2.1 Lesson plan 5 Outline	
Lesson plan 5 topic	Creating a “no wind” Flight Plan
Lesson plan 5 objectives	Students will demonstrate: • Knowledge of Magnetic Poles • Knowledge of longitude and latitude – True North • Effective use of a plotter • Ability to find and define landmarks on an aeronautical chart
Anticipatory set or lesson opening (to activate students` prior learning or draw student interest or involvement)	Reflecting on the previous lesson/demonstration, why do you think Pilotage is important for a modern pilot - who has the advantage of automation in the cockpit?
Direct Instruction	The lesson will begin with a PowerPoint overview of the days activities. The presentation wil go over the steps in the activity, and will be supported by a worksheet and a Flight Plan sheet.
Guided Practice	Using the Elmo, the teacher will demonstrate the techniques used for developing the Flight Plan. The technique will be step by step, with ample time to walk the classroom to help students in need.
Independent Practice/Differentiated Activities	Each student will create a unique Flight Plan but will be situated in a group of three. Students will be able to collaborate and help each other in developing the Flight Plan.
Reflection on employability skills	This is a typical Ground School lesson for the Private Pilot curriculum. I have observed this in a less structured setting at the Alpha One Ground School.
Lesson Closure	Students will complete both the Flight Plan instruction Sheet and the Flight Plan log sheet.
Summative/end of lesson assessment	This will be the major part of the unit grade. See attached Rubric.
References / Resources / Teacher Preparation	Attached PowerPoint, plotters, pencils, Flight Plan log, Flight Plan Instructions and Sectional Charts

(Note: Please attach relevant documents, quiz and answer key.)

Aircraft – Choose one by circling:

Piper Warrior Cessna 152 Beech Bonanza Aeronca Champ Cirus SR20 Mooney M20

Call Sign – N_____

(choose any combination of letters and numbers. The letters and numbers must be appropriate).

Instructor Approval_____

1. Find the ***True Airspeed (TAS)*** and ***gallons per hour in cruise flight (GPH)*** for your aircraft using Internet research
    a. TAS _____
    b. GPH_____

2. On your ***New York Sectional*** chart, choose an airport for your **departure**.

3. Select a **destination** airport of at least 100 nautical miles straight line distance from your departure.

4. Choose an altitude between 3500 and 8500 feet.
    a. Traveling east – use odd thousands plus 500 feet (e.g. 5,500 feet)
    b. Traveling west – use even thousands plus 500 feet (e.g. 4,500 feet)

5. Determine the following numbers and input them onto your Flight Plan
    a) Winds are "Calm" – zero for this activity
    b) True Course – use your Plotter
    c) Wind Correction - zero for this activity
    d) True Heading – same as True Course for this activity
    e) Magnetic Variation – Find the Isogonic line closest to your course
    f) Magnetic Heading
    g) Ground Speed – same as TAS for this activity
    h) Total Miles
    i) Total Time
    j) Fuel Required
    k) Leave the "Remarks" section blank.

6. Choose five visible check points along your route of flight

7. Use the current clock time for Departure Time.

8. Under **Wind Speed and Direction**, write ***"Calm".*** This will result in a **zero wind correction angle**. This means that for this activity, True Airspeed and Ground speed will be the same

9. Determine "Total Time" by using this formula: **Miles Flown/Ground Speed X 60 = Total Time in minutes**

    Example:

Miles Flown - 135

Ground Speed – 295

135/295 X 60 = 27.45 minutes, approximately 27 minutes and 26 seconds

10. Determine Fuel Required using this formula: **Total Time/60 X GPH = Fuel Required**

Example:

Total Time = 27.45 minutes

Gallons Per Hour (GPH) = 42 (Where did we get that?)

27.45/60 X 42 = 19.215 Gallons of fuel

11. Determine the point-to-point distances between check points.

12. Determine the Distance Remaining. How will you do this?

BONUS!!

Figure out the ***Estimated Elapsed*** T***ime*** and the ***Estimated Arrival Time*** on your flight plan.

Why do you think ***CLOSE YOUR FLIGHT PLAN*** is printed at the bottom of the Flight Plan?

ALTITUDE						**HEADING**					**GPH**
True Air Speed	**Winds** Direction	Speed	True Course	Wind Correction	True Heading	Variation +W -E	Magnetic Heading	Ground Speed	Total Miles	Total Time	Fuel Required

Time Off	Distance		Elapsed Time		Arrival Time		Remarks
Check Points	Point to Point	Dist. Remain	Estimated	Actual	Estimated	Actual	
1							
2							
3							
4							
5							

CLOSE YOUR FLIGHT PLAN!!