WELCOME ABOARD LETTER – WEEK ONE

To the New Student Pilot,

Welcome to Next Gen Pilot Training, your first step toward becoming a safe, confident, and competent pilot. This week marks the start of your aviation journey, and everything we do from this point forward is designed to build a strong foundation.

Over the next five days, you'll attend three ground school sessions and participate in two introductory flight lessons. Your curriculum is structured to introduce the basics while also getting you airborne quickly, so you can apply what you learn.

By the end of the week, you'll know how to safely conduct a preflight inspection, understand key FAA regulations, and feel the controls of an aircraft in flight for the very first time.

We're not just here to teach you how to fly; we're here to train the pilot in you.

Here's what to expect:

- 3 Days of Ground School (Mon/Wed/Fri)
- 2 Days of Flight Training (Tue/Thu)
- Quizzes to reinforce key knowledge
- Hands-on learning and interactive discussions

Let's take off together.

Sincerely,
Connor Bynum
(480) 848-3956
Certified Flight Instructor
Next Gen Pilot Training

Student Pilot Essentials

Next Gen Pilot Training with Connor Bynum

What You'll Need

1. Headset (Required)

You'll need this to clearly hear ATC and protect your hearing.

Top Choice – Premium:
🔗 Bose A30 Aviation Headset – $1,271.14
Industry leader in noise cancellation and comfort.

Mid-Tier – Budget Friendly:
🔗 Pilot USA Pro Max ANR Headset – $439.00
Solid quality with Bluetooth and active noise reduction.

2. Kneeboard (Required)

Keeps your charts, notes, and iPad organized in the cockpit.

🔗 Flight Outfitters iDeck Kneeboard – $79.95
Great for both paper and digital materials.

3. Sunglasses (Required)

Non-polarized, UV-protective sunglasses to reduce glare without affecting instrument visibility.

🔗 Randolph Aviator Sunglasses – $299.00
Designed specifically for pilots.

4. Books & Study Materials (Required)

You'll receive printed or digital copies in class, but you can also purchase your own:

- FAA Airplane Flying Handbook (AFH)
- FAA Pilot's Handbook of Aeronautical Knowledge (PHAK)
- ASA Private Pilot Test Prep Book

- Cessna 172 Checklist (provided)
- VFR Sectional Chart (provided in class)

5. Optional But Recommended

- iPad with ForeFlight (digital navigation and planning)
- E6B Flight Computer (or E6B app)
- A small flight bag to carry your materials

What to Do:

Order your headset, kneeboard, and sunglasses before your first flight lesson.
Bring them to your first flight day (Tuesday).
Come ready to learn, take notes, and ask questions.

WEEK ONE OVERVIEW

Day	Type	Focus Area	Location
Mon	Ground School	Fundamentals of Flight + FAA Regs	Classroom / Sim Lab
Tue	Flight Lesson	Preflight + Straight & Level Flight	Ramp + Cessna 172
Wed	Ground School	Flight Instruments + Checklists	Classroom
Thu	Flight Lesson	Turns, Climbs, Descents + Radio Comms	Ramp + Cessna 172
Fri	Ground School	Airspace, Weather Basics, Review	Classroom / Quiz

DAY-BY-DAY CURRICULUM

Day 1 – Monday: Ground School Kickoff

Topic: Introduction to Flight + FAA Rules and Aerodynamics

What You'll Learn

- How to Become a Pilot:
  Get a clear roadmap of the steps, milestones, and requirements for student pilots.
- Aircraft Categories & Parts:
  Understand the differences between aircraft categories (single-engine, multi-engine, etc.) and learn the names and functions of the key parts on a training airplane.
- Aerodynamics Essentials:
  Explore what makes airplanes fly, including the "Four Forces of Flight": lift, weight, thrust, and drag.
- FAA Rules That Matter:
  Demystify the basics: what the FAA (Federal Aviation Administration) requires for new pilots, from medical certificates to student pilot eligibility.

Hands-On Experience

- Aircraft Walk-Around:
  Join me for an up-close tour of our training aircraft. See, touch, and identify every part you'll soon be flying.
- Getting Set Up:
  I'll walk you through your first logbook entry and explain how we'll use lesson outlines and digital tools to track your progress from the very first day.

