

So You Want to Learn to Fly



Your Guide to Make it Happen

follow your dream ... the time is now



So You Want to Learn to Fly

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ISBN: 978-0-9911957-8-7

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1 – Introduction

If you're reading this, you've already got the bug – you know, the flying bug. How do I know? Well, you're reading this aren't you?

Let me describe the symptoms. You're standing outside your office or your home deep in conversation with a business colleague, a neighbor or a friend, and you hear an airplane overhead. You break eye contact, scan the sky until you find it, determine that it's a 767 or A330, then, slowly, return to the conversation and strive mightily to recall what the heck you were talking about that seemed so interesting a while ago.



You're home one night watching the final scenes of "Casablanca" and you vow, once and for all, that as soon as the movie ends you're going to Google search the name of the twin-engine airplane that flies Ingrid Bergman into the fog and forever away from Humphrey Bogart. (If you already know that it was a Lockheed L-12A Electra Junior, you're a goner.)

Recognize yourself? Of course you do. You've had the bug for years and always thought that some day you'd like to learn to fly. I got the bug on an airline that no longer exists in an airplane that no longer flies. The Captain came down the aisle of that Lockheed Constellation, pinned a tin TWA wing on the lapel of my sport coat, and I was a goner, too.



Now you find yourself in the position where you think you can make the time, and think you might have the money and ... well ... now you want to know, "How do I get started?" Relax. Stick with me and I'll tell you all you need to know. Welcome aboard.

2 – Pick an Airplane

It's not a big decision

So ... you've made the choice between an independent instructor in a flying club or learning at a flight school and now you've got to pick the type of airplane you want to learn in. It's not a big decision—all airplanes follow the same principles of aerodynamics, and it's pretty easy to switch back and forth between airplane types. Your choices are pretty basic as well: low wing or high wing, and that generally means flying a Piper or flying a Cessna.

The low wing option

Which brings us to the basic Piper low wing trainer, the PA-28 Cherokee. Cherokees in all their variations are good airplanes. They are easy to fly and very stable in flight. And, the low wing is out of your way in a turn, enabling you to see amazingly well while you're in a busy airport traffic pattern.



But Cherokees have disadvantages, too. You've got to be nimble to crawl around under that low wing to sample fuel, and examine the bottom of the wing. An apparent Cherokee advantage, the ease with which it lands, actually can cause problems when you start flying other kinds of airplanes

When you land a Cherokee, you fly it close to the runway, near enough to final approach speed and, CLANG, it's on the runway. It doesn't require slavish attention to the final approach speed, it tends to stay on the runway unless you really pound it on – in general, it actually may be a little too easy to land.

The high wing option

A Cessna, on the other hand, demands attention in the landing flare. You need to be on speed because the Cessna's longer, tapered wing demands it. If you took two student pilots with average skills, started one in a Piper Cherokee and the other in a Cessna, the Piper student would usually solo quicker than the Cessna student. While that's great in the short term, in the long term it's not so great because not every airplane you'll ever fly is as easy to land as a Piper.



When you finally learn to land a Cessna (many people prefer the 172 over the 150/152 for a number of reasons – but the biggest one is that it's hard to squeeze comfortably into a 150/152), you learn that airspeed is crucial and controlling the airplane during landing is a hard-earned skill.



When you learn in a Cessna and then move on to higher performance high-wing, or low-wing, airplanes, your Cessna-learned landing skills will enable you to land your new airplane with much greater ease. (Of course, your landing skills would be even more enhanced if you learned in a tailwheel airplane, but that's not a practical decision for most people – finding a good tailwheel trainer isn't easy and finding a good tailwheel instructor is harder still.)

Cessna's have other advantages. The high wing makes preflight inspection less of an acrobatic feat than in a low wing. Passengers love being able to look out of their window and see the earth directly below them, something that doesn't happen in a low wing. If it rains, the high wing makes for a nice umbrella – until you have to leave its shelter.

Cessna disadvantages exist, as well. The nose wheel steering is far less responsive than a Piper. With the horizontal stabilizer and elevator, the Cessna has less nose up and down stability than a Piper – although with the high wing it has more lateral, or side to side, stability than a Piper. But if you were to ask many instructors which airplane they prefer teaching in, many would tell you that it's a Cessna, hands down. There are more Cessna 172's flying than any other general aviation airplane. There's not a lot that's sexy in a Cessna 172, other than the avionics (that's aviation-speak for the radios) in the newer ones, but you want sexy in a sports car or a significant other, not a training airplane. The 172 is dependable and reliable, easily repairable and a lot of fun to fly. Of course, if you live somewhere near an airport with great tailwheel training airplanes, like J-3 Piper Cubs or Citabrias, and great tailwheel instructors, the added time it will take you to learn will be more than made up for the life-long landing skills that you'll develop. Oh, and most tailwheel airplanes are high wing, by the way.



You'll hear arguments for each type, high wing and low wing, and the arguments are sound for either. But the important point is to get started flying and it really doesn't matter that much whether you choose a low wing or a high wing. If you don't like the airplane you start with, you can always switch.

3 – Chose How You'll Learn

Do a little research

What do you do first? A little research will take some effort on your part, but if you persist it will pay big dividends and probably save you some money.

First, an Internet search of flying schools in your area would be a good start. You'll find a list of flight schools in your home town, or nearby. Another starting point would be a search for independent flight instructors: a good source is the National Association of Flight Instructors (www.NAFI.org), which publishes their members in a database that is searchable by state. You should also do a search for flying clubs in your area – we'll explain why in a minute. You might also consider buying an airplane – if you've got the big bucks – because aircraft manufacturers might include free flying lessons as a part of the deal.

Okay, let's go through each of these in detail.

Flight schools

Flight schools would seem a logical choice since they are in the business of training pilots. In many cases, flight schools are certified by the Federal Aviation Administration (FAA from now on and forevermore under Part 141 – a batch of government regulations that dictate how flight schools operate and which require annual inspections of the schools. Flight schools insist that their instructors follow a syllabus they've developed to ensure that training is done in an organized and orderly fashion.

One way to find a flight school with a top-notch, well-structured program is to look for a Cessna Pilot Center (CPC) in your area. Many of them are Part 141 schools, but all of them use a very organized, logical—and fun – curriculum developed for Cessna Aircraft Company by King Schools. Search on the web for the Cessna Pilot Center nearest you. Or go to www.cessna.com, and click on "Pilot Center Locator" (in the lower left corner of the page).



Flight schools offer stability and structure, with Chief Flight Instructors, Assistant Chief Flight Instructors, a fleet of airplanes, mechanic(s), buildings, flight simulators, and a whole bunch of overhead. Sometimes the instructors who work for flight schools are younger, newly-minted and not as experienced. They've chosen aviation as a career path and flight training offers a way to build lots of flying time so that they can pursue airline or corporate flying careers.

Often times it costs more per hour to learn at a Part 141 school than it does using other sources because of all the overhead. On the other hand, you may end up paying less overall for your certificate because the flight school is more organized and effective. If you gravitate towards a structured environment, flight schools are for you.

Independent instructors

Independent flight instructors have chosen a different path for helping you to achieve your goal of becoming a private pilot. Independent instructors work for themselves and either own their own airplane(s), teach in your airplane, or work through flying clubs. In general, independent flight instructors are older, have more experience and charge more for their services. It's hard to categorize a group of unconnected individuals, but independent flight instructors enjoy working for themselves and build their entrepreneurial businesses mostly with word-of-mouth advertising. Independents may have their own websites extolling the virtues of flying with them, and they almost always follow curriculums of their own design. If you prefer a more flexible, independent-minded instructor who teaches people to fly because he or she loves sharing the sky with new people, then an independent instructor might be for you.

Flying clubs

Joining a flying club is another way to find the sky. Flying clubs are organized in a number of ways. A large company might establish a flying club for its many employees.

A group of like-minded pilots at your airport might pool their resources to purchase an airplane or two for their collective use. If you're lucky, you might find a flying club that is a not-for-profit organization that provides a variety of airplanes owned by individuals who make their airplane available to the club to subsidize the ownership of their plane(s).



The reason to join a flying club is saving money on the airplane rental. Flying clubs don't have the overhead of flight schools and can charge less for the airplanes you rent. If you go the flying club route, you will still need to find an instructor, but flying clubs often have a list of independent instructors who can teach in their airplanes.

Sometimes flying clubs organize fly-ins to nearby, or distant, airports. If you like joining a group of like-minded individuals whose goal is to socialize and fly, or you like saving money, a flying club may be your best choice.

Buy an airplane

Lastly, you might buy a new or used airplane. Some airplane manufacturers offer incentives to move those newly-built planes from their ramps – and one of those incentives might be flight training included in the purchase price. Owning your own airplane is a source of joy and wonder for the owner.

The fact that the new owner doesn't know how to fly the new purchase is a problem. If the airplane you've bought doesn't include flight training, contacting an independent instructor before you actually take delivery of the airplane might be a good idea. The instructor, if willing, will accompany you to the factory, and fly your new purchase home, while giving you instruction during the process.



So ... we've discussed where to go to learn how to fly. If you stick around for the next section, we'll tell you how to pick a good instructor.

4 – How to Choose an Instructor

They are not created equal

All instructors are not created equal. There are some who instruct to build time to improve their chances for getting hired by an airline. Others do it because the airline or corporate world wasn't for them and they instruct because they want to make money in the sky. There are others, however, who instruct because they are drawn to it. Those are the instructors you look for.

How can you tell? It's hard at first. You need to do some research. If you have friends who fly, ask them for recommendations. If you go to a flight school, ask to fly with someone who has been with the company for a few years. If you choose an independent instructor and want to fly with a flying club, see if the club has recommendations. Most clubs will publish a list of instructors who teach through the club.

Good flight instructors often are full time, and make their living teaching people to fly. But many instructors do something else for a living, and while they don't teach full time they teach because they have a real passion for teaching. If your time is flexible, and you can get your schedules to match, they can often be a great choice.



Interview the candidates

Then what do you do? When you apply for a job, you have to endure an interview, or three, in order to get the job – in the same way, you need to interview the potential instructors you've selected. You're hiring someone to sit alongside you in the close confines of an airplane for a long time. Whether it's a flight school, an independent instructor, or through a flying club, you're going to be paying a lot of money for your flight training and your instructor is the key ingredient.

You don't have to like your instructor, but it helps. Would you want to spend the next few months sitting next to someone you don't like – or someone whose personal hygiene habits aren't what you would like? Would you want to spend the next few months with a petty dictator, or someone whose personality annoys you? Would you want to spend the next few months with someone who barks at your mistakes, or someone who belittles you for your shortcomings? I don't think so. How do you know which instructor is right for you? Remember how you always look up when an airplane flies overhead? See if you catch the instructor you're interviewing doing that. Ask him or her about their favorite flight lesson, or which rating or certificate they prefer teaching the most. Ask what their favorite airplane is, or what their most memorable flight was. Ask any of these questions and watch their eyes while they answer. Their eyes will light up recalling a favorite flight; they'll wear a big smile when they talk about their favorite lesson. And they'll probably look up, too, should an airplane fly overhead



Make sure they follow a syllabus

Ask your flight instructor candidate what syllabus they follow. If there's a hesitation, a bit of uncertainty, move on. A good instructor will work from one of the published standard syllabi, or they may have created their own which might be based on their personal experience in finding a more effective way to teach – because good instructors are always looking for better ways to help their students learn.

Do they follow standards

Ask your flight instructor candidate if they belong to any organizations. Instructors who belong to the National Association of Flight Instructors (NAFI) or to the Society of Flight Educators (SAFE) subscribe to a code of conduct that promotes ethical flight training standards – and a NAFI or SAFE (more acronyms, get used to them, in aviation they abound like cow patties on ranch land) membership is a good indication of a responsible flight instructor.

Let's go flying

Finally, after you've selected a couple of viable candidates, ask each of them to teach you an introductory flight lesson – in some places it's called a "Discovery Flight". The intro lesson should include a pre-flight inspection of the airplane you'll be flying and should include up to an hour's flight time – which is usually the first lesson in the instructor's syllabus. Compare the styles of instruction of your candidates. Good ones will want to know how you best learn: are you a doer, do you prefer visuals, or are you a good listener. Good instructors will try to tailor their teaching to the best way you learn. Bad ones will work from a pat syllabus and teach the style they're most comfortable with – which may not work for you.

