



Transportation Systems/ Infrastructure Planning, Management and Regulations Pathway: **Air Mode**

Problem-based Scenario Outline

School Site: Triad High School

Pathway Knowledge and Skill(s):

- PO1.1.3 Develop the plans for new or improved public transportation
- PO5.3.1 Determine the need for new or expanded public transportation services.

Performance Element(s):

The students will compile information required to properly assess local need of the airport. They will need to complete a study of the airports usability. They will need to examine the four major segments of the airline industry. After completing the study they will need to determine a marketing strategy that the airport could use to attract such an airline

Title: MidAmerica Airport

Completion Time: 3 weeks

Problem Statement: You have been studying the Mississippi Flyway and have become familiar with that area's geography and demographics. Based upon that knowledge you decide that an additional airport is required to serve the St. Louis region. You know that Lambert International Airport is plagued with over 20,000 hours of delays. They have the plan of adding another runway by 2006, but that will not lessen the problem of the delays. Your job is to determine what type of airport is required, plan for development, and what segment of the aviation field should be targeted. After you have made these determinations you should develop a marketing strategy to develop a tenant base within the appropriate segment(s). You only have 15 days to develop this proposal. After the 15 days your funding of the project will no longer be available.

***Note: The four segments of the aviation field are:**

- Air Cargo
- Air Carrier
- Maintenance, Repair, and Overhaul Facilities
- General Aviation (small private carriers)

Occupations and Related Job Titles (*Examples*):

- Planning Commissioner
- Civil Engineer

- Transportation Engineer
 - Pilot
 - Aviation Mechanic
 - Baggage Handlers
 - Air Traffic Controller
 - Flight Attendants
 - Marketing
 - Aviation Planning
 - Aviation Fire Fighting
 - Airport Field Maintenance
 - Building Maintenance
-
-

Business/Industry/Government Partner(s):

Mid America Airport

Mid America Airport is a new airport in the St. Louis Metro East area. The airport was designed to alleviate congestion to Lambert International Airport. To this date, only PanAm Airlines has utilized the airport. They, however, have since removed service. Several aviation maintenance facilities and Scott Air Force Base are currently using the facility

Scott Air Force Base

Students:

Product: Students will create a PowerPoint presentation and two additional sources of information to advertise new flights out of MidAmerica Airport. They will be required to research and develop what airlines should consider using MidAmerica. After they have determined the airlines they must correlate the flights so that the airport can allow for the planes to takeoff on time.

Process: Students will research MidAmerica Airport. They will take a tour of the facilities to better understand the workings of the airport. They will also research Lambert International Airport. After the research process is completed the students will create a flight schedule for the chosen airline that will fly into MidAmerica. They must correlate the flight schedule with existing flight schedules. Finally the students must create an advertisement to promote the new flight schedules. The students may use any source of media that they wish.

Required Materials and Resources:

The partner will provide the students with the problem and additional information such as the flight pattern maps, airport locations, and cost structure for airport usage. The partner will also be available for questions from the students/teacher. The teacher will e-mail or call the partner with questions and updates of the project.

- Computers

- Word processing and presentation software
- Internet usage to research St. Louis International Airports flight Schedules
- Flight schedules for MidAmerica Airport
- Sectional Aeronautical Charts
- Computer usage to create advertisements

Suggested Assessment Approaches:

Cluster: The students will be assessed utilizing several different methods. They will be assessed for style, correctness of grammar, and spelling on their written report. They will also be assessed on the use of resource materials. The final assessment will be determined by how well the students compile and present their findings of the project to Madison County Transit with the use of the scoring rubric.

Pathways: The students will be assessed via tests and daily assignments. A scoring rubric will be used to fully assess the students overall performance. Since the students are working in team settings, they will evaluate each of the team members and themselves for a final participation grade for the project.

Cluster Foundation Knowledge and Skills:

- F2.2.1 Compose multi-paragraph writing containing technical concepts, knowledge, and vocabulary.
- F2.2.3 Use information technology to design, produce and present written and multi-media materials (See Information Technology Applications).
- F2.4.2 Contribute effectively to group discussions including meetings.
- F3.2.1 Develop solutions to performance problems using a structured problem-solving process.
- F4.1.1 Create documents using word processing software.
- F4.1.4 Use geographic information systems software
- F4.1.5 Develop and make presentations using presentation software
- F4.2.2 Use Internet services to locate and retrieve information.
- F5.2.1 Manage customer relationships (internal and/or external customers)
- F5.2.4 Maintain compliance with organizational policies and government laws and regulations
- F7.2.1 Conduct and participate in meetings.

Module Plan

<p>1. Introduction to problem statement</p>	<p>Students will be introduced to problem statement via classroom information.</p>	<p>Students will be assessed by student problems and exercises associated with the initial problem statement.</p>
<p>2.</p>		

Fieldtrip on MidAmerica Airport	Students will attend a fieldtrip to MidAmerica Airport. They will explore all areas of the airport to better understand the workings of the airport.	Students will write a reflection paper that will provide for the insight that the students had before and after the field trip. These will be compiled and placed in the final report.
3. Internet Research	Students will research the airport and also Lambert Airport. They will explore flight schedules and airline information.	Students will conduct the research. They will compile a list of airlines that fly out of Lambert and their destinations. They will then look at the top five destinations and tell the times of all the flights.
4. Flight Schedules	Students will explore current flight schedules at MidAmerica and Lambert airport. They will determine the 5 top destinations.	Students will be evaluated on the accuracy of their schedule reading.
5. Flight information	Students will create a potential flight schedule for the airport. They will use the Lambert flight schedules as a model.	Students will be evaluated by the accuracy and reliability of their projections and research techniques.
7. Complete written report	Compile a written report to be presented to MidAmerica Airport. Correct grammar, spelling, style, and documentation must be completed. Use of charts, graphs, etc. should be used in this step.	Students will be assessed via a rubric that will be handed out at the beginning of the project. Spelling, style, grammar, and citation of sources will be assessed.
8. Complete Oral Report	Students should give a verbal presentation of their findings to MidAmerica Airport. Clarity, accuracy, and structure must be examined. The students must provide an outline and a complete written copy of their presentation. The students will then give the presentation first to the teaching	Students will be assessed via a rubric that will be given to them before they start on the development of the oral presentation. Grammar, mannerisms, and quality will be assessed.

	committee, before presenting their final report to MidAmerica Airport.	
--	--	--