

**VOICES OF WAR: WORLD WAR II DELAWARE
PRIMARY SOURCE ACTIVITIES**

**THE AIR WAR
AIR COMBAT AND OPERATIONS
OF THE
UNITED STATES ARMY AIR FORCES
1941 TO 1945**



**BY
MARK GIANANTI**



**DEDICATED TO THOSE WHO
SERVED
SACRIFICED
AND
SAVED THE WORLD**



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**WILMINGTON UNIVERSITY
PROJECT DELAWARE, INC.**

**LIEUTENANT GOVERNOR JOHN C. CARNEY, JR.
SECRETARY OF STATE HARRIET SMITH WINDSOR
THE DELAWARE COMMISSION OF VETERANS AFFAIRS**

To the Teacher:

Voices of War: World War II Delaware has been initiated to preserve the memories of Delawareans that served at home and abroad both as civilians and in the armed services. Since the “Greatest Generation” is disappearing from our landscape it is essential that we use their stories to remember them and explain our past to future generations.

These stories and remembrances provide us all with glimpses of the past that are rarely, if ever, recorded in traditional texts. This pack is designed to integrate the oral histories into current high school curricula. The activities in this packet will help students to understand that the past was made by real people. Activities are provided that connects historic events to the recollections presented in the oral histories. Students are asked to listen to the recollections of Delaware veterans, examine primary resources, and interpret the past.

Furthermore, the primary source activities in this packet will enhance student skills and knowledge. The activities within this packet have been aligned with the Delaware Social Studies Standards. By examining documents, photographs, charts, and other historical evidence, students will be able to demonstrate deeper comprehension about the past. Additionally, the students will become active participants, discussing various interpretations of the past and the roles and contributions of diverse segments of the population in an era that defined the contemporary world.

The goal of this packet is to provide an easy to use resource that enables teachers to bring Delaware’s veterans into the classroom so that the future can have a deeper understanding, and appreciation, of the past.



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TEACHER PAGE

AIR WAR: ORAL HISTORIES

OBJECTIVE: At the end of this activity, you will be able to use oral histories in order to gain a deeper understanding of the Allied air campaign, how it was conducted, and the results achieved.

ACTIVITY: Listen to the remembrances and answer the following questions.

1. Define the term “MILK RUN.”
A milk run is a routine operation that presents little danger or difficulty to the people involved.
2. Based on how Harold Talley describes the actual mission, was it a “milk run?” Why or why not?
The mission was not a milk run. There were enemy fighters waiting to attack the bombers and the target was protected by flak.
3. How many hours of actual flying time did Andrew Knox have before he was sent overseas?
600
4. When was a crew assigned to a plane and pilot?
After he had passed flight training a bomber pilot was assigned to a crew.
5. Why do you think it was done this way?
*Answers will vary but should focus on the following:
They were trained together and deployed together.
Teamwork and trust were built up among the crew members.*
6. What units did Mr. Knox belong to while he was overseas?
The 348th Bomb Squadron, 24 of the 99th Bomb Group of the 15th Air Force.
7. Why was completing 25 missions significant?
After successfully completing 25 missions a crew would be sent home.
8. What decision did Mr. Knox have to make on two consecutive missions?
He had to decide if he was going to drain the wing tanks of fuel or use the main fuel tanks first.
9. Why was this decision important?
If you used the fuel in the wing tanks there would be highly explosive vapors left in the wings. If the wings were hit there was a very good chance of an explosion. If the fuel was not used and the wings were hit the fuel would drain from the tanks and would not be available for the return flight.
10. According to Clayo Rice, how many candidates were in his group of Tuskegee pilots? How many graduated?
His class began with 80 men at the start of training. 33 men graduated.
11. What unique record is James Otis Handy proud of?
They never lost a bomber to enemy aircraft.
12. According to William Nutter, what was a major design flaw of early model B-17 Flying Fortresses? How did German fighters exploit this flaw?
The positioning of the defensive guns prevented them from firing directly to their front. German fighters would fly straight at the B-17s and aim for the cockpit. This went on until the B-17G was introduced. This model was equipped with a “chin turret” that fired to the front.
13. What happened to Harry Ray Shirey on the day his aircraft was shot down?
All of the crew members escaped from the plane without serious injuries. (The pilot had a broken left arm, the co-pilot broke his leg when he hit the ground.) Mr. Shirey was able to escape from the aircraft even though he had been shot in both feet and was in the aircraft when it exploded.



* Teacher's note: In Clayo Rice's interview he mentions the academic portion of his training. He states that "to see so many people (African-Americans) that were supposedly inferior who knew so much" made him feel good. It can be argued that the Second World War was the birthplace of the United States Civil Rights movement. A possible research topic would be one in which students are asked to show the connections between the roles and experiences of women and minorities during the war and their subsequent demands for equality afterwards.

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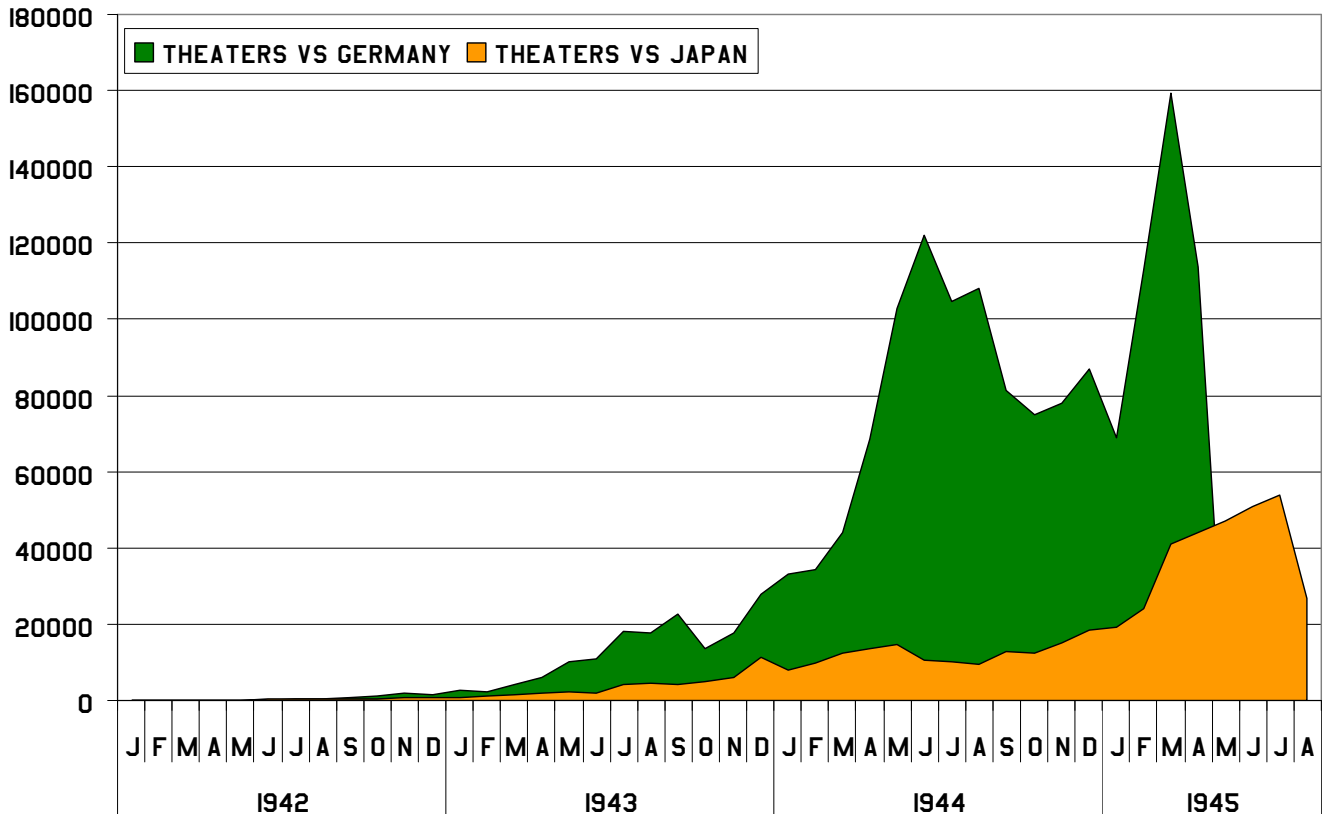
TEACHER PAGE

AIR WAR: CHARTS AND GRAPHS

OBJECTIVE: At the end of this activity, you will be able to read and gather information from a chart or graph.

ACTIVITY: Examine the graph and answer the questions that follow.

