $WX = XY$ , $VX = XZ$	1.
2.	2. Vertical Angles Theorem
3. $\triangle VXW \cong \triangle YXZ$	3.
4.	4.

6. **Understand** Is there sufficient information to prove  $\triangle SPQ \cong \triangle QRS$  by SSS? Explain.



7. **Apply** Will the folded flag fit in the shadow box shown? Explain.

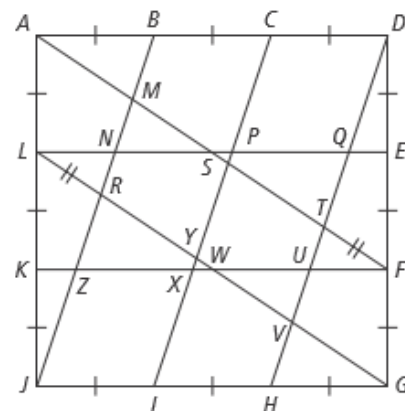


# Triangle Congruence Worksheet 3

Complete each proof using the given information and figure  $ADGJ$ .

**Given:** Rectangle  $ADGJ$  is a square.

$$\begin{array}{ll} \overline{AD} \parallel \overline{LE} \parallel \overline{KF} \parallel \overline{JG} & \overline{LE} \perp \overline{DG} \\ \overline{AF} \parallel \overline{LG} & \overline{FA} \cong \overline{LG} \\ \overline{BJ} \parallel \overline{CI} \parallel \overline{DH} & \overline{BJ} \cong \overline{CI} \cong \overline{DH} \\ \overline{AJ} \perp \overline{KF} & \overline{LR} \cong \overline{FT} \end{array}$$



1. Prove:  $\triangle AKF \cong \triangle GEL$

Statements	Reasons
$\overline{LA} \cong \overline{KL} \cong \overline{EF} \cong \overline{FG}$	
$LA + KL = AK, EF + FG = GE$	
$\overline{AK} \cong \overline{GE}$	
$\overline{LE} \perp \overline{DG}, \overline{AJ} \perp \overline{KF}, \overline{LE} \parallel \overline{KF}$	
$\overline{LE} \perp \overline{AJ}, \overline{DG} \perp \overline{KF}$	
$LEFK$ is a rectangle.	Definition of a rectangle
$\overline{LE} \cong \overline{FK}$	Opposite sides of a rectangle are $\cong$ .
$m\angle AKF = 90^\circ, m\angle GEL = 90^\circ$	
	All right angles are congruent.
$\triangle AKF \cong \triangle GEL$	

2. Prove:  $\triangle JRG \cong \triangle DTA$

Statements	Reasons
$\overline{LR} \cong \overline{FT}, \overline{FA} \cong \overline{LG}$	Given
$LR + RG = LG, FT + TA = FA$	
	Substitution Property
	Subtraction Property of Equality
$\overline{AD} \parallel \overline{KF}, \overline{AF} \parallel \overline{LG}, \overline{JG} \parallel \overline{KF}$	
$\angle DAT \cong \angle AFK, \angle AFK \cong \angle FWG$	
$\angle FWG \cong \angle RGJ$	
	Transitive Property of Congruence
$ADGJ$ is a square.	
	Definition of a square
$\triangle JRG \cong \triangle DTA$	

## CC Standards Practice Week 8

### Selected Response

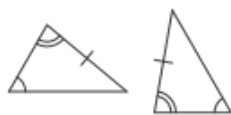
1. If  $\triangle LMN \cong \triangle PQR$ , which of the following statements must be true?

- (A)  $\overline{NM} \cong \overline{RQ}$   
(B)  $\overline{LN} \cong \overline{PQ}$   
(C)  $\overline{LN} \cong \overline{QR}$   
(D)  $\overline{MN} \cong \overline{PQ}$

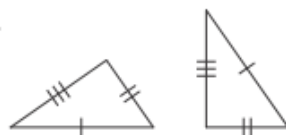
### Constructed Response

2. For each pair of triangles, state which theorem can be used to show that the triangles are congruent.

a.

