BASICS FOR AIR TRAFFIC CONTROL – PILOT WEATHER REPORTS (PIREPs)

MODULE OVERVIEW

Purpose: The purpose of this module is to introduce you to the Pilot Weather Report (PIREP) Program operated by the National Weather Service (NWS) and the Federal Aviation Administration (FAA). You will learn to solicit, record, handle, and decode PIREPs.

MODULE OUTLINE

Lesson: Introduction to Pilot Weather Reports (PIREPs)

Purpose: The purpose of this lesson is to identify the purpose and uses for pilot weather reports and the information included in the report.

Objectives:

- Identify purpose and uses of a PIREP
- Identify content included in a PIREP

Topics:

- Pilot Weather Report In-Flight Reports
- PIREP Classifications
  - Urgent (UUA)
  - Routine (UA)
- Reported Conditions
- PIREP Uses
  - ATCT
  - FSS
  - ARTCC
  - NWS
  - TRACON, ATC, ATCT
- Knowledge Check
- Soliciting PIREPs
  - Requirements to Solicit PIREPs
- PIREP Preparation
- Handling PIREPs
  - All ATC
  - En Route ATC
  - Terminal ATC
- PIREP Form
  - FAA Form 7110-2
  - Items 1-5
  - Items 6-12
- Knowledge Check
- Review/Summary

Question and Answer Session – *Parking Lot*

Lesson: PIREP Recording and Decoding

Purpose: The purpose of this lesson is to explain and interpret each segment of information found on a pilot weather report.

Objective:

- Identify information recorded in a PIREP

Topics:

- PIREP Recording and Decoding
  - Classification
  - Location
  - Time
  - Altitude/Flight Level
  - Type Aircraft
  - Sky Condition
- Knowledge Check
  - Weather
  - Air Temperature
  - Wind
  - Turbulence
  - Icing
  - Remarks
- Knowledge Check
- Review/Summary

Exercise – Recording PIREPs

Activity – Soliciting, Decoding, and Processing PIREPs

Question and Answer Session – *Parking Lot*

End-of-Module (EOM) Test

INTRODUCTION

LESSONS	■ Introduction to Pilot Weather Reports (PIREPs) ■ PIREP Recording and Decoding
TOTAL ESTIMATED RUN TIME	3 hrs. 17 mins.
MODULE CONTENT	■ Module Overview ■ Lesson: Introduction to Pilot Weather Reports (PIREPs) ■ Q&A Session – Parking Lot ■ Lesson: PIREP Recording and Decoding ■ Exercise – Recording PIREPs ■ Activity – Soliciting, Decoding, and Processing PIREPs ■ Q&A Session – Parking Lot ■ End-of-Module Test

FACILITATOR INSTRUCTIONS	**DELIVERY METHOD**
■ Instruct students to select ***Pilot Weather Reports (PIREPs)*** module link within Blackboard ■ Instruct students to read the module introduction and then wait quietly for additional instructions	Blackboard
	EST. RUN TIME
	2 mins.

No observation is timelier than the one made from the cockpit. In fact, aircraft in flight are the only means of directly observing cloud tops, icing, and turbulence. Pilots, as well as controllers, welcome Pilot Weather Reports (PIREPs) because they inform pilots of weather where there are no weather reporting stations.

As a controller, you will be handling PIREPs, whether solicited or volunteered, on a daily basis. PIREPs are a valuable source of information to the Air Traffic Service (ATS). You must be able to decode and process them properly and in a timely manner to be of use to the pilot.

The purpose of this module is to introduce you to the PIREP Program operated by the National Weather Service (NWS) and the Federal Aviation Administration (FAA). You will learn to solicit, record, handle, and decode PIREPs.

FACILITATOR INSTRUCTIONS	DELIVERY METHOD
■ **ENABLE *Introduction to Pilot Weather Reports (PIREPs)*** lesson in Blackboard ■ Instruct students to navigate to the ***Introduction to Pilot Weather Reports (PIREPs)*** lesson in Blackboard ■ Instruct students to work individually through the lesson content ■ Upon completion of the lesson, students should review previously introduced content or wait quietly until other students have completed	Blackboard **EST. RUN TIME** 25 mins.

INTRODUCTION TO PILOT WEATHER REPORTS (PIREPs)

Purpose: The purpose of this lesson is to identify the purpose and uses of pilot weather reports and the information included in the report.

Objectives:

- Identify purpose and uses of a PIREP
- Identify content included in a PIREP

References for this lesson are as follows:

- FAA Order JO 7110.65, Air Traffic Control
- FAA Order JO 7110.10, Flight Services
- Aeronautical Information Manual (AIM)
- AC 00-45, Aviation Weather Services
- FAA Form 7110-2 (PIREP)

Pilot Weather Report (PIREP) In-Flight Reports

A PIREP is a report of meteorological conditions in flight. Since a meteorological phenomenon may not be observable by any other means, pilots can report actual weather conditions as they are encountered by the aircraft in flight.

Example of a PIREP

"ACADEMY APPROACH, SOUTHWEST TWO THIRTY SEVEN 10 MILES SOUTHWEST OF THE APPLETON VORTAC AT 8,000, THE TOPS OF THE BROKEN LAYER WERE 6,000."

PIREP Classifications

There are two classifications of PIREPs:

- Urgent (UUA)
- Routine (UA)

Urgent (UUA)	Weather phenomena reported by a pilot that represent a hazard or a potential hazard to flight operations. Conditions Classified as Urgent PIREPs ■ Tornadoes, funnel clouds, or waterspouts ■ Severe or extreme turbulence (including clear air turbulence) ■ Severe icing ■ Hail ■ Low-level wind shear ■ Volcanic eruptions and volcanic ash clouds ■ Any other weather phenomena reported that are considered as being hazardous, or potentially hazardous to flight operation
Routine (UA)	All received PIREPs are classified as routine except those classified as urgent.

Reported Conditions

Reported conditions may include, but are not limited to:

- Thunderstorms and related phenomena
- Clouds
  - Bases
  - Tops
  - Layers
- In-flight visibility
- Restrictions to visibility
  - Haze
  - Smoke
  - Dust
- Precipitation
- Wind at altitude
- Temperature aloft
- Airframe icing
- Turbulence
- Wind shear
- Clear air turbulence
- Volcanic ash

PIREP Uses

The following ground stations receive, format, and disseminate information reported in PIREPs.