TONS OF BOMBS DROPPED OVERSEAS BY THEATER



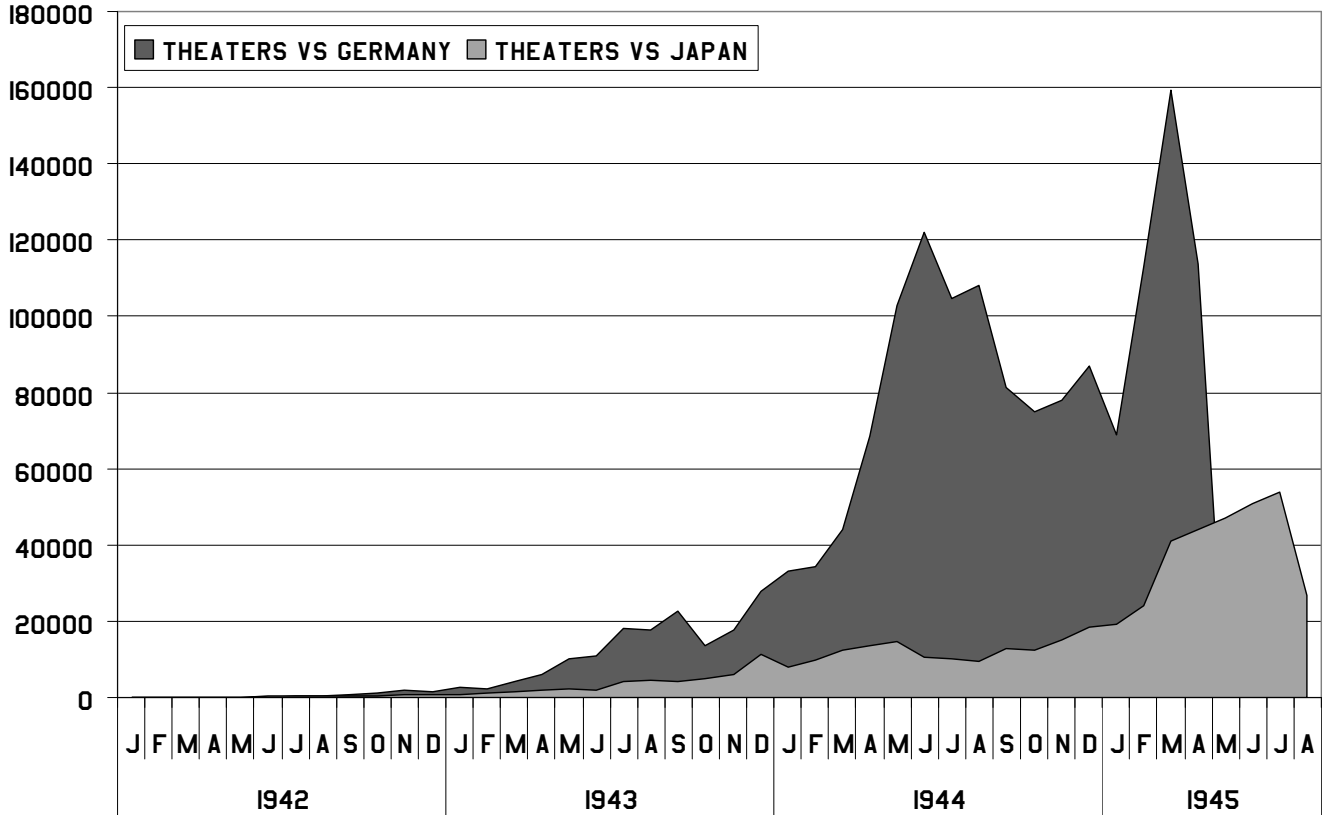
1. Which enemy nation was struck with more bombs during the Second World War?
Germany
2. When did strikes reach their highest levels against Germany and Japan?
Germany: March 1945 Japan: July 1945
3. Approximately what was the highest amount of bombs dropped in one month against Germany and Japan?
Any reasonable answer should be accepted. In March of 1945, Germany was struck by 159,123 tons of bombs. In July of 1945, Japan was struck by 53,665 tons of bombs.
4. Why do you think that there was a sudden increase of bombs dropped on German territory between February and June 1944?
The Allies were preparing for Operation Overlord, the Invasion of France. USAAF aircraft flew raids over German occupied territory in order to weaken German defenses, destroy transportation networks, and misdirect German attention away from the actual landing areas.
5. There is a significant difference between the tonnages of employed against German and Japan. Why do you think there is such a difference?
Answers will vary but should focus on the following points:
 1. *The Allies followed a policy of "Germany first." This policy, announced two weeks after the attack on Pearl Harbor, stated "that Germany was the main enemy and her defeat was the key to victory." This meant that the Allies would focus on holding off Japanese forces until Germany was defeated.*
 2. *The majority of Japanese industry was located in the Japanese Home Islands. These islands were beyond the range of USAAF bombers until island bases, such as Saipan and Tinian, had been wrested from Japanese control late in the war.*

AIR WAR: CHARTS AND GRAPHS

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ACTIVITY: Examine the graph and answer the questions that follow.

TONS OF BOMBS DROPPED OVERSEAS BY THEATER



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3. Approximately what was the highest amount of bombs dropped in one month against Germany and Japan?
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5. There is a significant difference between the tonnages of employed against German and Japan. Why do you think there is such a difference?

TEACHER PAGE

AIR WAR: PHOTOGRAPH

OBJECTIVE: After examining the photograph from the Second World War, you will be able to interpret and use photographic evidence as a historic resource.

ACTIVITY: Examine the photograph and answer the questions.

1. What does this photograph show?

The photograph is a consolidated bomb fall plot. It shows the results of a raid flown against Regensburg by the 301st Bombardment Group (Heavy) on December 12, 1944. (301st B.G. (H) on 28.12.44)

2. What do the areas inside the white circles represent?

The areas within the white lines are the assigned target areas that were to be struck by the bombers.

3. What does the area encompassed by the white square represent?

The area within the white square is the main target area.

4. What are the white dots on the image?

The white dots show where individual bombs hit.

5. What was the total weight of explosives dropped during this raid?

274 bombs were dropped by the American bombers during this raid. Each bomb weighed 500 pounds for a total tonnage dropped equaling 137,000 pounds or 68.5 tons of high explosives.

6. How many plots have been plotted in the photograph?

96

7. Was the picture taken before, during, or after the raid? Support your position with details from the image.

The picture was taken during the raid. Two details in the photograph support this.

A. There is like smoke above where bomb hits had been plotted.

B. There are bombs falling to the south of the target area in the photograph.

8. What information can you gather based on the bomb dispersal patterns shown in the image?

The bomb plot patterns can give information about the following:

A. Direction of attack: Most of the plots are in a generally north south line. This means that the bombing runs were flown in those directions.

B. Accuracy of attack: The grouping of the bomb plots shows how the bombs struck the center of the target area and continued south.

9. How would you rate the effectiveness of the attacks on this area? Defend your position with details from the image.

Answer will vary but should state that the attacks were somewhat effective since:

- most of the plots are outside the primary target area designated by the box*
- most of the plots are concentrated in a line*

10. Other than the impact to the target area, what other impact would the raid have?

Answer will vary but should focus on some or all of the following:

- All of the bombs did not hit within the target area.*
- Buildings, roads, and rail lines outside the target were damaged or destroyed.*
- Other sections of the local infrastructure would have been hit and damaged as well.*
- All of this damage would have a significant impact on the local population.*
- People working and living in the area would have been killed or wounded.*
- Items that needed to be imported would be more difficult to move into the area.*
- Material needed to help deal with the damage would be unavailable for use elsewhere thereby straining the German industrial base.*
- Items that the area was producing for the German war effort would be more difficult to produce or transport to where it was needed.*

TEACHER PAGE



AIR WAR: PHOTOGRAPH

OBJECTIVE: After examining the photograph from the Second World War, you will be able to interpret and use photographic evidence as a historic resource.

ACTIVITY: Examine the photograph and answer the questions.

1. What does this photograph show?
2. What do the areas inside the white circles represent?
3. What does the area encompassed by the white square represent?
4. What are the white dots on the image?
5. What was the total weight of explosives dropped during this raid?
6. How many plots have been plotted in the photograph?
7. Was the picture taken before, during, or after the raid? Support your position with details from the image.
8. What information can you gather based on the bomb dispersal patterns shown in the image?
9. How would you rate the effectiveness of the attacks on this area? Defend your position with details from the image.
10. Other than the impact to the target area, what other impact would the raid have?



TEACHER PAGE

AIR WAR: POSTERS

OBJECTIVE: At the end of this activity, you will be able to use visual images in order to explain the significance of the Air Campaign during the Second World War.

ACTIVITY: Examine the posters below and answer the questions below.

1. Which Allied nation published these posters? Prove your answer with details from each poster.
Great Britain published each of the posters. All of the aircraft have RAF markings and the text of each poster identifies RAF and British bombing efforts against Germany.
2. What type of attack are these posters portraying?
These posters are showing strategic bombing attacks made on German industrial centers and cities.
3. Why does the first poster claim that the “victory of the allies is assured?”
Victory is assured due to the fact that British, and American, bombers are able to strike German industrial centers thereby weakening Germany’s war effort.
4. Does the second poster support the claim of the first poster? Why or why not?
The second poster does support the first since it shows “thousands” of British bombers unleashing ever more intensive levels of destruction on German cities despite antiaircraft defenses.
5. Which poster is more effective? Explain your position with details from the posters.
Answers will vary. Student responses should be based on the images and ideas being presented in each poster. For example, the first poster guarantees victory while second poster shows more bombers attacking Germany and implies victory.



**VICTORY OF THE ALLIES
IS ASSURED**



British Bombers now attack German cities a thousand at a time!

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The R.A.F.'s intensive bombing of Germany's war industries continues.

**VICTORY OF THE ALLIES
IS ASSURED**



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TEACHER PAGE

AIR WAR: POSTERS

OBJECTIVE: At the end of this activity, you will be able to use visual images in order to explain the significance of the Air Campaign during the Second World War.

ACTIVITY: Examine the posters below and complete the following.

1. Based on the images in each poster, how did the U.S. Army Air Forces contribute to fighting the war?

The USAAF helped to win the war by using:

- A. heavy bombers like the Liberator to strike important industrial centers deep inside enemy territory.
- B. fighters like the Thunderbolt to shoot enemy fighters from the sky and thereby gain air superiority.
- C. aircraft like the Mustang to attack enemy road and rail targets in order to keep men and material from reaching the front.
- D. transport aircraft like the Skymaster to deliver airborne troops wherever needed.

