



Building Mental Models with Visuals for E-Learning ACTIVITY

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Directions: Your job is to read the learning goal and collaborate with your group to think of how you would build a mental model using the authoring tools and resources you're given. You are welcome to do any research you would wish using the WWW. If you need, you may assume access to other technologies, like databases, and repositories of pre-made digital materials. This activity is only a simple beginning approach to thinking about the use of images (in their various forms) to build mental modeling (and richer e-learning experiences). Please be ready to share with the group after the allotted time.

Scenario A:

Hiking a Difficult Terrain (A Task Goal)

GOAL: Your team needs to show learners how to navigate a difficult hiking terrain in either a plains or rugged mountain-scape for a 5-day trek. You need to address issues of equipment, resources, strategy, and any other relevant details.

TOOLS and RESOURCES: Digital cameras, scanners, videocams, topographical maps, microphones and sound recorders, satellite imagery, authoring tools, animated tutorial software, graphics / audio / video editing software, and games engines.

INSTRUCTIONAL APPROACH: ?

MENTAL MODEL BUILDING STRATEGY: ?

USES OF DIGITAL VISUALS: ?

Scenario B:

Using a Foreign Language to Negotiate the Foreign Marketplace (A Skill and Acclimation)

GOAL: Your team needs to train learners in how to speak in a foreign language (of your choice) to negotiate the marketplace in a foreign locale.

TOOLS and RESOURCES: Digital cameras, scanners, videocams, topographical maps, microphones and sound recorders, satellite imagery, authoring tools, animated tutorial software, graphics / audio / video editing software, and games engines.

INSTRUCTIONAL APPROACH: ?

MENTAL MODEL BUILDING STRATEGY: ?

USES OF DIGITAL VISUALS: ?

Scenario C:

The Spread of Malaria (An Overview)

GOAL: Your team needs to develop a mental model of the spread of malaria in a fictional country in a tropical zone during the height of mosquito activity. Your team will need to consider disease vectors. They will also need to consider various ways to head off the spread of malaria based on a number of real-world interventions.

TOOLS and RESOURCES: Digital cameras, scanners, videocams, topographical maps, microphones and sound recorders, satellite imagery, authoring tools, animated tutorial software, graphics / audio / video editing software, and games engines.

INSTRUCTIONAL APPROACH: ?

MENTAL MODEL BUILDING STRATEGY: ?

USES OF DIGITAL VISUALS: ?

Scenario D:**Using Google Maps (A Software Interface and Software)**

GOAL: Your team needs to develop a mental model of how to use Google Maps. This is available at <http://maps.google.com/>. Make sure your learners develop both a sense of how to use this tool and also the back-end technologies that enable these technologies.

TOOLS and RESOURCES: Digital cameras, scanners, videocams, topographical maps, microphones and sound recorders, satellite imagery, authoring tools, animated tutorial software, graphics / audio / video editing software, and games engines.

INSTRUCTIONAL APPROACH: ?

MENTAL MODEL BUILDING STRATEGY: ?

USES OF DIGITAL VISUALS: ?

Scenario E:**The Pressures of Floor Traders at the New York Stock Exchange (A Task Goal)**

GOAL: Your team needs to develop a mental model of the trading floor of the New York Stock Exchange. The learners need to understand the technologies, the work, and the interactions among the entities there.

TOOLS and RESOURCES: Digital cameras, scanners, videocams, topographical maps, microphones and sound recorders, satellite imagery, authoring tools, animated tutorial software, graphics / audio / video editing software, and games engines.

INSTRUCTIONAL APPROACH: ?

MENTAL MODEL BUILDING STRATEGY: ?

USES OF DIGITAL VISUALS: ?

Scenario F:**Negotiating among Diplomats (A Skill)**

GOAL: Your team has been tasked with emulating a negotiation among diplomats. One side must emulate the US, and the other side must emulate Russia, over the issue of a missile defense shield in Eastern Europe. How will you best create a mental model of this here?

TOOLS and RESOURCES: Digital cameras, scanners, videocams, topographical maps, microphones and sound recorders, satellite imagery, authoring tools, animated tutorial software, graphics / audio / video editing software, and games engines.

INSTRUCTIONAL APPROACH: ?

MENTAL MODEL BUILDING STRATEGY: ?

USES OF DIGITAL VISUALS: ?

Scenario G:**A Medic on Call with Second Language Speakers (Empathy and Communications)**

GOAL: Your team has been asked to create a mental model experience to help medics who go out on calls to work with individuals who have not only suffered a difficult trauma but are second language speakers. The idea is to enhance the information-gathering skills of medics while balancing their cultural sensitivity and communications skills.

TOOLS and RESOURCES: Digital cameras, scanners, videocams, topographical maps, microphones and sound recorders, satellite imagery, authoring tools, animated tutorial software, graphics / audio / video editing software, and games engines.

INSTRUCTIONAL APPROACH: ?

MENTAL MODEL BUILDING STRATEGY: ?

USES OF DIGITAL VISUALS: ?

Scenario H:**Planning a Family Budget (A Skill)**

GOAL: Your team has been asked to train learners on how to build a family budget. Decide on the constraints of a particular family and their resources. Then, help your learners gain a larger sense of the economic realities and of how to respond to those in a creative and money-saving way.

TOOLS and RESOURCES: Digital cameras, scanners, videocams, topographical maps, microphones and sound recorders, satellite imagery, authoring tools, animated tutorial software, graphics / audio / video editing software, and games engines.

INSTRUCTIONAL APPROACH: ?

MENTAL MODEL BUILDING STRATEGY: ?

USES OF DIGITAL VISUALS: ?

Scenario I:**The Car that Won't Start (Problem-Solving)**

GOAL: Your team needs to build a mental model for learners to understand the various possibilities when a car won't start. This training needs to help them problem-solve the reason for the car not starting and being able to optimally get the car started. Include a mental model of how the car works and what happens during the start-up process.

TOOLS and RESOURCES: Digital cameras, scanners, videocams, topographical maps, microphones and sound recorders, satellite imagery, authoring tools, animated tutorial software, graphics / audio / video editing software, and games engines.

INSTRUCTIONAL APPROACH: ?

MENTAL MODEL BUILDING STRATEGY: ?

USES OF DIGITAL VISUALS: ?

Scenario J:**Preparing for a Disaster (Planning)**

GOAL: Your team needs to build a hypothetical mental model of what would happen in the US heartland in case of a multi-week torrential rainfall that floods a town. What are some critical planning pieces that will need to be considered by the learners? What realities should be built into a mental model, so that the learners are the best prepared for this scenario?

TOOLS and RESOURCES: Digital cameras, scanners, videocams, topographical maps, microphones and sound recorders, satellite imagery, authoring tools, animated tutorial software, graphics / audio / video editing software, and games engines.

INSTRUCTIONAL APPROACH: ?

MENTAL MODEL BUILDING STRATEGY: ?

USES OF DIGITAL VISUALS: ?

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