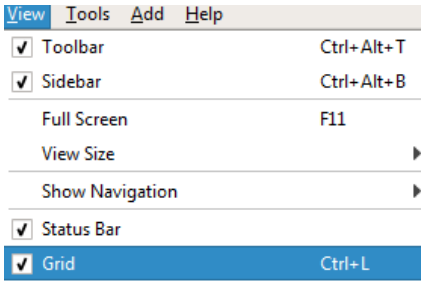
2.1 Lesson plan 2 Outline	
Lesson plan 2 topic	Longitude and Latitude
Lesson plan 2 objectives	Students will be able to locate an airport on Google Earth and determine its longitude and latitude. Understand Degrees, Minutes and Seconds as it relates to geographic position. Understand ***True North*** and ***True South***
Anticipatory set or lesson opening (to activate students` prior learning or draw student interest or involvement)	Quiz – (attached) on the TAC Opener – Without using your address, describe the location of your home to classmate. • Was this easy or hard? Why?
Direct Instruction	This lesson will begin with a PowerPoint presentation that will outline the sessions activities. Students will use the "Aviation Longitude and Latitude" hand out to work through the exercises.
Guided Practice	The teacher will circulate among the class to give additional guidance and demonstrations.
Independent Practice/Differentiated Activities	Students will work in groups of three, using discovery, discussion and online research to answer questions.
Reflection on employability skills	We have had many discussions on GPS position during ground school and discussions among CFI's (Certified Flight Instructor)
Lesson Closure	In your Journal, explain the advantages of a coordinate system as opposed to a descriptive narrative to determine your location.
Summative/end of lesson assessment	Questions at the end of the Longitude/Latitude worksheet.
References / Resources / Teacher Preparation	Google Earth Pro, Longitude and Latitude handout

Aviation Longitude and Latitude

Open ***Google Earth Pro*** > ***View> Grid***



What is the Longitude of the ***Prime Meridian***? _____

What is the Longitude of the ***Antemeridian***? _____

What is the Latitude of the ***North Pole***? _____

What is the Latitude of the ***South Pole***? _____

Find an airport with two intersecting runways. List the four Longitude/Latitude points that define the "Numbers" of the runway. Use Degrees (°), Minutes (') and Seconds (") - with Decimal.

Airport_____

Example – RWY 15 Latitude 41°40'48.75"N Longitude 70°57'50.54"W

RWY

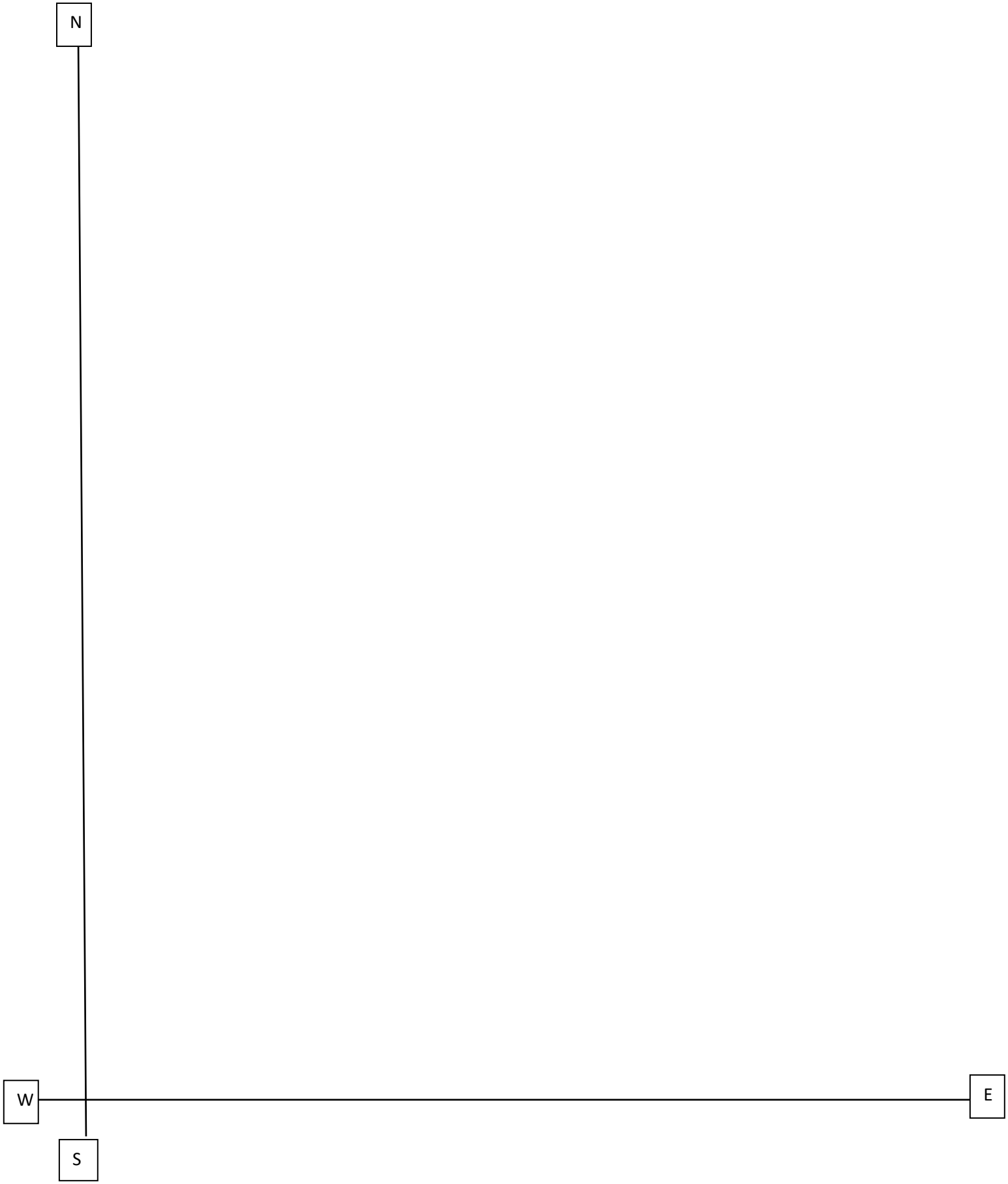
____ Latitude_____ Longitude _____

____ Latitude_____ Longitude _____

____ Latitude _____ Longitude _____

____ Latitude_____ Longitude _____

Sketch the runway layout based on True North



Questions – Answer each question in a complete sentence.

1. Explain what is meant by this position report: "Aircraft is approximately located at 41°42' North Latitude, 71° 3' West Longitude."

2. What is the meaning of a runway number? What is the accuracy of the runway number?

Second Airport_____

Example – RWY 15 Latitude 41°40'48.75"N Longitude 70°57'50.54"W

RWY

____ Latitude_____ Longitude _____

____ Latitude_____ Longitude _____

____ Latitude _____ Longitude _____

____ Latitude_____ Longitude _____

How many "Nautical Miles" are there between your two airports?

What would your "Heading" be?

Topic to investigate: Would your heading be a "True" heading or a "Magnetic" Heading?