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Career Cluster:



Information Technology includes opportunities in entry level, technical, and professional careers related to the design, development, support and management of hardware, software, multimedia, and systems integration services.

North Dakota Media

Introduction

There are thousands of challenging educational and training opportunities within the high-skilled world of Information Technology. This activity will give the student an opportunity to experience the resources and opportunities that exist in the State of North Dakota in Information Technology. The brochures developed will provide students an experience in design of the multimedia career pathway. This experience will expose students through the use of the technology available, to the various careers that have been involved in the development of this cluster.

Warm-Up Activity

Make the following statement to the class, “Imagine that you and two of your friends have been hired by the Tourism Department of North Dakota as Multimedia Producers to create a brochure for your state. The three of you are going to develop a brochure to inform, educate, and persuade prospective tourists why they should make North Dakota part of their summer travel plans. The three of you will present the final product to your classmates and teacher in both oral and written formats. Each of you will have specific tasks to gather and arrange your information in a manner that meets the requirements.”

One way that people learn about places that they are interested in is with brochures. Brochures grab the reader’s attention and get them interested enough to want to know more. It may use captivating images, catchy quotes, and colorful descriptions of that particular place.

Procedure

Direct each group to create a brochure about North Dakota that informs, educates, and persuades tourists to visit our state. The brochure will have to cover a broad range of topics yet shouldn't cover so much information that it is overwhelming. Choose 3-4 key

points describing North Dakota. If there are other important elements, consider listing them in a simple bullet form. Using the www.northdakotahasjobs.com website (click on "For Job Seekers" and then "Find Jobs in North Dakota by Employer"), review employer information and the company website. Using the basic format, students can design their own brochures.

Students are to decide on the best format to present the information. Students may want to include text, lots of pictures, charts, or maps. Choose a format that works best for the chosen information.

Brainstorm as a class what makes North Dakota unique. You may want to use the following discussion points:

- What are some of the major attractions of our state?
- What does North Dakota have to offer visitors?
- When you think of North Dakota, what symbols, images, or landmarks come to mind?
- What virtues do North Dakotans hold dear?

(The teacher may also want to have sample brochures on hand to illustrate and discuss what qualities make a good brochure.)

Students are to use the following tasks in developing the project.

#1 – Research - The task is to research and gather the information you want to include in your brochure. Describe the location. Include significant landmarks and their stories. Locate vibrant photos that illustrate the beauty of the land.

#2 – Layout Design - The task is to take the information and organize it in a logical and meaningful way that grabs the attention of the reader. Look at samples of brochures and identify those that have a style or format that you would like to incorporate. Sketch out some rough ideas as to how you would like the brochure to look.

#3 – Graphic Artist – The task is to use the software available to you and transfer your layout design into final form. Your software may have brochure templates that you can implement. Scan or import images, charts, maps and other necessary information.

A brochure must be informative, educational, and persuasive. It should present the material in a clear and organized manner that gives the reader enough information to want to know more, but doesn't leave them confused.

Assessment

Using the following sites, design a rubric to assess the oral presentation and developed brochure: http://teach-nology.com/web_tools/rubrics/ and www.rubistar4teachers.org.

Standards

This activity addresses the following North Dakota Social Studies Standard:
Standard 4: Social Studies Resources.

- 8.4.1 Use various map forms, tools, and technologies to acquire, process, and report information related to social studies.
- 8.4.2 Use primary and secondary sources to gather, interpret, analyze, and evaluate information related to social studies.
- 8.4.3 Use technology to gather, organize, record, interpret, and evaluate information related to social studies.

Time Frame

This lesson will take approximately four class periods. Class time may be shortened if the students do some of the work independently.

Resources

TeAch-nology -- http://teach-nology.com/web_tools/rubrics/

Rubistar 4 Teachers -- www.rubistar4teachers.org

Discover North Dakota -- <http://www.discovernd.com/>

Department of Commerce – www.northdakotahasjobs.com

The Cluster/Pathway Model for Information Technology outlines the pathways and occupations as well as the related cluster knowledge and skills. This model can be located by clicking on Career Clusters at www.imaginend.com.

