The 5 E Instructional Model

A Framework for
Inquiry-Based Instruction

Engineering By Design

A Standards-based National Model

Foundations of Technology

A Standards-Based High School Model Course Guide

Presented by Bob Gray, DTE

University of Maryland Eastern Shore

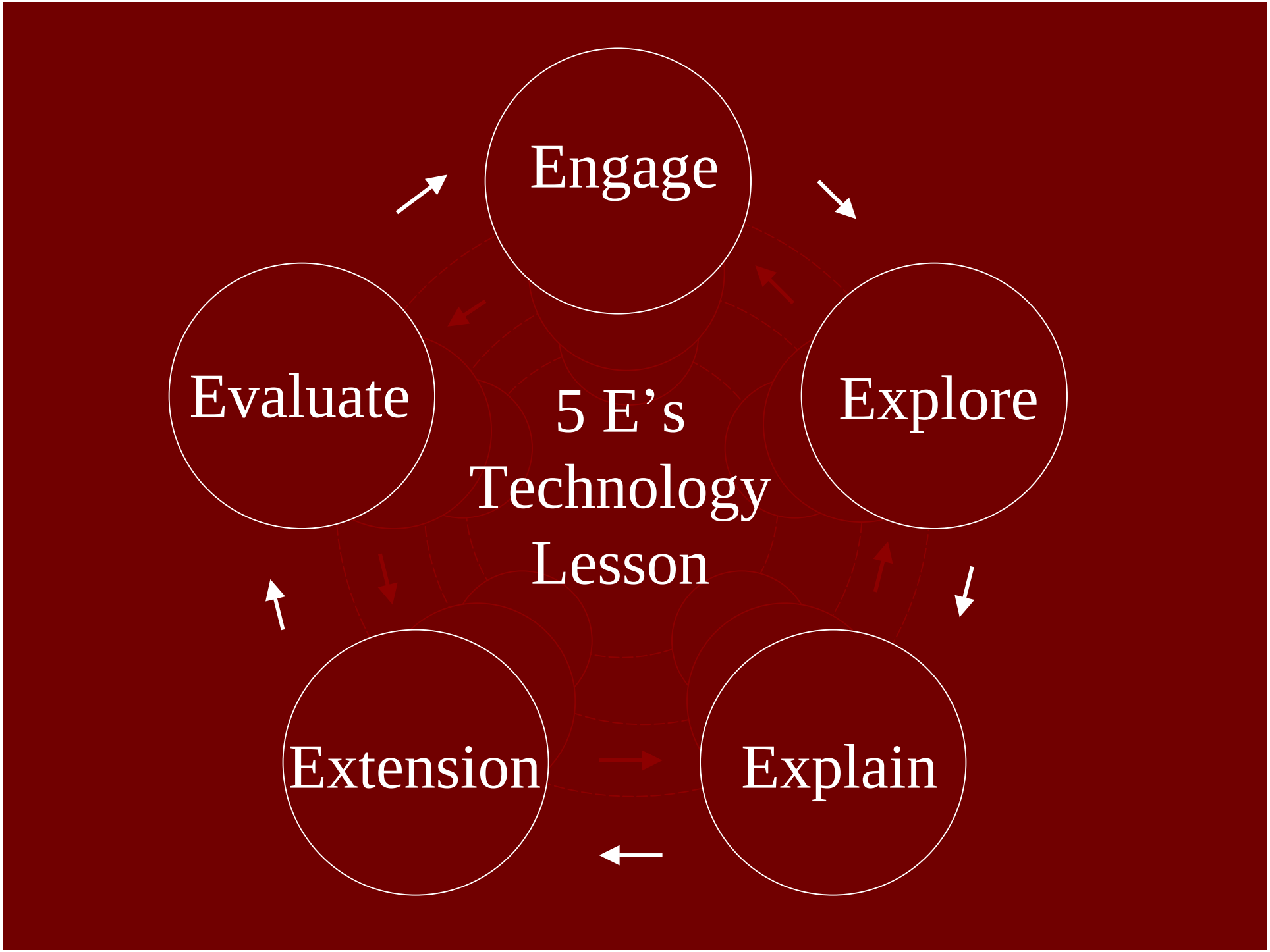
Foundations of Technology

Backward Design Process

Identify Desired Results.

Determine acceptable evidence.

Plan learning experiences and instruction.


Engage
Explore
Explain
Extension
Evaluate
5 E's
Technology
Lesson

Engage

- Activity which will focus student's attention, stimulate their thinking, and access prior knowledge.

Student asks questions such as,
Why did this happen?
What do I already know about this?
What have I found out about this?
Shows interest in the topic.

- Demonstration
- Reading
- Free Write
- Analyze a Graphic Organizer
- KWL
- Brainstorming

Explore

- Activity which gives students time to think and investigate/test/make decisions/problem solve, and collect information.
- Perform an Investigation
- Read Authentic Resources to Collect Information
- Solve a Problem
- Construct a Model

Explain

- Activity which allows students to analyze their exploration. Student's understanding is clarified and modified through a reflective activity.

- Student Analysis & Explanation
- Supporting Ideas with Evidence
- Structured Questioning
- Reading and Discussion
- Teacher Explanation
- Thinking Skill Activities: compare, classify, error analysis

Extension

- Activity which expands and solidifies student thinking and/or applies it to a real-world situation.

- Problem Solving
- Decision Making
- Experimental Inquiry
- Thinking Skill Activities: compare, classify, apply

Evaluate

- Activity which allows the teacher to assess student performance and/or understandings of concepts, skills, processes, and applications.

- Any of the Previous Activities
- Develop a Scoring Tool or Rubric
- Performance Assessment
- Produce a Product
- Journal Entry
- Portfolio