2. Rank the importance of each of these roles towards winning the war. Defend your rankings with facts from readings or research.

Answers will vary. However, students should be able to explain how each of the USAAF roles contributed to ultimate victory.

- A. The strategic bombing campaign reduced Germany's ability to make the weapons needed to prosecute the war.
- B. The elimination of enemy fighters gave the Allies air superiority which allowed them to:
 - i. perform interdiction missions.
 - ii. increase the level of destruction caused by the heavy bombers.
- C. Interdiction missions against enemy road and rail targets weakened enemy formations facing Allied ground forces.
- D. The ability to deploy airborne forces gave Allied commanders offensive options that further stretched German resources.



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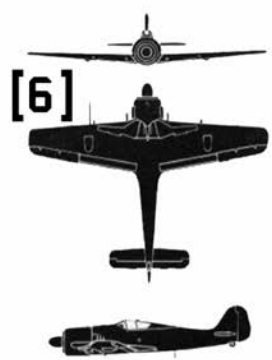
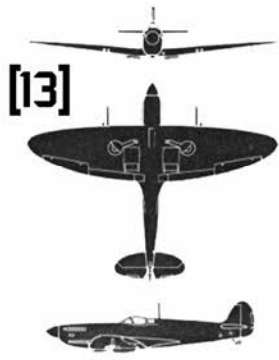
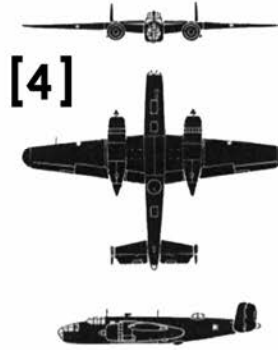
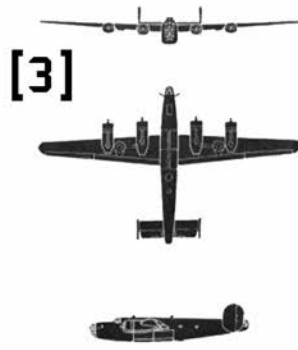
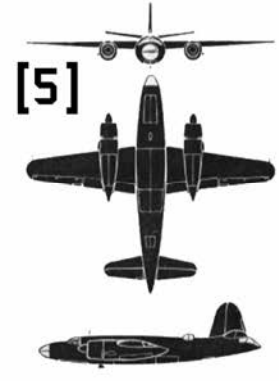
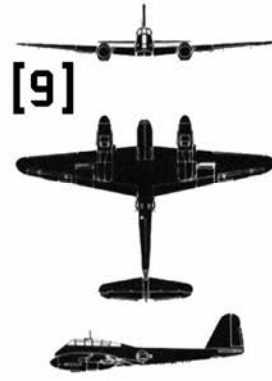
AIR WAR: AIRCRAFT RECOGNITION

OBJECTIVE: At the end of this activity, you will be able to recognize the silhouettes of selected aircraft that you will read about during your study of air combat during the Second World War.

ACTIVITY: Place the number of the correct description in the appropriate box for each aircraft silhouette.

- 1) **A-20 HAVOC or BOSTON:** Shoulder wing monoplane with long thin transparent nose. Wing has straight leading edge and pronounced taper to trailing edge. Twin radial engines are underslung with nacelles extending well beyond the trailing edge of wing. Fuselage has a graceful attitude due to turned up after section. Tall single fin and rudder.
- 2) **B-17 FLYING FORTRESS:** Four-engine, low-wing monoplane. Wings equally tapered with rounded tips and full dihedral. Long, narrow fuselage. Gun turret on top of fuselage just aft of pilot's cockpit enclosure. Large ventral turret aft of wings. Tail has broad single fin and rudder with fin faired far forward into fuselage. Large stabilizer and elevator, similar in shape to the wing.
- 3) **B-24 LIBERATOR:** High mid-wing monoplane. Four radial engines. Long narrow equally tapered wings with small rounded tips and slightly dihedral. Deep bulky fuselage. Large rounded twin fins and rudders set flush with outer end of stabilizer.
- 4) **B-25 MITCHELL:** Two radial engines underslung below wings. Nacelles extend beyond trailing edge of wing. High outboard twin fins and rudders sloped like a lopsided rectangle. Gull wing effect due to positive dihedral on inboard panel only. Wings tapered on both edges with more pronounced taper on trailing edge. Long transparent nose.
- 5) **B-26 MARAUDER:** Shoulder wing monoplane with long cigar shaped fuselage. Sharply tapered wings with rounded tips and no dihedral. High single fin and rudder with rounded top. Tail plane has marked dihedral. Radial engines underslung beneath wings with long nacelles projecting beyond trailing edge. Rear fuselage fairing downward and beyond the tail assembly.
- 6) **Focke-Wulf FW 190:** Short blunt nose with large spinner. Short thin tapered wings with blunt tips. Fuselage narrow aft of wings. Rectangular stabilizer and tail plane. Tall fin and rudder. Small low cockpit tapering into fuselage.
- 7) **Messerschmitt ME 109:** Low-wing monoplane with single in-line engine and thick nose. Air scoops under each wing and under nose. Wings tapered with rounded tips and dihedral from roots. Stabilizer set high on small fin and rudder. Long fuselage with low cock-pit.
- 8) **Messerschmitt ME 110:** Twin engine, low-wing monoplane. Tapered wings have full dihedral and square tips. Twin in-line engines are underslung. Fuselage is slim with long cockpit enclosure. Twin fins and rudders, oval in shape with flattened bottoms, are set outboard of stabilizer and elevator.
- 9) **Messerschmitt ME 210:** Twin in-line engine, low-wing monoplane. Wing has dihedral from roots and equal taper to small round tips. The engines extend slightly beyond the short nose. Slim tapering fuselage with high and long streamlined cockpit enclosure. Side gun blisters. Tall prominent single fin and rudder.
- 10) **P-38 LIGHTNING:** Twin-engine, mid-wing monoplane. Pilot's central nacelle projects well forward to rounded nose. Sharper taper on trailing edge of wings. Full dihedral from the roots. In-line engines mounted in nacelles at forward ends of twin tail booms extending from motors to stabilizer. Air scoops for radiators fitted on sides of booms halfway back. Stabilizer is long and rectangular with rounded tips extending outboard of the booms. Twin fins and rudders are egg-shaped.
- 11) **P-47 THUNDERBOLT:** Low mid-wing monoplane with single radial engine. Wing has slightly tapered edge and semi-elliptical trailing edge. Wings have full dihedral from roots. Engine cowl is oval-shaped with propeller hub set above center. Fuselage has thick heavy appearance with sharp ridge down sloping back. Single fin and rudder with pronounced tape on leading edge and curved trailing edge.
- 12) **P-51 MUSTANG:** Single in-line engine low-wing monoplane with long pointed nose. Wings have full dihedral and are tapered to nearly square tips. Long radiator mounted under fuselage extends aft of cockpit enclosure. Single fin and rudder is tall with a square top.
- 13) **SPITFIRE:** Low-wing monoplane with full dihedral and elliptically curved wing outline. Radiator intake off-set on underside of wing or wings. Stabilizer and elevator are set high on fuselage, with elliptically curved outline and cut-out in trailing edge. The fin and rudder are small and rounded.
- 14) **TYPHOON:** Low-wing monoplane with single in-line engine. Dihedral on outer wing panels only. Short pointed nose. Equally tapered wings with rounded tips. Large radiator intake under nose. Well-curved fin and rudder, extending slightly below fuselage.