Air Traffic Control Tower (ATCT)		ATCTs and TRACONs use PIREPs to: ■ Expedite traffic flow in the vicinity of the airport ■ Provide hazardous weather avoidance procedures
Flight Service Stations (FSSs)		FSSs use PIREPS from en route aircraft to: ■ Brief pilots ■ Issue in-flight advisories ■ Issue weather avoidance information
Air Route Traffic Control Center (ARTCC)		ARTCCs use the reports within the center's area to: ■ Expedite the flow of en route traffic ■ Determine most favorable altitudes ■ Issue hazardous weather information
National Weather Service (NWS)		NWS uses PIREPs to: ■ Verify or amend conditions contained in forecasts and advisories triggering mechanism for issuing advisories ■ Pilot weather briefings ■ Study meteorological phenomena
Terminal Radar Approach Control (TRACON), Air Traffic Control *(ATC), Air Traffic Control Tower (ATCT)		All ATC facilities and NWS: ■ Forward PIREPs into the weather distribution system ■ Make PIREP information available to pilots and other interested parties

Knowledge Check A

REVIEW what you have learned so far about PIREPs. ANSWER each question listed below.

1. If reported on PIREP, which of these weather conditions would be classified UUA? *(Select all correct answers that apply.)*
   - ❑ **Severe icing**
   - ❑ **Volcanic ash**
   - ❑ **Low-level wind shear**
   - ❑ **Hail**

2. Who uses PIREPs to expedite traffic flow in the vicinity of the airport and to provide hazardous weather avoidance procedures? *(Select the correct answer.)*
   - ❑ FSS
   - ❑ **ATCTs and TRACONs**
   - ❑ ATC and NWS
   - ❑ NWS

Soliciting PIREPs

Requirements to Solicit PIREPs

Air traffic facilities are required to solicit PIREPs from aircraft when one of the following conditions **exists** or is **forecasted**:

- Ceilings at or below 5,000 feet
  - Includes cloud bases/tops when feasible
- Visibility 5 miles or less
  - Surface or aloft
- Thunderstorms and related phenomena
- Turbulence
  - Moderate degree or greater
- Icing
  - Light degree or greater
- Wind shear
- Volcanic ash clouds are reported or forecast
- Detection of sulfur gases (SO2), associated with volcanic activity, in the cabin
- When braking action advisories are in effect (terminal only)

PIREP Preparation

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- Ensure each PIREP includes:
  - Aircraft position
  - Time
  - Altitude or flight level
  - Type aircraft
  - At least one other element

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PIREP you request:

- Obtain directly from the pilot

Requested by another facility:

- Pilot transmits directly to that facility

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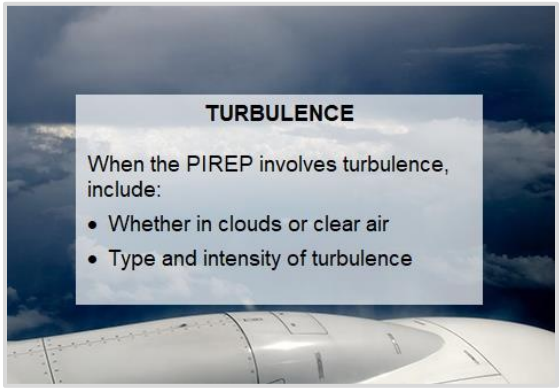

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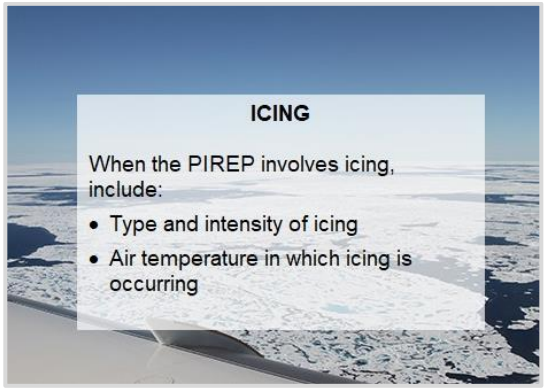

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Handling PIREPs

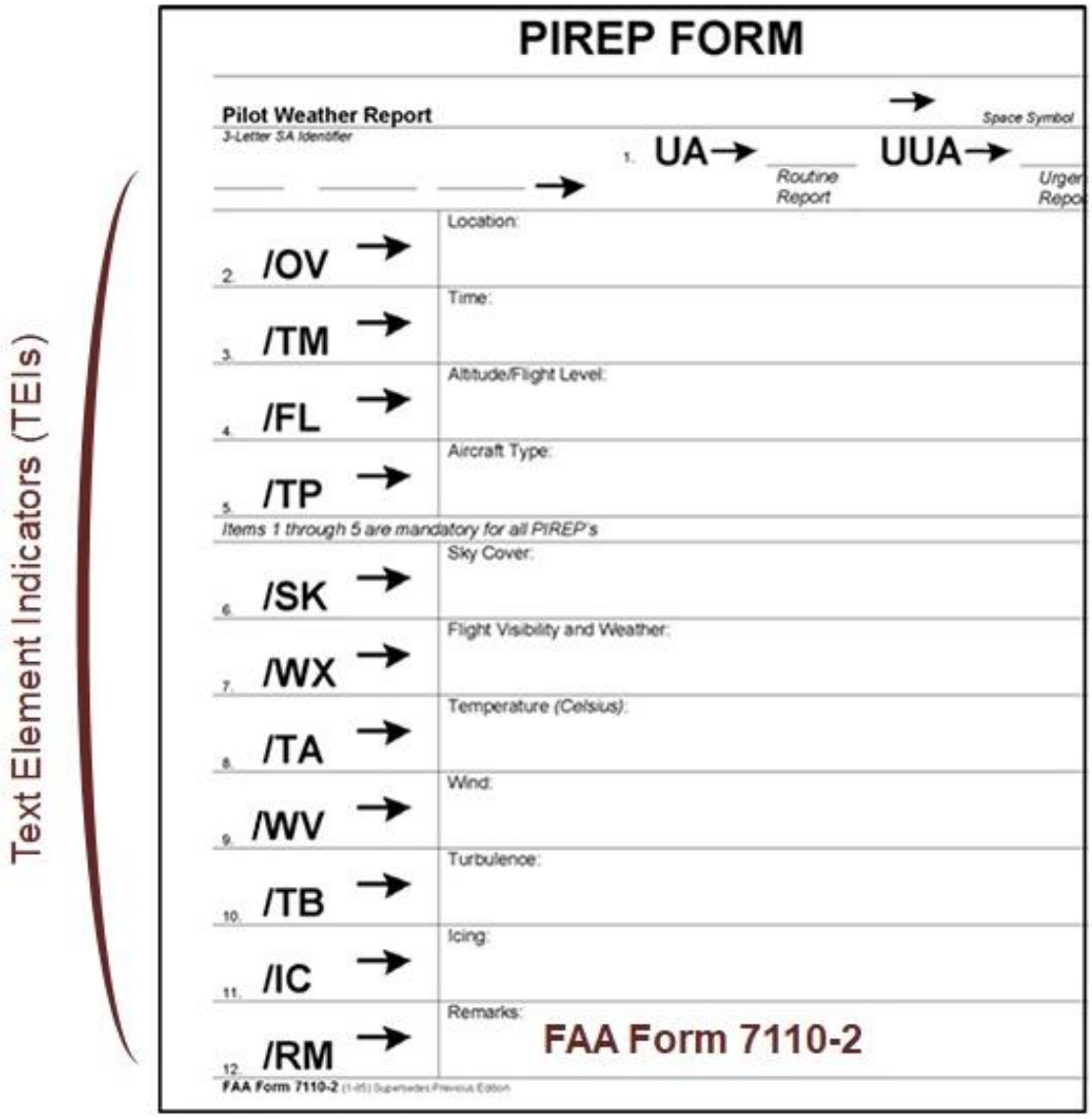
Handle PIREPs as follows:

All ATC	All ATC specialists shall relay pertinent PIREP information to concerned aircraft in a timely manner.
En Route ATC	En route ATC specialists shall relay all operationally significant PIREPs to the facility Weather Coordinator. The Weather Coordinator is an en route position that ensures the sectors in the center, towers, and TRACONs are kept up-to-date on significant weather that may affect their areas of responsibility.
Terminal ATC	Terminal ATC specialists relay all operationally significant PIREPs to: ■ Appropriate intra-facility positions ■ FSS serving the area in which the report was obtained ■ Other concerned terminal or en route ATC facilities, including non-FAA facilities

PIREP Form

The PIREP form (FAA Form 7110-2) is used to aid the controller in collecting all data needed to complete a PIREP.

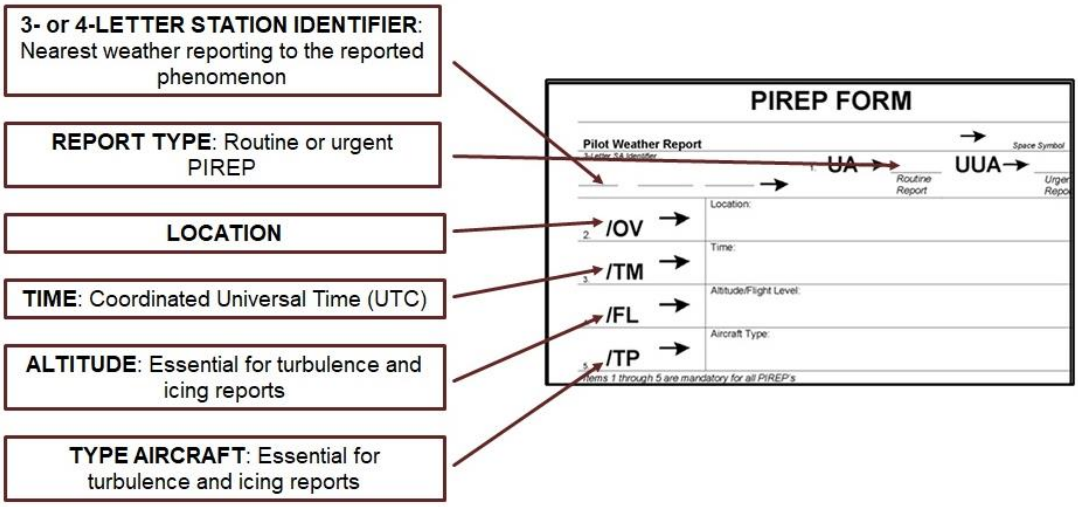
The elements listed on the PIREP form are called Text Element Indicators (TEIs).



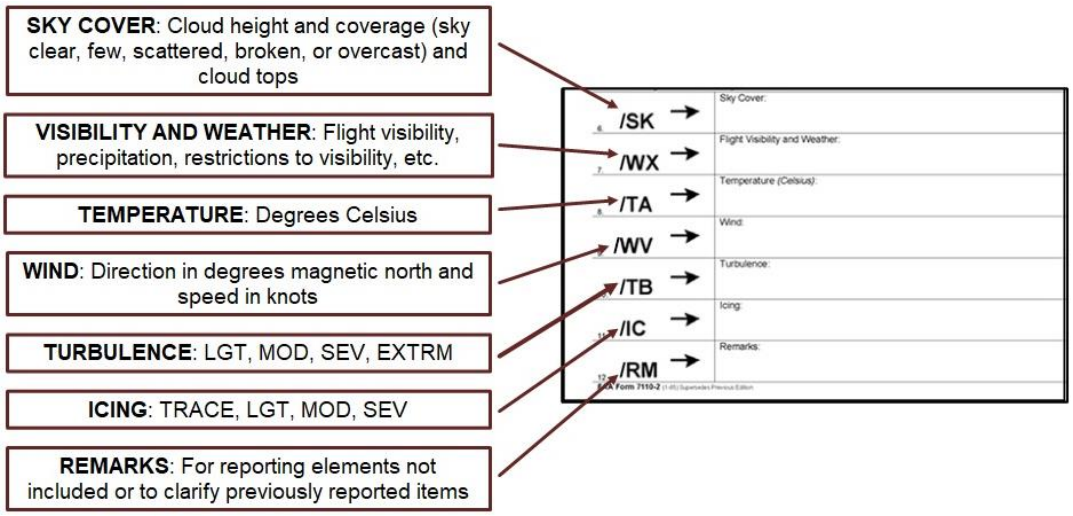
FAA Form 7110-2

The FAA, NWS, and other organizations that enter PIREPs into the weather reporting system use the following standardized format.