Homework Assignment

- Reading:
  - FAA Airplane Flying Handbook, Chapters 1 & 2 (Introduction & Aircraft Basics)
- Visual Review:
  - Study the labeled diagram of an airplane's main parts
- Preparation for Quiz #1:
  - Review today's topics so you're ready for your first quiz (short, low-pressure, and designed to reinforce, not stress you out!)

Quiz #1 – Ground School Check

Topics Covered:

- Parts of the airplane
- The four forces of flight
- Basic FAA requirements for student pilots
- Key terms: lift, weight, thrust, drag

Sample Quiz Questions:

1. Name the four forces of flight.
2. What does the FAA require for a student pilot certificate?
3. What is the purpose of the rudder?
4. Label the following parts of an airplane:
   (wing, empennage, fuselage, aileron)
5. What does “lift” counteract in flight?

What Happens Next?

By the end of Day 1, you’ll know exactly what it takes to start your flight training journey. You’ll have seen the real airplane, set up your pilot logbook, and begun building a foundation of knowledge that every great pilot needs.

Day 2 – Tuesday: Your First Flight Lesson

Topic: Preflight Inspection + Your First Flight in the Left Seat

What You'll Learn & Do

- Preflight Mastery:
  We'll begin on the ramp, walking step-by-step through the official Cessna 172 preflight checklist. You'll learn how to safely inspect the exterior and interior of the aircraft, including fuel, oil, control surfaces, lights, and more, so you know your airplane is airworthy before every flight.
- Taxiing Techniques:
  You'll practice safely maneuvering the aircraft on the ground, including steering with your feet, using brakes, and staying clear of hazards. You'll learn to read airport markings and respond to ground control instructions over the radio.
- Effects of Controls:
  Once airborne, I'll guide you through using the yoke and rudder to maintain the plane's straight and level flight. You'll discover how each flight control (ailerons, elevator, rudder) affects the aircraft, and get a feel for how to make smooth, coordinated inputs.
- First ATC Experience:
  You'll learn the basics of listening and responding to Air Traffic Control (ATC) on the ground and in the pattern, so you're comfortable with the radio from Day 1.
- Safety Focus:
  Throughout the lesson, you'll practice using checklists, develop safe cockpit habits, and become familiar with key instruments and switches.

Aircraft & Lesson Structure

- Aircraft: Cessna 172 (standard training configuration)
- Flight Time: About 1 hour in the air, plus 30 minutes pre- and post-flight briefing
- Emphasis: Safety procedures, real-world checklists, and cockpit "tour" with plenty of time to ask questions and get comfortable

Hands-On Practice

- Preflight walk-around: You perform each inspection step with real-time coaching
- Taxi out and run-up: learn to keep the airplane on the centerline and handle radio calls
- Straight and level flight: hands on the controls for the first time, with gentle guidance
- Using checklists: practice before start, before takeoff, and after landing

Post-Flight Debrief

After landing, we'll sit down together to:

- Review what went well and what to improve
- Talk through anything that felt surprising or challenging
- Go over the checklist and reinforce cockpit procedures
- Assign a brief reflection so you capture your "aha" moments from the lesson

Homework

- Review a preflight inspection video and checklist
- Complete your first flight reflection:
  What surprised you about the experience of flying? What skills do you want to improve next time?
- Study your ground lesson notes, focus on the flow of preflight, taxi, and basic controls

Flight Quiz 1 – Tuesday Check

Topic: Preflight + Straight & Level Flight

Sample Quiz Questions:

1. What are the main items you inspect during a preflight walk-around of the aircraft?
2. What is the purpose of the control check before engine start?
3. How do you maintain straight and level flight?
4. What is the correct response if you hear a radio transmission you don't understand?
5. Name one thing you learned today that surprised you about being in control of the aircraft.

What Happens Next?

By the end of your first flight lesson, you'll have performed a real preflight inspection, handled the controls in the air, and built your confidence with safety-first habits.
You'll be ready for your next step: learning to communicate, maneuver, and debrief like a pro.

