ACTIVITY: Language

IF PILOTS HAVE TO SPELL OUT WORDS ON THE RADIO, THEY USE AVIATION'S PHONETIC ALPHABET:

Alpha	**Q**uebec **(kuh-BEK)**
Bravo	**R**omeo
Charlie	**S**ierra
Delta	**T**ango
Echo	**U**niform
Foxtrot	**V**ictor
Golf	**W**hiskey
Hotel	**X**-ray
India	**Y**ankee
Juliet	**Z**ulu
Kilo	
Lima **(LEE-muh)**	**3** Tree
Mike	**9** Niner
November	**0** Zero
Oscar	All other numbers
Papa	standard pronunciation

SPELL OUT THE FOLLOWING WORDS USING THE PHONETIC ALPHABET:

1. PILOT _____

2. AIRPLANE _____

3. SCHOOL _____

4. Name of your school mascot _____

5. Your city or town _____

6. Your first name _____

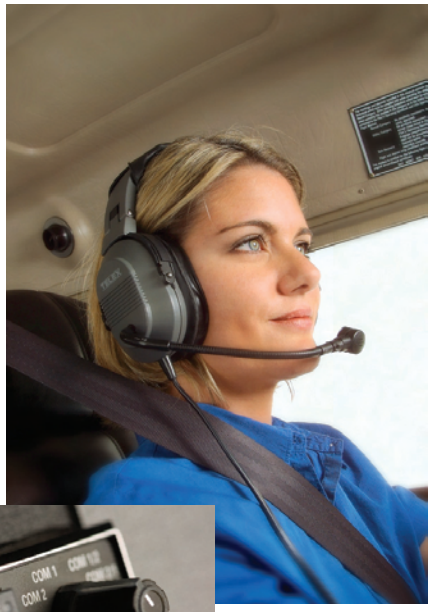
7. Your teacher's name _____

8. The color of your school bus _____

WHEN PILOTS TALK ON THE RADIO, THEY USE STANDARD, ABBREVIATED WORDS THAT STAND FOR TYPICAL MESSAGES OR IDEAS.

See if you can match these messages with the correct radio language!

Message	Radio Language
1. No, I can't do that	**2.** Roger
2. I heard you	**3.** Say Again
3. Didn't understand, repeat	**5.** Wilco (Hint: Will Comply)
4. Yes	**1.** Unable
5. Yes, I'll do that	**4.** Affirmative



ACTIVITY: Aircraft Basics

DID YOU LEARN THESE NEW WORDS?

The "body" of an airplane: F**U S E L A G E**

The "hood" that covers the engine: ENGINE C **O W L**

The flight control on the horizontal stabilizer that raises or lowers the nose: E **L E** V **A T O R**

Like on a boat, the flight control on the vertical stabilizer that turns the airplane's nose right or left: R **U D D** E **R**

The role of the airplane's tail is to balance and steady its flight. That's why its horizontal part and its vertical part are both called a: S **T A** B **I L I** Z **E R**

Near the tip of the wing, the flight control that banks the wing for a turn is an: A **I L E** R **O N**

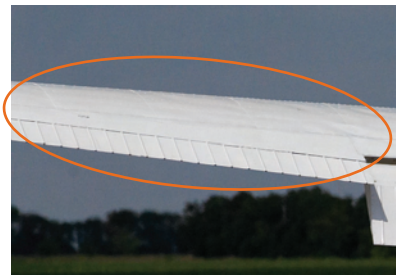
Also on each wing is a F **L A P** . When lowered for takeoff and landing, it changes the shape of the wing to create more lift.

On a high-wing airplane, a pole-like structure provides additional support to the wing. It is a: S **T R U** T

ACTIVITY: Aircraft Basics

WRITE THE NAME OF EACH PART OF AN AIRPLANE UNDER ITS PICTURE:

Elevator



Aileron

Flap

Tail

Wing

Wing Strut

Rudder

Propeller

Wing Strut

Propeller

Flap

Rudder

Aileron

Elevator

Tail

Wing

ACTIVITY: Flight Controls

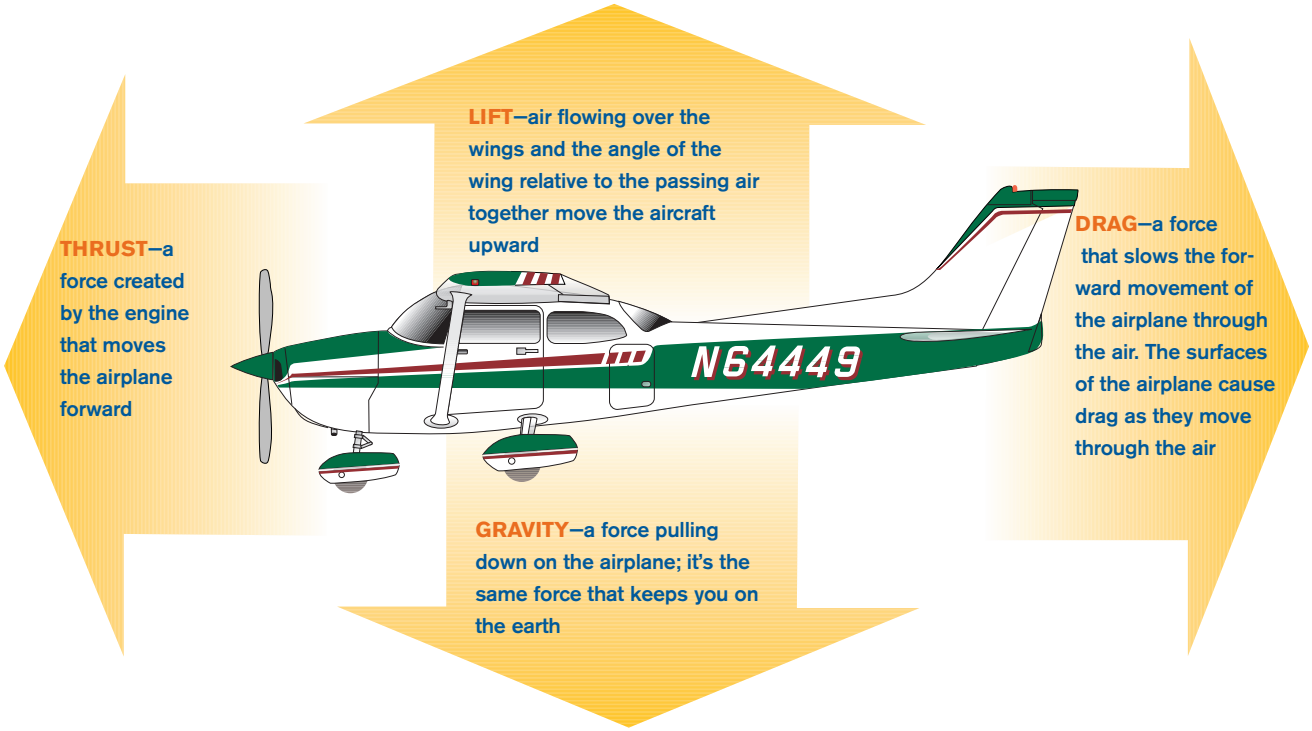
CIRCLE ONE OR FILL IN THE BLANKS:

1. To turn the plane, the pilot turns the control wheel **LEFT** / **RIGHT** to start a left turn.
2. Turning the control wheel makes the wings tilt or "B A N K ."
3. To start a turn to the right, the pilot would turn the control wheel to the **LEFT** / **RIGHT**.
4. To help coordinate the turn, the pilot uses the R U D D E R.

CIRCLE ONE:

1. To facilitate a left turn, the pilot pushes the **LEFT** / **RIGHT** rudder pedal.
2. To start a climb, the pilot **PUSHES FORWARD** / **PULLS BACK** on the control wheel.
3. To start a descent, the pilot **PUSHES FORWARD** / **PULLS BACK** on the control wheel.

ACTIVITY: Aerodynamics



CIRCLE ONE OR FILL IN THE BLANKS:

1. A propeller moves an airplane ___forward___ by creating thrust.

2. For every action there is an ___equal___ and ___opposite___ reaction, according to Newton.

3. Air flowing over and under the wings generates ___lift___ which makes an airplane conquer gravity and fly.

4. ___drag___ is air resistance created by airplane parts in the air stream.

TRUE OR FALSE:

1. ___F___ Air moves slower around the curved top part of a wing.

2. ___F___ Air moving over the wing creates higher air pressure above the wing.

3. ___T___ Lift can overcome the effects of gravity.

4. ___F___ The shape of a wing has no affect on how much lift is produced.

ACTIVITY: Weight and Balance

CIRCLE ONE OR FILL IN THE BLANKS:

1. The point where a teeter-totter rests is called a fulcrum. **TRUE** / **FALSE**

2. Kathryn and Kim each weigh 85 pounds they are sitting equally far from the center of the teeter-totter, they will B A L A N C E each other.

3. Jeffrey weighs 95 pounds and Jennifer weighs 72 pounds. Jennifer will have to sit **CLOSER** / **FARTHER AWAY** from the center than Jeffrey to counter-balance Jeffrey's weight.

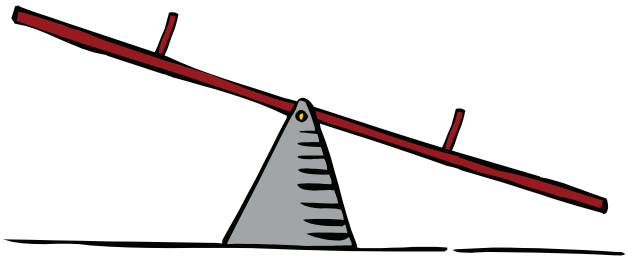
4. The distance from the center of balance (fulcrum) to the weight of each child is call the A R M.

5. Two factors determine if each child will be in balance:

A. the child's W E I G H T and

B. the distance to the center of balance (A R M)

6. The one point on a beam (like our teeter-totter) where all weights and distances balance is called the fulcrum. In an airplane, it is called the center of G R A V I T Y.