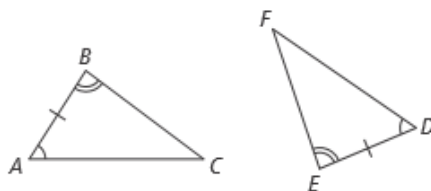


b.



### Extended Response

3. a. Which theorem can be used to show that  $\triangle ABC \cong \triangle BEF$ ?



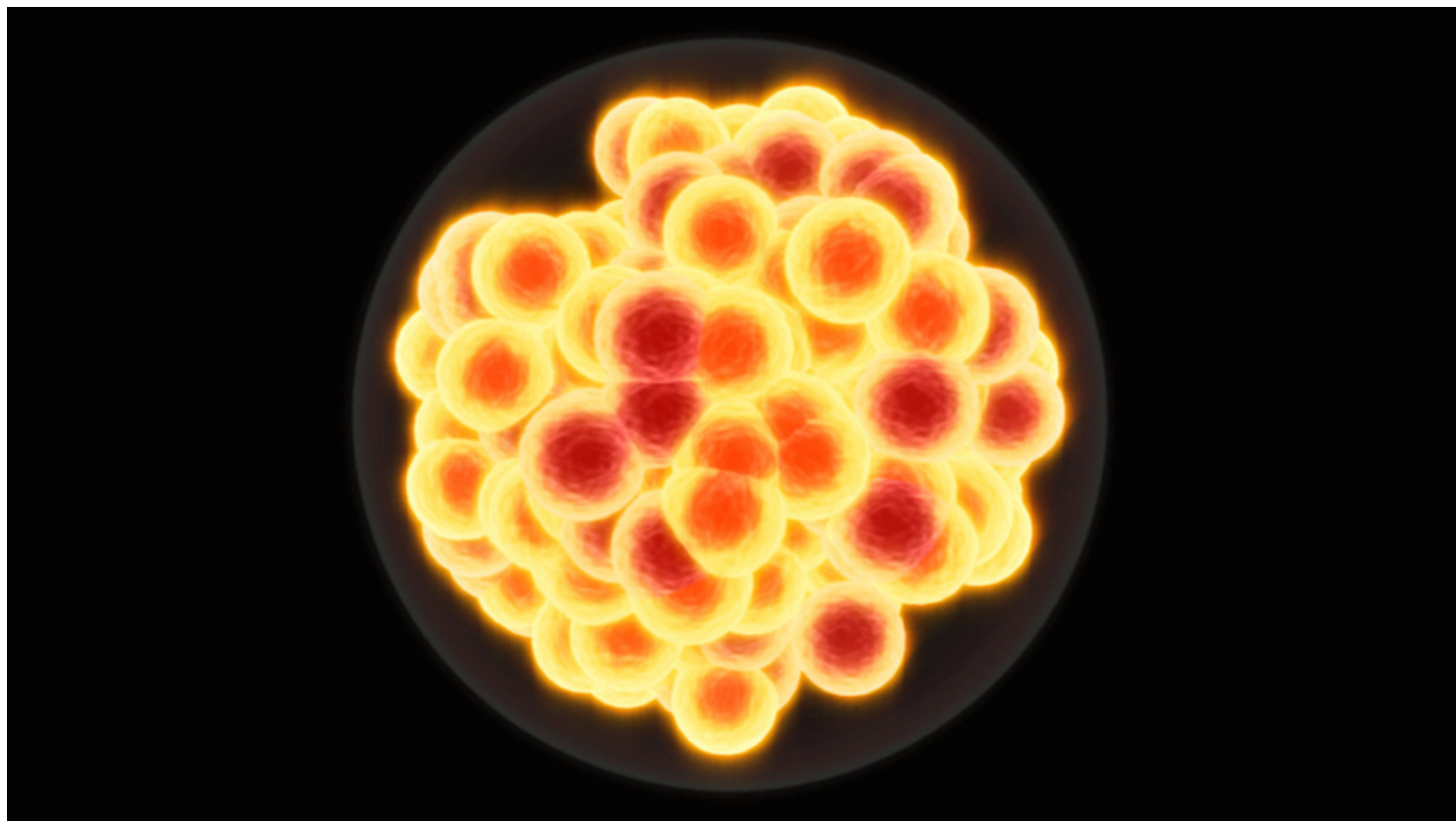
- b. Verify the congruence by describing a composition of rigid motions to map  $\triangle ABC$  to  $\triangle DEF$ .