- Items 1 through 5 are included in all transmitted PIREPs, along with one or more of items 6 through 12



- Items 6 through 12 provide a description of reported weather



Note: *Information from these forms is entered into the Aeronautical Information Systems Replacement (AISR) system or from Flight Service Stations (FSS).*

Knowledge Check B

REVIEW what you have learned so far about PIREPs. ANSWER each question listed below.

1. Air traffic facilities must solicit PIREPs when which of the following are reported? *(Select all correct answers that apply.)*
   - ❑ **Ceiling at or below 5,000 feet**
   - ❑ Trace of ice
   - ❑ **Visibility of 5 miles or less**
   - ❑ Light turbulence

2. What is the responsibility for all ATC specialists when handling a PIREP? *(Select the correct answer.)*
   - ❑ **Relay pertinent PIREP information to concerned aircraft in a timely manner**
   - ❑ Relay all operationally significant PIREP information to appropriate intra-facility positions
   - ❑ Relay pertinent PIREP information to FSS serving the area in which the report was obtained
   - ❑ Ensure sectors are kept up-to-date on significant weather that may affect their area of responsibility

3. Which of the following items are required when preparing a FAA Form 7110-2? *(Select all correct answers that apply.)*
   - ❑ **Report type**
   - ❑ **Location**
   - ❑ Temperature
   - ❑ **Time**
   - ❑ **3- or 4-letter station identifier**
   - ❑ **Type aircraft**

Introduction to Pilot Weather Reports Summary

Pilot weather reports serve as a valuable source of information to the ATC community. As a controller, you will handle pilot weather reports on a daily basis. You must be able to decode and process them properly in a timely manner.

FACILITATOR INSTRUCTIONS	DELIVERY METHOD
■ Review content presented in Introduction to ***Introduction to Pilot Weather Reports (PIREPs)*** ■ Navigate to the ***Parking Lot*** link within Blackboard and review any student questions. ■ Address ***Parking Lot*** questions and facilitate a brief discussion of the lesson content	Facilitated Discussion **EST. RUN TIME** 15 mins.

FACILITATOR INSTRUCTIONS	DELIVERY METHOD
■ **ENABLE *PIREP Recording and Decoding*** lesson in Blackboard ■ Instruct students to navigate to the ***PIREP Recording and Decoding*** lesson in Blackboard ■ Instruct students to work individually through the lesson content ■ Upon completion of the lesson, students should review previously introduced content or wait quietly until other students have completed	Blackboard **EST. RUN TIME** 25 mins.

PIREP RECORDING AND DECODING

Purpose: The purpose of this lesson is to explain and interpret each segment of information found on a pilot weather report.

Objective:

- Identify information recorded in a PIREP

References for this lesson are as follows:

- FAA Order JO 7110.65, Air Traffic Control
- Aeronautical Information Manual (AIM)

PIREP Recording and Decoding

Classification

Classification of a PIREP refers to the type of message displayed in a report. There are two message types:

- UA – Routine PIREP
- UUA – Urgent PIREP

Location

Location in reference to a very high frequency (VHF) navigational aid (NAVAID) or an airport using the three or four alphanumeric identifier.

- If appropriate, encode the identifier, then three digits to define a radial and three digits to define the distance in nautical miles
- Route segment with two or more fixes to describe a route

Examples
/OV SAV-PZD (Savannah, GA, to Albany, GA) or **/OV KSAV-KPZD**

Time

The time that the phenomenon occurred or was encountered is reported in four digits Coordinated Universal Time (UTC).

Altitude/Flight Level

Altitude is reported from where the phenomenon was first encountered in hundreds of feet.

- If not known, enter UNKN (unknown)
- If the aircraft was climbing or descending:
  - DURC – During climb in remarks
  - DURD – During descent in remarks

Examples
/FLUNKN (altitude unknown); **/RM DURC** (Remarks: during climb)
If the condition was encountered within a layer, the altitude range appears within the appropriate Text Element Indicator (TEI) describing the condition.

Type Aircraft

If type aircraft is not known, the contraction UNKN is reported.

- Icing and turbulence reports must always include the type aircraft

Examples
/TP C172 (Cessna 172); **/TP PAY2** (Piper Cheyenne 2)

Sky Condition

Height of cloud bases, tops, and cloud coverage are reported as follows:

- Cloud cover abbreviation (FEW, SCT, etc.)
- Height of cloud bases, using three digits, in hundreds of feet mean sea level (MSL) (if unknown, use UNKN or for bases, leave blank)
- Height of tops in hundreds of feet, preceded by the word “TOP”
- When more than one layer is reported, use a solidus (/) to separate layers

Examples
/SK BKN-OVC UNKN TOP060/BKN120 TOP150/ SKC – indicates the base is a broken to overcast layer, altitude unknown, top of the first layer at 6,000 MSL. Second layer base at 12,000 MSL tops 15,000 MSL, clear above.

Knowledge Check C

REVIEW what you have learned so far about PIREPs. ANSWER each question listed below.

1. What would a proper classification of a PIREP be? *(Select the correct answer.)*
   - ❑ UC
   - ❑ **UA**
   - ❑ MT

2. Which example of time reported on a PIREP is correct? *(Select the correct answer.)*
   - ❑ /1200
   - ❑ /0800 TM
   - ❑ **/TM 1600**

3. Which example represents sky condition reported on a PIREP? *(Select the correct answer.)*
   - ❑ **/SK BKN-TOP065**
   - ❑ /OV APE230010
   - ❑ /WV 23538KT

Weather

Weather conditions encountered by the pilot are reported as follows:

- Flight visibility, if reported, will be the first entry in the /WX field
  - Enter FV followed by a two-digit visibility value rounded down, if necessary, to the nearest whole statute mile and append “SM” (Example: **FV03SM**)
  - If visibility is reported as unrestricted, it will be entered as **FV99SM**

Air Temperature

Outside air temperature is reported using two digits in degrees Celsius.

- Negative temperatures are prefixed with an “M” (Example: **M32**)

Examples
The PIREP Form 7110-2 indicates to write negative temperatures with a hyphen. When PIREPS are disseminated, negative temperatures will be indicated with an M (i.e.: -2 = M02).

Wind

Wind is reported using three digits to indicate wind direction (magnetic) and two to three digits to indicate reported wind speed and is always appended with “KT.”