ACTIVITY: Weight and Balance

CIRCLE ONE OR FILL IN THE BLANKS:

1. In the air, the weight of the plane, its equipment and all the people, cargo and fuel in it have one C E N T E R of G R A V I T Y.

2. In the air, the center of gravity is somewhere along the W I N G, where the center of lift also is located.

3. The engine in the very front of the plane is one of the heaviest parts of the plane. No wonder the distance from the engine to the wing is **SHORTER / LONGER** than the distance from the wing to the tail.

4. The plane's front seats and fuel in the wings are very close to the center of gravity and the center of lift.

A. Carrying a heavier pilot and passenger in the front seats will likely have **A LARGE / A SMALL** effect on the balance of the airplane.

B. Carrying more fuel will add weight, but will have **A LARGE / ALMOST NO** effect on the balance of the airplane.

5. The passenger seats are in the rear of the plane, and the cargo bin is even further back (behind the rear seats and well behind the wing).

A. Carrying passengers in the rear seats will likely have an effect on the plane's balance. **TRUE / FALSE**

B. Carrying a little cargo in the cargo bin will have no effect on the plane's balance. **TRUE / FALSE**

6. The safe flight of an airplane depends on both W E I G H T and B A L A N C E .

ACTIVITY: Instruments

NAME AND READ EACH INSTRUMENT

Name: airspeed indicator

Speed: 120 knots

135 mph

Name: altimeter

Altitude: 4 , 5 6 0 feet

Name: heading indicator

Heading: 160 degrees

Name: vertical speed indicator

Is plane climbing? ____

Flying level? ✔

Descending? ____

Name: altimeter

Altitude: 4 , 1 6 0 feet

Name: attitude indicator

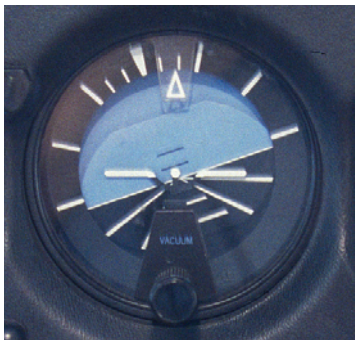
Plane is turning:

___ Right? ✔ Left?

Name: turn coordinator

Plane is turning:

___ Right? ✔ Left?



Name: attitude indicator

Plane is turning:

✔ Right? ___ Left?

ACTIVITY: Instruments

READ THE INSTRUMENTS* TO ANSWER THE QUESTIONS BELOW:

1. What is the airplane's indicated airspeed?
   1 0 5 knots
2. At what altitude is the airplane?
   3 , 1 8 0 feet

3. The airplane is in a turn.
   What two instruments tell you?
   A. ARTIFICAL H O R I Z O N
   B. TURN C O O R D I N A T O R

4. The airplane is descending.
   What instrument(s) tell you?
   V E R T I C A L
   S P E E D
   I N D I C A T O R

5. What direction is this plane flying?
   NORTHEAST AT 040 DEGREES

THINK IT THROUGH... .

Since the airplane is banked and turning, is the airplane's heading going to change or stay the same?

CHANGE

Since the airplane is descending, will the airspeed likely stay the same, decrease or increase?

INCREASE

Read the Vertical Speed Indicator. How long will the airplane take to descend 1,000 feet? 2 minutes

ACTIVITY: Weather

Low stratus

Cumulonimbus

Pilots watch the clouds, because clouds can indicate the kind of weather in store for a flight.

FILL IN THE BLANKS OR CIRCLE ONE:

A. Stratus means flat or "on one level."

"Low stratus" (clouds near the ground) can be part of a wide area of poor weather near weather **fronts**. A stratus cloud at ground level is called F O G.

Pilots who are certified to fly using instruments only can fly in the low ceilings and poor visibilities typical of low stratus clouds.

B. Cumulus means "clumped." Large, tall cumulus clouds can have dark bottoms (bases) indicating they have grown vertically and now block out the sun's light.

When clouds grow enough vertically, they can produce R A I N by elevating their water vapor until it cools and condenses into water drops which are heavy enough to fall. We call this **precipitation**.

When these clouds grow very tall (20,000 to 50,000 feet) and get very dark, they are called **cumulonimbus** – the cloud structure of a typical T H U N D E R storm.

If cumulonimbus clouds have grown massively in vertical development, rain will likely be **light / moderate / very heavy.** (circle one)

Cumulonimbus clouds grow with afternoon heat or when two air masses meet in a "front." At a front, warmer and cooler air meet. The warmer air is forced U P , making tall clouds that produce rain or thunderstorms.

ACTIVITY: Weather

Fair weather cumulus

High cirrus

Pilots can fly by avoiding these areas or flying around them.

C. Fair weather cumulus have little height (vertical development.) They have **little / great** potential to produce rain.

D. Cirrus clouds high altitudes where it is cold, are made of ice crystals, not water vapor. They usually indicate nothing but good flying weather.