# Chemistry group offers seat at periodic table to 4 new elements

By Los Angeles Times, adapted by Newsela staff on 01.13.16

Word Count **796**

Level **1110L**



An illustration of the newly created element 117. Kwei-Yu Chu / Lawrence Livermore National Laboratory

The periodic table is getting a little bit longer, thanks to the addition of four super-heavy elements.

The discoveries of elements 113, 115, 117 and 118 were confirmed recently by an international scientific group called the International Union of Pure and Applied Chemistry. The group vets the man-made elements seeking a permanent spot on the periodic table, a chart listing all the elements that hangs in science classrooms around the world.

Elements, which cannot be separated into smaller substances, make up all matter. Atoms are the building blocks that make up elements. At the center of each atom is a nucleus composed of small particles called protons and neutrons. Nuclei is the plural of nucleus.

The new elements are known as super-heavy elements because the nuclei of their atoms are so enormous. Element 118, for example, is the heaviest element to date, with 118 protons alongside 176 neutrons.

## **Super Heavy, Highly Unstable**

Most elements are found in nature. However, these huge, super-heavy elements are not routinely found in nature, and it can take years to make them in specialized laboratories.

“Probably the only other place where they might exist in a short period of time could be a supernova, where you have so much energy and so many particles that are really heavily concentrated,” said Dawn Shaughnessy, the principal investigator for the Heavy Element Group at Lawrence Livermore National Laboratory. The group had a hand in three of the discoveries.

Super-heavy elements are also highly unstable, existing for just a fraction of a second before they begin to decay, or break down.

Scientists never observe unstable elements directly. Rather, they know they briefly existed because they are able to measure their decay products.

### **A Smashing Success**

The heaviest known elements are made by smashing two particles together and hoping they will stick. It's a probability game with extremely long odds.

Scientists first create a target out of a carefully chosen atom with a particular number of protons and neutrons — a process that can take months. Then they purify it and bombard it with another specialized atom that they think has the best chance of recombining with the target.

“It's really hard to smash two things together and get them to stick,” Shaughnessy said. “There is so much positive charge — they want to repel each other.”

It takes several months to try this smashing experiment roughly 10 quintillion times (10 followed by 18 zeros). If just one of those attempts works, the experiment is considered a success.

“And we're not always successful,” Shaughnessy said. At most, it will work about three times in 10 quintillion tries, she said.

### **Tracking Elements Through Decay**

There are only a few laboratories around the world equipped to do this work. The experiments generate so much data that supercomputers are required to sift through it all and search for the telltale signs of a successful mash-up.

Elements 115, 117 and 118 were created in Russia at the Joint Institute for Nuclear Research. Scientists from Lawrence Livermore worked on all three discoveries, and the association that created element 117 also included researchers from a laboratory in Tennessee and the University of Nevada, Las Vegas.

The international chemistry group credited a Japanese group with the discovery of element 113. Led by Kosuke Morita of RIKEN, they are the first Asian scientists to find a new element.

Morita and his team spent several years searching for proof of element 113. During that time, whenever Morita visited a Japanese shrine, he gave an offering of 113 yen.

“It's not really a question of whether I believed it or not,” Morita told Asian Scientist Magazine. “The reason I did it is that I wanted to know that I had done everything humanly possible to get credit for the discovery of the element.”

## Now For Their Names

Until now, these elements have been known by the generic Latin names ununtrium, ununpentium, ununseptium and ununoctium. Their confirmation paves the way for them to get permanent names. Traditionally, that honor falls to the researchers who first found them.

The team from Lawrence Livermore and their Russian teammates had previously named element 116 Livermorium in honor of the Northern California lab. No word on what 115, 117 and 118 might be called.

With this announcement, 26 elements have been added to the periodic table since 1940. But Shaughnessy said her team isn't done.

The scientists will continue trying to make heavier elements until they hit a wall where there are just so many protons that they won't stick together.