Examples
/WV 26580KT (wind two six five at eight zero); **/WV 235110KT** (wind two three five at one one zero); **/WV 05008KT** (wind zero five zero at eight)

Turbulence

Turbulence is reported with duration, intensity, type, and altitude as follows:

- Intensity using contractions LGT, MOD, SEV, or EXTRM
  - Range or variation of intensity will be separated with a hyphen (Example: **MOD-SEV**)
- CAT (Clear Air Turbulence) or CHOP will be included if reported by the pilot
- Altitude will be reported only if it differs from value reported in /FL
  - When a layer of turbulence is reported, height values will be separated with a hyphen
  - If lower or upper limits are not defined, BLO (below) or ABV (above) will be used

Examples
/TB MOD (Moderate turbulence); **/TB EXTRM CAT** (Extreme Clear Air Turbulence); **/TB LGT-MOD 040-085** (Light to moderate turbulence between four thousand and eight thousand five hundred); **/TB INTMT LGT CHOP** (Intermittent light chop)

Icing

Intensity, type, and altitude of icing are reported as follows:

- Intensity is reported first using the word TRACE or the contractions LGT, MOD, or SEV
  - Range or variation of intensity reports are separated with a hyphen
  - Icing forecasted, but not encountered, is reported using NEG
- Icing type is reported as RIME, CLR, or MX
- Icing/altitude reported only if different from the value reported in the /FL

When icing is reported, always report temperature in the /TA Text Element Indicator (TEI).

Examples
/IC LGT RIME (Light rime icing); **/IC MOD MX** (Moderate mixed icing)

Remarks

Remarks are used to report phenomena that are considered important but do not fit in any of the other areas.

- Hazardous weather is reported first
- Low-Level Wind Shear (LLWS) is described to the extent possible

Remarks include but are not limited to:

- LLWS reports
- Thunderstorm lines
- Coverage and movement
- Hail
- Lightning
- Dust storms
- Sandstorms
- Clouds observed, but not encountered
- Contrails

Examples
/RM LLWS -15 KT 003-SFC DURD RWY 28L PIT /RM TCU W-NE (Towering Cumulus West thru Northeast)

Knowledge Check D

REVIEW what you have learned so far about PIREPs. ANSWER each question listed below.

1. Which example represents wind reported on a PIREP? *(Select the correct answer.)*
   - ❑ /SK BKN-TOP065
   - ❑ /WX FV03SM BR
   - ❑ **/WV 23538KT**

2. What are the abbreviations used to describe turbulence in a PIREP? *(Select all correct answers that apply.)*
   - ❑ **MOD**
   - ❑ **EXTRM**
   - ❑ EXT
   - ❑ **SEV**
   - ❑ **LGT**
   - ❑ SV

3. Which of these types of information can be found on a PIREP? *(Select all correct answers that apply.)*
   - ❑ **Aircraft type**
   - ❑ **Location**
   - ❑ **Remarks**
   - ❑ **Altitude**
   - ❑ **Icing**
   - ❑ **Temperature**

PIREP Recording and Decoding Summary

A pilot operates in an environment that is unique only to them, and weather can take a turn for the worse in an instant. When a pilot issues a pilot weather report, there is usually hazardous weather present. You must communicate the information rapidly and accurately to surrounding facilities in order help other aircraft coming into the vicinity know what to expect or what to avoid.

FACILITATOR INSTRUCTIONS	DELIVERY METHOD
■ Instruct students to locate student exercise ***Recording PIREPs*** in the printed ***Student Guide*** ■ The exercise will be performed individually ■ Read aloud sample weather reports ■ Instruct students to listen to sample weather reports ■ Instruct students to record information using PIREP format on the provided form ■ Entries should be made IAW FAA Form 7110-2 ■ Advise students to use current classroom time as UTC ■ After completion, select students randomly to provide answers orally while other students assess their own answers ■ Encourage student discussion with this exercise and resolve any questions the students may have on the exercise or recording a PIREP	Exercise **EST. RUN TIME** 45 mins.

EXERCISE: RECORDING PIREPs

Purpose

This exercise provides practice recording Pilot Weather Reports (PIREPs).

Directions

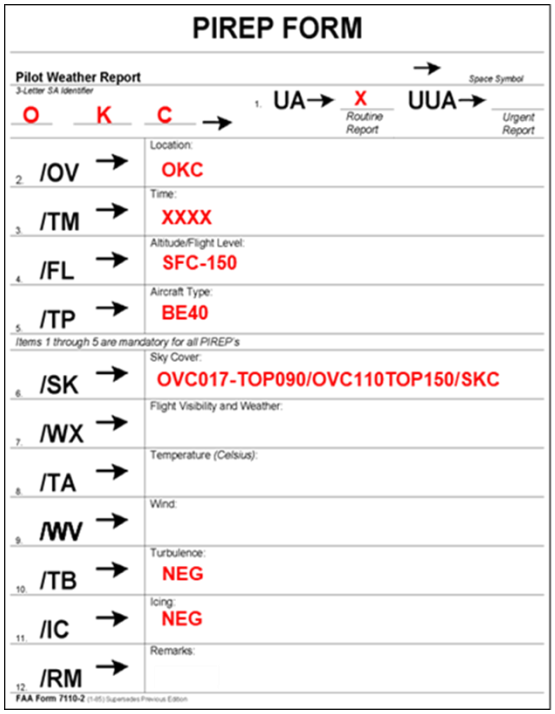
Using the PIREP forms, record the PIREPs as the instructor reads them aloud.

Detailed Facilitator Instructions: *Direct students to work individually to complete the exercise. Acting as pilot, read the following PIREPs aloud while the students record them on the forms located in Student Guide. The entries should be made in accordance with FAA Form 7110-2.*
After completion, select students randomly to provide answers orally while other students assess their own answers. Encourage student discussion with this exercise and resolve any questions the students may have on the exercise or recording a PIREP.

Advise students to use current classroom time as Coordinated Universal Time (UTC).

Report 1
"Ft. Worth Center, Beechjet six two papa, Climbing out of Oklahoma City we were in the clouds at about 1700', broke out at 9,000, had another overcast layer around 11,000, and broke out at 15,000, clear above. Negative ice, negative turbulence."
Report 2
"Oke City Tower, this is Citation three x-ray yankee – we had some moderate chop around three thousand, broke out at two thousand five hundred, and we were plus or minus twenty knots on final."
Report 3
"Amarillo approach, this is United thirty eight – Boeing 737, on our climb off runway four we got some light rime from five thousand to eight thousand."