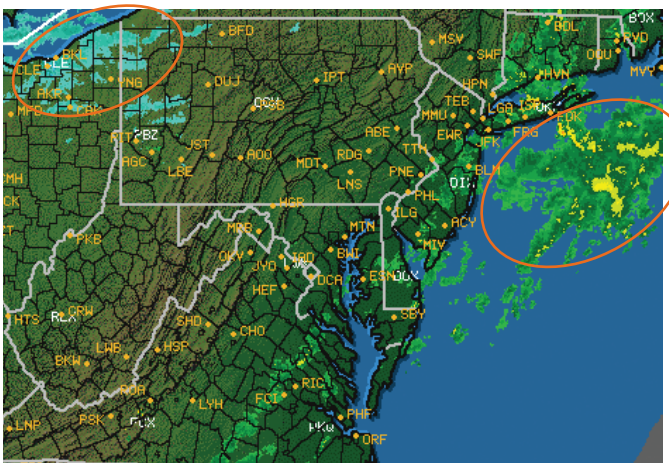
Near tall mountains, some types of windblown cirrus clouds can indicate turbulent air flow over the mountain – showing pilots areas of turbulence to avoid.

Clouds are the pilot's "road signs" to weather in the area.

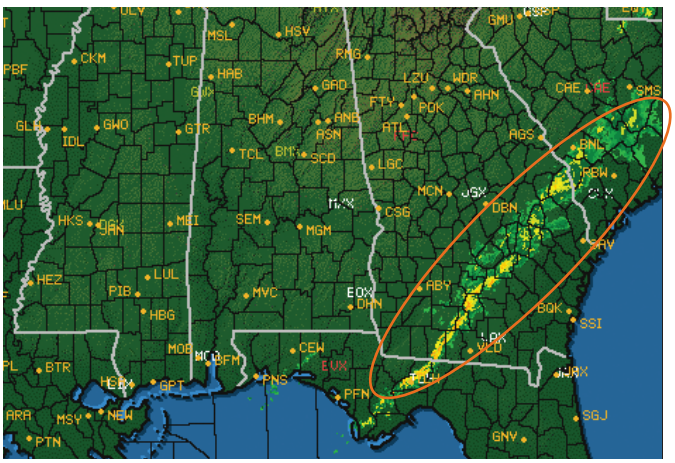
ACTIVITY: Weather

TODAY, PILOTS HAVE MORE THAN CLOUDS TO TELL THEM WHAT'S AHEAD.

WHAT DO THESE SATELLITE IMAGES TELL YOU ABOUT THE LOCAL WEATHER?



Map 1



Map 2

Weather reports, satellite photos and weather radar tell what the weather is beyond what can be seen.

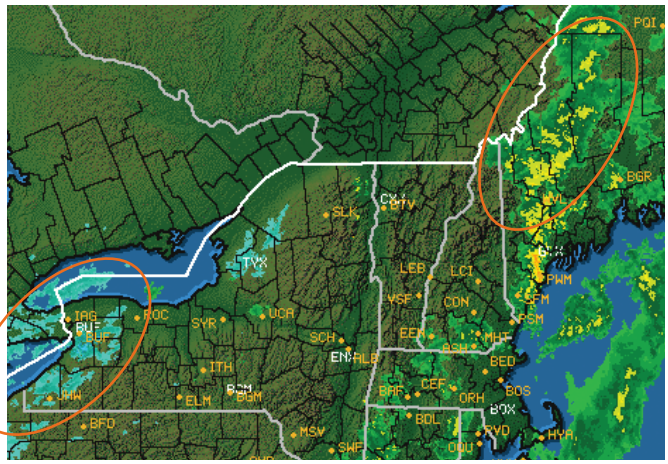
WHAT DO THESE RADAR IMAGES SAY ABOUT WEATHER IN THESE AREAS?

MAP 1: A **line** of R A I N extends from Virginia to Connecticut. An **area** of R A I N extends off-shore into the Atlantic. The heavier rain is shown in YELLOW.

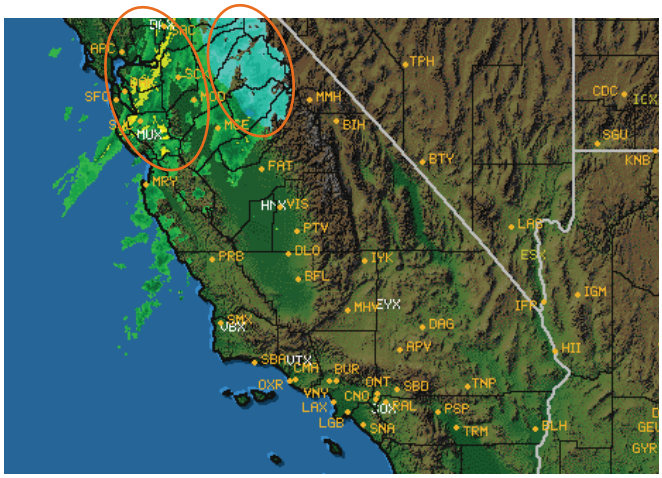
In northern Ohio and NW Pennsylvania, there is "lake effect" S N O W blowing downwind of the Great Lakes, since precipitation in areas below freezing is shown in BLUE.