TEACHER PAGE



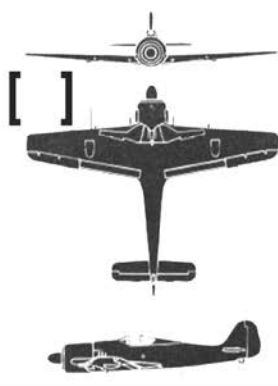
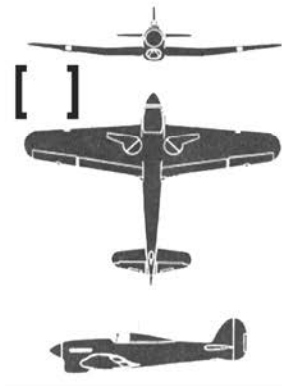
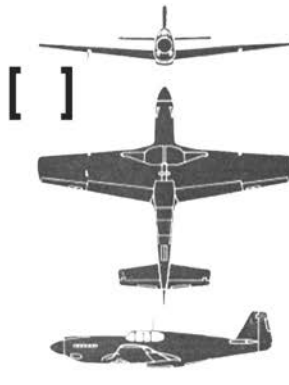
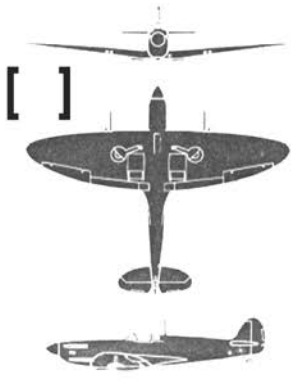
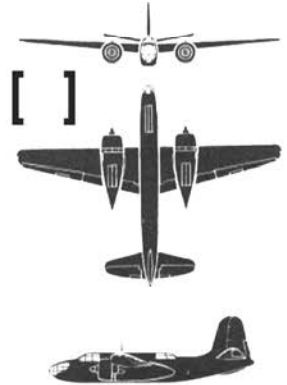
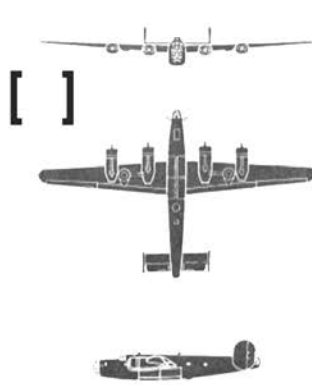
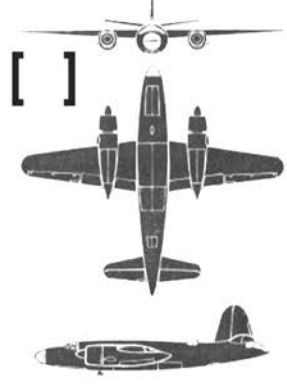
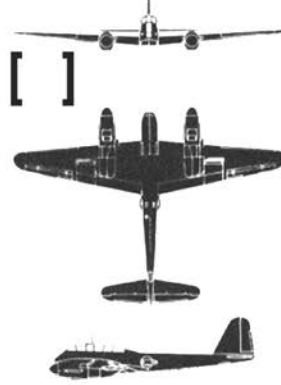
ALLIED
AND
AXIS
AIRCRAFT
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- 2) **B-17 FLYING FORTRESS:** Four-engine, low-wing monoplane. Wings equally tapered with rounded tips and full dihedral. Long, narrow fuselage. Gun turret on top of fuselage just aft of pilot's cockpit enclosure. Large ventral turret aft of wings. Tail has broad single fin and rudder with fin faired far forward into fuselage. Large stabilizer and elevator, similar in shape to the wing.
- 3) **B-24 LIBERATOR:** High mid-wing monoplane. Four radial engines. Long narrow equally tapered wings with small rounded tips and slightly dihedral. Deep bulky fuselage. Large rounded twin fins and rudders set flush with outer end of stabilizer.
- 4) **B-25 MITCHELL:** Two radial engines underslung below wings. Nacelles extend beyond trailing edge of wing. High outboard twin fins and rudders sloped like a lopsided rectangle. Gull wing effect due to positive dihedral on inboard panel only. Wings tapered on both edges with more pronounced taper on trailing edge. Long transparent nose.
- 5) **B-26 MARAUDER:** Shoulder wing monoplane with long cigar shaped fuselage. Sharply tapered wings with rounded tips and no dihedral. High single fin and rudder with rounded top. Tail plane has marked dihedral. Radial engines underslung beneath wings with long nacelles projecting beyond trailing edge. Rear fuselage fairing downward and beyond the tail assembly.
- 6) **Focke-Wulf FW 190:** Short blunt nose with large spinner. Short thin tapered wings with blunt tips. Fuselage narrow aft of wings. Rectangular stabilizer and tail plane. Tall fin and rudder. Small low cockpit tapering into fuselage.
- 7) **Messerschmitt ME 109:** Low-wing monoplane with single in-line engine and thick nose. Air scoops under each wing and under nose. Wings tapered with rounded tips and dihedral from roots. Stabilizer set high on small fin and rudder. Long fuselage with low cock-pit.
- 8) **Messerschmitt ME 110:** Twin engine, low-wing monoplane. Tapered wings have full dihedral and square tips. Twin in-line engines are underslung. Fuselage is slim with long cockpit enclosure. Twin fins and rudders, oval in shape with flattened bottoms, are set outboard of stabilizer and elevator.
- 9) **Messerschmitt ME 210:** Twin in-line engine, low-wing monoplane. Wing has dihedral from roots and equal taper to small round tips. The engines extend slightly beyond the short nose. Slim tapering fuselage with high and long streamlined cockpit enclosure. Side gun blisters. Tall prominent single fin and rudder.
- 10) **P-38 LIGHTNING:** Twin-engine, mid-wing monoplane. Pilot's central nacelle projects well forward to rounded nose. Sharper taper on trailing edge of wings. Full dihedral from the roots. In-line engines mounted in nacelles at forward ends of twin tail booms extending from motors to stabilizer. Air scoops for radiators fitted on sides of booms halfway back. Stabilizer is long and rectangular with rounded tips extending outboard of the booms. Twin fins and rudders are egg-shaped.
- 11) **P-47 THUNDERBOLT:** Low mid-wing monoplane with single radial engine. Wing has slightly tapered edge and semi-elliptical trailing edge. Wings have full dihedral from roots. Engine cowl is oval-shaped with propeller hub set above center. Fuselage has thick heavy appearance with sharp ridge down sloping back. Single fin and rudder with pronounced tape on leading edge and curved trailing edge.
- 12) **P-51 MUSTANG:** Single in-line engine low-wing monoplane with long pointed nose. Wings have full dihedral and are tapered to nearly square tips. Long radiator mounted under fuselage extends aft of cockpit enclosure. Single fin and rudder is tall with a square top.
- 13) **SPITFIRE:** Low-wing monoplane with full dihedral and elliptically curved wing outline. Radiator intake off-set on underside of wing or wings. Stabilizer and elevator are set high on fuselage, with elliptically curved outline and cut-out in trailing edge. The fin and rudder are small and rounded.
- 14) **TYPHOON:** Low-wing monoplane with single in-line engine. Dihedral on outer wing panels only. Short pointed nose. Equally tapered wings with rounded tips. Large radiator intake under nose. Well-curved fin and rudder, extending slightly below fuselage.



**ALLIED
AND
AXIS
AIRCRAFT
OF THE
EUROPEAN
THEATER**

TEACHER PAGE

AIR WAR: NEWSPAPER REPORTS

OBJECTIVE: At the end of this activity, you will be able to use news reports to explain how the Air War was presented in newspapers of the time.

ACTIVITY: Read the article *U.S. - Raids Over France Climax Big Week in Air War*, and answer the following questions.

1. What do you think the “German War Cradle” is? Prove your position with details from the article.
Answers should focus on the idea that the “German War Cradle” was the industrial center of Germany. It was the region producing most of the key items and equipment needed by the German military. The article states that armament factories were hit by Eighth Air Force bombers.
2. How was the Ruhr described following the attack by Allied bombers?
The Ruhr was described as a “bomb-pitted valley of spreading ruin” and that the “task of neutralizing the Ruhr was nearing completion.”
3. Why would the Allied Air Forces target this region?
Answers will vary, but should focus on the following points:
 - *Industrial facilities needed to be attacked in order to reduce or eliminate their production.*
 - *Any reduction in industrial output would weaken front line German strength.*
 - *Only aircraft were able to reach industrial targets deep in enemy territory.*
4. How did 8th Air Force commanders describe their role in the war?
Eighth Air Force headquarters stated that “the primary task of heavy bombers...is to slow enemy armament production.” Additionally, attrition to “enemy fighter defenses” was an “important secondary consideration.”
5. How did they ascertain the damage inflicted on their targets?
Various sources were used such as:
 - *Eyewitness reports of returning fliers who stated that they saw bombs “exploding all over the target area”*
 - *Observations that the industrial haze over the region had “thinned out appreciably.”*
 - *German propaganda reports implied that industrial output had dropped, traffic and utilities had been disrupted and morale suffered.*
6. Based on information in this article, were the Allied air forces causing significant damage to Germany’s war effort? Support your position with details from the article.
Answers will vary, but should agree that Allied Air Forces were seriously damaging Germany’s war effort. Points that support this view are:
 - *German factories were “really smacked”*
 - *Aircraft and hangars were hit*
 - *Freight yards were raided*
 - *30,000 tons of bombs had been dropped on Germany’s industrial facilities and production seemed to have dropped*
 - *German morale was dropping as was the nation’s ability to move materials*

U.S.-RAF Raids Over France Climax Big Week in Air War

***Fortresses Lead Strong Daylight Attacks on
Nazi Bases and Plants — British Pound
Bochum and Gelsenkirchen, Losing 30***

By The Associated Press.

LONDON, Sunday, June 27—A large force of American heavy bombers attacked airfields and industrial targets in France by daylight yesterday, winding up the busiest week yet seen in the mighty Allied aerial offensive that has devastated the German war cradle in the Ruhr valley and woven a pattern of destruction along Adolf Hitler's coastal wall.

A communiqué issued jointly by the United States Army's European theatre headquarters and the British Air Ministry said supporting Thunderbolts destroyed three Nazi fighters and that the American Navy bombers, some flying unescorted, shot down a "considerable number."

Five bombers and seven fighters were lost in the daylight assaults, which were accompanied by British fighter sweeps over the Continent.

The operations followed a heavy attack Friday night by big Royal Air Force bombers on the heart of the German Ruhr coal and steel

belt. The RAF pounded Bochum and Gelsenkirchen, losing thirty planes during the night.

The Ruhr was described as a bomb-pitted valley of spreading ruin after this week of assault—the mightiest ever loosed against a similar area.

Many squadrons of United States, RAF, Dominion and Allied fighters took part in the daylight operations.

The precise objectives of the American heavyweights were not announced in the communiqué, which described the sky fleet as a "large formation" and said it included some light bombers of the RAF.

One returning flier said, however, that "we really smacked those factories; I could see the bombs dropped by the formations behind us still exploding all over the target area."

The communiqué said "adverse

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U. S.-RAF RAIDS CAP WEEK IN AIR WAR

Continued From Page One

weather conditions were encountered by some of the heavy bombers and those which were unable to identify clearly their targets dropped no bombs."