Report 1



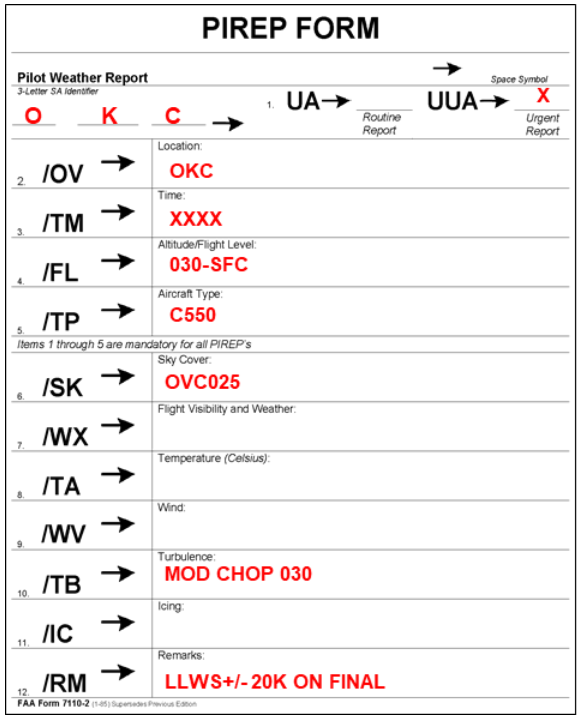
PIREP FORM

Pilot Weather Report
3-Letter SA Identifier: O K C
1. UA → X (Routine Report) UUA → (Urgent Report) (Space Symbol →)

2.	/OV →	Location: OKC
3.	/TM →	Time: XXXX
4.	/FL →	Altitude/Flight Level: SFC-150
5.	/TP →	Aircraft Type: BE40
	Items 1 through 5 are mandatory for all PIREP's	
6.	/SK →	Sky Cover: OVC017-TOP090/OVC110TOP150/SKC
7.	/WX →	Flight Visibility and Weather:
8.	/TA →	Temperature *(Celsius)*:
9.	/WV →	Wind:
10.	/TB →	Turbulence: NEG
11.	/IC →	Icing: NEG
12.	/RM →	Remarks:

FAA Form 7110-2 (1-65) Supersedes Previous Edition

Report 2



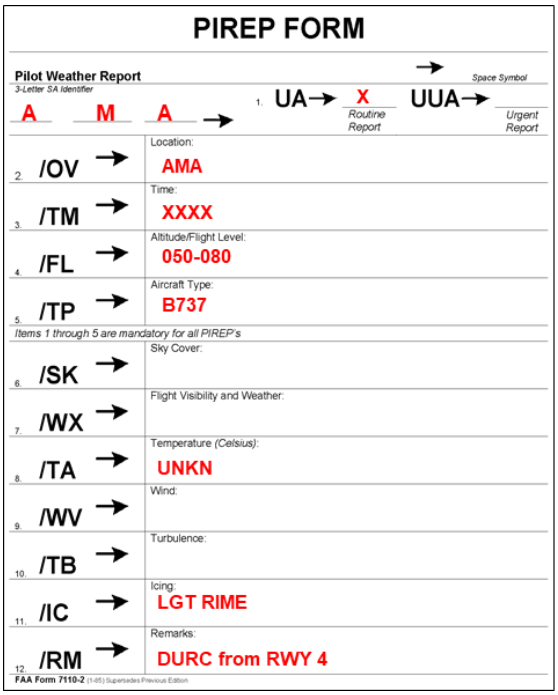
PIREP FORM

Pilot Weather Report
3-Letter SA Identifier: O K C
1. UA → (Routine Report) UUA → X (Urgent Report) (Space Symbol →)

2.	/OV →	Location: OKC
3.	/TM →	Time: XXXX
4.	/FL →	Altitude/Flight Level: 030-SFC
5.	/TP →	Aircraft Type: C550
	Items 1 through 5 are mandatory for all PIREP's	
6.	/SK →	Sky Cover: OVC025
7.	/WX →	Flight Visibility and Weather:
8.	/TA →	Temperature *(Celsius)*:
9.	/WV →	Wind:
10.	/TB →	Turbulence: MOD CHOP 030
11.	/IC →	Icing:
12.	/RM →	Remarks: LLWS+/- 20K ON FINAL

FAA Form 7110-2 (1-65) Supersedes Previous Edition

Report 3



PIREP FORM

Pilot Weather Report
3-Letter SA Identifier: A M A
1. UA → X (Routine Report) UUA → (Urgent Report) (Space Symbol →)

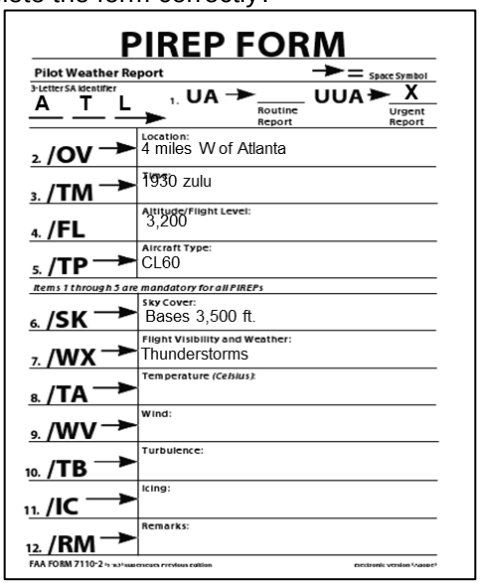
2.	/OV →	Location: AMA
3.	/TM →	Time: XXXX
4.	/FL →	Altitude/Flight Level: 050-080
5.	/TP →	Aircraft Type: B737
	Items 1 through 5 are mandatory for all PIREP's	
6.	/SK →	Sky Cover:
7.	/WX →	Flight Visibility and Weather:
8.	/TA →	Temperature *(Celsius)*: UNKN
9.	/WV →	Wind:
10.	/TB →	Turbulence:
11.	/IC →	Icing: LGT RIME
12.	/RM →	Remarks: DURC from RWY 4