Day 3 – Wednesday: Ground School Deep Dive

Topic: Flight Instruments, Checklists, and Weight & Balance

What You'll Learn & Do

- Meet the "Six Pack":
  You'll get hands-on with the six primary flight instruments every pilot must know: airspeed indicator, attitude indicator, altimeter, vertical speed indicator (VSI), heading indicator, and turn coordinator. I'll break down what each does, what it looks like in flight, and how to interpret changes at a glance.
- Pitot-Static System Simplified:
  We'll explain the difference between the pitot and static systems, what each instrument uses for data, and how to spot signs of malfunction.
- Checklist Discipline:
  Learn not just how, but *why*, to use checklists for every phase of flight. You'll practice the normal checklist flows for preflight, engine start, taxi, before takeoff, and after landing, using real-world examples and memory aids.
- Intro to Weight & Balance:
  See how loading your aircraft (fuel, passengers, baggage) affects flight. We'll cover the basics of the center of gravity, why it matters for safety, and review sample loading problems.

Hands-On Practice

- Instrument Quiz:
  Interactive activity using simulated cockpit gauges, identify, explain, and "fly" basic scenarios with the six pack.
- Checklist Flow Drill:
  In small groups or pairs, you'll walk through each step of a normal checklist, learning to check, call, and confirm, just like you will in the airplane.
- Diagram Labeling:
  Complete a labeled aircraft diagram (either paper or digital) to reinforce your knowledge of instrument locations and names.

Homework Assignment

- Complete your aircraft diagram label sheet (parts and instrument panel)

- Review basic performance charts (climb rate, takeoff distance, etc.), just a preview, no math stress yet!
- Study checklist flows for each phase of flight (memorization tips provided)

Quiz #2 – Flight Instruments & Checklists

Topics Covered:

- Names and functions of all six primary flight instruments
- Pitot-static system basics
- Proper checklist usage and why it prevents errors
- Weight and balance safety principles

Sample Quiz Questions:

1. What does the VSI (Vertical Speed Indicator) measure?
2. Which instruments use the pitot tube?
3. Why is the checklist important during every phase of flight?
4. What does the altimeter indicate?
5. Describe how you would know your aircraft is coordinated in a turn.

What Happens Next?

By the end of today's lesson, you'll be able to recognize, name, and interpret every main instrument on your panel, and understand how real pilots use checklists and weight & balance to fly safely, every time.

Next, we'll take these skills into the sim and the airplane, so you can see them in action.ll!

Day 4 – Thursday: Flight Lesson – Maneuver Mastery & Radio Basics

Topic: Basic Maneuvers: Turns, Climbs, Descents + Introduction to Radio Communication

What You'll Learn & Do

- Coordinated Flight Fundamentals:
  Take the controls and practice coordinated turns, gentle climbs, and smooth descents. You'll learn how to "feel" when the aircraft is in balance and how to use both the ailerons and rudder for safe, smooth turns.
- Altitude & Heading Control:
  Develop precision flying skills by holding a steady altitude and maintaining your heading, no autopilot here! You'll learn to scan your instruments, make small corrections, and "fly by the numbers."
- Trim and Power Management:
  Discover how to use elevator trim for lighter control pressure and how adjusting the throttle affects climb, cruise, and descent. You'll practice setting the airplane up for hands-off, stable flight.
- Radio Communication 101:
  Get comfortable with the radio! You'll learn how to make and respond to basic ATC calls, requesting taxi clearance, reading back instructions, and announcing your intentions in the pattern. I'll guide you through standard phraseology so you're confident on the mic.
- Scenario Practice:
  Put your new skills together, climb out after takeoff, level off, enter a turn, descend, and talk to ATC, all in one lesson.

Aircraft & Lesson Structure

- Aircraft: Cessna 172 (dual controls, full instructor support)
- Flight Time: Approximately 1.2 hours (plus pre/post-brief)
- Emphasis: Real-time feedback, step-by-step coaching, with the student at the controls for every maneuver

Hands-On Practice

- Preflight checklist and safety review

- Practice taxiing and communicating with Ground Control
- In-flight: execute straight-and-level flight, gentle turns (10°–20° bank), climbs and descents at assigned headings
- Use of trim during level flight and while changing pitch
- Multiple radio calls: taxi clearance, takeoff clearance, position reports

Post-Flight Debrief

- Student Self-Assessment:
  Reflect on your strengths and areas to improve. Where did you feel in control? What challenged you today?
- Instructor Evaluation:
  Personalized feedback on technique, communication, and situational awareness. Next-step recommendations for building skills and confidence.
- Q&A and Goal Setting:
  We'll answer your questions and set a clear goal for your next lesson.