"These super-heavy elements help us understand how the nucleus functions and redefines our ideas of matter and how it behaves," she said. "We're really studying the physics of what the extreme limits of matter might be."

# Four new elements added to periodic table have formal names

By Ben Guarino, Washington Post on 12.07.16

Word Count **507**

Level **MAX**



Kosuke Morita, researcher of Riken (Institute of Physical and Chemical Research) who led a group discovered element 113, points to a periodic table of the elements during a press conference at the institution in Wako, Japan, June 9, 2016. AP Photo/Eugene Hoshiko

Oh, hello, oganesson. The International Union of Pure and Applied Chemistry, the century-old organization charged with maintaining the periodic table, finally announced it had approved the names of four new elements. These monikers, attached to new heavy elements, were the result of an almost year-long process.

In December 2015, IUPAC made the first of several broadcasts: Four elements, numbered 113, 115, 117 and 118, met the criteria for inclusion in the periodic table. The seventh, bottom row of the periodic table was complete. In June, IUPAC announced the tentative names. And on Nov. 28, after a five-month waiting period during which IUPAC accepted public comments, the organization released an updated periodic table. The June names had passed muster, and are set to be ratified at the organization's meeting in July 2017.

To be clear, the general public never had a shot at naming the elements directly, sparing everyone the whimsy of Elementally McElementalface-ium. (And, fitting as a literal heavy metal tribute to

Motörhead musician Lemmy Kilmister would be, lemmium's Change.org petition did not pan out.)

Still, a few people tried to sway IUPAC. "Overall, it was a real pleasure to realize that so many people are interested in the naming of the new elements, including high school students, making essays about possible names and telling how proud they were to have been able to participate in the discussions," Jan Reedijk, president of IUPAC's Inorganic Chemistry Division, said in a statement Wednesday. "For now, we can all cherish our periodic table completed down to the seventh row."

From the official IUPAC announcement, the elements are:

Nihonium and symbol Nh, for the element 113;

Moscovium and symbol Mc, for the element 115;

Tennessine and symbol Ts, for the element 117; and

Oganesson and symbol Og, for the element 118.

In keeping with IUPAC standards, the scientists who discovered the elements proposed the accepted names. There are some ground rules: the names must refer to a scientist, mythology, substance, elemental property or place. Three of the names - tennessine (Tennessee), nihonium (Japan) and moscovium (Moscow) - reflect where the scientists' institutions were located, as The Washington Post reported in June. oganesson is in honor of Yuri Oganessian, a nuclear physics professor at the Joint Institute for Nuclear Research.

Nihonium was the first element to be given a name with Japanese origin. "The periodic table is a great legacy in chemistry. I'm filled with deep emotion that there is an element with a Japanese name," Kyushu University chemist Kosuke Morita, who led the discovery of nihonium, said in a conference on Thursday according to the Japan Times.

With large numbers of protons in their nuclei - nihonium, as its atomic number indicates, has 113 protons - the elements are considered superheavy and unstable. They exist only in laboratories for a few fractions of a second. Nihonium was first synthesized in 2004, by bashing zinc ions with the element bismuth. It took years of work for the Japanese researchers to confirm its existence, recreating the element in 2005 and again in 2012.

## Remembering the Atomic Bomb

Benchmark Standard	History 3a: Students will compare competing historical narratives, by contrasting different historians' choice of questions, use and choice of sources, perspectives, beliefs, and points of view, in order to demonstrate how these factors contribute to different interpretations.
Grade Band	11-12
Vocabulary	Point of view

*~This is a Stanford History Education Group (SHEG) lesson, modified by CSD for use at home~*

**ACTIVITY 1:** Complete the following questions on a separate sheet of paper.

1. Write down everything you know about the dropping of the atomic bomb at the end of WWII.
2. How do you think we should remember the dropping of the atomic bomb?

Today you are going to choose an image that will go on a United Nations website commemorating the dropping of the atomic bomb.