Ask them about their plans

Once you choose an instructor, make sure that they will be around for the entire course of your training. If the instructor has plans to take a corporate job, or is hoping for an airline gig, you may have to find a new one in the midst of your training. If your instructor has a big holiday planned during the time you'll be training, you may want to postpone the training until later or find someone who will be around for the whole time. Will your instructor be available to fly when you're available to fly? If you can only fly on weekends and they are very busy on weekends, you may have a scheduling problem. If you prefer to fly on weekdays and your instructor has a weekday job, you'll have scheduling conflicts.

It's a complicated process finding an instructor, but you'll be well-served when you find the instructor who best fits your needs.

In the next section, we'll discuss what kind of airplane you want to train in.

5 – FAA Requirements

The rules you'll fly by

So ... you've chosen how you'll learn, an instructor and an airplane. Sadly it's time to move onto one of all pilot's least favorite topics, the regulations heaped upon us by our friends at the federal Aviation Administration (FAA. (No, that wasn't a snicker you heard – honest.

Regulations exist for good reasons – most of them, anyway. If the skies weren't regulated, we might all have to walk around outdoors wearing steel pots on our heads to keep from getting conked by all the airplanes and airplane parts falling from the sky. Regulations came about because, especially in the early days of flying, pilots did amazingly stupid things in airplanes. The government decided that it needed to establish requirements for pilots and airplanes to ensure the safety of the flying – as well as the walking – public.

The regs as they apply to you, a new student pilot, are pretty straight forward.

Before you can fly solo

A big step in every pilot's life is their first solo. The feeling of taking off and landing without your instructor in the airplane is exhilarating...but, before you get the chance, regulations require that you have two certificates; a student pilot certificate and a medical.

Getting your student pilot certificate

We'll start with the first thing you'll need to do—get a student pilot certificate. The reason you want to do this first is that it only takes a small amount of time to fill out your application, but it can take the FAA 6 to 8 weeks to send your shiny new student pilot certificate in the mail. So what will you do while you're waiting? Start your lessons! Hopefully, by the time you are ready to solo, you will have your certificate in hand.

To get your student pilot certificate you and your instructor will need to go online to complete an application using the Integrated Airmen Certification and/or Rating Application (IACRA at <https://iacra.faa.gov/IACRA>. Once you create an account with IACRA you can complete the application and submit it to your instructor who will review, approve and submit it to the FAA. The FAA and the Transportation Security Administration (TSA will review the application and mail your student pilot certificate to you. If you haven't yet found a flight instructor you can still complete the application, print it out and take it to the nearest FAA Flight Standards District Office (FSDO and the friendly folks there will submit your application for you.

Getting your medical certificate


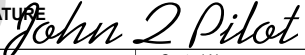
As a student pilot Next you will want to get at least a third class medical certificate before you solo. The FAA publishes a list of AME's (What? Another acronym? OMG), Aviation Medical Examiners. You can find a list of AME s with a quick Internet search. The FAA website will direct you to a searchable database where you can hunt for an authorized doctor by country, county, city, zip code or last name. (How's that for government efficiency. OMG, did I really just write that last sentence?



When you've found a medical examiner near your home or work, you'll make an appointment and the AME's staff will inform you that you will need to fill out an online application on the FAA's MedXPress web page (<https://medxpress.faa.gov/>). Fill out the form, you'll be given an application number, and then present yourself to the AME at the appropriate day and time.

The examination involves a basic physical (inhale/exhale), an eye exam, a hearing test and you'll have to provide a urine sample. FAA is really interested if you have had any heart trouble, chest pain or neurologic disorders ... or if you take any FAA-prohibited medications that could affect your mental processes or emotional stability. If you have any questions about medications, you should not fill in the form until you get some advice. You can get the help you need by joining Aircraft Owners and Pilots Association (AOPA). Their website is www.AOPA.org. Once you're a member, look for the FAA Accepted Medications Database, or talk to a phone counselor for help with these issues.

Generally, you'd want a third class medical certificate to become a private pilot. If you had a desire to get paid for your flying, you'd need a second class medical certificate. If you had airline aspirations, you'd have to pass the test for a first class medical certificate. Some people who have higher aspirations apply for the higher medical certificates just to see if they can pass the requirements. That would be a choice you'd have to make – but for basic private pilot privileges, all you need is a third class medical.

UNITED STATES OF AMERICA Department of Transportation Federal Aviation Administration MEDICAL CERTIFICATE THIRD CLASS					
This certifies that (Full name and address): JOHN Quency PILOT 111 Main Street Hometown, CA 00000 USA					
Date of Birth	Height	Weight	Hair	Eyes	Sex
01/01/1990	71	180	BLACK	BROWN	M
has met the medical standards prescribed in part 67, Federal Aviation Regulations, for this class of Medical Certificate.					
Limitations	Must wear corrective lenses for near and distant vision.				
	(Empty space for additional limitations)				
Date of Examination 01/01/20XX			Examiner's Designation No. 000000000		
Examiner	Signature 				
	Typed Name JOHN BROWN . MD				
AIRMAN'S SIGNATURE 					
Applicant ID: 0000000000			Control No.: 000000000000		
FAA Form 8500-9 (3-12) Supersedes Previous Edition NSN: 0052-00-670-7002					

CONDITIONS OF ISSUE

The holder of this certificate must:

- Have it in his or her personal possession at all times while exercising privileges of an airman certificate. (14CFR § 61.3)
- Understand that the issuance of a medical certificate by an Aviation Medical Examiner may be reversed by the FAA within 60 days. (14CFR § 67.407)
- Comply with validity standards specified for first-, second-, and third-class medical certificates. (14CFR § 61.23)
- Comply with any statement of functional, operational, and/or time limitation issued as a condition of certification. (14CFR § 67.401)
- Comply with the standards relating to prohibitions on operation during medical deficiency. (14CFR § 61.53, 63.19, and 65.49)

For International Operations Only: Some holders may be affected by certain international medical standards. Consult the U.S. Aeronautical Information Publication for U.S. differences with ICAO Annex 1 medical standards.

The medical examiner will issue you your Third Class Medical Certificate if he finds no problem with your exam.

If, after you get your private pilot's certificate, all you want to fly are small, general aviation aircraft you will have the option of not renewing your FAA medical certificate and using your driver's license as proof of your fitness to fly using a set of rules called BasicMed. BasicMed still requires you to see a doctor periodically to check and document your health but that doctor can be your personal physician rather than an AME. However, if you want to fly larger aircraft (more than 6 seats and heavier than 6,000 pounds) or faster than 250 knots indicated airspeed, or higher than 18,000 feet you will need to have an FAA medical certificate from an AME. The same is true if you want to fly and get paid for it.



Private Pilot Ground School & Test Prep Course



Today, John and Martha King provide online or computer-based courses that will make your study a fun-filled experience and have you ready to pass your FAA Private Pilot Knowledge Exam with ease. Trying to make learning fun has been a life long goal of mine – and that concept is John and Martha’s passion. Yes, I worked for the Kings for two tours and six years, total, so it may seem I have a vested interest in promoting their products – but I’ve found that their courses work. Trying to have fun while teaching the sometimes dull topics that are required to pass the Private Pilot Knowledge Exam is hard work. John and Martha make it look easy.

And I am living proof that their courses work. Apart from my private pilot written, I have taken King courses to pass all of the certificates or ratings required to become a flight instructor and beyond. The worst score that I got was a 96 on my commercial pilot knowledge exam and I managed two perfect 100’s on the Fundamentals of Instruction and the Instrument Instructor Knowledge Exams. Their courses work, they make learning fun, and, even better, they’re guaranteed. If you take your Private Pilot Knowledge Exam within a year of purchasing the King Schools course, and fail the knowledge exam, they will refund your money and you get to keep the course. They are that certain that you will succeed.

As a rule, instructors want their students to have the knowledge exam passed before they start the first solo cross country. There aren’t a lot of people who love to study and there are fewer still who ever thought that they’d have to have a basic knowledge of meteorology, aerodynamics, radio communications and navigation, and the inner workings of an internal combustion engine. Yet that and more is what you’ll have to comprehend in order to pass your knowledge exam. So, doing the study sooner, and getting the knowledge exam out of the way earlier, is the best way to do it. When you start learning how to fly, the exciting stuff happens in the air, not on the ground. No one starts private pilot training thinking, “Boy, oh boy, I can’t wait to start learning about aerodynamics.” The knowledge demanded isn’t trivial; the knowledge you acquire will make you a smarter, safer pilot – which is a very good goal. So ... get after the knowledge exam sooner. It will make your private pilot training a lot more effective.



The flight time you need

FAA mandates that you must fly for a minimum of 40 hours in order to take your Private Pilot Practical Test. (In theory, you can get your Private Pilot certificate in 35 hours at a Part 141 flight school, but very few students accomplish that feat.) Included in the 40 hours of flying time, you must have at least 20 hours of dual instruction (that's with an instructor on board), 3 hours of instrument training, 3 hours of night training including 10 night landings to a full stop, 3 hours of cross country flight training, 10 hours of solo time of which 5 hours must be solo cross country, and 3 hours of training for the practical test. These are the minimum numbers that FAA mandates. In reality, it is a rare student who is able to achieve the Private Pilot certificate at the minimum.

The national average is around 75 hours. A good student with a good instructor, without too many weather, life or maintenance-issued obstacles, might hope to do it in between 50 and 55 hours of flying. But sometimes the weather won't cooperate, or your airplane develops a mechanical problem and there is no back-up, or you get a cold or your instructor has a nervous break down (only kidding), and the time required becomes more than you anticipated.

It's good practice. And, if it takes a little longer to pass your Private Pilot flight test, you'll have had more time with your instructor – which will pay dividends because you'll have had more experience.

When you can expect to solo

In the pioneering days of flying pilots soloed in 3 hours. There were barely any requirements back then, people learned in big grass fields and were always able to land into the wind. Forty years ago, the average was around 8 hours – and it took me 13½ because I'm a little slower than most. Today, you'll be lucky if you solo in 15 hours. But short time to solo isn't a good goal.



There are so many more demands made of instructors by the FAA these days – and that’s not necessarily a bad thing. Students have come to grief because they weren’t prepared for all the things that can happen in the sky, so the FAA has mandated that certain goals must be accomplished before a student can solo. A student must have passed a pre-solo test given by the instructor. A student must have completed training in nearly every phase of flight before the instructor is allowed to solo that student. A student must have a valid Student Pilot and Third Class Medical Certificate on which is an endorsement from the student’s instructor authorizing solo flight. A student’s logbook must have an instructor’s endorsements regarding the specifics of solo flight. It’s a complicated world, airports are busier and airplanes are more complex. But, once you solo, your life will never be the same. We’ll talk more about solo in an upcoming section. Stay tuned.

Flying your first solo cross country flight

A student pilot must have the instructor’s endorsement on his Student Pilot Certificate before the student is able to fly a cross country trip of more than 50 nautical miles. A student must have an authorized instructor’s endorsement in the make and model airplane being flown and stating that

the instructor has reviewed the cross country planning for that flight and found it to be correct. That the instructor has reviewed the current and forecast weather conditions and has determined that the flight can be successfully completed under visual flight rules. (VFR. Could that be another acronym?) That the instructor has determined that the student can safely make that specific flight that the student's solo endorsements are current for that flight in the make and model airplane being flown, and that the student's solo cross country endorsements are current for the make and model of airplane being flown. In addition, there are a dozen training prerequisites that must be met before a student pilot attempts a solo cross country flight.



Why all the brouhaha, Bub? Well, FAA wants to make sure that a student pilot has had the training and had a review of all his or her planning before he or she launches into the sky to find, and then return from, another airport. FAA, if nothing else, is all about safety and no responsible instructor would argue against its requirements.

What else you need to be a Private Pilot

What do the Feds say about the other requirements for you to become a private pilot? Well, quite a lot, actually. You've gotta be 17 years old to be a private pilot in anything but a glider or a balloon. You've got to be able to read, speak, write and understand the English language. You've got to have logbook endorsements from an instructor verifying that you have the knowledge and can perform all the maneuvers required by the regs.