Homework Assignment

- Review your cockpit notes on maneuvers and radio calls
- Watch a video demo of the "trim technique" and write down three key tips
- Complete a short reflection: What's one thing you want to master before your next flight?

Flight Quiz 2 – Thursday Check

Topic: Turns, Climbs, Descents + Radio Basics

Sample Quiz Questions:

1. During a standard turn, how do you ensure coordination between the aileron and the rudder?
2. What happens to airspeed during a climb if power is not increased?
3. What is the effect of trim during level flight?
4. Repeat the proper radio phrase for entering a taxiway (based on today's lesson).
5. What was your biggest challenge during this flight, and how do you plan to improve it next time?

What Happens Next?

By the end of this lesson, you'll have made real turns, climbs, and descents under your control and started speaking the language of pilots on the radio. You'll be developing "muscle memory" and building the foundation for every future maneuver, plus, you'll leave with a clear plan to make your next flight even better.

Day 5 – Friday: Ground School – Airspace, Weather & Weekly Review

Topic: Understanding Airspace, Decoding Weather, and Building Confidence

What You'll Learn & Do

- Airspace Essentials for Student Pilots:
  Learn the differences between Class A, B, C, D, E, and G airspace, what each means, how to spot them on a sectional map, and the rules you must follow as a student pilot. We'll focus on what airspace you can operate in, communication requirements, and how to avoid common mistakes.
- Student Pilot Limitations:
  Clear up the "can and can't do" rules, so you know exactly where and when you're permitted to fly, solo or with an instructor.
- Weather Basics – METARs & TAFs:
  Dive into the world of aviation weather. You'll learn how to read METARs (current weather reports) and TAFs (forecasts), interpret basic weather symbols and abbreviations (like SCT, BKN, OVC), and find trusted sources for real-time flight planning.
- Weekly Recap and Group Discussion:
  Review the highlights from your first week of training, everything from preflight to your first maneuvers. Share what challenged you, what inspired you, and what you're most proud of. Group discussions help solidify knowledge and foster camaraderie.

Hands-On Practice

- Airspace Map Exercise:
  Work through sectional chart scenarios, identify different classes of airspace, practice plotting a local flight, and point out required radio calls for each type.
- METAR Decoding Activity:
  Break down a real METAR and TAF together, step by step, learning to spot ceiling, visibility, wind, and weather trends.
- "Ask the Instructor" Q&A:
  Wrap up with open discussion, bring your questions from the week, and I'll share real-world stories and practical tips.

Homework Assignment

- Review your sectional chart and identify all airspace classes near your home airport
- Practice reading METARs and TAFs for the coming weekend, what weather would you expect for a practice flight?
- Prepare a summary of your biggest learning moment from Week 1

Quiz #3 – Airspace & Weather Basics

Topics Covered:

- Airspace classification (Class A–G), key student pilot rules
- Reading and interpreting METAR/TAF codes and symbols
- Basic radio communication requirements
- Practical flight scenarios based on weather and airspace

Sample Quiz Questions:

1. What is the difference between Class C and Class D airspace?
2. What does “OVC020” mean on a METAR?
3. What type of communication is required to enter Class C airspace?
4. How does the weather affect your ability to fly VFR?
5. When flying in Class G airspace below 1,200 feet AGL during the day, what is the minimum visibility requirement?

What Happens Next?

By the end of your first week, you’ll have a solid foundation in the essentials: airspace, weather, flight planning, and real pilot communication. You’ll know how to read a map, decode a weather report, and confidently talk through your progress.

Next week, we’ll build on this knowledge with more advanced maneuvers, solo prep, and real-world scenario training!

Answer Key – Sample Week 1 Quizzes

Ground Quiz 1 – Monday: Intro to Flight + FAA Rules

1. Name the four forces of flight.
   Lift, Weight, Thrust, Drag
   Explanation:
   - *Lift* opposes *Weight* (gravity).
   - *Thrust* (engine power) opposes *Drag* (air resistance).