Most of the heavy bombers, including Flying Fortresses, flew unescorted and engaged in many combats with enemy fighters.

An earlier Air Ministry communiqué told of a raid by RAF Typhoon bombers on Bernay airfield, forty miles south of Havre.

One bomb fell squarely on a large concentration of parked Nazi aircraft. Others burst near twin-engined planes and buildings and hangars were hit. The raiders returned safely despite anti-aircraft fire that pilots described as "considerable."

Other Typhoons scored hits on the station and freight yard near Le Treport in a raid during which not a single enemy fighter was sighted. Boston bombers attacked the oft-blasted airfield at Abbeville.

Fortresses' Score on Nazi Fighters

American headquarters here reported late yesterday that the Flying Fortresses had destroyed nearly 100 Nazi fighters in their two raids over Germany during the week, when thirty-seven American bombers were lost.

The raids were on Huel in the Ruhr, along with Antwerp, on Tuesday and over Northwest Germany on Friday. Headquarters, which first announced that eigh-

teen American planes were missing from Friday's attack, said that only seventeen were lost as one of the missing planes had returned safely.

The Eighth United States Air Force headquarters noted:

"The primary task of heavy bombers operating in daylight against war industry targets is to slow enemy armament production, but attrition against enemy fighter defenses, an important secondary consideration, is mounting steadily."

After Friday night's blow at Bochum and Gelsenkirchen by the RAF, one military observer here estimated that 30,000 tons of explosives had ripped into the German industrial valley since the Allies opened their intensive aerial bombardment three and a half months ago. He declared that the task of neutralizing the Ruhr was nearing completion.

The observer said that even the most concentrated anti-aircraft and fighter defenses the Nazis were able to muster had failed to check the onslaught.

The customary haze of smoke from the Ruhr's armament factories was reported to have thinned out appreciably in recent weeks and at some points to have disappeared entirely.

There was a definite feeling here, supported by Joseph Goebbels' propagandists, that the ruin now had been spread over such a huge area of the Ruhr that traffic and utilities were disrupted, morale seriously disturbed and production definitely impaired.

AIR WAR: NEWSPAPER REPORTS

OBJECTIVE: At the end of this activity, you will be able to use news reports to explain how the Air War was presented in newspapers of the time.

ACTIVITY: Read the article *U.S. - Raids Over France Climax Big Week in Air War*, and answer the following questions.

1. What do you think the “German War Cradle” is? Prove your position with details from the article.
2. How was the Ruhr described following the attack by Allied bombers?
3. Why would the Allied Air Forces target this region?
4. How did 8th Air Force commanders describe their role in the war?
5. How did they ascertain the damage inflicted on their targets?
6. Based on information in this article, were the Allied air forces causing significant damage to Germany’s war effort? Support your position with details from the article.

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TEACHER PAGE

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OBJECTIVE: At the end of this activity, you will be able to use news reports to explain how the Air War was presented in newspapers of the time.

ACTIVITY: Read the article *U.S. Planes in Shuttle Blow Attack Nazi Airplane Factory*, and answer the following questions.

1. What targets were hit in the raids described in this article?

The following areas were targeted by Allied aircraft:

- *Messerschmitt factory at Regensburg*
- *Ball bearing production centers at Schweinfurt*
- *Airfields at Istres le Tube and Sálon near Marseilles*

2. What losses were inflicted on the U.S. forces making the raids?

Thirty-six heavy bombers and five fighters were reported missing after the attacks.

3. What were the enemy losses?

Thirty-three enemy fighters were reported as shot down by gunners on board the bombers and escort fighters.

4. How were these raids unique?

The raids were unique in three ways.

1. *They were the deepest penetration to that date by American bombers.*
2. *It was the first time that Flying Fortresses based in North Africa attacked German occupied France.*
3. *It was the first “shuttle raid” launched by U.S. air forces.*

5. What is a shuttle raid?

It is a bombing raid in which bombers based in Great Britain attack targets deep in Germany. Once the bombers have struck their target, they continue on to Allied bases in North Africa instead of returning to Great Britain. A few days later the planes would leave North Africa strike targets in Germany and continue on to Great Britain.

6. What is/are the goal(s) of the Allied Air Forces?

The goals of the Allied Air Forces is to:

- *destroy the Axis’ ability to wage war.*
- *Shoot down or eliminate enemy fighters that are tasked with stopping Allied bombers from reaching their targets.*

7. How were they attempting to achieve their goal(s)?

The enemy’s ability to keep fighting came from a variety of sources. These sources were examined and ranked in importance to the enemy’s war effort, their distance from Allied air bases, and their vulnerability to attack. Once these rankings had been made a process of “scientific destruction” was unleashed on the enemy targets.

8. Why did the reporter feel that these attacks would worry the German leaders? Support your statement with details from the article.

The reporter stated that Germany was wide open to attack since Allied bombers, launched from Great Britain and North Africa could reach and strike any target they wished. Additionally, the Luftwaffe (German Air Force) was being forced to defend against larger bomber forces coming from more directions. This would stretch their resources to the breaking point.

9. What does the phrase, “bomb cancer” mean?

The definition of cancer is: an often fatal, diseased growth in the body or any evil condition or thing that spreads destructively. In this instance the cancer is the destruction brought about by the Allied bombers.

U. S. Planes in Shuttle Blow Attack Nazi Fighter Factory

**Bombers From Britain Strike at Regensburg,
Schweinfurt—Fortresses From Africa Hit
Near Marseille—RAF at Turin Again**

By **FREDERICK GRAHAM**
By Cable to THE NEW YORK TIMES.

LONDON, Wednesday, Aug. 18—The United States heavy bomber offensive against Germany was broadened to a shuttle service with final landing in North Africa yesterday on the first anniversary of the Eighth Air Force's initial attack against occupied Europe.

Three formations of Flying Fortresses, described as the largest forces yet to make a daylight attack on Germany, left here and blasted Regensburg in the southeastern Reich, where Messerschmitt fighters are built, and Schweinfurt, sixty miles east of Frankfurt on the Main, which produces more than half of Germany's total output of ball bearings.

The first formation turned south after bombing Regensburg and crossed the Alps to North African bases for a trip of more than 1,400 miles.

The other two formations wheeled after completing their bombing runs at Schweinfurt and returned to Britain for round-trip flights of about 1,200 miles. They battled the stiffest Nazi fighter opposition yet encountered.

Thirty-six heavy bombers and five fighters of the American forces were missing after the operations, United States Army headquarters here announced. The Fortress gunners and escort planes that flew part way shot down at least thirty-three Nazi fighters.

The Regensburg-Schweinfurt attacks—the deepest penetration yet by American bombers into Germany—were part of all-day bombing assaults against Nazi-held Europe that included the first raids by American Flying Fortresses of the Allied North African Command over France.

The bombers from Mediterranean

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U. S. SHUTTLE RAID HITS DEEP IN REICH

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an bases pounded enemy airfields at Istres le Tube and Salon, near Marseilles.

These bombing raids on the southern face of Adolf Hitler's European fortress and the shuttle service from Britain must sound ominous notes for the Germans, for they mean that the thin, tightly stretched Luftwaffe from now on must guard the back as well as the front door to Germany proper.

In the Regensburg shuttle raid the Eighth Air Force followed tactics adopted by the Royal Air Force in an attack from Britain on Spezia, Italy, the night of June 20, with the bombers continuing to North Africa and returning to Britain three nights later with a blow at Spezia on the way.

Nazis "Wide Open," Anderson Says

Announcing the shuttle service, Brig. Gen. Frederick L. Anderson, chief of the Eighth Bomber Command, said:

"Germany is now wide open—no part is secure—for she has received blows at vital units deeper in her territory than ever before.

"Now the Allied air forces in Africa and Britain have Germany between their jaws."

Earlier, talking to correspondents awaiting the return of the Schweinfurt raiders at the airfield from which the Eighth Air Force's first Fortresses left for Europe a year ago, General Anderson said:

"We still have a hard fight against an increasingly desperate enemy, but the past year has shown conclusively that strategic bombing by the American and British Bomber Commands can do the job some of us have foreseen and promised so consistently.

General Anderson remarked that the most obvious results of the Fortress attacks in the year's operations—the shooting down of enemy fighters—was not their most important accomplishment.

"The shooting down of fighters who oppose us is necessary, but our real job is the destruction of the Axis' ability to wage war," he said. "His ability stems from many sources, most of them far removed from the fronts, some having little apparent or direct connection with the fighting forces.

"These sources are analyzed carefully to determine their relative importance to the enemy. Their vulnerability is determined in terms of distance and destructibility.

"We started one year ago today and have followed gradually a developing plan of scientific destruction, the full impact of which is certainly now apparent to the enemy.

"Although we cannot say the end actually is in sight, the eventual end, the ultimate collapse of German resistance due to the ever-spreading bomb cancer, certainly is obvious and inevitable."

AIR WAR: NEWSPAPER REPORTS

OBJECTIVE: At the end of this activity, you will be able to use news reports to explain how the Air War was presented in newspapers of the time.

ACTIVITY: Read the article *U.S. Planes in Shuttle Blow Attack Nazi Airplane Factory*, and answer the following questions

1. What targets were hit in the raids described in this article?
2. What losses were inflicted on the U.S. forces making the raids?
3. What were the enemy losses?
4. How were these raids unique?
5. What is a shuttle raid?
6. What is/are the goal(s) of the Allied Air Forces?
7. How were they attempting to achieve their goal(s)?
8. Why did the reporter feel that these attacks would worry the German leaders? Support your statement with details from the article.
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OBJECTIVE: At the end of this activity, you will be able to use news reports to explain how the Air War was presented in newspapers of the time.