**ACTIVITY 2:** For your background knowledge, read the following articles on The Manhattan Project and the Bataan Death March

**The Manhattan Project** – from: <https://www.history.com/topics/world-war-ii/the-manhattan-project>

The Manhattan Project was the code name for the American-led effort to develop a functional atomic weapon during World War II. The controversial creation and eventual use of the atomic bomb engaged some of the world's leading scientific minds, as well as the U.S. military—and most of the work was done in Los Alamos, New Mexico, not the borough of New York City for which it was originally named. The Manhattan Project was started in response to fears that German scientists had been working on a weapon using nuclear technology since the 1930s—and that Adolf Hitler was prepared to use it.

### America Declares War

The agencies leading up to the Manhattan Project were first formed in 1939 by President Franklin D. Roosevelt, after U.S. intelligence operatives reported that scientists working for Adolf Hitler were already working on a nuclear weapon.

At first, Roosevelt set up the Advisory Committee on Uranium, a team of scientists and military officials tasked with researching uranium's potential role as a weapon. Based on the committee's findings, the U.S. government started funding research by Enrico Fermi and Leo Szilard at Columbia University, which was focused on radioactive isotope separation (also known as uranium enrichment) and nuclear chain reactions.

The Advisory Committee on Uranium's name was changed in 1940 to the National Defense Research Committee, before finally being renamed the Office of Scientific Research and Development (OSRD) in 1941 and adding Fermi to its list of members.

That same year, following the Japanese attack on Pearl Harbor, President Roosevelt declared that the U.S. would enter World War II and align with Great Britain, France and Russia to fight against the Germans in Europe and the Japanese in the Pacific theater.

The Army Corps of Engineers joined the OSRD in 1942 with President Roosevelt's approval, and the project officially morphed into a military initiative, with scientists serving in a supporting role.

### The Manhattan Project Begins

The OSRD formed the Manhattan Engineer District in 1942, and based it in the New York City borough of the same name. U.S. Army Colonel Leslie R. Groves was appointed to lead the project.

Fermi and Szilard were still engaged in research on nuclear chain reactions, the process by which atoms separate and interact, now at the University of Chicago, and successfully enriching uranium to produce uranium-235.

Meanwhile, scientists like Glenn Seaborg were producing microscopic samples of pure plutonium, and Canadian government and military officials were working on nuclear research at several sites in Canada.

On December 28, 1942, President Roosevelt authorized the formation of the Manhattan Project to combine these various research efforts with the goal of weaponizing nuclear energy. Facilities were set up in remote locations in New Mexico, Tennessee and Washington, as well as sites in Canada, for this research and related atomic tests to be performed.

### Robert Oppenheimer and Project Y

Theoretical physicist J. Robert Oppenheimer was already working on the concept of nuclear fission (along with Edward Teller and others) when he was named director of the Los Alamos Laboratory in northern New Mexico in 1943.

Los Alamos Laboratory—the creation of which was known as Project Y—was formally established on January 1, 1943. The complex is where the first Manhattan Project bombs were built and tested.

On July 16, 1945, in a remote desert location near Alamogordo, New Mexico, the first atomic bomb was successfully detonated—the Trinity Test—creating an enormous mushroom cloud some 40,000 feet high and ushering in the Atomic Age.

Scientists working under Oppenheimer had developed two distinct types of bombs: a uranium-based design called “the Little Boy” and a plutonium-based weapon called “the Fat Man.” With both designs in the works at Los Alamos, they became an important part of U.S. strategy aimed at bringing an end to World War II.

### **The Potsdam Conference**

With the Germans sustaining heavy losses in Europe and nearing surrender, the consensus among U.S. military leaders in 1945 was that the Japanese would fight to the bitter end and force a full-scale invasion of the island nation, resulting in significant casualties on both sides.

On July 26, 1945, at the Potsdam Conference in the Allied-occupied city of Potsdam, Germany, the U.S. delivered an ultimatum to Japan—surrender under the terms outlined in the Potsdam Declaration (which, among other provisions, called for the Japanese to form a new, democratic and peaceful government) or face “prompt and utter destruction.”

As the Potsdam Declaration provided no role for the emperor in Japan’s future, the ruler of the island nation was unwilling to accept its terms.

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### **Bataan Death March** -From: <https://www.history.com/topics/world-war-ii/bataan-death-march>

After the April 9, 1942 U.S. surrender of the Bataan Peninsula on the main Philippine island of Luzon to the Japanese during World War II (1939-45), the approximately 75,000 Filipino and American troops on Bataan were forced to make an arduous 65-mile march to prison camps. The marchers made the trek in intense heat and were subjected to harsh treatment by Japanese guards. Thousands perished in what became known as the Bataan Death March.

