



# Teaching Extraordinary Students Lessons in Aerospace Basic Aeronautics Course Part A

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Name \_\_\_\_\_

Co-pilot's Name \_\_\_\_\_

Date started \_\_\_\_\_ Date Completed \_\_\_\_\_

**Materials:** Internet access, Composition book, Flight Simulator

**Prerequisites:** An interest in aerospace.

**What is a course checksheet?** A course checksheet is a list of all the materials and everything you need to do to successfully complete the course. It includes assignments, essays and sketches that will enhance your understanding and ability to apply the course materials.

**Co-pilot:** Each student will be assigned a peer (aka Co-Pilot). You will be graded in part on how you successfully help your peer.

**How to use this course checksheet:** The materials are carefully arranged in an exact sequence so you smoothly progress at your own pace. It is therefore important to follow the checksheet as closely as possible.

When you finish an item mark it off on the checksheet with your initials and the date and go on to the next one. Your initials beside an item on the checksheet means you know and can apply the material contained in that step or that you have done and can do that action or that your twin is competent on that item.

**Flight time:** You are expected to log in simulator time. Additional simulator time may be done in class providing all class work is completed. Exceptional students may be selected to log in real hours.

**Course Product:** A person who has their basics understood for beginning a career in the aerospace industry.

**Additional Note:**

It is very important that students look up words they encounter as they study as this is known to bog down students. A student who has no misunderstood words will progress smoothly.

**Tips for successfully getting through this checksheet:**

Leave no word misunderstood. It is only misunderstood words that make a subject incomprehensible (not understood).

Take responsibility for yourself and your copilot.

Responsibility is very closely related to knowledge.

This is an exciting field to be part of and it starts with the fundamentals of flight. Other planets exist possibly with other life. Mars and beyond awaits. Are you ready? 3... 2... 1... Blast off!!

## Section One

1. Read the above and make sure it is well understood.

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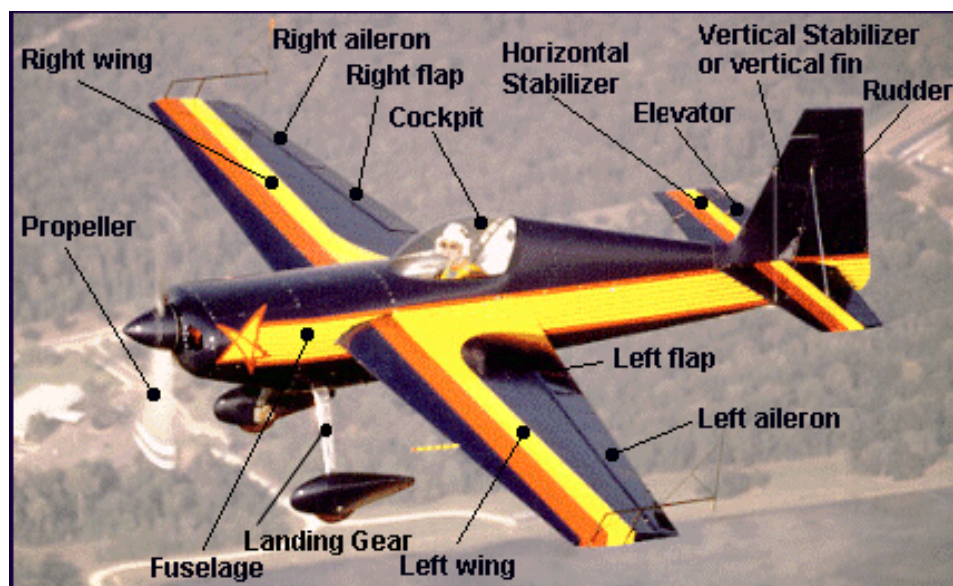
2. Define "Control Surface"

A control surface is any part of an airplane that can influence the movement of the airplane. By moving the controls inside an airplane the flying characteristic of the aircraft can be changed. This is what makes control of an airplane possible. Knowing how to use these control surfaces expertly makes one a great pilot.

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3. Memorize these parts of an airplane and be able to explain what they do.

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4. Get a blank composition book and label it Flight Log. Add your name underneath.

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5. **Sketch** the picture from step 3 as many times as necessary until you're sure you know all the parts.

6. Using a model airplane have your flight instructor quiz you on all parts until you can name them easily and without hesitation.

**Instructor Signature** \_\_\_\_\_

7. Make a section in your Flight book for logging your simulator time

8. **Demonstration:** Build an airplane with all the parts from step 2 (label them). The airplane is junk engineered. It doesn't have to actually fly it just has to be a model 1 to 2 feet in wingspan with all basic parts. Hot glue and duct tape works well for this.

**Instructor Signature** \_\_\_\_\_

9. Watch this instructional video on how planes work:  
<http://www.youtube.com/watch?v=bv3m57u6ViE>

10. Explain and demonstrate to your teacher how a wing works and explain, "angle of attack"

**Instructor Signature** \_\_\_\_\_

11. Watch a total of 30 mins of you tube videos on how planes work. Log The video and time in your flight book. Also note the date.

12. Log in 1 hr of ultra light flight time on the simulator in your log book.

13. Log in 1hr of the plane of your choice in the flight simulator.

14. Log in 1hr of the plane of your choice in the flight simulator.

15. Log in 1hr of the plane of your choice in the flight simulator.
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## **Student Completion**

I have completed the requirements of this checksheet and I know and can apply this material.

Student attest \_\_\_\_\_ Date \_\_\_\_\_

I have trained this student to the best of my ability. The student has completed the requirements of this checksheet and knows and can apply the checksheet data.

Teacher attest \_\_\_\_\_ Date \_\_\_\_\_

Student is eligible for TESLA Aeronautics Course Part B. The Student will receive a certificate for successful completion of this course.