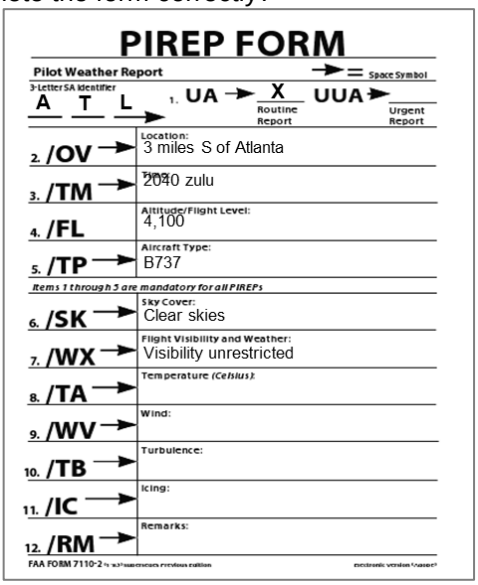
FAA Form 7110-2 (1-65) Supersedes Previous Edition

FACILITATOR INSTRUCTIONS	DELIVERY METHOD
■ **ENABLE *Soliciting, Decoding, and Processing PIREPs*** in the ***Exercise and Activities*** folder in Blackboard ■ Instruct students to navigate to the ***Exercise and Activities*** folder in Blackboard ■ Instruct students to locate activity ***Soliciting, Decoding, and Processing PIREPs*** ■ The activity will be performed individually ■ Instruct students to answer each question ■ At the end of the activity, the activity will evaluate the students' performance ■ Suggest allowing opportunities to repeat the activity during periods of down time	Activity **EST. RUN TIME** 20 mins.

ACTIVITY: SOLICITING, DECODING, AND PROCESSING PIREPS (ANSWER KEY)

Question	Answer
1. According to what he has read in the weather report, is Dave required to solicit a PIREP? Dave is an air traffic controller at the Hartsfield-Jackson Atlanta (ATL) International Airport. He has just completed his position relief briefing and assumed his position in the tower. He begins his shift by reading the METAR/SPECI. The ATL METAR states that the visibility is 3 miles and the overcast is 2,000.	**Yes. If the ceiling is less than 5,000 feet or visibility is less than 5 miles, you are required to solicit a PIREP.** No
2. Dave has received information from the pilot of N3248 and is ready to enter his observations on an FAA Form 7110-2. What classification should he assign for the PIREP? *"ATL TOWER, NOVEMBER THREE TWO FOUR EIGHT, FOUR MILES WEST OF ATLANTA, AT THREE THOUSAND TWO HUNDRED FEET, WE ARE ENCOUNTERING THUNDERSTORMS, BASES THREE THOUSAND FIVE HUNDRED FEET, MOVING EAST, TOPS UNKNOWN"*	**UUA. The pilot reported encountering thunderstorms, which represents a hazard or a potential hazard to flight operations. On a PIREP, thunderstorms are classified Urgent (UUA).** UA

Question	Answer
3. This is what Dave entered on Form 7110-2. Did he complete the form correctly?  **PIREP FORM** Pilot Weather Report → = Space Symbol 3-Letter SA Identifier: A T L → 1. UA → ____ Routine Report UUA → X Urgent Report 2. /OV → Location: 4 miles W of Atlanta 3. /TM → Time: 1930 zulu 4. /FL → Altitude/Flight Level: 3,200 5. /TP → Aircraft Type: CL60 *Items 1 through 5 are mandatory for all PIREPs* 6. /SK → Sky Cover: Bases 3,500 ft. 7. /WX → Flight Visibility and Weather: Thunderstorms 8. /TA → Temperature (Celsius): 9. /WV → Wind: 10. /TB → Turbulence: 11. /IC → Icing: 12. /RM → Remarks: FAA FORM 7110-2	**No. He did not include all the information reported by the pilot. He needs to add under the remarks section, "Thunderstorms moving east, Tops unknown"** Yes
4. Now that the Form 7110-2 is filled out, what action is required by Dave?	**ATL tower should deliver to the ARTCC Weather Coordinator as soon as possible** ATL tower should transmit to all aircraft in the vicinity
5. Match the reported data from N3248 with the text element indicators, used to create the PIREP. A. At 3,200 ft. B. Bases 3,500 ft. tops unknown C. Thunderstorms moving east D. 1930Z E. 4 miles west of Atlanta	**A. /FL 3,200** **B. /SK BASES 3500 TOPSUNKN** **C. /RM TS MOVING E** **D. /TM 1930** **E. /OV 4 W ATL**
6. Verify the information reported by the CL60 pilot and the created PIREP. Is the report accurate? "ATL TOWER, NOVEMBER THREE TWO FOUR EIGHT, FOUR MILES WEST OF ATLANTA, AT THREE THOUSAND TWO HUNDRED FEET, WE ARE ENCOUNTERING THUNDERSTORMS, BASES THREE THOUSAND FIVE HUNDRED FEET, MOVING EAST, TOPS UNKNOWN" UUA / OV 4 W ATL / TM 1930 / FL032 / TP CL60/ SK BASES 3500 TOPSUNKN/ RM TS MOVING E	**Yes** No
7. ARTCC Weather Coordinator has distributed the UUA PIREP to all concerned. How does the PIREP help flight operations? (Select all that apply.)	❑ **Expedites the flow of en route traffic** ❑ **Determines most favorable altitudes** ❑ Conducts pilot weather briefings ❑ **Issues hazardous weather information** ❑ Identifies trends in meteorological phenomena

Question	Answer
8. Time has passed on Dave's shift, and he decides to review the latest METAR/SPECI. The current METAR at ATL states that the sky condition is clear and the visibility is 4 miles. Is ATL tower required to solicit a PIREP?	**Yes. If the ceiling is less than 5,000 feet or visibility is less than 5 miles, he is required to solicit a PIREP)** No
9. Dave has received information from the B737 pilot and is ready to enter his observations on a Form 7110-2. What classification should he assign for the PIREP? *"ATL TOWER, NOVEMBER SEVEN THREE SIX FOUR, THREE MILES SOUTH OF ATLANTA, CLIMBING THROUGH FOUR THOUSAND ONE HUNDRED, CLEAR SKIES, VISIBILTY UNRESTRICTED."*	**UA. The pilot reported clear skies and visibility unrestricted. All received PIREPs are classified as UA, or routine, except those classified as urgent.** UUA
10. This is what Dave entered on Form 7110-2. Did he complete the form correctly? 	**Yes, All required information is completed and correct.** No

PIREP FORM

Pilot Weather Report → = Space Symbol

3-Letter SA Identifier: A T L

1. UA → X Routine Report UUA → Urgent Report

2. /OV → Location: 3 miles S of Atlanta

3. /TM → Time: 2040 zulu

4. /FL → Altitude/Flight Level: 4,100

5. /TP → Aircraft Type: B737

Items 1 through 5 are mandatory for all PIREPs

6. /SK → Sky Cover: Clear skies

7. /WX → Flight Visibility and Weather: Visibility unrestricted

8. /TA → Temperature (Celsius):

9. /WV → Wind:

10. /TB → Turbulence:

11. /IC → Icing:

12. /RM → Remarks:

FAA FORM 7110-2

SUMMARY

This module introduced you to the PIREP Program operated by the National Weather Service (NWS) and the Federal Aviation Administration (FAA). You learned to solicit, record, handle, and decode PIREPs.

