

MAEL-CROSS COUNTRY FLIGHT VIRTUAL REALITY

CROSS COUNTRY FLIGHT IN A FLIGHT SIMULATOR:

1. As a team, decide which student will be the pilot first. Have this person sit in the flight simulator cockpit. The other student (the copilot) will sit next to the pilot, in the chair provided.
2. As a team, review the vocabulary used at this workstation, which is listed on the last two pages of these cards.
3. As a team, review the information on the next few cards, making sure you are familiar with the controls.

Turn to the Next Task Card

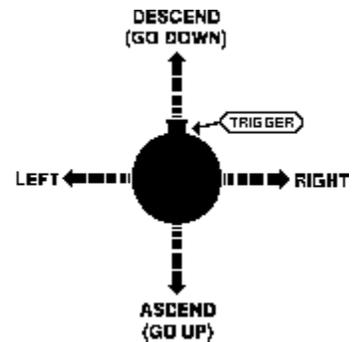
MAEL-CROSS COUNTRY FLIGHT VIRTUAL REALITY

4. Notice these control features:
 - A. Above the three computer screens you are facing, on a smaller screen, a map of your flight terrain will appear as you fly, letting you know your position.
 - B. Now, briefly refer to the color map provided at the workstation, to see the route you will fly in your turn as pilot.
 - C. Find the "Flight Stick. On the flight stick is a button, **(Don't push the button yet)**, but the button on the side of the flight stick facing the computer screens, starts the aircraft.

Turn to the Next Task Card

MAEL-CROSS COUNTRY FLIGHT VIRTUAL REALITY

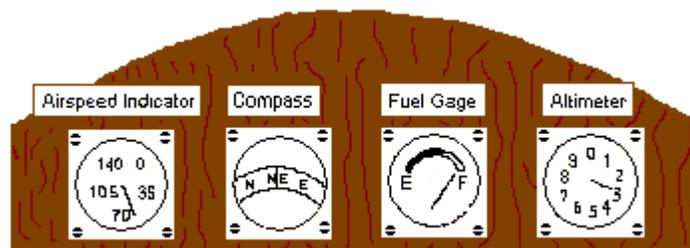
- D. The “Flight Stick” directs the nose of the aircraft. The diagram below shows you how it moves the aircraft.



Turn to the Next Task Card

MAEL-CROSS COUNTRY FLIGHT VIRTUAL REALITY

5. Briefly, study the instrument panel below, it will be the one you will be using for your cross country flight. Be especially aware of the compass, as the pilot will need to read the compass at several points along the flight.



Turn to the Next Task Card

MAEL-CROSS COUNTRY FLIGHT VIRTUAL REALITY

6. Now, you are ready to fly. The copilot will begin reading the below “Flight Plan” to the pilot and will fill in the data in the pilot’s “Pilot’s Journal.” The pilot should begin the flight by pulling the “red” trigger on the flight stick.

- **Copilot:** **Begin reading the “Flight Plan” aloud to the pilot.**

Turn to the Next Task Card

MAEL-CROSS COUNTRY FLIGHT VIRTUAL REALITY

Cross Country Flight Simulator Flight Plan:

To Begin: Head southwest to the castle, straight ahead. Increase your speed by moving the throttle forward. **Keep your nose down**, to see the landmarks, by pushing forward on the flight stick. Notice the water tower on the left as you pass it.

At the Castle: When you arrive at the castle, notice the waterfall to the left of the castle. What is your compass reading now?

- **Copilot:** **Write the compass reading on page 1 of the pilot's "Cross Country Flight Journal" on your clipboard.**

Turn to the Next Task Card

MAEL-CROSS COUNTRY FLIGHT VIRTUAL REALITY

After the Castle: You will be heading straight toward some houses, which are directly below a hillside. Using the flight stick, ascend to at least 100 meters to clear the hillside directly in front of you.

- **Copilot:** **Stop reading until you and the pilot see this!**
With the flight stick, put the plane's nose down again until you reach the ocean.

At the Ocean: At the ocean, head west along the coastline until you see a river opening into the ocean on your right. An island with a lighthouse will appear at the mouth of the river. What is your compass reading now?

Turn to the Next Task Card

MAEL-CROSS COUNTRY FLIGHT VIRTUAL REALITY

- **Copilot:** Write the compass reading on the pilot's "Cross Country Flight Journal," on your clipboard.
 - At the River:** Follow the river north from the lighthouse, using the flight stick to clear the bridge over the river. When you reach the bridge, let me know your compass reading, OK?
 - **Copilot:** Wait till the Pilot gives you the reading, then write it down.
- At the first fork in the River:** At the first fork in the river, follow the river east.

Turn to the Next Task Card

MAEL-CROSS COUNTRY FLIGHT VIRTUAL REALITY

**At the second fork
in the river:**

At the second fork in the river, make a sharp turn to the east and continue following the river. Clear the dam, and as you approach it, tell me your compass reading.

• **Copilot:**

Wait till the Pilot gives you the reading, then write it down.

At the small Lake:

When the river opens into the small lake, find the landing strip on the island and fly to it to land the plane. As you approach the island, reduce your speed by pulling back on the throttle, and attempt to land on the runway. What is your compass reading as you are approaching the runway?

- **Copilot:** **Write the reading down.**

Turn to the Next Task Card

MAEL-CROSS COUNTRY FLIGHT VIRTUAL REALITY

7. When the flight simulator stops, the copilot will record the flight statistics displayed on the computer screen on page 2 in pilot's "Cross Country Flight Journal."
8. Pilot and Copilot change places and repeat the process going back to Step 6 in these cards.
9. When the second pilot has completed the flight, notify the MAEL flight attendant that you are both ready to begin using the Virtual Reality

Headset. (The Flight Attendant will need to work on the computer a few moments to change the setting.)

Turn to the Next Task Card

MAEL-CROSS COUNTRY FLIGHT VIRTUAL REALITY

CROSS COUNTRY FLIGHT IN VIRTUAL REALITY:

10. Take turns experiencing the Virtual Reality Experience of flying for five minutes each.
11. In the time remaining, begin filling out Questions #2 through #8 in your "Cross Country Flight Journal."

(WE HOPE YOU HAD A GREAT FLIGHT!)

Turn to the Next Task Card

MAEL-CROSS COUNTRY FLIGHT VIRTUAL REALITY

VOCABULARY:

Altimeter - an instrument for measuring, in feet, the height of the airplane above sea level

Airspeed indicator - an instrument for measuring the speed of the aircraft relative to the air through which it is moving

Biplane - a plane with two sets of wings, one wing above the other

Cockpit - the place where pilots sit to fly the plane, containing the instruments and controls

Compass - an instrument used by pilots to determine the direction in which they are flying

Turn to the Next Task Card

MAEL-CROSS COUNTRY FLIGHT VIRTUAL REALITY

VOCABULARY (CONTINUED):

Flight plan - the details written by the pilot which show where a plane is going, how long the flight will take and other important facts

Flight simulator - a training machine on the ground, which imitates flight in the air

Flight stick - the lever which directs the nose of the plane

Navigate - to plan and follow a specified route from one airport to another

Throttle - the lever which regulates the speed of the engine

Virtual reality - a realistic simulation of an environment, which includes three-dimensional graphics, on a computer system which uses interactive hardware and software

You have completed your activities on this workstation.