### **Bataan Death March: Background**

The day after Japan bombed the U.S. naval base at Pearl Harbor, on December 7, 1941, the Japanese invasion of the Philippines began. Within a month, the Japanese had captured Manila, the capital of the Philippines, and the American and Filipino defenders of Luzon (the island on which Manila is located) were forced to retreat to the Bataan Peninsula. For the next three months, the combined U.S.-Filipino army held out despite a lack of naval and air support. Finally, on April 9, with his forces crippled by starvation and disease, U.S. General Edward King Jr. (1884-1958), surrendered his approximately 75,000 troops at Bataan.

*Did you know? The Philippines is an archipelago consisting of more than 7,100 islands.*

### **Bataan Death March: April 1942**

The surrendered Filipinos and Americans soon were rounded up by the Japanese and forced to march some 65 miles from Mariveles, on the southern end of the Bataan Peninsula, to San Fernando. The men were divided into groups of approximately 100, and the march typically took each group around five days to complete. The exact figures are unknown, but it is believed that thousands of troops died because of the brutality of their captors, who starved and beat the marchers, and bayoneted those too weak to walk. Survivors were taken by rail from San Fernando to prisoner-of-war camps, where thousands more died from disease, mistreatment and starvation.

### **Bataan Death March: Aftermath**

America avenged its defeat in the Philippines with the invasion of the island of Leyte in October 1944. General Douglas MacArthur (1880-1964), who in 1942 had famously promised to return to the Philippines, made good on his word. In February 1945, U.S.-Filipino forces recaptured the Bataan Peninsula, and Manila was liberated in early March. After the war, an American military tribunal tried Lieutenant General Homma Masaharu, commander of the Japanese invasion forces in the Philippines. He was held responsible for the death march, a war crime, and was executed by firing squad on April 3, 1946.

**ACTIVITY 3:** Read the two historical narratives and complete the two Guiding Questions on a separate sheet of paper.

**Two Historical Narratives** (Remember that a narrative is a story and like anything, there are many different ways to tell a story)

*Source: Excerpts from “Three Narratives of our Humanity” by John W. Dower, 1996. The following is from a book written by a historian about how people remember wars. John W. Dower explains the two different ways that the dropping of the atomic bombs on Hiroshima and Nagasaki is remembered.*

### **Hiroshima as Victimization**

Japanese still recall the war experience primarily in terms of their own victimization. For them, World War II calls to mind the deaths of family and acquaintances on distant battlefields, and, more vividly, the prolonged, systematic bombings of their cities.

If it is argued that the nuclear bombing of Hiroshima was necessary to shock the Japanese to surrender, how does one justify the hasty bombing of Nagasaki only three days later, before the Japanese had time to investigate Hiroshima and formulate a response?

## Hiroshima as Triumph

To most Americans, Hiroshima—the shattered, atomized, irradiated city – remains largely a symbol of triumph – marking the end of a horrendous global conflict and the effective demonstration of a weapon that has prevented another world war.

It is hard to imagine that the Japanese would have surrendered without the atomic bomb. Japanese battle plans that were in place when the bombs were dropped called for a massive, suicidal defense of the home islands, in which the imperial government would mobilize not only several million fighting men but also millions of ordinary citizens who had been trained and indoctrinated to resist to the end with primitive makeshift weapons. For Japanese to even discuss capitulation (surrender) was seditious (against the law).

### Guiding Questions

1. In 1-2 sentences each, explain the two narratives (stories) about Hiroshima.
2. Which narrative do you agree with more? Why?