MAP 2: The Florida Panhandle, Georgia and South Carolina have a line of H E A V Y rain and thunderstorms storms shown in YELLOW.

ACTIVITY: Weather



Map 3



Map 4

MAP 3: In Maine, there are embedded T H U N D E R storms shown in YELLOW. (Embedded: hidden inside areas of general rain.)

To the west, on the border with Canada, there is also L A K E E F F E C T snow (in blue) downwind of two Great Lakes.

MAP 4: Northern California near San Francisco and the normally warmer coast has an area of rain and a L I N E of heavier rain (in YELLOW.)

An area of S N O W is shown (in BLUE) in the normally colder Sierra Nevada, tall mountains east of the city near the Nevada border.

ACTIVITY: Weather

FILL IN THE BLANKS OR CHOSE ONE:

1. Generally, **BAD** / **GOOD** weather is associated with high-pressure areas (H on the weather map) while L O W pressure areas (L on the weather map) often bring **POOR** / **BETTER** weather.

2. Air flows from high pressure areas towards L O W pressure areas. Atmospheric pressure, called b A R O m e t r i c pressure, is measured by a b A R O m e t e r. When a Low is approaching, B A R O m e t r i c pressure **rises** / **falls**.

3. In the Northern Hemisphere, air circulation around a High is clockwise. Air circulation around a Low is c O U N T E R -clockwise.

4. The J E T Stream is described as a "river" of strong winds that snakes around the globe at high altitudes, where jets fly. It helps steer Highs and Lows (and associated storm systems) in their movement across the U.S.

5. Because of prevailing winds and the rotation of the e A R T H, weather in the U.S. generally moves from West to E A S T.

6. Temperature, wind and a I R pressure can change as a front passes by. After a cold front passes, it usually will be W I N D y and cooler.

7. Since the cold front was probably generated by the inflow from a high pressure area, barometric pressure after a front passes will probably **fall** / **rise.**

8. Heating of the earth's surface by the sun during the day can cause c L O U D s to form or grow, if enough moisture is in the air. Lots of heating causes vertical development, leading to r A I N or even a t H U N D E R storm.

TRUE OR FALSE

___F___ Air tends to flow from areas of low pressure to areas of high pressure.

___T___ When two air masses meet, it is called a front.

___F___ Pilots cannot fly in the rain.

___T___ At higher altitudes, water vapor in clouds can create ice on aircraft, even in the summer.

ACTIVITY: Time

AVIATION TIME – FOR YOUR TRAVELS AROUND THE WORLD!

Aviators use "military time" or the "24-hour clock", rather than the 12-hour clock we know that goes around twice each day. Why? To eliminate confusion about "a.m." and "p.m." and to make time comparisons and conversions easier. Converting 12-hour to 24-hour time:

No difference in morning hours, just precede with a "0" (6:00 a.m. = 0600)
After 12:00 noon, just add 12 to the hours (3:00 p.m. = 1500)
In either case, minutes follow hours (no colon) (0615, 1530)

24-HOUR TIME: TRY IT OUT!

1. 1200 is 12:00 Noon. What time is 1PM? 1 3 0 0

2. If you eat dinner at 6PM, what 24-hour time is that? 1 8 0 0

3. If you start studying at 8 PM, what time is that? 2 0 0 0

4. If you go to bed at 10 PM, it's.... 2 2 0 0 in 24-hour time.

5. Oh, it's late! It's one minute before midnight, or 2 3 5 9

DID YOU KNOW? "WORLD TIME" IS AVIATION TIME

How many time zones are there around the world, allowing the sun to be almost directly overhead at noon in every place? 24 (Hint: How many hours in a day… one rotation of the earth)?

One time zone is the basis for all other time. It is centered in Greenwich, England – the historical center of sea and air navigation at 0 degrees longitude. Once called Greenwich Mean Time (GMT), it's now Universal Coordinated Time (UTC).

Each of 24 time zones has a letter. World standard UTC is the last one, the Z or "Zulu" time zone. In the U.S. (being west of England), local time is so many hours "behind" Zulu time. (The sun — rising in the east — rises earlier in England, well before it does here!)

To convert our local time to Zulu time, we add however many hours difference there is between the two time zones.

TEACHER

ACTIVITY: Temperature

Aviation, uses the Celsius (C) temperature scale rather than Farenheit (F).
It makes temperature calculations easier. Celsius is also called Centigrade because it has only 100 degrees between water freezing (0C rather than 32F) and water boiling (100C, not 212F.)

