

General Pilot Instruction Lesson Plan

National Airspace System

Student: _____ Date: _____

Objectives:

Upon completion of this lesson, the student will:

- Be able to recognize various types of airspace as depicted on the sectional and WAC charts.
- Be able to list the pilot and aircraft equipment requirements to enter different types of airspace.
- Be able to list the Basic VFR Weather Minimums in all types of airspace.

Elements:

- Purpose of the AIM
- Two different categories of airspace listed in the AIM: Regulatory and Non-Regulatory
- Four types within those two categories: Controlled, Uncontrolled, Special Use, Other
- How these airspace structures are depicted on charts

Schedule:

• Pre-lesson briefing	00:05
• Class A Airspace	00:05
• Class B Airspace	00:10
• Class C Airspace	00:05
• Class D Airspace	00:05
• Class E Airspace	00:10
• Class G Airspace	00:10
• Special Use Airspace	00:10
• Other Airspace	00:10
Total:	01:10

Equipment:

- AIM
- FARs
- Airspace Handouts
- Sectional Chart
- Terminal Area Chart

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Instructor Actions:

1. Pre-lesson briefing
 - Present lesson objective and outline of the lesson.
2. Instructor will discuss Class A airspace.
 - Separation of IFR traffic from other IFR traffic
 - Vertical (FL180 – FL600) and Lateral (12nm from coastal boundaries) limits
 - Entry requirements (ATC Clearance, IFR flight plan)
 - Pilot Requirements (Instrument Rating)
 - Aircraft Requirements (IFR equipped, RVSM equipped between FL300 – FL 400)
3. Instructor will discuss Class B airspace.
 - Separation of IFR traffic from other IFR and VFR traffic.
 - VFR traffic will receive separation and sequencing vectors and altitudes.
 - Be wary of being told to “MAINTAIN...”
 - Vertical (SFC – 10,000) and Lateral limits
 - 30nm Mode C ring
 - Entry requirements (ATC Clearance)
 - Pilot requirements (private pilot, student pilot with exceptions)
 - Aircraft equipment requirements (two-way radio, Mode C transponder)
 - Speed restrictions within Class B airspace (250 kts.)
 - Speed restrictions below or within a VFR corridor (200 kts.)
 - Depiction of Class B airspace on various charts
 - Basic VFR Weather Minimums in Class B airspace
4. Instructor will discuss Class C airspace.
 - Separation of IFR traffic from other IFR and VFR traffic
 - Vertical (SFC – 4,000 and 1,200 – 4,000) and Lateral (5 and 10nm rings, 20 mile outer area)
 - Entry requirements (Establish two-way radio communications)
 - Pilot requirements (student pilot)
 - Aircraft equipment requirements (two-way radio, Mode C transponder)
 - Speed Restrictions (below 2,500 AGL and within 4nm of primary airport, 200 kts.)
 - Depiction of Class C airspace on various charts
 - Basic VFR Weather Minimums in Class C airspace
5. Instructor will discuss Class D airspace.
 - NO separation services are provided
 - Vertical (SFC – 2,500) and Lateral (4NM)
 - Entry requirements (Establish two-way radio communications)
 - Pilot requirements (student pilot)
 - Aircraft equipment requirements (two-way radio)
 - Speed Restrictions (200 kts.)
 - Depiction of Class D airspace on various charts
 - Basic VFR Weather Minimums in Class D airspace
6. Instructor will discuss Class E airspace.
 - NO separation services are provided
 - Class E to the Surface
 - Class E to 700
 - Class E to 1200
 - Class E from 14,500 to FL180

