

## Learning Theories and Lesson Outline

| Learning Theory / Framework                        | Application in the Course                                                                                                                                                         |
|----------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Bloom's Taxonomy</b>                            | Developed measurable learning objectives, progressing from understanding to application, and analysis.                                                                            |
| <b>Backward Design</b>                             | Aligned learning objectives, assessments, instructional activities, and the final, project rubric.                                                                                |
| <b>Assessment Design &amp; Scaffolded Practice</b> | Formative assessment with timely feedback for scaffolded practice and a rubric to establish clear performance expectations and evaluate learner achievement in the final project. |
| <b>Gagné's Nine Events of Instruction</b>          | Structured lessons to support attention to Instructions, learning, practice, and retention.                                                                                       |
| <b>Engagement Strategies</b>                       | Incorporated videos, interactive activity, and readings to increase collaboration and motivation .                                                                                |
| <b>UDL principles</b>                              | Offered multiple means of representation and Learning (UDL) for flexible options for learner submissions and engagement.                                                          |
| <b>Accessibility</b>                               | Applied accessibility best practices, including , clear navigation, readable                                                                                                      |

|                                                              |                                                                                                                                                                                            |
|--------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                              | content, alternative text, captions, and inclusive learning materials.                                                                                                                     |
| <b>Online Learning, Pedagogy,<br/>&amp; Course Standards</b> | Applied course design best practices, including consistent course structure, clear navigation, chunked content, learner support, and alignment of objectives, activities, and assessments. |

| <i><b>Lesson outline</b></i>     |                                                                                                                                                                                                                             |
|----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i><b>Module Title:</b></i>      | An interactive and engaging elearning module for 6th grade learners                                                                                                                                                         |
| <i><b>Authoring tool:</b></i>    | Canvas LMS                                                                                                                                                                                                                  |
| <i><b>Topic:</b></i>             | Identify, classify natural resources and apply this knowledge to create a new hands-on real world project.                                                                                                                  |
| <i><b>Target Audience:</b></i>   | 6th grade students                                                                                                                                                                                                          |
| <i><b>Duration:</b></i>          | 3 days (40 min each day) under teacher guidance                                                                                                                                                                             |
| <i><b>Delivery Mode:</b></i>     | This course can be done in hybrid /online/ self paced/ in classroom                                                                                                                                                         |
| <i><b>Problem Statement:</b></i> | _Only 16% of 6th graders demonstrate proficiency in classifying renewable and non-renewable resources. This knowledge gap makes it difficult for students to engage in more complex environmental topics later in the unit. |
| <i><b>Solution:</b></i>          |                                                                                                                                                                                                                             |

To address the learning gap, **a structured, engaging e-Learning module** was developed using existing Canvas LMS features. The course integrates **interactive content, collaboration, guided practice, formative assessments, and timely feedback**. By leveraging familiar tools and brief tutorials without introducing new technologies the solution ensures effective instruction within practical constraints.

### ***Course Learning Goal:***

By the end of the course, students will be able to identify, classify natural resources and apply this knowledge to create a new hands-on real world project with 80% accuracy.

### ***Learning Objectives:***

**Module 1:** Students will be able to identify and classify renewable and non renewable natural resources with at least 80% of accuracy.

**Module 2:** Students will be able to Compare and contrast renewable and non renewable resources with at least 80% of accuracy.

**Module 3:** Students will be able to create their own project (poster, slide deck, recorded video or any other their choice approved by teacher )

### **Assessment strategy**

- Diagnostic: Warm-ups
- Formative: Practice quiz
- Summative: Final project

### **Accessibility Considerations**

- Multiple formats (text, video, audio)
- Flexible submission options
- Clear instructions
- Captioned videos

### **Navigation Flow**

**Home → Module 1 → Module 2 → Module 3 → Final Submission**

### Data & Feedback

- Quiz analytics used to track progress
- Teacher feedback on drafts
- Rubric-based grading

### Canvas-Specific Features

- Modules for structured flow
- Pages for content delivery
- Assignments for submissions
- Quizzes for assessment

## *Day 1 (Module 1)-40mins*

### *Building Foundational Knowledge and Understanding*

#### Title: Warmup1 (5 mins)

Content: knowledge check assignment

Purpose: Activate prior knowledge (Gagné) and support Bloom's remembering & understanding

Interaction: Students define and provide examples; multiple response formats support **UDL**

#### Title: TopicVideo

Content: -A short introductory video on topic.

Purpose: Gain attention and present key concepts visually

Interaction: Audio, visuals, and captions

#### Title: Guided readings

Content: Age-appropriate external resources on topic

Purpose: **Provide additional scaffolding and support UDL**

Interaction: Independent reading, optional audio, peer discussion

**Title: Collaborative Activity(15mins)**

**Content:** Google Slides practice activity

**Purpose:** Apply concepts (Bloom's application); Reflect Gagné's guidance and performance stages; Reduce cognitive load through structured scaffolds

**Interaction:** Peer discussion and collaborative learning

## *Day 2 (Module 2) -40 mins*

### *Practice and final Project preparation*

**Title: Warmup 2 (5min)**

**Content:** Knowledge check assignment

**Purpose:** Reinforce retention and build confidence

**Interaction:** Individual responses (UDL supported)

**Title: Practice quiz (15min)**

**Content:** Formative quiz with immediate feedback

**Purpose:**Support Gagné's feedback stage; Enable multiple attempts for mastery; Progress across Bloom's levels

**Interaction:** Independent MCQ quiz in Canva

**Title: Final Project Guideline(10min)**

**Content: Project overview and submission options**

**Purpose:**Support UDL (choice and expression); Clarify expectations through rubric and assessment guideline page available through Canvas.

**Interaction:** Class discussion, selection of preferred format

**Title:** **Rough draft(10 mins)**

**Content:** Initial project development

**Purpose:** Apply gradual release model; Provide teacher guidance before independent work

**Interaction:** Guided work with teacher support

*Day 3 (Module 3) -40 mins*

*Application and Mastery*

**Title:** **Warmup 3(5 mins)**

**Content:** knowledge check assignment

**Purpose:** Reinforcing metacognition and planning.

**Interaction:** Canvas assignment

**Title:** **Project work time (35mins)**

**Content:** Independent project development

**Purpose:** Apply higher-order thinking (Bloom's analysis, evaluation, creation); Demonstrate learning through real-world application

**Support links provided to students for** : Practice activity, readings, and Practice quiz, rubric, assessment policies, student support