They're all summarized in Part 61 of Title 14 of the Code of Federal Regulations. The regs are accessible on the FAA's website, www.faa.gov. They are fairly specific and sometimes readable – once you get a beaurocratese decoder ring. It takes patience to wade through and understand the regulations, but you learn all of that the fun way from your King Schools Knowledge Test course. Once you achieve your Private Pilot certificate, FAA wants you to be safe – and that should always be your primary goal: be safe. The secondary goal should always be: have fun. Heck, why in blazes are you spending so much money if you can't have any fun doing it? And, without waxing too rhapsodic, I've found more fun in the sky than anything I've ever done. More on that in a later section. Let us all agree that FAA only wants us all to be safe in the sky. That is an admirable goal.

6 – Join an Organization

Organizations that can help you get the most out of your flying

When you climb into the sky, you're entering rarified air in a world where there ain't too many others who've got the same bug. Joining an aviation organization is a grand way get to know the pilot community, one of the most select communities around. Which organization(s) you join depends on who you are.

Aircraft Owners and Pilots Association (AOPA)

The Aircraft Owners and Pilots Association has been around since 1939 and is the largest pilot organization in the world. Your membership in AOPA helps fund its efforts to represent General Aviation's interests before national and state government, and to provide a vast array of services to you. Your membership also entitles you to a subscription to AOPA Pilot, one of the best of the aviation magazines.



AOPA also publishes Flight Training Magazine, a fabulous resource for student pilots, as well as instructors. Your instructor can sign you up for a free six month subscription. The magazine is an invaluable aid to help you get the information you need to achieve your flight training goal. AOPA also offers pilot insurance, aircraft insurance, and legal and FAA medical services to its pilot members. AOPA organizes and sponsors activities for pilots at airports and conventions around the country. AOPA events give you the opportunity to meet other pilots, see lots of airplanes and let aviation companies try to sell you their products. AOPA is your voice to the FAA and in Congress, and is worthy of your dollars. If it weren't for AOPA we probably would not have personal aviation in the U.S. as we know it today.

The Experimental Aircraft Association (EAA)

The Experimental Aircraft Association was founded by an aviation enthusiast named Paul Poberezny and some friends in 1953. Its goal is to promote grass-roots recreational aviation – whether you fly airplanes, want to build or restore them, or just look at them and wish, EAA is for you.



EAA puts on an event called AirVenture, which occurs around the last week in July and first week in August each year at Wittman Regional Airport in Oshkosh, Wisconsin. It is the world's largest aviation event – and everyone just calls it "Oshkosh".

Going to Oshkosh for AirVenture is every pilot's dream. If you haven't been, you can't imagine it. If you have been, you can't wait to get back. Once you're there, you can be overwhelmed with the number of airplanes of all kinds: homebuilts, antiques, warbirds, airliners of today and yesterday,

military aircraft – if you can name it and it flies, you'll probably see it at Oshkosh. Joining EAA gets you a monthly subscription to Sport Aviation, a fine magazine that focuses on homebuilts, ultralights, rotorcraft, antiques and warbirds. EAA sponsors workshops and local chapters (one may well exist at your airport). They represent the heart and soul of general aviation.

Organizations for Women

If you're a female in aviation you are in the minority. Only about 6% of the pilots in the United States are women. So, if you're a woman and you want to fly, joining a woman's pilot organization is an important step.

Ninety-Nines

The Ninety-Nine's is an international organization of women pilots, and was founded in 1929. Amelia Earhart was one of the 99 founding members of the organization.



The 99's offer scholarships funded by the organization to help women pay for their flight training. The 99's sponsor hundreds of educational workshops each year and co-sponsor FAA pilot safety programs throughout the country. Joining The Ninety Nine's is a good step to helping promote women in aviation.

Women in Aviation

Women in Aviation, International (WAI)

Speaking of women in aviation, cleverly enough there is an organization known as Women in Aviation, International. It is a relatively new woman pilot's organization that started in the 1990's and has grown rapidly.



Women in Aviation International helps members with recruitment and job search opportunities at their annual convention. They publish Aviation for Women Magazine with articles on career choices, scholarship and internship opportunities, and a page dedicated to job placement. Women in Aviation welcomes both male and female members, but is “dedicated to the encouragement and advancement of women in all aviation career fields and interests.”

If you are a woman and hoping for a career in aviation, this is the group for you.

Other helpful organizations

There are scores more aviation organizations. There are airplane type clubs like the Cessna Pilot's Association, the Cherokee Pilot's Association, the Cub Club, the Grumman Gang, the Cirrus Owners and Pilots Association (COPA), and many, many, many more. Airplane type clubs provide invaluable information about owning and maintaining your aircraft and have been a strong force in reducing aircraft accidents.

In addition to type clubs there are organizations for different categories of airplanes: the Antique

In addition to type clubs there are organizations for different categories of airplanes: the Antique Aircraft Association, Warbird Information Exchange, the Helicopter Association International (HAI). Plus there are groups that use airplanes to benefit others like Angel Flight, the Flying Samaritans, and LightHawk.

Regardless of how your interest in aviation takes shape, there will be an organization to support you.

7 – Classic Books Every Pilot Should Know About

As a pilot you will find there are some books that provide the guidance and inspiration you will rely on for the rest of your flying career.

FAA books you will want to know about

The Feds (okay, we've referred to them as the Federal Government and FAA) publish a number of manuals and handbooks that are the official source of information for nearly everything you will learn about flying. If you don't have them in your library you should at least know about them. For instance, when King Schools is creating their video and computer courses, these are the references they go to to make sure they are following FAA policy. The books are official, but they are very dry. What I mean to say is that they were written by someone who makes their living writing stuff for bureaucrats which is then vetted by attorneys. King Schools considers it their job to take these unbelievably dry FAA books and deliver the information in a clear, simple and fun way.

You can find these FAA books on the web at: http://www.faa.gov/regulations_policies/handbooks_manuals/aircraft/ or by searching on the titles. You can either read them online or download them. If you prefer to have a printed copy you can find them at many pilot shops, or buy them from King Schools.



The Airplane Flying Handbook

The Airplane Flying Handbook contains a bunch of stuff the FAA considers important for you to learn and understand about flying airplanes.

The Pilot's Handbook of Aeronautical Knowledge

In addition, the FAA publishes The Pilot's Handbook of Aeronautical Knowledge. It is the official source of information not specific to a particular category of aircraft such as airplanes or helicopters.

Aviation Weather

Aviation Weather has been around for a long time and offers an interesting look into the subject of weather from the pilot's perspective.

Aviation Weather Services

Now, once you learn about the weather, it's important to know how to get the information you need as a pilot about weather on an everyday basis. Aviation Weather Services is a valuable resource to accomplish that end.

Federal Aviation Regulations (FARs)

This collection of regulations states the conditions under which all flight legally occurs. There are literally thousands of regulations, covering everything from the design and building of aircraft and maintaining them to the design of the airspace system. Your primary concern will be Part 1 – Definitions; Part 61 – Certification: Pilots, Flight Instructors and Ground Instructors; and Part 91 – General Operating and Flight Rules. The FARs can be searched on the Web by regulation number, but you will find the regulations that you will be concerned with for personal flying are available at airports in printed format in a book that usually often also includes the Aeronautical Information Manual (which we will talk about next).

The Aeronautical Information Manual

The Aeronautical Information Manual (AIM) is the FAA's official guide to the information you need for flying and ATC procedures. It contains many things of special interest including health and medical facts, a pilot/controller glossary of terms used in the ATC System, and much more. The AIM is one of the most astounding publications ever made available to the public by the Federal Government: it's readable. OMG, someone working for the government actually put nouns, verbs, conjunctions, infinitives, prepositions and articles into sentences that made sense, and strung them into paragraphs that had coherence. I believe it was divine intervention because never, ever, not once, no, not, nada has anything ever written by the government been easy to read.

The Airport/Facility Directory (A/FD)

The FAA publishes a government periodical called the Airport/Facility Directory. It tells you everything you ever wanted to know about airports and navigation aids in your area of the country – and a whole bunch more. It's updated every 56 days and one way or another you need to have a current version of the information in the A/FD. You can subscribe to the actual printed publication (which almost nobody does) or you can get the information from any number of flight planning and navigation software programs that are widely available to pilots.

Private Pilot Airman Certification Standards

To round out the list of FAA publications, you need to get a copy of the Private Pilot Airman Certification Standards. Once again, you can download it from FAA's website, or you can buy a copy produced by an aviation publisher. Plus, it's included in the King Schools Practical Test Course.

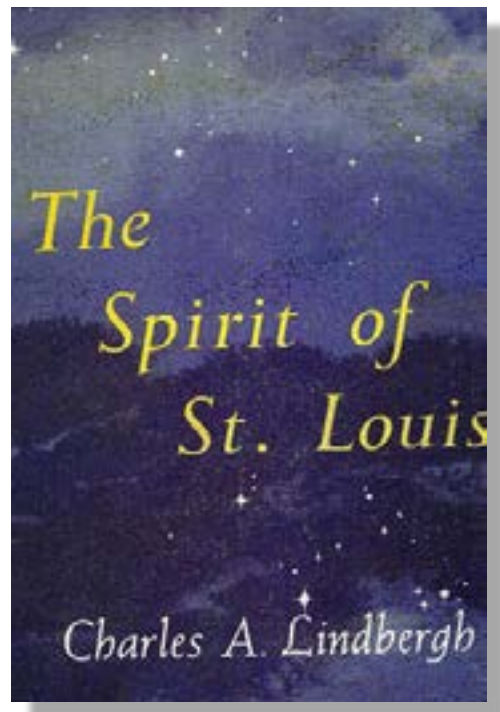
What is it? Simply, it's the booklet that defines what your check ride (practical test, in FAA-speak) will contain, how it will be conducted, and the parameters which will determine your success or failure. Each designated examiner carries a copy and follows its directives. In short, it contains all the stuff that you'll have to know and do in order to achieve your Private Pilot certificate. You might wanna get cozy with it long before you get ready for your ride. And be sure to read the introduction, which tells you how the examiner is expected to conduct the ride. It's indispensable.

Books every pilot will cherish

Okay, this can't go on forever, so let me close with a few volumes that have nothing to do with regs, rules or training. Aviation has produced some pretty good writers over the years. Some of their stories, personal accounts or novels are well-written, informational or inspirational. This is a very limited selection but, if you really do have the bug, you really ought to read about how it all came about.

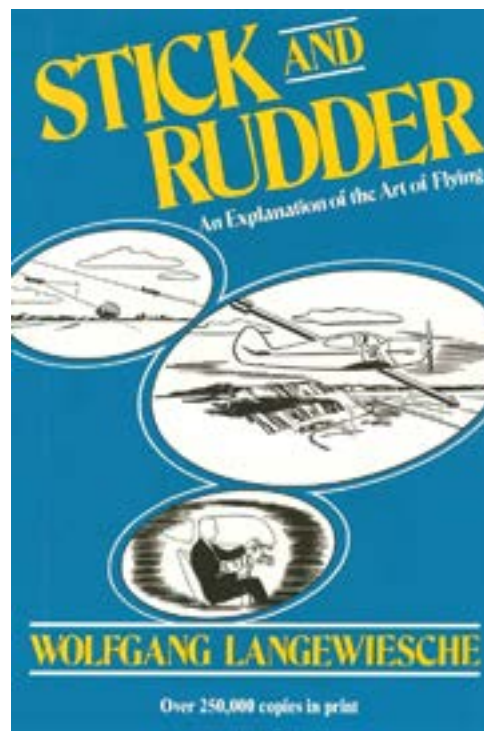
The Spirit of St. Louis

Charles A. Lindbergh – who in his time was more famous than, pick one: Mick Jagger, Julia Roberts, Snoop Dog, Bart Simpson or Barrack Obama – published *The Spirit of St. Louis* 25 years after his epic flight, the first ever solo across the Atlantic Ocean, on May 20/21, 1927. It is simply written and tells an amazing tale of how one man, with the help of scores more, was able to conquer the North Atlantic in a single engine airplane. It is the stuff of dreams.



Stick and Rudder

Stick and Rudder by Wolfgang Langewiesche was, and is, the most famous book about flying ever written. First published in 1944, it is a tad dated using, for example, the term “flippers” for the elevator. But if you want to read the book that helped generations of pilots understand the mysteries of flight, Stick and Rudder is a fine purchase.



Listen! The Wind, and North to the Orient

Anne Morrow Lindbergh – yes, Charles A's wife – was a prolific writer who recounted tales of their early exploratory flights in two books: Listen! The Wind, and North to the Orient. Her diaries and letters from her early days before meeting Lindbergh and after were published and provide amazing insights into the lives of the two most famous people on earth at the time.