ACTIVITY: Read the article *U.S. FIGHTER BLOW DESTROYS 86 NAZIS*, and answer the following questions.

1. What were the U.S. and RAF aircraft attacking?
Bridges, factories, roads, traffic targets, gasoline stores, synthetic oil plants, and airfields were all struck by Allied air forces.
2. Based on the details provided by the article, define and explain a "fighter sweep?"
An offensive mission by fighter aircraft to seek out and destroy enemy targets of opportunity in an allotted area of operations
3. Over which targets were German defenses the strongest?
Around the cities of Neustadt and Munich the German forces put up their stiffest defense.
4. According to the article, what are the German losses to date?
The U.S. air forces had destroyed 2,570 aircraft, 3,386 locomotives, 7,030 railroad cars, 100 barges, 3,610 motor vehicles. Additionally, they had damaged 2,389 locomotives, 21,000 railroad cars, 657 barges, 2,700 trucks, and over 1,600 aircraft on the ground.
5. How do you think the damage inflicted by the Allied air forces influenced the war? Give details from the article to support your position.
Student responses should focus on the level of destruction wrought by the Allied air forces on Germany's infrastructure, industrial centers, as well as road and rail traffic and how damage in all of these areas would severely cripple the German war effort.

U. S. FIGHTER BLOW DESTROYS 86 NAZIS

8th Air Force Pilots Fire Oil Stores Near Munich, Catch and Punish Luftwaffe

RAF HITS DAY AND NIGHT

Muenster Traffic Center, Ruhr Fuel Plants Its Targets—15th Bombs at Vienna

LONDON, Sunday, Nov. 19 (AP)—Eighty-six German planes were shot down or destroyed on the ground yesterday by 400 hard-hitting American fighter pilots who hung up the second longest such mission on record—1,200 air miles to Munich and back.

Another 1,500 American fighters attacked bridges, factories and roads in the Reich and German infantrymen falling back before Gen. Dwight D. Eisenhower's great offensive, while 1,150 Allied heavy bombers pounded gasoline stores and traffic targets in western and southern Germany and Austria.

Last night British Lancasters went back to the Ruhr after other Royal Air Force "heavies" had hit Muenster during the day. The target for the night was the important synthetic oil plant at Wanne-Eickel.

During the afternoon 650 Liberators and Flying Fortresses from Italy bombed oil targets near Vienna and their 300-plane fighter escort punished enemy airfields near the Brenner Pass.

Rocket-Bomb Fuel Destroyed

Flying a mission that a year ago would have been called impossible, the Eighth Air Force's 400 Thunderbolts and Mustangs set fire to oil storage depots near Munich, Ulm and Hanau that were vital to Nazi rocket-bomb attacks on England.

The fighter sweep was the longest since Eighth Air Force pilots shot up Nazi airfields east of Berlin last spring. Oil-bearing railroad cars, as well as oil storage, were main targets. Ulm is seventy miles northwest of Munich and Hanau is twenty-five miles east of Frankfurt on the Main.

German planes were ordered into battle for the first time since Nov. 2, when 155 Nazi defense craft were shot down by these same American pilots.

North of Munich one of the Mustang groups was challenged by forty Messerschmitt 109's and the American won six victories. Thunderbolts whirled against thirty Nazis near Hanau and downed ten.

The grounded Nazi aircraft, about thirty of them jet-propelled and also over Neustadt, to the near Munich, where the American pilots said the flak was the heaviest they had ever encountered.

Eighth's Fighter Loss Small

Eleven of sixteen Eighth Air Force fighter pilots who failed to return are believed to have landed in friendly territory. Over Frankfurt and also over Neustadt to the south of Regensburg, a region rich with oil and gasoline stores, the Luftwaffe came up to attack in formations ranging from ten to thirty planes.

The Luftwaffe lost twenty-five planes shot down and another sixty-one on the ground.

Thirty of the Nazi aircraft raked into flames by streams of fiery tracers were the jet propelled

Me. 262's. Most of the strafing was done from fence height at Lechfeld airdrome near Munich. Leipheim near Augsburg and Mengen north of Lake Constance.

Oil storage tanks and parked railway fuel cars were left burning at Langenseibold near Hanau and Weissenhorn near Ulm. South of Ludwigshafen American pilots blew up twenty-two locomotives, fifty oil tank cars and 200 other railway cars.

Near Frankfurt a large formation of Focke-Wulf 190's swooped on a Thunderbolt outfit, the Fifty-sixth Fighter Group, led by Maj. Harold E. Comstock of Fresno, Calif. The two formations closed at 8,000 feet, whirling in a circus of dog fighting over many miles before thirteen Nazi pilots were shot down and the rest limped for home.

Halifaxes Attack at Muenster

In the RAF's daylight attack about 500 Halifaxes, escorted by 200 Spitfires and Mustangs, battered rail and water communications at Muenster.

The United States Fifteenth Air Force punched another hole in Nazi rocket-bomb supplies when its Italian-based "heavies" smashed at oil targets near Vienna.

Mustang-escorted Liberators hit at airfields at Udine, near-by Aviano at the head of the Adriatic; Villafranca, ten miles southwest of Verona, and Vicenza, twenty-seven

miles northeast of Verona. Crewmen reported only scattered anti-aircraft fire and no aerial defense of these fields, on which Nazi fighters were believed to have been based for attacks on American bombing formations flying to German targets.

Lightning-escorted Fortresses ran into thick anti-aircraft fire over the Vienna area, where clouds hid the results of the bombing attack.

From last Feb. 1 to yesterday fighters of the Eighth and Fifteenth Air Forces had destroyed 2,570 Nazi aircraft on the ground, 3,386 locomotives, 7,030 railway cars, 100 barges and 3,610 motor vehicles, United States Strategic Air Forces headquarters announced. They damaged 2,389 locomotives, 21,000 railway cars, 657 barges, 2,700 trucks and more than 1,600 parked airplanes.

WAR: NEWSPAPER REPORTS

OBJECTIVE: At the end of this activity, you will be able to use news reports to explain how the Air War was presented in newspapers of the time.

ACTIVITY: Read the article *U.S. FIGHTER BLOW DESTROYS 86 NAZIS*, and answer the following questions.

1. What were the U.S. and RAF aircraft attacking?
2. Based on the details provided by the article, define and explain a "fighter sweep?"
3. Over which targets were German defenses the strongest?
4. According to the article, what are the German losses to date?
5. How do you think the damage inflicted by the Allied air forces influenced the war? Give details from the article to support your position.

U. S. FIGHTER BLOW DESTROYS 86 NAZIS

8th Air Force Pilots Fire Oil Stores Near Munich, Catch and Punish Luftwaffe

RAF HITS DAY AND NIGHT

Muenster Traffic Center, Ruhr Fuel Plants Its Targets—15th Bombs at Vienna

LONDON, Sunday, Nov. 19 (AP)—Eighty-six German planes were shot down or destroyed on the ground yesterday by 400 hard-hitting American fighter pilots who hung up the second longest such mission on record—1,200 air miles to Munich and back.

Another 1,500 American fighters attacked bridges, factories and roads in the Reich and German infantrymen falling back before Gen. Dwight D. Eisenhower's great offensive, while 1,150 Allied heavy bombers pounded gasoline stores and traffic targets in western and southern Germany and Austria.

Last night British Lancasters went back to the Ruhr after other Royal Air Force "heavies" had hit Muenster during the day. The target for the night was the important synthetic oil plant at Wanne-Eickel.

During the afternoon 650 Liberators and Flying Fortresses from Italy bombed oil targets near Vienna and their 300-plane fighter escort punished enemy airfields near the Brenner Pass.

Rocket-Bomb Fuel Destroyed

Flying a mission that a year ago would have been called impossible, the Eighth Air Force's 400 Thunderbolts and Mustangs set fire to oil storage depots near Munich, Ulm and Hanau that were vital to Nazi rocket-bomb attacks on England.

The fighter sweep was the longest since Eighth Air Force pilots shot up Nazi airfields east of Berlin last spring. Oil-bearing railroad cars, as well as oil storage, were main targets. Ulm is seventy miles northwest of Munich and Hanau is twenty-five miles east of Frankfurt on the Main.

German planes were ordered into battle for the first time since Nov. 2, when 155 Nazi defense craft were shot down by these same American pilots.

North of Munich one of the Mustang groups was challenged by forty Messerschmitt 109's and the American won six victories. Thunderbolts whirled against thirty Nazis near Hanau and downed ten.

The grounded Nazi aircraft, about thirty of them jet-propelled and also over Neustadt, to the near Munich, where the American pilots said the flak was the heaviest they had ever encountered.

Eighth's Fighter Loss Small

Eleven of sixteen Eighth Air Force fighter pilots who failed to return are believed to have landed in friendly territory. Over Frankfurt and also over Neustadt to the south of Regensburg, a region rich with oil and gasoline stores, the Luftwaffe came up to attack in formations ranging from ten to thirty planes.

The Luftwaffe lost twenty-five planes shot down and another sixty-one on the ground.

Thirty of the Nazi aircraft raked into flames by streams of fiery tracers were the jet propelled

Me. 262's. Most of the strafing was done from fence height at Lechfeld airdrome near Munich. Leipheim near Augsburg and Mengen north of Lake Constance.

Oil storage tanks and parked railway fuel cars were left burning at Langenseebold near Hanau and Weissenhorn near Ulm. South of Ludwigshafen American pilots blew up twenty-two locomotives, fifty oil tank cars and 200 other railway cars.