**ACTIVITY 4: POINT OF VIEW – Argue both sides of an “argument” → Part 1 of Activity 4 – You are going to take the point of view of the Japanese. Part 2 of Activity 4 – You are going to take the point of view of the Americans.**

### Part 1: Japanese Experience Experts:

Take the point of view that America was wrong to drop the atomic bomb. Read through Documents A-E to support your view that American was wrong:

- You are a historian who specializes in Japanese history.
- Prepare for a discussion with a group of American experience historians. Go through the Atomic Bomb Documents
- Re-read and highlight or underline quotes, facts, images, information, etc. that supports the “Hiroshima as Victimization” narrative.
- Record your main points on a separate sheet of paper under the title, “Japanese Experience Main Points”

### Part 2: American Experience Experts:

Take the point of view that America was right to drop the atomic bomb. Read through Documents A-E to support your view that American was right.

- You are a historian who specializes in American history.
- Prepare for a discussion with a group of Japanese experience historians. Go through the Atomic Bomb Documents
- Re-read and highlight or underline quotes, facts, images, information, etc. that supports the “Hiroshima as Triumph” narrative.
- Record your main points on a separate sheet of paper under the title, “American Experience Main Points”

## Document A: Textbook

Even before the bomb was tested, American officials began to debate how to use it. Admiral William Leahy, Chairman of the Joint Chiefs of Staff, opposed using the bomb because it killed civilians indiscriminately. He believed that an economic blockade and conventional bombing would convince Japan to surrender.

Secretary of War Henry Stimson wanted to warn the Japanese about the bomb while at the same time telling them that they could keep the emperor if they surrendered. Secretary of State James Byrnes, however, wanted to drop the bomb without any warning to shock Japan into surrendering.

President Truman later wrote that he “regarded the bomb as a military weapon and never had any doubts that it should be used.” His advisers had warned him to expect massive casualties if the United States invaded Japan. Truman believed it was his duty as president to use every weapon available to save American lives.

*Source: American History Textbook, American Vision, pg. 615*

## Document B: Thank God for the Atomic Bomb

My division, like most of the ones transferred from Europe was going to take part in the invasion at Honshu (an island of Japan). The people who preferred invasion to A-bombing seemed to have no intention of proceeding to the Japanese front themselves. I have already noted what a few more days would mean to the luckless troops and sailors on the spot.... On Okinawa, only a few weeks before Hiroshima, 123,000 Japanese and Americans killed each other. War is immoral. War is cruel.

*Source: Paul Fussell, a World War II Soldier, Thank God for the Atom Bomb, 1990.*

## Document C: Stopping Russia

"[Byrnes] was concerned about Russia's postwar behavior. Russian troops had moved into Hungary and Romania, and Byrnes thought it would be very difficult to persuade Russia to withdraw her troops from these countries, that Russia might be more manageable if impressed by American military might, and that a demonstration of the bomb might impress Russia."

Source: James Byrnes was one of Truman's advisors on the atomic bomb. In addition to defeating Japan, he wanted to keep the Soviet Union from expanding its influence in Asia and to limit its influence in Europe. Manhattan Project scientist Leo Szilard met with Byrnes on May 28, 1945. Leo Szilard wrote about his meeting with Byrnes in 1980.

### Document D: Survivor

One of my classmates, I think his name is Fujimoto, he muttered something and pointed outside the window, saying, "A B-29 is coming." He pointed outside with his finger. So I began to get up from my chair and asked him, "Where is it?" Looking in the direction that he was pointing towards, I got up on my feet, but I was not yet in an upright position when it happened. All I can remember was a pale lightening flash for two or three seconds. Then, I collapsed. I don't know much time passed before I came to. It was awful, awful. The smoke was coming in from somewhere above the debris. Sandy dust was flying around. . .

I crawled over the debris, trying to find someone who were still alive. Then, I found one of my classmates lying alive. I held him up in my arms. It is hard to tell, his skull was cracked open, his flesh was dangling out from his head. He had only one eye left, and it was looking right at me. . . he told me to go away.

I, so, was running, hands were trying to grab my ankles, they were asking me to take them along. I was only a child then. And I was horrified at so many hands trying to grab me. I was in pain, too. So all I could do was to get rid of them, it s terrible to say, but I kicked their hands away. I still feel bad about that. I went to Miyuki Bridge to get some water. At the river bank, I saw so many people collapsed there. . . I was small, so I pushed on the river along the small steps. The water was dead people. I had to push the bodies aside to drink the muddy water. We didn't know anything about radioactivity that time. I stood up in the water and so many bodies were floating away along the stream.