Night Flight, Wind, Sand and Stars, and The Little Prince

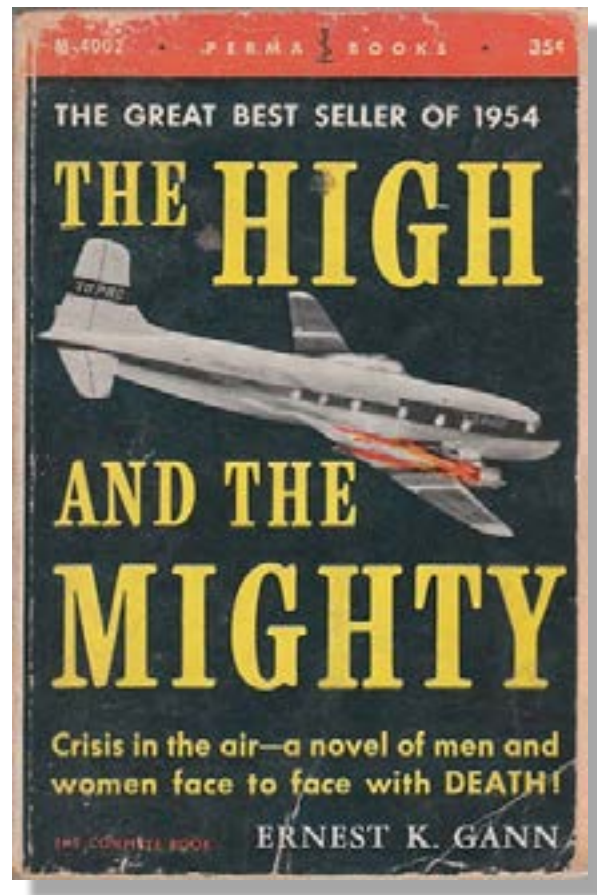
Antoine de Saint-Exupery flew for the French mail service in the early days of aviation, over the deserts of North Africa and the Andes of South America. His novels about flying, among them Night Flight, and Wind, Sand and Stars, are among the best written. But his novella published during World War II, The Little Prince, is one of the finest books you'll ever read.

The Bishop's Boys

You can't know anything about flying until you know something about the men responsible and Tom Crouch's The Bishop's Boys is the best biography written about Wilbur and Orville Wright. It will raise your flying IQ into the stratos.

Cannibal Queen

Stephen Coonts has written a lot of aviation-based novels. Since I'm partner in a Stearman, I'm particularly fond of the story he relates about his travels in his Stearman in Cannibal Queen.



The High and the Mighty

Ernest K. Gann was an airline pilot before he became a published writer. He flew DC-2's and DC-3's for American, and then a variety of military transports in WWII for the Air Transport Command of the Army Air Corps. He wrote a number of novels and books about his flying experiences. My favorite, *The High and the Mighty*, was made into a movie by William Wellman starring John Wayne and Robert Stack, and it came out about the same time I made my first airplane flight. I was hooked.

Jonathan Livingston Seagull, Stranger to the Ground, Biplane, Nothing by Chance, and A Gift of Wings.

Finally, you can't make a list of aviation writers without including Richard Bach. He published early in the 60's, but burst onto the scene with *Jonathan Livingston Seagull* in 1970, a million-book seller. He has written dozens of books and hundreds of articles about flight and each is informative, well-written and, usually, inspirational. Among the flying books are *Stranger to the Ground*, *Biplane*, *Nothing by Chance*, and *A Gift of Wings*.

8 – Getting Ready for Your Knowledge Test

There are a lot of knowledge exam test prep providers and some of them are good. There are even free online test prep resources.

King Knowledge Test Course

For me, and for thousands of others, King is the only name you need to remember. John and Martha King have been teaching people how to ace their knowledge exams for almost 40 years. They started an industry, and with the aid of humor and great graphics they make learning the most complex topics a breeze.



King Practical Test Course

You might also want to think about purchasing their Private Pilot Practical Test Course. The practical test (most of us call it the check ride) consists of an oral discussion and a flight test. The King course is a simulated check ride with a real examiner.

Part of the problem with check rides is that no one likes being evaluated. Add to that, you, the applicant, know very little about how the check ride is conducted – which adds to the nervousness you'll feel before the ride. With the King Private Pilot Practical Test Course, you'll get to see what the oral and flight test are all about with a model performance from John (for the Private Pilot Test) or Martha (for the Instrument Test), before you take your own – a great way to calm your nerves and help you perform to your best abilities.

I've experienced a goodly number of check rides over the years and having John and Martha smooth the way before the event helped me pass with flying colors. Let them help you, too.

9 – Turning the Noisy Cockpit Into a Calm Environment With a Headset

One of the things that makes flying much more pleasant than it was in the “good old days” is the presence of intercoms and really good headsets. These turn what would otherwise be a noisy and hectic setting into a calm, pleasant environment. Some headsets allow you to enjoy your favorite music in the background from your iTunes library while you fly.

So one of the first purchases you’ll need to make will be a headset. In addition to making the cockpit much more pleasant, a headset makes it much easier to hear your instructor’s pearls of wisdom over the noise of the airplane’s engine –I learned without one and maybe that’s why it took me so long. (It’s also a reason why so many older pilots, who flew in the days before ear protection, are hard of hearing. What?) Plus, in the old days, every time I needed to talk on the radio I had to fumble for the hand-held microphone, turning me temporarily into a one-handed pilot.

Get information

Headsets are curious things, and most pilots have opinions on which are the best. When you purchase your first headset, ask the opinion of your instructor and of any friends you know who fly. Maybe go online and do some research.



Get a cheap one?

One school of thought says that your first headset should be a cheap one, just to have one for the initial training. Then, as you fly more you can try out other headsets to see which model you prefer. (Many pilot shops will let you rent a headset and apply the rental charges towards a purchase.)

When you've found the one you like, you can always use the inexpensive headset for your first passengers.

Get a really good one?

The other school of thought is to purchase the best headset you can afford. There is merit in this. If you buy a good, expensive headset, you'll eliminate one of the most annoying things about your early flight training (adjusting your headset to your head and ears). If you do buy an expensive headset and find out that you don't like it, you might be able to exchange it for another model if it's within a certain period of time (30 days is normal).



Passive noise reduction

There are two basic kinds of headsets: passive noise reduction and active noise reduction. A passive noise reduction headset uses the insulating properties of the ear seals (or cushions) that cover your ears to reduce the sounds of the cockpit. (I prefer gel seals to the typical foam).

Active noise reduction

An active noise reduction headset uses “anti-noise” which cancels out the cockpit noise. Active noise reduction (ANR – goodness, imagine that, another aviation acronym) requires a power source, usually a battery, to generate the “anti-noise”.

Which you prefer depends on your patience and preparedness level. People who love ANR headsets also love having spare batteries accompany them when they fly. Some people, like me, haven’t the patience to lug extra batteries. Some people also despise the noise they experience when their ANR headset’s batteries fail.

It’s personal

A headset is a personal matter. But owning a good one, whether it’s a passive or active noise reduction headset, is an important early purchase in your flying career.

10 – The E6B—your indispensable tool

The E6B (the name comes from a military specification number) is a flight computer that was developed in the 1930's as a circular slide rule. (Okay, raise your hand if you know what a slide rule is. I'm so old, not only do I know what a slide rule is, but I used one—way back in the dark ages of the 1960's. For those of you who have no idea of what I'm talking about, think of a slide rule as a calculator without batteries. A slide rule lets you quickly do multiplication and division by placing logarithmic scales next to each other to add or subtract distances on the scales.)



It works magic—and it doesn't even need batteries

The E6B is a marvelous, simply-designed flight computer. It can calculate wind drift correction, help you estimate the time enroute to your destination, how much fuel you'll burn on the trip, what the density altitude (really important to pilots) is at your destination, and so much more that it was called the "whiz wheel" by the thousands of pilots who've used it over the years.

It can calculate your ground speed, update your arrival time based on that ground speed and tell you if you'll need to stop for fuel because that headwind you hadn't planned for has slowed you to a crawl. You can find them online or at your favorite pilot shop, or you can order one from King Schools. You will come to love your E6B, even if you don't ever understand how it works.

You can do the same thing with the electronic version

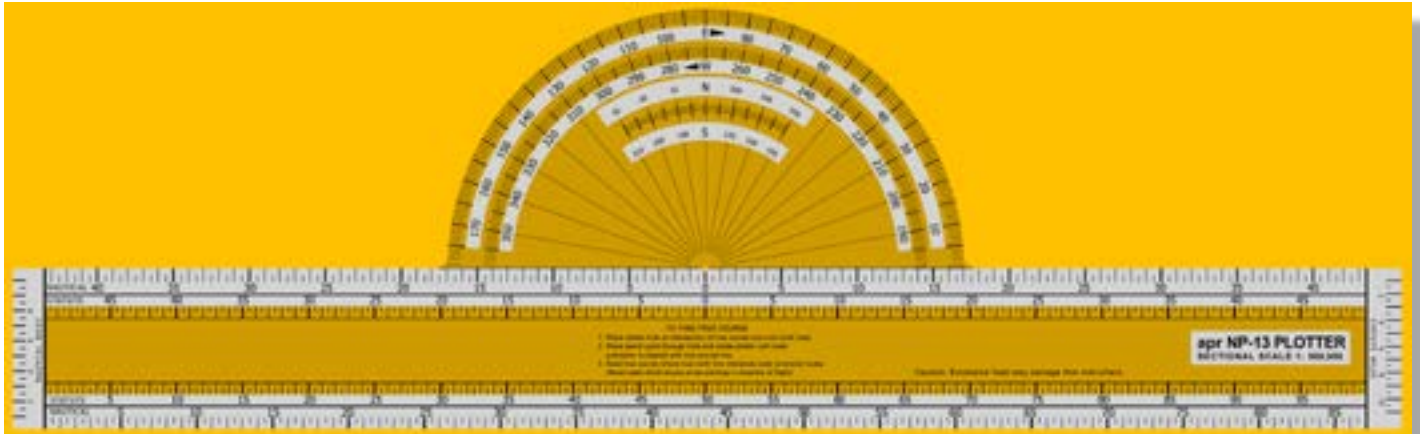
For those of us who love electronic gadgets, the electronic E6B was developed. The electronic E6B is a hand-held calculator that will perform all the functions of the original. It does require a technical instruction booklet that may or may not have been written by someone whose first language was English – which is why I don't own one. (My aged, addled brain can't understand the instructions.)



While the electronic E6B has lots of advantages, the potential problem is that the battery in it may fail. Also, I've been told by a number of designated pilot examiners (the people who conduct your check ride and sign your temporary private pilot certificate), that there is a very good chance that your electronic E6B's battery will "fail" on your check ride, just when you need it most. So, despite the ancient history qualities of the original E6B, it pays to have a good working knowledge of it.

11 – Your Plotter—a combined ruler and protractor

What the heck is a plotter? A novelist who writes intricately interwoven story lines in a whodunit; a slow-moving walking horse; someone who is planning the overthrow of the government?