2. What does the FAA require for a student pilot certificate?
   - Be at least 16 years old
   - Be able to read, write, and speak English
   - Hold at least a third-class FAA medical certificate
     Explanation:
     These are the basic eligibility requirements for solo flight as a student pilot.

3. What is the purpose of the rudder?
   Controls yaw (left/right movement of the aircraft's nose).
   Explanation:
   The rudder helps coordinate turns and keeps the airplane straight on the runway.

4. Label the following parts of an airplane:
   - Wing: Main lifting surface
   - Empennage: Tail section (vertical and horizontal stabilizer)
   - Fuselage: Main body of the aircraft
   - Aileron: Hinged section on the wing, used for rolling (banking)

5. What does “lift” counteract in flight?
   Lift counteracts Weight (gravity).

Flight Quiz 1 – Tuesday: Preflight + Straight & Level Flight

1. Main items to inspect during a preflight walk-around:
   - Fuel quantity and quality
   - Engine oil level

- Control surfaces (wings, ailerons, rudder, elevators)
- General aircraft condition (no damage, all panels secure)
- Tires and brakes
- Lights and antennas
- Pitot tube and static ports (clear and unobstructed)
- *Explanation: Always follow the aircraft's official preflight checklist.*

2. Purpose of control check before engine start:
   To verify that all flight control surfaces (ailerons, rudder, elevators) move correctly, freely, and are unobstructed.
3. How do you maintain straight and level flight?
   - Proper pitch attitude (nose position relative to the horizon)
   - Correct power setting
   - Trim for hands-off flight
   - Keep the wings level with ailerons, and use the rudder for coordinated flight
4. Correct response to unclear radio transmission:
   Say "Say again" or "Please repeat."
   - Always clarify instructions rather than guessing.
5. One thing you learned about being in control of the aircraft:
   Student's personal reflection (subjective answer).

Ground Quiz 2 – Wednesday: Flight Instruments + Checklists

1. What does the VSI measure?
   Rate of climb or descent (in feet per minute).
2. Which instruments use the pitot tube?
   Airspeed Indicator (ASI)
   Explanation:
   The pitot tube provides dynamic air pressure to the ASI only.
3. Why is the checklist important during every phase of flight?
   Checklists ensure that critical safety and procedural steps are not overlooked, thereby reducing the likelihood of errors or omissions.
4. What does the altimeter indicate?
   The aircraft's altitude above mean sea level (MSL).
5. How do you know your aircraft is coordinated in a turn?
   The ball in the turn coordinator stays centered (no slip or skid).

Flight Quiz 2 – Thursday: Turns, Climbs, Descents + Radio Basics

1. How do you ensure coordination between the aileron and the rudder in a turn?
   Apply smooth rudder pressure to keep the ball centered in the turn coordinator as you roll into and out of the turn.
2. What happens to airspeed during a climb if power is not increased?
   Airspeed will decrease.
   Explanation:
   Climbing requires more power; if you don't add power, the airplane slows down.
3. What is the effect of trim during level flight?
   Trim reduces control pressure, allowing you to maintain level flight with less effort.
4. Proper radio phrase for entering a taxiway:
   Example: "Scottsdale Ground, Cessna 123AB at Sierra Charlie, ready to taxi with information Alpha."
   Note: Phraseology will vary by airport and current ATIS/ground instructions.
5. Biggest challenge and improvement plan:
   Student's personal reflection (subjective answer).

Ground Quiz 3 – Friday: Airspace + Weather Basics

1. Difference between Class C and Class D airspace:
   - *Class C:* Requires two-way radio communication and a transponder with altitude encoding (Mode C); surrounds larger regional airports.
   - *Class D:* Requires two-way radio communication only (no transponder required); surrounds smaller control towers/airports.
2. What does "OVC020" mean on a METAR?
   Overcast cloud layer with a base at 2,000 feet above ground level.
3. Communication required to enter Class C airspace:
   Two-way radio contact must be established with ATC (you must hear your call sign read back).
4. How does the weather affect your ability to fly VFR?
   Poor weather (such as low clouds or visibility) can prevent VFR flight; you must meet minimum weather requirements for airspace and altitude.
5. Minimum visibility requirement for Class G airspace below 1,200 feet AGL (daytime):
   1 statute mile visibility and clear of clouds.