Use the following formulas to convert from Celsius to Farenheit or Farenheit to Celsius:

C = (F - 32) x 5/9 or F = (C x 9/5) + 32

WHAT DOES CELSIUS FEEL LIKE? (FILL IN THE BLANKS)

15C is a slightly chilly… 5 9 F

20C is a comfortable… 6 8 F

30C is a pretty warm… 8 6 F

Body temperature is 98.6F or about… 6 7 C

40C is a hot, hot….. 1 0 4 F

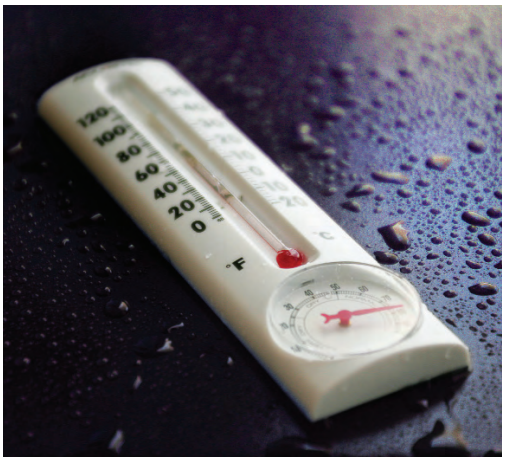
C to F? Try it in your head!
- Double Celsius
- Subtract 10%
- Add 32

Why do pilots care about temperature?

AIRPLANE PERFORMANCE DECREASES WITH TEMPERATURE
Higher temperatures really mean that air molecules are moving faster. The air is therefore "less dense." The propeller cannot "grab" the air as well. The wing cannot generate as much lift.

1. Airplane A's takeoff performance decreases 10% for each 10C increase in temperature. If it normally needs 2,000 feet for a safe take-off, how much runway is needed when temperature is 30C above normal?
2600 feet of runway

2. Will a 3,000 foot runway be enough? (YES) / NO



ACTIVITY: Speed

THE SPEED OF PLANES, LIKE BOATS, IS MEASURED IN "KNOTS" OR NAUTICAL MILES (NM) PER HOUR.

A nautical mile is 15% larger than a regular "statute" mile.

To convert from miles to nautical miles, or mph to knots: Divide by 1.15
To convert from nautical miles to miles, or knots to mph: Multiply by 1.15

TRY IT:

1. 100 knots is 1 1 5 miles per hour.

2. 100 miles per hour is 8 7 knots.

3. Surface winds near a thunderstorm can be 70 knots or 8 0 mph!

4. A jet flying at 500 knots is going 5 7 5 miles per hour.

AVIATION WEATHER REPORTS SHOW WIND SPEEDS IN KNOTS. WHY?

Airspeed + / - Winds Aloft = Groundspeed

To the plane's airspeed, the pilot has to add a tailwind or subtract a headwind to know "groundspeed" — how fast the plane is travelling over the ground.

1. You're flying at 100 knots with a 20-knot tailwind. Your groundspeed is 1 2 0 knots.

2. You're flying at 100 knots with a 20-knot headwind. Your groundspeed is 8 0 knots.

3. This 20-knot headwind (at 100 knots airspeed) cuts the plane's groundspeed by 2 0 per cent.

4. In a plane flying at 200 knots airspeed, a 20-knot headwind cuts the plane's groundspeed by 1 0 per cent.

ACTIVITY: Time/Speed/Distance

TIME/SPEED/DISTANCE CALCULATIONS ARE KEY TO FLIGHT PLANNING – TO PREDICT WHEN YOU'LL ARRIVE, AND TO KNOW HOW MUCH FUEL TO CARRY.

1. With 100 knots airspeed and 20 knot headwind, how long will it take to fly to a city 160 nm ahead?

_2_ hours

2. With a 150 knot airspeed and 30 knot tailwind, how long will it take to fly to a city 360 nm ahead?

_2_ hours

LET'S DO SOME REAL-WORLD FLIGHT PLANNING:

Assume the following for the questions below:

Your destination is 300nm away from you.
Your airplane flies at a cruise speed of 120 knots.
Fuel consumption is a constant 8 gallons per hour (gph).
For safety, you must have at least 30 minutes of fuel remaining on arrival.

1. It's 12:00 noon and you must be at your destination by 2 p.m. You will make it on time if you have a _30_ knot tailwind.

2. If you have NO tailwind, how long will it take you to reach your destination?

_2_ hours _30_ minutes

3. If you have 24 gallons of fuel remaining, you'll need a tailwind of _30_ knots to land with one hour of fuel remaning.

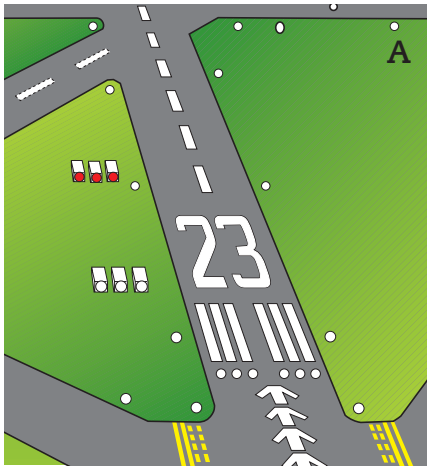
4. With NO tailwind and clear weather at your destination, will you have 30 minutes of fuel remaining when you arrive? (YES) / NO

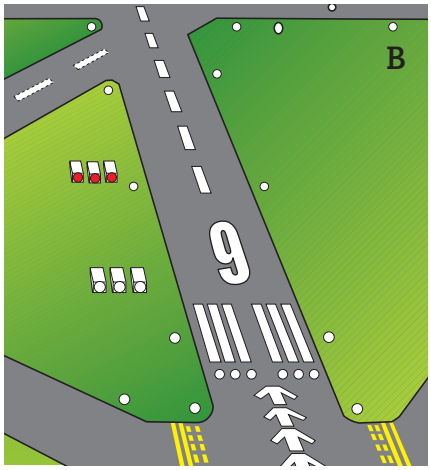
5. If there is bad weather at your destination, and you have NO tailwind, how much flying time will you have left to fly and find an alternate airport for landing? _30_ minutes.