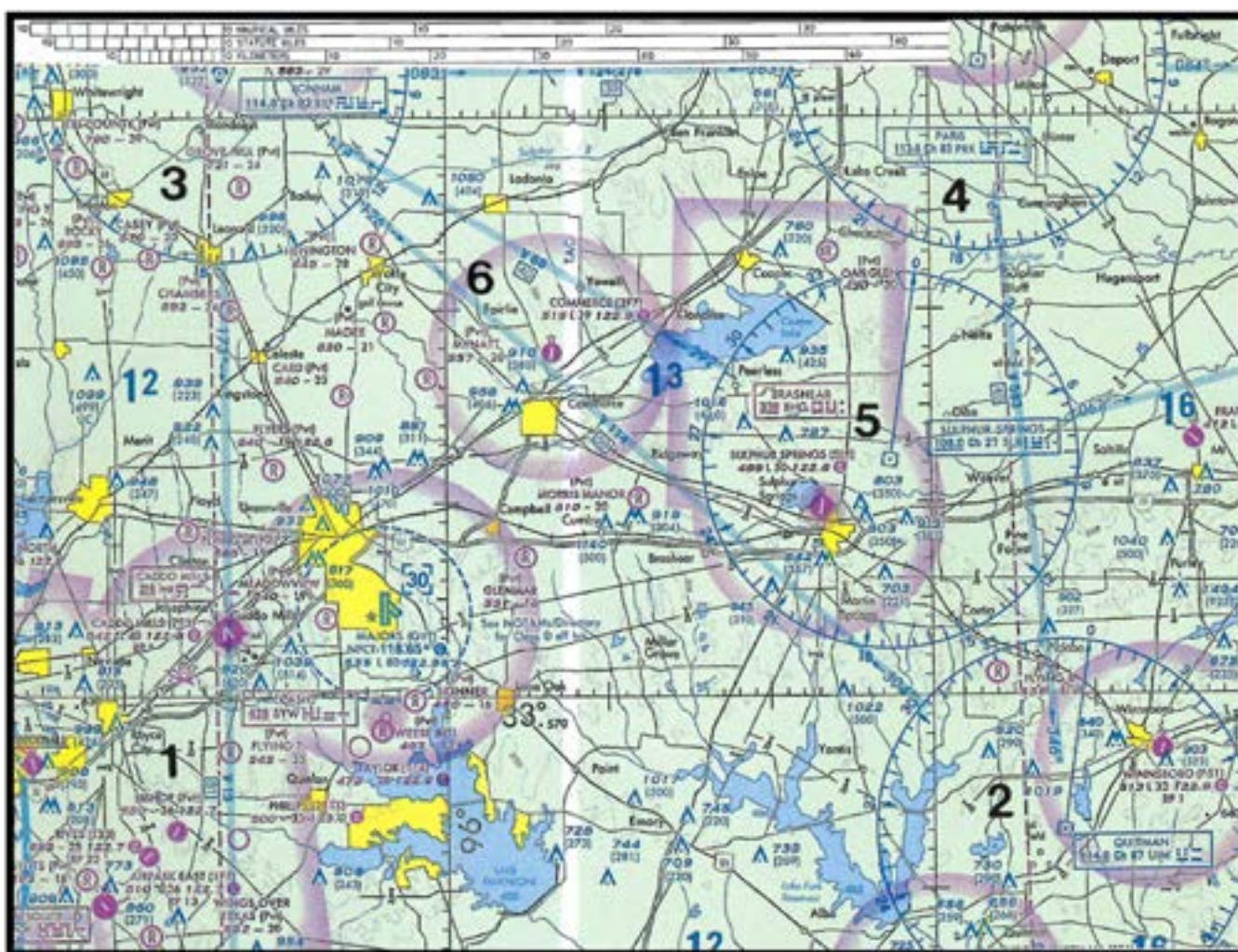
It is used to measure miles and course direction

Well, in a word, no. A plotter is a ruler that measures miles on a chart and also has an arc-like extrusion for a protractor to measure the direction of your course. Plotters are usually made of plastic and are inexpensive, yet they are indispensable when time comes for planning your cross country flights, which will happen in the last third of your private pilot training.

You can find plotters online or at your pilot shop, or again you can order one from King Schools. There are simple ones, and others that have moveable components which purport to do an easier job of showing you the angle of your course. Do yourself a favor: buy the simple model. The more moving parts a device possesses, the more complicated it is to understand.

12 – Charts (not maps) Are Your Guides To Navigation

You need aeronautical charts to fly about the country – or the world, for that matter. They are like maps, but tend to focus more detail on the things that might protrude into the sky. Maps are designed for the ground – and for the groundlings that walk upon it. Charts were originally designed for sailors, to negotiate the seas and oceans they sailed. Once aviation happened, charts were designed for pilots. Remember, maps are for groundlings; charts are for aviators or sailors. Once you start taking steps to become a pilot, you are no longer a groundling.



Terminal Area Charts (TACs) show detail in crowded terminal areas

Charts come in various scales. Terminal Area Charts are large scale and depict a smaller section of the earth (objects shown are larger) – the area around a major air terminal, like Los Angeles (LAX), Kennedy Airport in New York City (JFK), Chicago O'Hare or San Diego International.

Sectional Charts are for sections of the country

Sectional Charts are smaller scale (objects shown are smaller) and depict larger sections of the country, usually centered on the major metropolitan area contained on the chart. The San Francisco, Albuquerque, Atlanta or Miami Sectional Charts are examples.

World Area Charts (WACs) cover larger areas of the world

World Aeronautical Charts are small scale and depict large areas of the earth: multiple states, for example.

Make sure your charts are current

Terminal Area Charts and Sectional Charts are published every six months. World Aeronautical Charts are published every year. When you start preparing for your cross country flights, you'll purchase the charts appropriate to your area. Do not, never, not once, ever fly with an expired chart. Obstructions can be built, and navigation aids—even airports—can move.

13 – How Technology Has Made Flying Easier and Safer

As with many other things in life the rapid advance in technology has changed the world of flying. Flying is now much easier and safer.

Weather information is now readily available

Back in the good old days (not that I would know anything about the good old days), it was much harder to get weather information, but today it is a breeze. You can still call up the old reliable FAA Flight Service Station and get your weather briefing over the telephone, but now you can call up a pilot weather briefing on your own computer at your kitchen table. It'll come complete with color maps and charts. The amount of information you have at your fingertips is stunning—including instant weather reports and forecasts for every airport in the country that has them. One of the things your flight instructor will help you with is how to interpret all the information that is available to you.

Flight planning has become a breeze

When it comes time to do your flight planning, there are programs and apps (many of them free) that will generate your flight plan and detailed flight logs automatically, taking into account the wind at the altitude at which you'll be flying. As with getting your weather briefing, your flight instructor will want to make sure you can also do it the old-fashioned way, but when it comes to using your airplane for transportation all this new stuff will make flight planning a breeze.

In the air the information you need is at your fingertips

Things are a lot easier when you get in the air, too. In the good old days (there I go again) our two biggest worries were about getting lost and changing weather. Now, with modern aviation electronics—these are called “avionics”—those concerns have been removed. Many aircraft cockpits come with big screen displays of all the information a pilot could want—these are referred to as “glass cockpits”. Even if your airplane doesn't have a glass cockpit you can get almost all of the same information from relatively inexpensive portable units. There are also inexpensive apps that will display all of this on your iPad or other tablet.

The fear of getting lost is gone

The satellite-based Global Positioning System (GPS) has completely removed the fear of getting lost. You have a moving map that shows your position at all times. Most systems will also show you the terrain surrounding you, and even give you a warning if you are approaching high terrain.

The weather information you need is readily available

Plus, the map can display the latest weather information so you can make early in-flight decisions about the weather. For detailed weather information about airports you can call up the same weather reports and forecasts that you could if you were sitting at your kitchen table.

You'll learn to do things both with and without the technology

In fact, things are so easy now, your flight instructor's biggest concern will be that you need to make sure to learn the basics so that you are still safe in case of "technical failure". But a really good instructor will also make sure you know how to take full advantage of all this capability, because it makes things so much easier and safer.

14 – Learning The Basics Through Solo

It is not as complicated as it seems at first

When you actually start the flight training process, it may seem a daunting task. You'll look at the syllabus your instructor presents you (remember, you won't fly with an instructor who doesn't work from a syllabus, right?) and you'll realize that you're a long way from the check ride at the end. Don't get discouraged. When you were young, you had to learn how to crawl before you could learn how to walk; you had to walk before you could learn how to run.

You're young in the sky. You need to understand the basic elements of flight before you can figure out how to land, and how to fly a cross country.

Everything boils down to just four maneuvers

The syllabus you'll follow is designed to teach you how to control your airplane in the four basic flight maneuvers: climb, descent, straight and level, and turns. (Any maneuver, no matter how complicated it may seem, is merely a combination of those four maneuvers).



If you've taken an introductory flight lesson, you'll already know something about climbs, descents, flying straight and level and turning. Depending on your syllabus, the second lesson will involve combining climbs and descents with turns, so that you can understand better how lift works. You may also learn about how flaps (those panels on the trailing edge of the wing that can be lowered) affect the way your airplane flies. You may even get a simulated demonstration of what happens when the engine quits – which is not much, really.

You'll also start learning to identify, assess, and mitigate the risks for each flight you do – something you'll continue to do throughout your flying career.

You'll expand your capabilities

Then you'll start expanding your capabilities: slow flight, steep turns, engine out procedures and, perhaps the scariest thing you'll learn in the sky, recovering from a stall.



Learning slow flight will get you ready for landing

Slow flight is a natural condition of flight which prepares you for landing practice – every landing you'll ever make ends in slow flight because you want to come in contact with the ground as slowly as possible. The airplane performs differently in slow flight: it reacts more slowly to your control inputs. The nice thing is that with engine power reduced, the cockpit noise gets much quieter. Slow flight is the true measure of a pilot, and the better you learn how to fly slowly, the better your landings will become.

Practicing steep turns will help polish your aircraft control

Steep turns are a blast. You'll learn how to bank (tilt the wings to one side or another) your airplane, steeply, and still keep it under control. Most of your turns will be made at a slower rate than the steep turns, and when the earth starts turning around you at a fast rate it can be quite exhilarating – like riding a fast-moving merry-go-round, the only difference being that you're at the controls.



You'll learn to stay in control even without engine power

You'll learn to practice engine out maneuvers because things mechanical sometimes break. Now, I started flying in 1975 and I've never had an engine quit on me – that's a very long time and I'm knocking wood (okay, the top of my head) as I write this. But if you practice for the worst, if it ever happens, you'll be prepared. And that's what flying is all about.

A very experienced pilot told me long ago the difference between a professional pilot and an amateur pilot. A professional pilot expects and plans for the worst and is pleasantly surprised when it all turns out for the best. An amateur pilot expects the best and is completely surprised when it turns out for the worst. You don't have to fly for a living to think like a professional. Prepare, and you won't be surprised if what you prepare for happens – and you'll be delighted when it all turns out well.

You'll discover how to keep the air over the wings smooth

Now let's tackle the stall.

Wilbur and Orville (the Wright Brothers – you've heard of them, right?) did the pilot population no favors by naming that condition of flight when the wing no longer supports lift, as the stall. Stall? Isn't that what happens when an engine isn't getting enough fuel, or not enough air, or something?



Stall in an airplane has nothing to do with the engine and everything to do with the wing – or, more specifically, the angle at which the wing meets the air (angle of attack). If you pitch the airplane's nose up too high, the angle at which the wing meets the oncoming wind (known as the "relative wind") can become too great, and the air that was flowing smoothly over the wing starts to burble and backfill and eddy, no longer producing lift – voila, monsieur, le stall.

At the stall "break", when the event actually occurs and the wing stops producing lift, the nose of the airplane drops and the airplane starts to descend. It feels momentarily like you're falling. Falling is a primal fear in mankind – and, when you don't understand flight, lift or any of that "roger, wilco, over and out" stuff – your first few stalls can test your courage.

It's actually a pretty cool thing. A long time ago, the most expensive and thrilling rides at Disneyland required an "E" ticket. Stalls can be a major "E" ticket ride. And, once you understand that the airplane is designed to recover on its own, they become less scary. Lowering the nose – which happens when the wing stalls – increases airspeed, reduces the angle of attack and quickly causes the relative wind to resume its smooth flow over the wing and, just like that, you're flying, instead of falling.