Source: Yoshitaka Kawamoto was thirteen years old. He was in the classroom at Zakoba-cho, 0.8 kilometers away from the hypocenter. He is now working as the director of the Hiroshima Peace Memorial Museum, telling visitors from all over the world what the atomic bomb did to the people of Hiroshima.

### Document E: Hiroshima and Nagasaki Casualties

**TABLE A: Estimates of casualties**

	Hiroshima	Nagasaki
Pre-raid population	255,000	195,000
Dead	66,000	39,000
Injured	69,000	25,000
<b>Total Casualties</b>	<b>135,000</b>	<b>64,000</b>

**TABLE B: Cause of Immediate Deaths:**

Hiroshima		Nagasaki	
Cause of Death	Percent of Total	Cause of Death	Percent of Total
Burns	60%	Burns	95%
Falling debris	30	Falling debris	9
Other	10	Flying glass	7
		Other	7

**ACTIVITY 5:** Observe the Atomic Bomb images. Which image do you think should be selected to represent the dropping of the atomic bomb on a United Nations website? Explain why and support your answer with evidence from the lesson.

**ACTIVITY 6:** Debrief:

1. Which images were easy to eliminate?
2. Do you think the United States should have dropped the bomb?
3. Why is that a difficult question? Explain.
4. Do you feel like we can judge Truman's decision? Why or why not?
5. What would we need to know to feel qualified to judge? Explain.



Japanese bombing of Pearl Harbor. December 7, 1941.

OURS...to fight for



FREEDOM FROM FEAR



American Survivors of the Bataan Death March



General Paul Tibbets and the Enola Gay





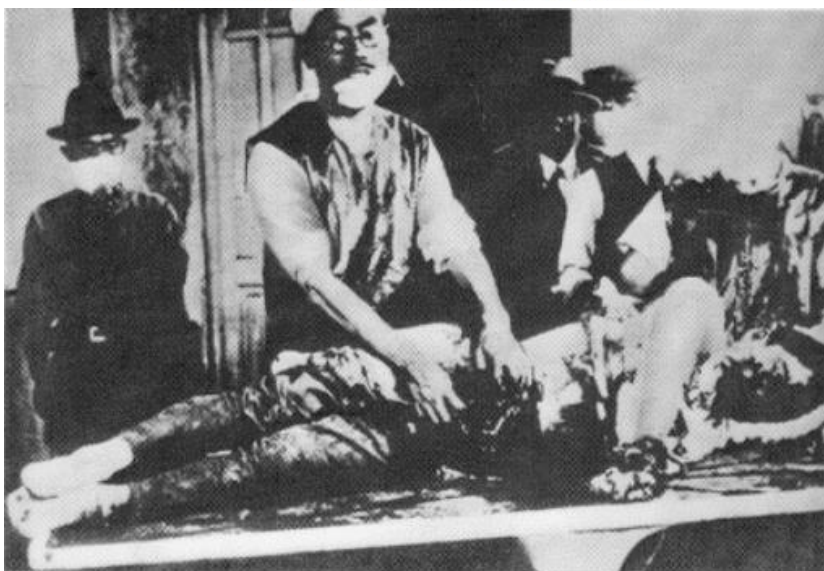
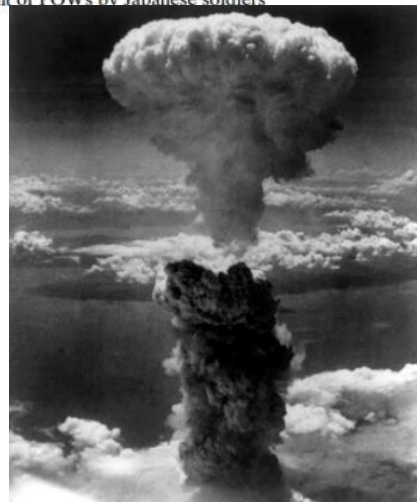
A girl with her skin hanging in strips after the atomic bombing of Hiroshima



Treatment of POWs by Japanese soldiers



A boy's burned flesh after the atomic bombing of Hiroshima



Japanese Unit 731 performs medical experiments, including vivisections, on POWs and colonial subjects.