Career Cluster: Information Technology

Building Linkages in IT Occupations Framework: For Entry Level, Technical, and Professional Careers Related to the Design, Development, Support and Management of Hardware, Software, Multimedia, and Systems Integration Services.

Sample of Career Specialties / Occupations	<p>Network Design and Administration:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Communications Analyst * Data Communications Analyst * Information Systems Administrator * Information Systems Operator * Information Technology Engineer <input type="checkbox"/> Network: Administrator * Analyst * Architect * Engineer * Manager * Operations Analyst * Security Analyst * Specialist * Technician * Transport Administrator <input type="checkbox"/> PC Support Specialist * <input type="checkbox"/> Systems: Administrator * Engineer * Support Lead <input type="checkbox"/> Technical Support Specialist * User Support Specialist <input type="checkbox"/> Telecommunications Network Technician 	<p>Database Development and Administration:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Data: Administrator * Analyst * Architect * Management Associate * Modeler * Modeling Specialist <input type="checkbox"/> Database: Administration Associate * Administrator * Analyst * Developer * Manager * Modeler * Security Expert * DSS (Decision Support Services) * Knowledge Architect <input type="checkbox"/> Senior: Database Administrator * Systems Analyst <input type="checkbox"/> Systems: Administrator * Analyst <input type="checkbox"/> Tester <p>Technical Writer:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Desktop Publisher * Document Specialist * Documentation Specialist * Editor <input type="checkbox"/> Electronic Publications Specialist * Publisher <input type="checkbox"/> Instructional Designer, Online Publisher <input type="checkbox"/> Technical Communicator * Editor * Publications Manager * Writer <p>Technical Support:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Analyst * Call Center Support Representative * Content Manager <input type="checkbox"/> Customer: Liaison * Service Representative * Service Professional <input type="checkbox"/> Help Desk: Specialist * Technician <input type="checkbox"/> Maintenance Technician * PC Support Specialist * PC Systems Coordinator * Product Support Engineer * Sales Support Technician * Systems Analyst <input type="checkbox"/> Technical: Account Manager * Support Engineer * Support Representative <input type="checkbox"/> Testing Engineer <p>Enterprise Systems Analysis and Integration:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Application Integrator * Business Continuity Analyst * Cross-Enterprise Integrator <input type="checkbox"/> Data: Systems Designer * Systems Manager * Warehouse Designer <input type="checkbox"/> E-Business Specialist * Electronic Transactions Implementer <input type="checkbox"/> Information Systems: Architect * Planner <input type="checkbox"/> Systems: Analyst * Architect * Integrator 	<p>Digital Media:</p> <ul style="list-style-type: none"> <input type="checkbox"/> 2D/3D Artist * Animator * Audio/Video Engineer * Designer * Media Specialist * Media/Instructional Designer <input type="checkbox"/> Multimedia: Author * Authoring Specialist * Developer * Specialist <input type="checkbox"/> Producer * Production Assistant * Programmer * Streaming Media Specialist * Virtual Reality Specialist <input type="checkbox"/> Web: Designer * Producer * Specialist <p>Web Development and Administration:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Web: Administrator * Architect * Designer * Page Developer * Producer * Site Developer * Specialist <input type="checkbox"/> Webmaster 	<p>Programming / Software Engineering:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Applications: Analyst * Engineer <input type="checkbox"/> Business Analyst * Computer Engineer * Data Modeler <input type="checkbox"/> Operating System: Designer/Engineer * Programmer Analyst <input type="checkbox"/> Program Manager * Programmer * Programmer/Analyst * Project Lead <input type="checkbox"/> Software Applications: Specialist * Architect * Design Engineer * Development Engineer * Engineer * QA Specialist * Tester <input type="checkbox"/> Systems: Analyst * Administrator <input type="checkbox"/> Test Engineer * Tester
Pathways	Network Systems	Information Support and Services	Interactive Media	Programming and Software Development
Cluster K&S	<p>Cluster knowledge and skills</p> <ul style="list-style-type: none"> ◆ Academic Foundations ◆ Communications ◆ Problem Solving and Critical Thinking ◆ Information Technology Applications ◆ Systems ◆ Safety, Health and Environmental ◆ Leadership and Teamwork ◆ Ethics and Legal Responsibilities ◆ Employability and Career Development ◆ Technical Skills 			