Near Frankfurt a large formation of Focke-Wulf 190's swooped on a Thunderbolt outfit, the Fifty-sixth Fighter Group, led by Maj. Harold E. Comstock of Fresno, Calif. The two formations closed at 8,000 feet, whirling in a circus of dog fighting over many miles before thirteen Nazi pilots were shot down and the rest limped for home.

Halfaxes Attack at Muenster

In the RAF's daylight attack about 500 Halfaxes, escorted by 200 Spitfires and Mustangs, battered rail and water communications at Muenster.

The United States Fifteenth Air Force punched another hole in Nazi rocket-bomb supplies when its Italian-based "heavies" smashed at oil targets near Vienna.

Mustang-escorted Liberators hit at airfields at Udine, near-by Aviano at the head of the Adriatic; Villafranca, ten miles southwest of Verona, and Vicenza, twenty-seven

miles northeast of Verona. Crewmen reported only scattered anti-aircraft fire and no aerial defense of these fields, on which Nazi fighters were believed to have been based for attacks on American bombing formations flying to German targets.

Lightning-escorted Fortresses ran into thick anti-aircraft fire over the Vienna area, where clouds hid the results of the bombing attack.

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TEACHER PAGE

AIR WAR: NEWSPAPER REPORTS

OBJECTIVE: At the end of this activity, you will be able to use news reports to explain how the Air War was presented in newspapers of the time.

ACTIVITY: Read the article *REGENSBURG FIRED*, and answer the following questions.

1. What area of German industry was targeted by the Allied air forces?
Aircraft industries were targeted and struck by Allied bombers.
2. What was the goal of the attacks?
The Allied air forces are attempting to destroy the fighter component of the Luftwaffe (German Air Force) by going after targets that the Germans were forced to defend.
3. What types of aircraft were used by the USAAF and RAF?
 - a. Bombers:
*Flying Fortresses, Liberators, Mitchells, Marauders (U.S.)
Bostons, Mosquitos, Mitchells (RAF)*
 - b. Fighters:
*Lightnings, Thunderbolts, Mustangs (U.S.)
Typhoons, Spitfires (RAF)*
4. What specific targets were hit in Germany?
*Messerschmitt assembly factory and aircraft components factory at Regensburg
Norma ball bearing works at Stuttgart
Messerschmitt assembly center and experimental station at Augsburg
Bachmann von Blumental aircraft components factory at Fuerth
Aircraft plant at Obertrauling*
5. What targets were struck outside of Germany?
*Italian Adriatic ports at Pola and Fiume
Yugoslav port of Zara
Airdrome in Graz
Railway junction at Zell am See*
6. According to the article, how many enemy aircraft were destroyed?
After two days of fighting, 208 German aircraft had been destroyed by American forces. Additionally, British aircraft had accounted for between 10 and 15 more German aircraft. Total German aircraft losses from a week of Allied air attacks totaled 518.
7. What were U.S. aircraft losses?
 - a. Bombers
Thirty-one heavy bombers had been lost along with a Marauder medium bomber had been lost in the operations detailed in this article.
 - b. Fighters
Three fighters were reported missing in the operations described in the article.
8. What had been the total losses in aircraft for the Allied and German fighters?
Over 1,000 enemy planes have been recorded as "kills" with hundreds more probably destroyed or damaged. American losses in fighters were listed as 295.
9. How did the Allied commanders determine the damage inflicted?
Damage estimates were based on visual reports from pilots and crews engaged in the operation. Additionally, reconnaissance photographs were taken of the target areas and evaluated.

REGENSBURG FIRED

Big Airplane Factories Bombed From Both England and Italy

RAF RIPS SCHWEINFURT

U. S. Loses 31 Bombers— Runs Bag of Nazi Craft Up to 518 in Six Days

By DREW MIDDLETON
By Cable to THE NEW YORK TIMES.

LONDON, Saturday, Feb. 26— Hundreds of heavy bombers of the United States Strategic Air Forces, flying from Britain and Italy, smashed deep into Germany yesterday to hammer six vital factories on which the German aircraft industry depends after two smashing blows at Schweinfurt Thursday night by about 1,000 Lancasters and Halifaxes of the Royal Air Force.

[The Berlin radio said Friday night that British planes were attacking Frankfurt on the Main, The United Press reported.

[A United Press dispatch from Zurich, Switzerland, said Allied bombers raided southern Germany Friday night and early Saturday morning. Bombers headed in the Munich direction Friday night and explosions were visible for forty-five minutes, the report said. A bigger force headed northeast from Lake Constance early Saturday and soon concentrated bombarding was heard for twenty minutes, the report added.]

The daylight attack yesterday was the third coordinated assault in four days against Germany from the west and south and the sixth successive daylight attack on the German aircraft industry from Britain. The Allied air forces are now in the midst of a smashing offensive to destroy the fighter command of the Luftwaffe, an offensive that through its violence admits its importance to Allied strategy in the west this year.

Eighth Hits Five Targets

Fortresses and Liberators of the Eighth Air Force, northern of the two powerful arms of attack striking at Germany, blasted the Messerschmitt assembly factory and major airframe components factory at Regensburg, the ball bearing works at Stuttgart, the Messerschmitt assembly center and experimental station at Augsburg and the major aircraft components factory at Fuerth yesterday with "good results."

It was announced last night that the greatest fighter force ever employed by the United States Air Forces was dispatched into Germany, a force that made a record penetration into enemy territory.

Simultaneously large forces of bombers of the Fifteenth Air Force in Italy pounded factories at Regensburg in a complementary attack that once again must have brought home to the Germans the tremendous weight of the bomber squadrons now being brought to bear on their aircraft industry by the United States Army Air Forces.

The target of the Eighth and Fifteenth Air Force bombers at Regensburg was the Prufening-Messerschmitt 109 fighter assembly factory, severely crippled Aug. 17, 1943, by the Eighth Air Force Fortresses. Yesterday the Fortresses also hit a near-by plant at Obertrauling.

The factories at Regensburg were the largest producer of ME 109's after those at Leipzig had been eliminated in last Sunday's attacks.

The factory at Augsburg was a parent Messerschmitt factory and an experimental center for this type. Me-410 twin-engined fighters also were produced there.

At Fuerth the Liberators pounded the Bachmann von Blumental aircraft plant producing components for the assembling of Me-110's and 410's.

At Stuttgart the target was the Norma ball-bearing plant engaged wholly in the production of bearings for aircraft.

[In addition to the blow at Regensburg the Fifteenth also bombed the Italian Adriatic

Continued on Page Two

REGENSBURG FIRED IN 2-WAY ASSAULT

Continued From Page One

ports of Pola and Fiume, the latter for the second straight day; the Yugoslav port of Zara on the Dalmatian coast, an airdrome near Graz in southern Austria and the railway junction at Zell am See, thirty-three miles southwest of Salzburg, The Associated Press reported. All of the missions were described as successful.]

52 Nazi Planes Felled

Very strong forces of fighters, principally American, but including an impressive number of British, Allied and Dominion squadrons of highest fighting quality, accompanied the Eighth Air Force bombers from Britain. They destroyed twenty-seven enemy fighters, according to preliminary reports. The toll taken by the bombers of the Eighth has not been reported.

Lightnings, Thunderbolts and Mustangs of the Eighth Air Force flew 1,000 miles to Regensburg to protect the bombers, with Lightnings and Mustangs accounting for twenty aircraft. Mustangs of the Ninth Air Force escorting the "heavies" to other targets got seven German fighters without a loss.

At least twenty-five more enemy planes went down under the fire of the Fifteenth Air Force, boosting the day's total to fifty-two German planes destroyed for certain, a success that bears as directly as the successful bombing of aircraft plants bears indirectly on the strength of the enemy fighter force for anti-invasion employment.

The last two days' fighting over Europe has accounted for 208 German aircraft destroyed by American planes in the air alone, while the British have knocked down ten and perhaps fifteen more of the limited enemy striking force in western Europe.

American losses in this great engagement continue to be heavier than during the period when single "fringe" targets were attacked. Thirty-one heavy bombers and three fighters were missing from the British-based force in yesterday's operations, which means the loss of at least 300 trained airmen.

A Marauder and one fighter were missing from the sorties, but the Marauders claimed two Focke-Wulf 190's, while the escorts destroyed one twin-engined fighter.

In addition to the methodical series of blows against the aircraft industry, the offensive against the coast of northern France and airfields in Belgium and the Netherlands was maintained yesterday. Marauders of the United States Ninth Air Force hammered airfields at Venlo and St. Trond despite furious opposition from enemy fighters, which was the first encountered this month. Among the enemy formations attacking the American medium bombers was a "yellow-nose" squadron of Focke-Wulf 190's, one of which was destroyed by a Norwegian fighter pilot.

U. S. Attack "Very Great"

RAF, Dominion and Allied Bostons, Mosquitos and Mitchells, escorted and covered by clouds of RAF and Allied Spitfires and Typhoons, harried enemy military installations in northern France in their part of the short-range offensive.

The American effort yesterday, made in "very great strength"—the first time the expression has been used by the United States Strategic Air Forces—climaxed a week in which, according to reports assessed last night, at least eight of Germany's most important aircraft centers have been either completely wiped out for the time being or were so devastated that production has been drastically curtailed. Schweinfurt, Regensburg, Leipzig, Brunswick, Stuttgart, Gotha, Bernburg and Steyr are the centers so classified that have been attacked since Sunday.