In accordance with FAA Orders JO 7110.65, Air Traffic Control, and JO 7110.10, Flight Services; the Aeronautical Information Manual (AIM); AC 00-45, Aviation Weather Services; and FAA Form 7110-2 (PIREP), you should now be able to:

- Identify purpose and uses of a PIREP
- Identify content included in a PIREP
- Identify information recorded in a PIREP

FACILITATOR INSTRUCTIONS	DELIVERY METHOD
■ Navigate to the ***Parking Lot*** link within Blackboard and review any student questions ■ Address ***Parking Lot*** questions and facilitate a brief discussion of the lesson content ■ Instruct students to prepare for the End-of-Module test by putting away their Student Guides	Facilitated Discussion **EST. RUN TIME** 15 mins.

FACILITATOR INSTRUCTIONS	DELIVERY METHOD
■ **ENABLE *Pilot Weather Reports (PIREPs) End-of-Module Test*** link in Blackboard ■ Instruct students: ○ Clear desks ○ Do not write anything during or after the test ○ Navigate to the ***Pilot Weather Reports (PIREPs) End-of-Module Test*** link in Blackboard ○ Once they are satisfied with their responses, click “Save and Submit;” do not click “OK” to review results until directed to do so ○ Choose “Cancel” if they receive a warning message that the test has unanswered questions; choosing OK will submit the test and not allow them to go back and answer the questions ○ The test will auto-submit when the time limit is reached ○ Leave the room after submitting the test and return at the “Be Back” time ■ ***Note:*** *This test is scored but not graded* ■ During test, monitor students to ensure a secure testing environment ■ Identify the most commonly missed questions by reviewing student statistics in Blackboard ■ Instruct students to click “View Results” when ready to review commonly missed questions ■ Review commonly missed questions with students	Blackboard Assessment **EST. RUN TIME** 15 mins.

END-OF-MODULE TEST (ANSWER KEY)

Note: *Test questions in Blackboard are presented to the students in random order. Please be aware the test key question order will not match the student version.*

1. What is the purpose of a PIREP? *(Select the correct answer.)*
   - ❑ **Report meteorological conditions in flight**
   - ❑ Report a pilot's position
   - ❑ Report a pilot incident
   - ❑ Pilot's report of an accident

Reference(s): JO 7110.65, Pilot/Controller Glossary

2. Which of the following items is **NOT** a requirement when completing a PIREP? *(Select the correct answer.)*
   - ❑ **Remarks**
   - ❑ Location
   - ❑ Aircraft type
   - ❑ Altitude

Reference(s): JO 7110.65, Chap. 2

Refer to the following PIREP to respond to the following three questions.

OKC UA /OV OKC180010/TM 1516/FL120/TP BE20/SK BKN035 TOP075/OVC095-TOPUNKN/WX FV01SM SN/TA M04/TB MOD 050-070/RM TCU W DURC

3. At what altitude(s) did the aircraft encounter turbulence? *(Select the correct answer.)*
   - ❑ **5,000-7,000 feet**
   - ❑ 3,500 thru 7,000 feet
   - ❑ 12,000 feet
   - ❑ Unknown

Reference(s): JO 7110.65, Chap. 9; AIM, 7-1-23

4. What is the height of the base on the second layer? *(Select the correct answer.)*
   - ❑ **9,500 feet**
   - ❑ Not reported
   - ❑ 3,500 feet
   - ❑ 7,500 feet

Reference(s): JO 7110.65, Chap. 9

5. What was the weather element that caused the reduction in visibility? *(Select the correct answer.)*
   - ❑ **SN**
   - ❑ RN
   - ❑ SHRA
   - ❑ GR

Reference(s): JO 7110.65, Chap. 9

Refer to the following PIREP to respond to the following two questions.

After departing OKC at 0455Z, SWA5325, B737-700, 20 miles northwest of OKC climbing through 15,300 feet, reported bases 2,700, still IMC. Light turbulence was reported during the climb from 1,500 to 3,000, negative ice, wind 310 at 28.

6. How would the intensity of the turbulence and the altitude at which it was first encountered be recorded on a PIREP? *(Select the correct answer.)*
   - ❑ **LGT 015**
   - ❑ LGT/15
   - ❑ LGT 150
   - ❑ LGT 1.5

Reference(s): JO 7110.65, Chap. 9; AIM, 7-1-23

7. What should be recorded in the remarks section of this PIREP? *(Select the correct answer.)*
   - ❑ **DURC**
   - ❑ WIND 31028KT
   - ❑ NEG ICE
   - ❑ OKC315020

Reference(s): JO 7110.65, Chap. 9

FACILITATOR INSTRUCTIONS	DELIVERY METHOD
■ **ENABLE *End-of-Block 4 Test*** link in Blackboard ■ Instruct students: ○ Clear desks ○ Do not write anything during or after the test ○ Navigate to the ***End-of-Block 4 Test*** link in Blackboard ○ Once they are satisfied with their responses, click “Save and Submit;” do not click “OK” to review results until directed to do so ○ Choose “Cancel” if they receive a warning message that the test has unanswered questions; choosing OK will submit the test and not allow them to go back and answer the questions ○ The test will auto-submit when the time limit is reached ○ Leave the room after submitting the test and return at the “Be Back” time ■ ***Note:*** *This test is scored but not graded* ■ During test, monitor students to ensure a secure testing environment ■ Instruct students to click “View Results” when ready to review results; do not review commonly missed questions	Blackboard Assessment **EST. RUN TIME** 90 mins.