Getting ready for landings

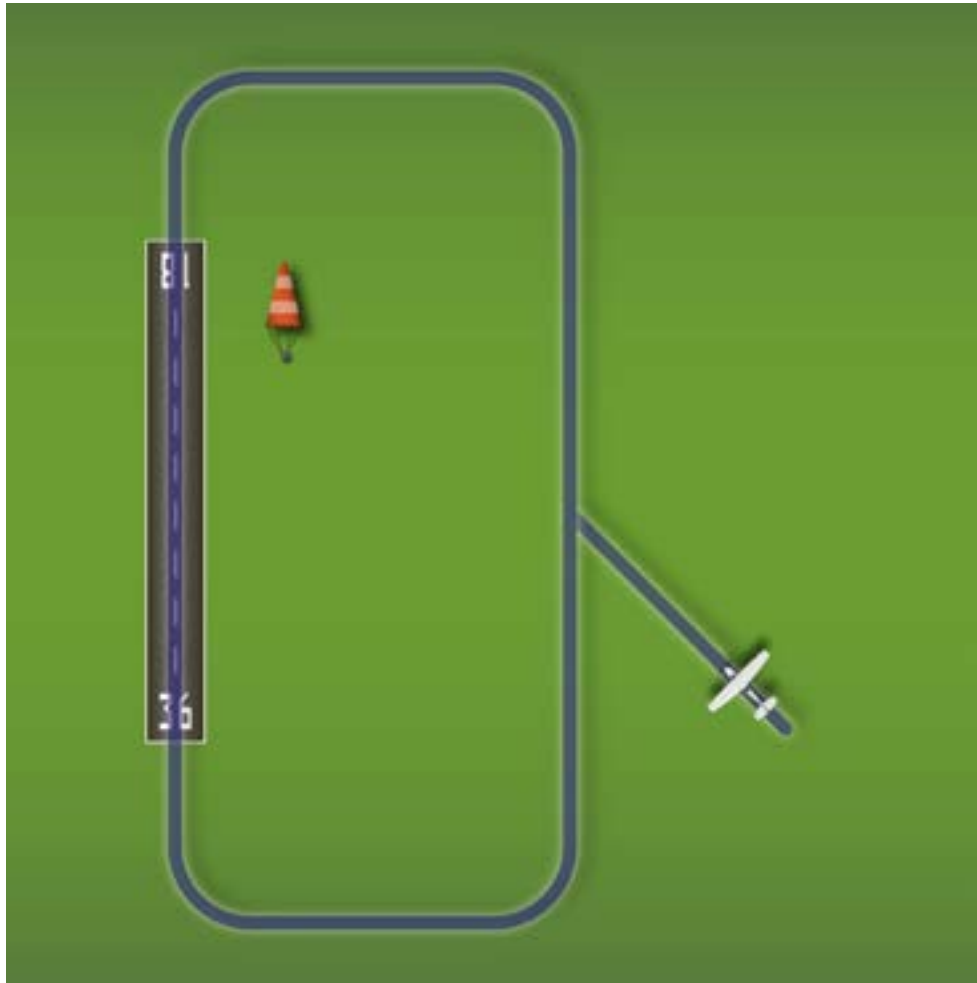
Once you've mastered basic airplane control, you'll start to learn some maneuvers that happen at lower altitudes. Landing practice can't begin until you've learned to control the airplane while you're flying slower, and closer to the ground. Airport traffic patterns are usually around 1,000 feet above the surface of the airport, so you'll need to learn how to fly down low. It's actually a whole lot of fun.



Airplanes are creatures of the air and, almost always, wind is a part of the air in which you fly. The low altitude maneuvers teach you how to adjust for the wind in the traffic pattern. You'll learn S-turns across a road, turns around a point and the rectangular pattern. S-turns have you fly perpendicular to a road and make a series of turns across that road that describe equal sized semi-circles on either side of the road. They help you understand wind and how to correct for it, all the while maintaining your altitude and watching for other airplanes.



Turns around a point have you describe a circle around a point that you've picked out on the ground. You'll learn to adjust for the wind to keep the circle from bulging out of shape. Rectangular patterns are fun practice because airport traffic patterns are rectangular. You'll try to maintain your altitude while maintaining the same distance from whatever surface feature you've chosen to represent a runway.



Getting those landings down

You've learned how to fly high and how to fly low. You've completed, or will be about to complete, your pre-solo test. Now you come to the stage of flight training that has confounded mankind since the beginning of time – well, the beginning of powered flight time, which is the only time that's important to you ... you are, after all, a pilot, right?

How do you control the airplane so that, just above the runway, you round out and flare and, just as the wing starts to lose lift, your tires kiss the runway and make that “chirp, chirp” sound that thrills pilots to their very soul? How? Practice, my friend, practice.

To that end, let me share a very old joke. A man walks up to another man in New York City. The first man asks, “How do I get to Carnegie Hall?” The second man replies, “Practice. Practice. Practice.” Okay, it's old. It has nothing to do with flying. So what. It illustrates the point that landings require practice. Practice. And more practice.

Can you imagine Wilbur and Orville trying to figure out how to land? I mean, they didn't have an instructor. They studied birds. They hoped and maybe prayed. They didn't fly very high, at first. But they had to figure out how to land their Flyer all by themselves. You'll at least have the benefit of an experienced instructor to help you figure it all out. Aren't you lucky.



The first landing probably won't be pretty. Nor will the second, third, or fourth be pretty. You might start thinking that you'll never figure it out; that you'll forever be a groundling, shackled to the earth and scorned by the sky. It may seem like the hardest thing you – or anyone ever in the history of mankind – has ever done. It ain't. Every pilot who ever flew struggled with landing – and eventually they all figured it out. Some got it quicker; some needed more time. It takes practice, practice, practice.



The pre-solo written test—your sign that solo is near

Before you complete this stage of training, or shortly thereafter, your instructor will give you a written test that you'll have to complete before you solo. It involves basic questions about airport traffic patterns and airspace around your solo airport, performance characteristics of your airplane, and FAA regulations. It means that at some point in the not-too-distant future, you'll be experiencing one of the greatest thrills of your life: solo.

In an era when most pilots soloed at eight hours, and the better ones five or six, it took me thirteen ... and a half. I was so afraid of hitting the trees at the end of the runway (on the "go" part of the "touch and go") that I didn't pay as much attention as I should have to the "touch" part. But when I finally figured it out, landings were never a problem – well, not as much of a problem. If it takes you a little longer to figure out landings, so what. When you finally do figure them out, you'll have had so much more practice landing the airplane that you'll never again have problems and you'll come to be known as a great, experienced lander of the airplane. And, don't forget that every passenger you ever fly with in the future will judge your flying skills solely by how well you land the airplane. Then will come the day that will change your life forever. Solo. Makes you think of Lindbergh and Earhart and all those brave pilots who've gone before you.

You'll be aware that it's coming. Your instructor will spend less time talking, less time helping you out with your landings. You'll practice engine out maneuvers – "short approach" is what he'll tell the tower controller, or you, if there's no tower at your airport – to understand how to land the airplane from a power off glide. Your instructor will have you practice "go-arounds" to save you from a bad pattern or approach. He may show you a forward slip to a landing.

The flight you'll never forget—your first solo

Then, one day, after having made three or more really good unaided landings, your instructor will have you taxi off the runway and to the ramp, or flight school, or somewhere close to the runway where he can observe you. “Well, you’ve made every mistake you can possibly make,” he’ll say, “And you’ve learned how to recover from all of them. How about taking it around the pattern by yourself?”

You won’t feel ready. You’ll suppress a panic attack. “I don’t know,” you’ll hear yourself say. “I don’t think I’m ready.” You will be. Your instructor wouldn’t get out of the airplane unless you were. You’ll discuss what your instructor will want you to do – usually three stop and goes, or full stop, or touch and go landings.

When you taxi out your palms will sweat, your tongue will swell, your breathing may quicken. But then the routine procedures will kick in. You’ll check everything you’re supposed to with your checklists. You’ll ask for takeoff clearance (or announce your intentions at a non-towered airport), and you’ll take off.

The airplane will leap into the sky because you’ve left all that dead weight that is your instructor on the ground. You’ll turn crosswind and downwind, and be at pattern altitude far sooner than normal because your airplane is a good 10 per cent lighter without the instructor.

Then you’ll come abeam your intended landing spot and you’ll begin your landing practice routine. You’ll turn base, add more flaps, and turn final. You’ll set up your final approach speed as you lower the last of your flaps, you’ll keep the airplane on the extended centerline of the runway, you’ll adjust for whatever wind that exists.

And then you’re just above the runway, you’ll start the round out and flare and, just like that, you’re on the ground. OMG. **Solo Pilot**. And then you’ll do it again. And again.

Not all three landings will be perfect – maybe none of them will be – but none of it matters. You have left the face of the earth in an airplane and successfully returned. You are a solo pilot.



When you return from your solo, your instructor will congratulate you with more warmth than you've ever experienced because every instructor remembers his or her first solo and delights in sharing that experience with someone new. You won't believe that you did it and you won't be able to suppress that grin you'll wear for a week. You are a solo pilot. It will change your life, forever.

15 – Expanding your skills

Okay, you've soloed. Now what?

Well, some of the hardest work you'll ever do, and most fun you'll ever have, is about to happen. This is where you start polishing your hard-won flying skills and learn how to fly cross countries.

Getting ready to go places in an airplane

What do you want to do after you become a private pilot? You want to go places: take a weekend flight to the lake, an ocean resort, a mountain retreat, some big city. Part of the fun you get from a private pilot certificate comes from travelling to places that are outside the comfort range of your automobile.



More solo practice

The first step in expanding your skills may start with an additional solo at a busy airport. Where I instruct, there is an airport, Brown Field near the Mexican border, that isn't quite as busy as my home airport, San Diego's Montgomery Field. So I take my students to Brown to do their early landing practice and solo them first at Brown, then Montgomery.

In your own training, your instructor may do the same thing. If you're learning at a nice, quiet uncontrolled field, you may solo there and then do some work at a busier airport to gain some experience with air traffic control.



Expanding your takeoff and landing skills

You'll also work on the specialty takeoffs and landings: short and soft field. This can be great fun. In a short field takeoff, you simulate taking off over a limited distance with a mandatory (and imaginary) fifty foot obstacle in your way. The short field landing simulates landing over that same (standard FAA) fifty foot obstacle, and practices getting the airplane stopped in as short a distance as possible. The soft field takeoff simulates taking off from a soggy field, trying to get the airplane into the air and out of the muck as soon as possible, then, once in the air, gaining flying speed. It's a kick – like doing a wheelie down the runway. The soft field landing teaches you to land as gently as possible while keeping the nose wheel off the runway until you no longer can.

You'll also experience some of the three hours of instrument training FAA requires you to have as a private pilot candidate. Flying an airplane by reference to instruments isn't especially difficult – heck, if you've got a flight simulator program on your computer, you can probably fly a heading and an altitude acceptably already. Doing it well, however, in an airplane in the sky takes some skill and some practice. Keeping all six flight instruments behaving as they should, while you're wearing a view-limiting device to simulate flight in a cloud, can be quite a challenge. Ultimately, though, it's fun.



Learning more about navigation

You'll also learn how to navigate using the navigation instruments in the airplane. You'll probably have at least one VOR navigation radio and you'll spend some time learning a technology that was developed in the 1940's and is still the foundation of the airway system throughout this country. You might even get to learn about ADF's (Automatic Direction Finder – another acronym, can you imagine? It must be aviation.) which point at a radio transmitter and tell you where it is – and you're supposed to be able to find it. This is a technology that got its start at the turn of the century – yes, the 20th – and became popular in the 1930's. You will also be introduced to navigation via a GPS (Global Positioning System). There are many different brands of GPS for aviation use, and they all work a little differently, so you'll learn the specific system in the airplane you're flying.



Aerial navigation is a bit similar to how you get about in your car. With your car, you look at a map (or have Google do it for you), find a route and follow the road(s) to your destination. With your airplane, you look at a chart (remember that charts are for sailors and aviators; maps are for groundlings), figure out which airway (like a road in the sky) will get you closest to your destination, and then you plan your route of flight accordingly. Since weather is more of a factor in the sky, you'll learn a bunch about the weather and the sources available to you to help avoid it.



Flying at night safely

In addition to learning about aerial navigation, you'll learn what it's like to fly at night. The airport where I learned to fly was surrounded by trees. On my first night flight, I was a bit nervous because it was dark and the runway lights were dim. As we climbed up above the tree line, I was stunned by all the lights on the ground. (I learned in suburban Philadelphia and there were lots of street lights.) It was the most beautiful thing I'd ever seen – at the time.

The air is smoother at night because the primary source of wind, the sun, is in hiding: all those thermal-induced bumps that got you queasy in your early flight training are gone. The radios are quieter because not as many people are flying at night. Other airplanes are often easier to see at night because of all their lights and airports are sometimes easier to find because of their beacons. (Although trying to find an airport's beacon in a congested, over-lit metropolitan area can be a challenge.)