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- Lateral limit of 12nm from shoreline
 - Basic VFR Weather Minimums in Class E airspace BELOW 10,000 MSL
 - Day (1sm & 500b, 1000a, 2000h) Night (3sm & 500b, 1000a, 2000h)
 - Basic VFR Weather Minimums in Class E airspace AT AND ABOVE 10,000 MSL
 - Day and Night (5sm & 1000b, 1000a, 1sm horizontal)
 - At and above 10,000 MSL (but excluding 2,500 AGL) Mode C transponder required
7. Special VFR
- Below 10,000 MSL
 - Within lateral boundaries of controlled airspace to the surface of an airport
 - ATC Clearance
 - Clear of Clouds
 - Flight Visibility is at least 1 statute mile
 - Between Sunset and Sunrise
8. Instructor will discuss Basic VFR Weather Minimums in Class G airspace.
- BELOW 10,000 MSL but 1,200 AGL or less
 - DAY (1sm & clear of clouds)
 - NIGHT (3sm & 500b, 1000a, 2000h)
 - BELOW 10,000 MSL and above 1,200 AGL
 - DAY (1sm & 500b, 1000a, 2000h)
 - NIGHT (3sm & 500b, 1000a, 2000h)
 - AT AND ABOVE 10,000 MSL
 - DAY and NIGHT (5sm & 1000b, 1000a, 1sm horizontal)
 - The following operations may be conducted in Class G airspace below 1,200 AGL
 - NIGHT (Clear of Clouds) – ONLY when visibility between 1-3 statute miles, in the traffic pattern, and within ½ mile of runway
9. Instructor will discuss Special Use Airspace.
- Prohibited Areas – No civil aircraft permitted to enter
 - Restricted Areas – Aircraft must gain permission from controlling agency to enter
 - Warning Areas – Same as Restricted but in international airspace beyond the 3 mile limit.
 - MOAs – Separate military traffic from IFR traffic. VFR traffic allowed in, but must be vigilant.
 - Alert Areas – Depicted on chart to alert pilots of high volume training or unusual aerial activity.
 - Controlled Firing Areas – Activity is suspended if civil aircraft is spotted.
10. Instructor will discuss Other Airspace Areas.
- Airport Advisory Areas – 10sm of airport where control tower is not operating but an FSS is located.
 - MTRs – Low altitude, high speed military training. 1,500 AGL or less (4 digits), above 1,500 (3 digits).
 - TFRs – FDC Notam, regulatory restriction.
 - Parachute Jump Areas – Listed in Airport/Facility Directory
 - Published VFR Routes
 - TRSAs – Provide separation from IFR traffic to participating VFR traffic. Participation not required.
 - National Security Areas – Pilots requested to voluntarily avoid these areas to protect ground facilities.

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Student Actions:

1. Pre-lesson briefing
 - Ask questions concerning previous lessons and/or this one.
2. Ask questions during airspace presentation
3. Respond to impromptu quizzing from the flight instructor.
4. Collect airspace handouts and place them in the Ground Instruction section of their flight binder.
5. Post-flight debriefing.
 - Ask questions about the lesson.

Completion Standards:

This lesson will be completed when the student:

- Knows the different categories and types of airspace.
- Is able to identify the different airspace types on a chart.
- Can recall and apply Basic VFR Weather Minimums for the National Airspace System.
- Can recall and apply the pilot, equipment, entry requirements, and restrictions in the NAS.

Common Errors:

- Student confuses Day and Night VFR requirements
- Student confuses the AT and ABOVE 10,000 MSL requirements, and the 1,200 AGL or less requirements
- Student gets lost in the Class E and Class G airspace discussion

References:

- AIM; Chapter 3
- Pilot's Handbook of Aeronautical Knowledge (FAA-H-8083-25); Chapter 13
- FAR 91.215 (ATC transponder and altitude reporting equipment and use.)

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Possible Review Questions:

1. The two different categories of airspace are _____ and _____.
2. At and above _____ MSL, all airspace is controlled.
3. While in controlled airspace, if the aircraft is equipped with a transponder it must be turned on at and above _____ MSL, but is not required if the airplane is below _____ AGL.
4. During daytime operations and while flying at or below _____ AGL, the pilot must remain _____ statute miles and clear of clouds.
5. If you are operating below 10,000 MSL, VFR during the day or night in Class C, D, or E airspace, you must have _____ sm visibility and remain _____' below, _____' above, and _____' horizontal from the clouds.
6. If you are operating below 10,000 MSL, VFR at night in uncontrolled (Class G) airspace, you must have _____ sm visibility and remain _____' below, _____' above, and _____' horizontal from the clouds.
7. If you are operating at and above 10,000 MSL, VFR during the day or night in Class E airspace, you must have _____ sm visibility and remain _____' below, _____' above, and _____sm horizontal from the clouds.
8. If you are operating below 10,000 MSL, FVR during the day or night in Class G airspace, you must have _____ sm visibility and remain _____' below, _____' above, and _____sm horizontal from the clouds.
9. If you are operating in Class B airspace, you must have _____sm visibility and remain clear of clouds.
10. If you are operating in Class G airspace 1,200 AGL or less above the surface during the day, you must have _____sm visibility and remain clear of clouds.