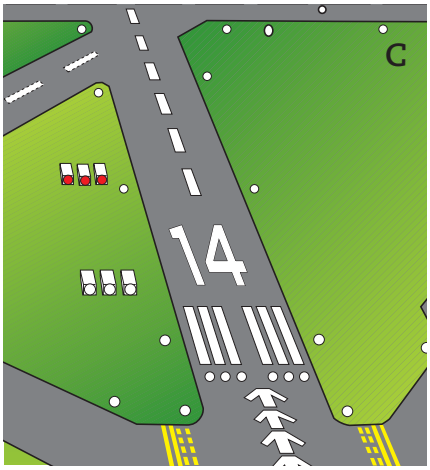
ACTIVITY: Runways and Wind

RUNWAYS ARE IDENTIFIED BY THEIR NEAREST COMPASS HEADING (OMITTING THE LAST ZERO OF THAT HEADING.)

Since runways have two ends, the opposite end of the runway has the opposite (reciprocal) compass heading.







What is the approximate magnetic compass heading of runway… A 2 3 0 B 0 9 0 C 1 4 0 ?

What is the runway number at the opposite end of runway… A 0 5 B 2 7 C 3 2 ?

Airplanes land or take-off best on a runway (most closely) aligned into the wind. Wind is reported by the compass direction it's blowing from and its speed. The third digit of the compass heading is omitted.

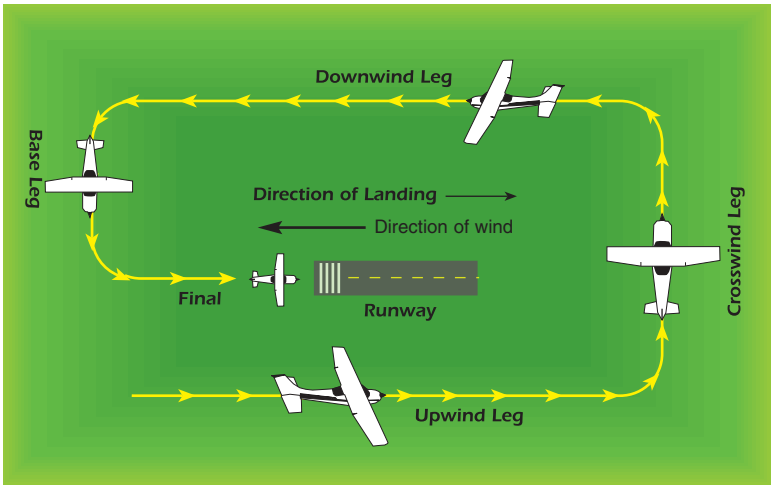
Example: For wind from 270, Runway 27 would be best.

CHOOSE THE BEST AVAILABLE RUNWAY FOR THESE WINDS

Circle the runway you should use. (Both runway ends are shown.)

WIND	Which end of this runway?
225 degrees or SW	Runway 4/(22)
From the south 180	Runway (17)/35
200 degees or SW	Runway (9)/27
150 degrees or SE	Runway (14)/32
60 degrees or NE	Runway 13/(31)

ACTIVITY: Traffic Patterns



In the example above, airport traffic moves around the landing runway in a rectangular traffic pattern making left turns, under standard procedures.

The sides (legs) of this rectangular pattern are named in relation to the wind blowing down the landing runway, except for the BASE leg (heading back to "the base") and the FINAL leg.

CIRCLE ONE OR FILL IN THE BLANKS:

1. You're entering the airport area in same direction as the runway that is most aligned into the wind. You'll fly the **DOWNWIND / UPWIND** leg first.

2. After you fly along the landing runway, you'll pass the far end of the runway and turn left onto the C R O S S W I N D leg.

3. To fly along the runway back towards the landing end, you'll turn left again. With the wind on your tail, you're on the D O W N W I N D leg.

4. After passing the end of the landing runway, you'll turn left toward the final approach course. This is the B A S E leg.

5. Finally, you're flying straight towards the runway "on F I N A L."

ACTIVITY: Aviation in History

DRAW A LINE FROM SOME OF AVIATION'S PIONEERS (ON THE LEFT) TO THIER AIRCRAFT OR ACCOMPLISHMENT (ON THE RIGHT.)