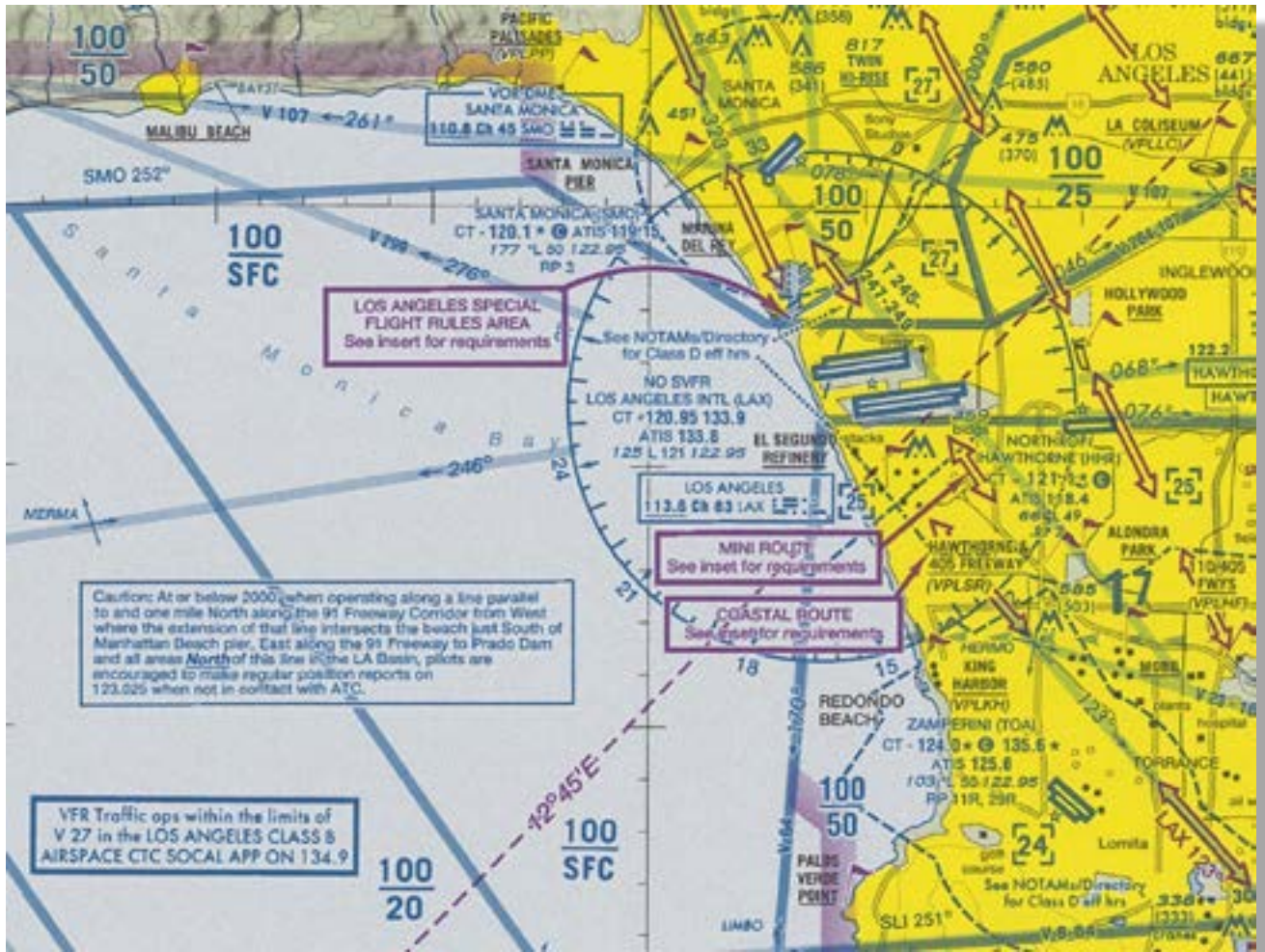
Preparing for emergencies

You'll experience some emergency training as well in this stage. Emergencies never happen in an airplane – until they do. Once again, if you've prepared for an emergency, you'll better be able to deal with it. The training is fun and you'll get to know a whole lot more about the bad things that can possibly happen.

You should also get to fly into congested airspace in this stage of training.

Expanding your boundaries

If you learn at a small-town airport without a big city nearby, your instructor will probably fly you to that big city so you can understand the requirements of flying in complicated airspace. Even if you're learning in or around busy, complicated airspace, it still gets your heart a-racing when you've got to call the Air Traffic Control facility for clearance into the airspace.



Flying cross country

Finally, you'll make your dual cross country flights with your instructor: one in daylight, the other at night. Preparation and attention to detail are the most important factors when it comes to cross country flying. When you're travelling to another airport, FAA says that you are responsible for "ALL" available information about that flight. ALL means a whole heck of a lot.

Can you interpret your chart? Can you understand the performance charts of your airplane? Can you calculate aircraft loading properly? Can you read the weather charts and interpret what they tell you? Can you plot your course using your plotter and whiz wheel? Can you file an accurate flight plan? Can you fly your course accurately? Can you arrive at your destination close to the time you predicted? And perhaps most important, can you identify, assess and mitigate the risks of the flight? Lotsa questions, huh? You betcha. But you'll have had the training required and, as daunting and detailed and time consuming as it all is, you're a pilot – you'll succeed.

16 – Solo cross country flying

Well, by this time, you've flown your dual cross countries with your instructor. You may have had another flight or two – perhaps more instrument training or another night flight. Then you'll start preparing for your first solo cross country.

Flying your first solo cross country

Your first solo cross country won't be as memorable as your first solo flight because you'll be too busy with all the preparation for it, and all the stuff you've gotta do while you're flying it. I barely remember my own first solo cross country, a short hop to Doylestown Airport – because I was so bloody busy with finding my checkpoints, recording my times, computing my ground speed, maintaining my altitude, flying my headings, correcting for wind, talking on the radio – whew, I was exhausted. And then I had to fly back.



Solo cross country prepares you for your future as a private pilot. It requires thoughtful planning, extreme attention to detail, a thorough knowledge of your airplane's performance abilities and limitations, an understanding of the weather and how it could affect your flight, an ability to identify

and mitigate risk, and begins to install the confidence that you'll need once you get your certificate. It's an amazing time.

Your first solo cross country will be, more than likely, a duplication of your first dual day cross country with your instructor on board. The best part is that this time you'll be more familiar with the plotting and planning and detail required. Flying the same route will give you some peace of mind – you've already seen the terrain before and you've already had practice doing all the things required.

Your long cross country

After the first solo cross country, you may have another navigation lesson – maybe more solo takeoff and landing practice – before you make the big trip, the long solo cross country. You'll be required to plan a flight to two airports you've never seen before and return to your home base. The planning and plotting demanded will be nearly three times the work because, basically, you're flying three times the distance of your first cross country. The planning and plotting won't be new, so it won't be as time consuming as the first couple of cross country flights, but it will still require a great deal of attention to detail. By this time you'll have become a wiz at the whiz wheel, cranking out ground speed, fuel burn, wind drift correction and headings like a seasoned pro – well, almost. Here in Southern California, I send my students first to Jacqueline Cochrane Regional Airport in Thermal, California, at the southern edge of the Coachella Valley. The next stop is Imperial County Airport, with a segment flying over California's largest lake, the Salton Sea. Finally, my students return home to Montgomery Field in San Diego.



The route requires flight over mountains, water and desert. It demands an understanding of VOR navigation. It taxes my students' flying skills, preparation skills and navigational ability. It's a blast. It's also great preparation for the student's flying future, since Southern California is bounded by a foreign country to the south (Mexico), the Pacific Ocean to the west, multiple mountain ranges and the Sonoran Desert to the north and east. Your cross country may not have similar topographic features, but it will test your ability to fly to airports in your region

Once you've completed your long cross country flight, you'll start preparing for the check ride. You'll review all those maneuvers you learned early in your flight training. You'll practice identifying, assessing, and mitigating risk for a flight. You'll finish up any hourly requirements like instrument time, night time and solo time. You'll perform all the maneuvers required by the Airman Certification Standards (ACS), FAA's check ride bible. You and your instructor will tie up any loose ends as you prepare for that epic day, your check ride.

17 – The check ride—your chance to demonstrate your knowledge, skill and risk management

After all the training, all the study, all the preparation and planning, all the joy and aggravation, the time will come for your check ride, the Private Pilot Practical Test.

Aviation demands tests. Every rating or certificate you will seek requires a check ride. When your instructor endorses your logbook, he's telling you and the examiner that he believes you have the ability to pass the test – so all you have to do is prove him right. The check ride has two parts—an oral exam and flight test. (And here is the time for a shameless plug for King Schools Private Pilot Practical Test Course. If you purchase this course, you'll get to see how a practical test, including both the oral exam and flight test, is conducted. All of the answers to the questions an actual examiner might ask, all of the maneuvers you'll be expected to fly, are demonstrated with a model performance by John King before a real examiner, right before your eyes. Knowledge is power, and when you know how the practical test is conducted, it will help you succeed.)

Your oral exam

Prior to the check ride date, the examiner will assign you a cross country flight to plan. The oral consists of a discussion – for what will seem an unbelievable amount of time – of your planning for that flight. You'll discuss every aspect of the flight: route planning, weather interpretation, performance numbers for your airplane, aircraft loading, any airspace along the route of flight – virtually every aspect of the cross country, including the regulations that apply. You'll also be asked to identify, assess, and mitigate the risks for the planned flight. It can be exhausting, but the examiner's task carries with it an enormous responsibility – when he or she signs your temporary airman certificate, you will have all the rights and privileges that pertain to your new-won status as a private pilot, and the examiner wants to make sure that you'll be a safe pilot.



By the way, here's another plug for getting a good score on your knowledge exam. Let's say you and I were to take a private check ride from the same examiner. And let's say that you scored a 96 on your knowledge exam, and I scored a 73. The examiner is required to ask us the same questions. The difference is that if you give a correct answer to a particular question, the examiner will assume that you know the information. If I give a correct answer, he may assume that my answer was a lucky guess and may ask follow up questions to ensure that I really do know the answer. So ... score well on your knowledge exam and you'll have an easier time with your oral.

Your flight test

If the examiner is happy with the results of your oral, then you'll get to go fly. Often you'll get a short break between the oral and the flight to grab a bite to eat or freshen up. (Chances are, if you scored well on your knowledge exam, your oral won't be so long that you'll need a break.)

The examiner will follow along as you pre-flight your airplane, perhaps asking questions as to why you're doing what you're doing. Again, the examiner wants to be comfortable that you'll be a safe pilot – after all, he'll probably be sharing the sky with you some day and he doesn't want to bump into you again, in mid-air.

If you're both satisfied with the pre-flight, you'll get to do the fun part, fly the airplane. It may not seem like fun flying – getting evaluated by a stranger – but it's part of the routine and you'll get to prove, or re-prove, your skills throughout your flying career. Most examiners will tell you that they'll

know how the ride will go in the first five minutes. They'll look for telltale signs like good radio work, taxiing on the center line of the taxiway, correcting for wind by placing your flight controls in the proper alignment for the wind, and a thorough use and understanding of the checklists. The Airman Certification Standards (ACS) outlines all the maneuvers you'll have to perform and the standards to which you'll be held. If you're performing a maneuver and you realize that you're not going to complete it to standards, it's best to tell the examiner that fact: "I really loused that steep turn up. I know I can do better. May I have another chance?" The examiner will grant that second chance because, not only is he testing performance, he's testing your judgment. Since you've recognized that the maneuver wasn't going to qualify, you've shown the examiner that you have good judgment and an understanding of the completion standards. Now if you have to ask for a second chance after every maneuver, you probably won't have a successful outcome to your check ride.

When it's all done, and the examiner is satisfied with your performance, he or she will have you fly back to your home airport. If the examiner says something like, "Don't do anything stupid on the way home," it may be an indication that you've succeeded. Don't assume anything and always wait for the examiner to offer an assessment. The examiner may even ask how you thought you did. It's a good time for you to make an honest evaluation of your performance. But when you return from that ride and the examiner shakes your hand to congratulate you as the world's newest private pilot, you'll remember that moment for the rest of your life. All the stress and worry and work and study will have been worth it.

You are now an official pilot

It's the thrill of a lifetime. I still remember the joy I felt when my private check ride was over, way back on Bastille Day, 1976. I don't remember if I celebrated, or how, I just remember the amazing feeling of accomplishment. You have become a brother to Lindbergh, or sister to Earhart. You are a direct descendant of Wilbur and Orville Wright and their dream. You are a pilot. There are few things you'll experience in your life that will bring greater satisfaction. Revel in it.

18 – So You're a New Private Pilot – What Can You Do?

You've become the world's newest private pilot. All that time and training and study and practice – not to mention money – has paid off, and now you want to know what to do. The simple answer: make use of it.

