

Multimedia Project Proposal

Topic - Managing Solid Waste

Municipal Solid Waste (MSW) can be defined as everyday garbage or trash produced by individuals or small businesses. Finding a management strategy that minimizes the economic, social, and environmental impact of solid waste is integral to fostering a sustainable society. Reducing the amount of waste to be managed, in addition to the specific management strategy, is equally as important to achieving sustainability. Therefore, it is also important that learners become familiar with and execute everyday behaviors that reduce the amount of waste they themselves produce.

Target Learners - Diverse Novices

This lesson will target undergraduate students enrolled in an introductory environmental science course at The Ohio State University. Since students will be enrolled in an introductory course, background subject matter knowledge is expected to be low. However, learners will be expected to have baseline university level knowledge in mathematics, statistics, science, writing, and reading (English). This is not to say that the targeted learners are homogenous, however. Learners are expected to be highly diverse in age, culture, faith, technological proficiency, and other experiences. The multimedia assets described here will also need to be prepared for any and all accessibility requests (i.e. students with disabilities).

Multimedia Assets

1. Infographic/Illustration

Learning Objectives – After reviewing an infographic on solid waste, learners will be able to define municipal solid waste and its significance, and identify the types/amount of trash produced by humans.

Description and Justification – Good infographics are aesthetic, simple, and easy to read and follow. This makes the infographic optimal for displaying facts and figures. Given the learning objective, this infographic will be designed to present categories or types of solid waste, as well as the proportion or amount that that waste contributes.

Multimedia Principles – The following principles will be used to optimize experience for novice level learners.

- The Multimedia Principle – words and figures will be coupled with related images and graphics
- The Coherence Principle – only essential information (major categories of solid waste) will be included
- The Contiguity Principle – words and their corresponding graphics will be positioned close to each other
- The Personalization Principle – conversational and inclusive language will be used throughout

2. Interactive Learning Object with Video/Audio

Learning Objectives – After completing this interactive lesson with quizzing on solid waste management strategies, learners will be able to describe common ways that solid waste is managed and identify the tradeoffs of each strategy.

Description and Justification – There are many strategies for managing solid waste. Many of these strategies are complex and involve multiple steps. As a result, a narrated lesson that describes each strategy, associated process, and positives and negatives will be most effective for our targeted learner. In addition, purposeful practice is important when storing information in one's long-term memory. This interactive lesson with quizzing – a form of practice – will give learners the opportunity to apply knowledge as they learn it.

Multimedia Principles – The following principles will be used to optimize experience for novice level learners.

- The Multimedia Principle – the interactive lesson will incorporate essential instructional graphics and keywords
- The Coherence Principle – only essential information will be presented; technical processes will be simplified
- The Contiguity Principle – graphics and keywords will be shown close in space and time
- The Modality Principle – audio and narration will be the predominant mode for portraying words
- The Redundancy Principle - on-screen text will be minimized to only keywords
- The Personalization Principle – conversational and inclusive language will be used throughout
- Shared Learner Control – learner will have access to lesson controls (navigation buttons/replay audio)