During this period 518 enemy planes have been knocked from the skies, a figure that represents a drastic weakening of enemy fighter strength. American fighters are playing an increasingly important role in this destruction of the German Air Force. Thus far they have destroyed more than 1,000 enemy planes for a loss of 295, and 551 of the enemy "kills" have been scored since the first of this year, with several hundred more planes probably destroyed or damaged.

Yesterday's attacks on Regensburg from Britain, involving a flight of more than 1,100 miles, left a smoke plume visible for hundreds of miles, according to a returning pilot, while a gunner reported that flames were visible from fifty or sixty miles from the

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Ten of the plant's fourteen buildings were damaged, while hits were scored on a parts plant making locomotives and heavy railroad equipment. Four hangars of an adjacent airdrome were damaged and a number of planes hit on the ground.

In the simultaneous attack on the ball and roller bearing works at Schweinfurt, where the production of vital parts for fighter planes had been partially restored since the last attack in October, Fortresses of the Eighth Air Force inflicted heavy damage on one of four buildings and lesser damage to two others.

Steyr Factories Ablaze

The aircraft components and ball-bearing factory at Steyr in Austria were heavily damaged by Italian-based aircraft of the Fifteenth Air Force. Photographs showed fires raging in four of the largest buildings. Other heavy bombers of the Fifteenth made direct hits on a torpedo works, one refinery, the gas works and railroad facilities at Fiume.

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ARTICLE RUBRIC

Student Name: _____ Date: _____

Article: _____ Instructor: _____

	1	2	3	4	SCORE
ORGANIZATION	Information and details are not in sequential order	Information is presented in a choppy manner making understanding difficult	Information is presented in a logical manner with only minor areas of reader difficulty	Information is presented in a logical manner with no difficulty for the reader	
CONTENT	Student does not have an understanding of the material and cannot answer questions about subject.	Student has a slight understanding of the material and can answer some questions about the subject	Student understands the material and can answer most questions about the subject	Student has a complete understanding of the material and can answer all questions about the material.	
GRAMMAR AND SPELLING	The article has four or more spelling errors &/or grammatical errors.	The article has three misspelled words &/or grammatical errors.	The article has no more than two misspellings &/or grammatical errors.	The article has no misspelled words or grammatical errors.	
ASSIGNMENT INSTRUCTIONS	Student did not follow instructions for the finished article	The article has three or more areas in the article that are not in accordance with instructions	The article has one or two areas in the article that are not in accordance with instructions	The article fully complies with the instructions for the assignment	
REFERENCES AND BIBLIOGRAPHY	There are no references provided for the article	The article does not have the appropriate number of references &/or the bibliography had errors	The bibliography was incorrectly completed	Work displays the correct number of references, with a correctly written bibliography	
TEACHER COMMENTS				SCORE	

Name: _____ Teacher: _____ Date: _____

MAP ANALYSIS FORM

What is shown on this map?

Who, when, and where produced this map?

Why was this map produced?

How was the information from the map gathered?

Identify and explain the components &/or markings on the map.

Title

Legend/Key

Scale &/or Contour Intervals

Compass/Orientation Arrow

Projection Type

Colors Used

Notations

Printed Text

Handwritten

Other

Identify four important facts discovered in your study of this map.

POSTER ANALYSIS FORM

What colors are used in this poster?

Is there any significance to the color choices? Why or why not?

What images are used in this poster?

If an image is used, is it:

Easy to understand &/or interpret

Striking &/or unforgettable

Are the images used symbolic or factual? If symbolic, what do they represent?

Is the message that the poster conveys:

Visual

Verbal

Both visual and verbal

Who is the poster's target audience?

What is the purpose of the poster?

How does the purpose of the poster help the war effort?

Effective posters attract notice, are memorable, get people to do what the creators want, and provide clear, simple, and direct symbols &/or phrases. Is this an effective poster? Explain your answer.

Name: _____ Teacher: _____ Date: _____

PHOTOGRAPH ANALYSIS FORM

Examine the photograph for between two and three minutes and develop an impression of the image. Write what you think this photograph is showing.

Now, divide the photo into four equal sections. Carefully examine each section and see if details in the photograph become apparent. Complete the chart below and list people, objects, scenery, and activities seen in the photograph.

PEOPLE	OBJECTS	SCENERY	ACTIVITIES

After examining this image, what conclusions can you reach about the event that was photographed?

What questions does this photograph create or leave unanswered?

How and where could you find answers for the questions raised by the image?

Name: _____ Teacher: _____ Date: _____

IMAGE ANALYSIS FORM

Where possible, give the title, artist, and date of the image.

TITLE: _____

ARTIST/PUBLISHER: _____

DATE CREATED/PUBLISHED _____

After examining the image, complete the chart below:

PEOPLE	ANIMALS	ITEMS	ACTIVITIES	LOCATION and SCENERY
---------------	----------------	--------------	-------------------	-----------------------------

List words or phrases that are used to identify people, items, or ideas in the image.

What important symbols are used in the image? Explain what the symbols mean.

Explain the purpose &/or message of the image.

What techniques does the artist use to make his point? (Satire, emotional appeal, logic, etc.)

Is the artist's point clearly expressed? Why or why not?

DOCUMENT ANALYSIS FORM

Type of document (check one):

- | | |
|---|---|
| <input type="checkbox"/> Letter
<input type="checkbox"/> Speech
<input type="checkbox"/> Magazine
<input type="checkbox"/> Newspaper | <input type="checkbox"/> Journal/Diary
<input type="checkbox"/> Government Document
<input type="checkbox"/> Legal Document
<input type="checkbox"/> Song Lyrics |
|---|---|

Name/Title of Document:	
Date of Document:	
Author (if known):	
Where document was created:	
Summary of document:	
What is the document's purpose? Give examples to support your answer.	

	Statement	Importance
1		
2		
3		

List three statements from the document and explain why they are important.

WHAT MAKES AN EFFECTIVE POSTER?

The following information will help you better understand the components of an effective poster. Part 1 describes what an effective poster will do. Part 2 lists the essential elements of an effective poster. Examples of the elements listed in Part 2 are pointed out and described in the poster at the bottom of the page.

1. An effective poster will do the following:

- Attract attention
- Be remembered by the viewer
- Get the viewer to do what the poster asks

2. A poster is viewed by people in a short period of time and from distance. Therefore, an effective poster will include the following:

- A. Verbal communication that is uncomplicated
- B. Images and text that are clear and easy to distinguish as well as understand from a distance
- C. Limited colors are used in order to get the viewer's attention but not become confusing
- D. The message is relevant to the viewer
- E. Images are clear and striking
- F. The viewer's eyes are directed through the poster's text and images in an orderly manner

B: A charging soldier makes up the central part of the image. The other soldiers are clear and easily distinguishable. The Japanese soldiers are positioned below and losing to the British soldiers.

C: Shades of brown and black are used. This allows for great detail in the drawing but keeps the images easy to view and understand.

A: Three bold words clearly state the message of this poster.



F: The central soldier's pose draws the viewer's eye from the top right corner of the poster down the soldier's body to the text at the bottom of the poster.

E: The first image the viewer sees is a soldier charging the enemy. His foot almost looks as if it is stomping on the Japanese soldier below him. In addition, the soldier in the background attacking a Japanese soldier with a bayonet draws the viewer's eye towards the slogan at the bottom of the poster.

D: The message of the poster is relevant to the target audience of British civilians and military personnel.

AIRCRAFT TERMS, DEFINITIONS, AND DIAGRAM

DIHEDRAL – n. The upward or downward inclination of an aircraft wing from true horizontal.

Ex.: Dihedral is where the right and left wing tips are higher than the fuselage. More dihedral generally means that a plane will be more stable in the air, but will be more difficult to turn.

ELEVATOR – n. a hinged horizontal surface on an airplane or the like, used to control the longitudinal inclination and usually placed at the tail end of the fuselage.

FIN – n. the fixed vertical surface of an aircraft empennage, to which the rudder is hinged.

FUSELAGE – n. the complete central structure to which the wing, tail surfaces, and engines are attached on an airplane.

HORIZONTAL STABILIZER – n. the horizontal surface, usually fixed, of an aircraft empennage, to which the elevator is hinged.

LEADING EDGE – n. the edge of an airfoil or propeller blade facing the direction of motion.

MONOPLANE – n. an aircraft with one main set of wing surfaces. The main distinction in types of monoplane is how the wings attach to the fuselage:

- **LOW-WING:** the wing lower surface is level with the bottom of the fuselage
- **MID-WING:** the wing is mounted mid-way up the fuselage
- **SHOULDER-WING:** the wing is mounted above the middle of the fuselage
- **HIGH-WING:** the wing upper surface is level with the top of the fuselage

NACELLE – n. a separate streamlined enclosure on an aircraft for sheltering the crew or cargo or housing an engine.

RUDDER – n. a movable control surface attached to a vertical stabilizer, located at the rear of an airplane and used, along with the ailerons, to turn the airplane.

STABILIZER – n. a device for stabilizing an aircraft, as the fixed, horizontal tail surface on an airplane.

TRAILING EDGE – n. the rear edge of a propeller blade or airfoil.

UNDERSLUNG – adj. suspended from an upper support, as the chassis of a vehicle from the axles or supported from above; placed or suspended below the source of support

VERTICAL STABILIZER – n. any of certain small, subsidiary structures on an aircraft, designed to increase directional stability.

WING ROOT – n. that part of the wing, on a fixed-wing aircraft, that is closest to the fuselage.