You'll probably want to take family members up for a flight first: Mom and Dad, your significant other, siblings, cousins, distant relatives in far flung parts of the world. You'll want to fly with everyone you've ever known and show them the hard won skills you've achieved. By the way, don't be surprised if some folks don't want to fly with you. After all, they will have to put their lives completely in the hands of a brand new pilot.

Make them want to fly with you again

If they do agree to fly with you, first, remember that to a non-pilot, it's excitement enough just to be up in the air and off the ground, especially since someone they know – you – are at controls. You don't need to do anything exciting for your passengers to be really thrilled.

Think of this flight as a sales flight. You're trying to convince a non-pilot that flying with you in the future will be fun, interesting, and – more important – safe. So pick a day when the weather is good—a bright, cheery day with no bumps and little wind, and not a rainy one. Also, make sure you and your passengers have the time to make it a relaxed experience.

Think about what would be interesting to them

What's particularly special for non-pilot, and something they will remember and talk about for a long time, is flying over their own house, business, school—any place significant to them. Another great choice is over a prominent local landmark or recreation area like a beach or park. Heck, even the biggest shopping center in town looks cool from the air.

Explain what will happen

Also explain what you're doing as you go along. Start with the pre-flight. Tell your passengers, we're checking things to be safe, not because flying is dangerous.

Before you do the run-up, let them know you're just making sure everything is working properly, and that the noise level will be going up.

Remember, actions and noises that are routine to you by now will be unfamiliar, even frightening, to non-pilots. Make the flight as smooth as you can so your passengers can focus comfortably on what's outside the window, instead of hanging on to the seat with a death grip because they're afraid of what's going to happen next.

Above all don't scare them

No one enjoys repeating an experience that scared them or made them sick. So for these first few flights with your special passengers, avoid abrupt maneuvers like stalls and steep turns.

A common question from nervous flyers is, “What happens if the engine quits?” Some pilots hearing that question will immediately say, “Nothing—let me show you,” then pull the throttle back to idle. Don’t do it! Your passenger will believe that you have completely shut off the engine. This is guaranteed to make a nervous passenger look around for a parachute and resolve never fly with such an irresponsible and reckless pilot again.

They don’t understand that truly nothing will happen, but then you haven’t given them much chance to know that. So don’t do anything abrupt or anything that makes rapid, big changes in the noise level of the airplane.

And whatever you do, resist the temptation to fly low—to do a buzz job over their home or business. It’s not only illegal and dangerous, it is not conducive to a relaxed passenger who would look forward to flying with you again. Above all, don’t find yourself saying the two most feared words in aviation: Watch this. It’s practically guaranteed to get you in trouble with either the airplane or your passenger, or more likely both.

Don’t make the flight too long. Thirty minutes or so is a good length for the first flight. Remember the old show business adage: Always leave them wanting more.



19 – Where Can You Go?

You've got a brand new certificate and want to make use of it. Where to go?

Try a hundred-dollar hamburger

Lots of people combine their new certificate with a desire to eat. Many airports have restaurants, and some of them are even good. You may have heard the expression, "The Hundred-Dollar Hamburger." It has to do with the cost of flying somewhere to eat, but the journey is the fun part and, if you've got friends who like adventure, it's a great way to share the experience.

Ask around your airport for recommendations – every pilot will give you their list of the four or five best airport restaurants within easy flying distance. For instance, here in Southern California, one of my favorite places is called the DC-3 Gifts and Grill on Catalina Island – and you don't order a \$100 hamburger, it's a buffalo burger. It requires a short trip across open ocean, plus landing on a runway that sits on top of a hill with big drop offs at either end and appears to disappear as you start your landing flare. But the burgers are wonderful and the quiet on Catalina Island is a palpable force.

Consider group fly-outs

Also, ask around among pilots about the places they have most enjoyed flying to. If you are a member of a flying club, oftentimes the club will promote a fly-in to a destination airport. Flying with a group of more experienced pilots will increase your confidence and expand your horizons.



20 – What Should You Want to Do Next?

Once you get your private pilot certificate, you will most likely find that you miss the learning and will want to expand your flying capability. A wise friend once told me that you're either learning something new, or, if not, you're forgetting something that you've already learned. Why not try something new? The coolest thing about flying is that there are so many options.

An instrument rating will add enormous practicality to your flying

After you have learned to fly, getting an instrument rating (which allows you to fly in the clouds and in low visibility) is your next logical step. An instrument rating adds enormous practicality to your flying. It allows you to plan cross country flights to distant airports with a fair degree of certainty that you'll reach your goal and be able to safely return. And beyond that, it's incredible fun – although the training may be the hardest you'll ever attempt. It requires a level of focus that some people are incapable of. It requires practice after you achieve the rating because the skills you develop in the training can quickly erode.

It doesn't give you the skill to fly through any imaginable weather, but it does give you an understanding of what weather you can handle, and what weather you should avoid like the plague. The more experience you build flying by reference to instruments, the more you will realize that it makes you a far better pilot overall.



More speed, range, and load-carrying capability

It's not uncommon for pilots to soon wish to go faster, farther, and with greater load-carrying capacity. Generally, the airplane that will do all of these things will have more than 200 horsepower. An airplane with more than 200 horsepower is referred to as a "high performance" airplane. There is nothing particularly tricky or difficult about flying a high performance airplane, but it will require an endorsement from a flight instructor who has checked you out in a high-performance airplane.



If your chosen airplane has a constant speed propeller, retractable landing gear and flaps it is referred to as a “complex” airplane. A complex airplane also requires a flight instructor endorsement.



Twins add even more power and capability

When you step up to even more capable airplanes it is not uncommon that you also get an extra engine. When you have a second engine you will find that you become much more comfortable when flying over bad weather, at night, or over rugged or remote terrain.



Twin training involves a lot of practice involving engine-out procedures because most twins have an engine on either wing and, when one of them quits, the airplane can get a bit squirrely. Everyone I know who has taken the training, has loved it. And it sure is fun having two throttles, mixture and prop controls to play with – along with hearing that satisfying hum of two synchronized propellers spinning alongside you.

Learn to fly tailwheel airplanes to go places a nose wheel airplane can't take you

Tailwheel airplanes can safely take you to fun and exciting places where nose wheel airplanes might have problems. For instance, want to land on dirt strips in the back country of Idaho? On gravel bars next to rivers in Alaska? On sandy beaches in Mexico? A tailwheel airplane keeps the propeller higher in the air, so you're less likely to have the propeller damaged by rocks or debris. And there's no nose wheel, prone to dig into the soft ground and cause problems.

Tailwheel airplanes are harder to land and takeoff than any airplane you'll ever fly. Why would you want to subject yourself to such hardship? Duh. You're a pilot, ain't you? Tailwheel training is fun, frustrating, exciting, humbling and a blast.



Another way to have fun—combine flying with the water

Without a doubt, the most fun flight training you can do is flying a seaplane, lift, and have to return to the ground when they can't find it.



The coolest thing about seaplane training is the places you can train. I have friends who learned in Coeur d'Alene, Idaho, and they'll chew your ear off about how beautiful it all is. I know a man who trains you to fly seaplanes at Honolulu International Airport – yes, that Honolulu, the one in Hawai'i. If there's a lake or a broad river near you, there's a chance there's someone who will teach you to fly a seaplane. Once you get your pilot's certificate, it may be the most fun thing you'll ever do in an airplane.

Helicopters make flying like magic

Helicopters are the humming birds of aviation. They can hover, and can fly in any direction the pilot wants them to. They provide a view and a flying experience unrivaled by any other aircraft. Flying helicopters is like learning to ride a bicycle—it is hard to learn, but once you get it down, it is easy. Just make sure you have a lotta money because all those moving parts cost a lotta money to keep in the air.

Learn to fly silently in a glider

Gliders, on the other hand, are not very expensive at all. I mean, what the heck, they don't have engines. And all the glider pilots I know are better pilots than the general pilot population because, after all, every landing is a power-off landing, so you sure as heck better be able to figure out how to get it down safely. Glider pilots also understand lift better than powered pilots do because they're always looking for sources of lift, and have to return to the ground when they can't find it.



There are glider training centers in places where there are sources of lift, like near mountains or coastal ridges. Flying a glider is one of the coolest things you will ever do and, once you learn, you won't worry much about having an engine quit – not that they ever do in a glider!

21 – The Joys of the Sky

You will soon be embarking on the wonderful adventure of being a pilot. It's something that will stay with you, and mark you as a special person, for the rest of your life. Most of all it will provide you with unparalleled experiences for as long as you fly.

As Charles Lindbergh said, "Science, freedom, beauty, adventure — aviation offers it all."

Not long ago my wife and I visited the Big Island of Hawai'i. We rented a Cessna 182 from a friend I had flown with years ago when I was an instructor and air tour pilot in Hawai'i. We flew south out of Kona International, past the City of Refuge ("Pu'u'honua O Honaunau" in Hawai'ian), past the southernmost tip of the United States, Ka Lae ("south point" in English), over top of a green sand beach. Yes, I wrote "green sand beach" and you'll only believe it when you fly (or take a really long four-wheel drive down) to it.



The active vent, Pu'u O'o, of the active volcano, Kilauea, was under cloud, so we headed back north, past the sparkling waters of Kealahou Bay, the best snorkeling site in the states. We were headed for the Hamakua Coast, on the northeast side of the Big Island.

It had rained for a few days on Kohala, the northernmost volcano, and as we passed the Polulu Valley we saw dozens of waterfalls cascading from the mountain cliffs onto the beaches below. We saw falls in the back of the Waipio Valley, as well. We had views of a blue ocean, lush green-covered ridges, cliffs and valleys, and more waterfalls than you could shake a stick.



On our flight returning to the mainland, I asked my wife what part of our two week holiday she liked best. She said, “The flight along the Hamakua Coast. I’ve never seen anything as beautiful.” I could go on ... and on ... and on. When you become a pilot, another world opens up for you. Sometimes it’s a world that lasts only for a moment: sunlight streaking through a cloud and spot-lighting a pristine forest; a meteorite slashing the darkened sky in front of you; a sunset so beautiful that it makes you weep.

I flew air tours for ten years around San Diego in an open cockpit Travel Air biplane. Sunset flights were my favorite. As the sun dropped, the city’s buildings would take on a reddish/pinkish blush. The sandstone cliffs of Torrey Pines would sparkle, each striation displaying a different hue. If the marine layer of low clouds lay offshore, they would assume dazzling shades of amber and gold as the sun dropped just above the horizon. Then, as the sun sank into the ocean, on rare occasions with super-clear skies you could experience a spectacular green flash of light. (Don’t bother to ask. The science is beyond my ken – but it exists, you’ll have to take my word for it, or move to California and hang out by the ocean at sunset.)

What joys can the sky bring you? You'll never know until you experience them on your own. It may be as simple as discovering how close everything is in your home town, when you're looking down on it from above. It may be the fun of pointing out a friend's home on their first flight with you. It may be as profoundly, life-changingly beautiful as the Grand Canyon or Sedona's red rock canyons, or the Florida Keys, or golden prairies, or rivers or streams or oceans or lakes with sunlight illuminating them from above.

The sky is forever changing and usually welcoming. All you have to do is become a pilot to find her beauty. Treat her with respect, and she'll shower you with vistas that were unimaginable before you became unstuck from the ground.

I want to share a poem written by a man who never saw battle in WWII, who died on a training flight. He found the joys of the sky and wrote about them in 1941. My late father-in-law, a WWII ferry command pilot, carried the poem with him lest he forget the words, yet he always remembered and recited them, when asked, from memory. I'll let John Gillespie Magee, Jr. close the joys of the sky.

High Flight

John Gillespie Magee, Jr.

**Oh! I have slipped the surly bonds of Earth
And danced the skies on laughter-silvered wings;
Sunward I've climbed, and joined the tumbling mirth
of sun-split clouds, — and done a hundred things
You have not dreamed of — wheeled and soared and swung
High in the sunlit silence. Hov'ring there,
I've chased the shouting wind along, and flung
My eager craft through footless halls of air....**

**Up, up the long, delirious, burning blue
I've topped the wind-swept heights with easy grace.
Where never lark, or even eagle flew
And, while with silent, lifting mind I've trod
The high untrespassed sanctity of space,
- Put out my hand, and touched the face of God**

Over the years you will want to remember another famous saying that goes like this: "Aviation in itself is not inherently dangerous. But to an even greater degree than the sea, it is terribly unforgiving of any carelessness, incapacity, or neglect."

So have fun with your flying. And by all means, please...Stay out of the trees!