Library of Congress

Charles Lindbergh flew this to Paris in May, 1927…

Neil Armstrong was first to do this…


NASA


Library of Congress

Orville and Wilbur Wright built and flew this, the first powered, controllable airplane…

William T. Piper's Piper Aircraft built thousands of these for private flying and pilot training after World War II

The company Clyde Cessna started (in 1927) has built 40,000 of these, the most-produced single airplane model in history….

Leonardo da Vinci imagined a human-powered aircraft 400+years ago…

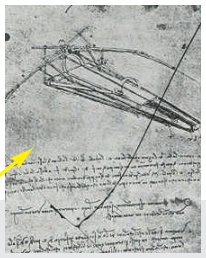
Chuck Yeager, first to fly faster than the speed of sound, flew this…

Eileen Collins was the first woman commander of the….

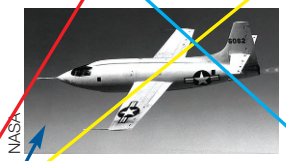
_ _ _ _ _ Cub


NASA

Space Shuttle



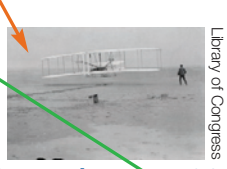
Ornithopter


NASA

Bell X1

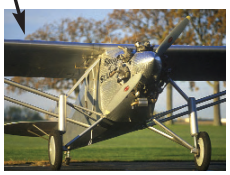

NASA

July, 1969


Library of Congress

December 17, 1903

_ _ _ _ _ _ 172



The Spirit of St. Louis

ACTIVITY: Aviation in History

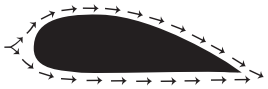
FROM THE FOLLOWING TO FILL IN THE BLANKS BELOW:

Cessna	Harriett Quimby	Paris	1912
Chuck Yeager	Leonardo da Vinci	Armstrong	Piper
Bernoulli	Amelia Earhart	1947	1969
1903	Willa Brown	New York	Wright
1920s	Bessie Coleman	Tuskegee	Armstrong
General	Space Shuttle	Military	Eileen Collins


Library of Congress

1. Two brothers, Wilbur and Orville **WRIGHT**, mastered lift, power and flight control to make the first successful powered, controlled flight in 19 **0** **3**.

2. Centuries earlier, the first person to study the problems of flight scientifically was the Italian **DA VINCI**. He lived from 1452 to 1519.



3. The **BERNOULLI** Effect – the principle that air moving faster over the curved top of a wing creates a partial vacuum and "lift" — is named for this 18th Century Italian.

4. The first American woman to learn to fly was **HARRIET QUIMBY**.


2002 National Air and Space Museum, Smithsonian Institution


NASA

5. The first African-American woman to earn a pilot license was **BESSIE COLEMAN**. She flew during the 19 **2** **0**s.


Library of Congress

6. The first person to fly solo, non-stop across the Atlantic Ocean was Charles Lindbergh. In 1927, he flew from **NEW YORK** to **PARIS**.

ACTIVITY: Aviation in History


NASA

7. AMELIA EARHART was the first woman to cross the Atlantic in a plane and the first woman to fly across the U.S. She tried to fly around the world in 1937.

8. Three longtime pioneers in airplane manufacturing all started in the 1920s or 1930s, but their companies'modern planes are still numerous at any airport. They are CESSNA, PIPER and Beech.

9. A leading pilot, she was a pioneer in aviation and flight trainingfor African-Americans in the 1930s and 1940s. She was WILLA BROWN.

10. A small group of African American pilots were trained to fly for World War II at a famous Historically Black College in Alabama, from which they took their name. They were The TUSKEGEE Airmen.


NASA

11. The first person to fly faster than Mach 1 – the speed of sound – became well-known after the book and movie, "The Right Stuff." Air Force pilot YEAGER flew the rocket-powered X-1 to "break the sound barrier" in 19 4 7.

12. Early U.S. astronauts were selected from the nation's best military test pilots. Alan Sheppard was the first launched into space – a suborbital "shot" in 1961.

In 1962, John Glenn (later a U.S. Senator) was the first American to orbit the earth – the goal of Project Mercury.

Later, civilian pilots became astronauts. By July, 19 6 9, former civilian test pilot Neil ARMSTRONG was the first person to walk on the Moon – the goal of Project Apollo.


NASA

ACTIVITY: Aviation in History

13. Eileen Collins was the first woman to pilot and later command the SPACE SHUTTLE.

14. Circle one: More than **6,000 / 60,000 / 600,000 / 6 Million** Americans currently have an active pilot license.

15. Airlines fly 700+ million passengers between the country's 400-700 largest airports every year.

Flying for all other reasons, in planes large and small to all 13,000 U.S. airports and airstrips, is called GENERAL Aviation.

16. Circle one: General Aviation carries more than **10,000 / 100,000 / One Million / Ten Million / 100 Million** people a year.

17. General Aviation is all of aviation except the airlines and the MILITARY.

AVIATION AND YOU

1. Your nearest airport is _____ (airport name) in _____ (town name.)

2. The airport providing airline service to your town is _____.

Hint: Are they the same airport? Did you forget a local airport that's closer than the airline-service airport?