Activity 2.1 Examples of Design

Activity Preview

The following activity has been developed in conjunction with the learning plan called *Thinking in Reverse: Backwards Design in AFNR Course Planning.* This activity is supplemental to Module 2. The UbD Template and assesses the following learned skill: *Review existing units through the lens of the UbD Template*. In this activity, teachers will use the UbD template to review the provided curriculum examples and develop familiarity with the template components.

Directions

1. Review **Figure 1. UbD Template 2.0 with Descriptions** and discuss each component.
2. Review **Table 1. Design Example A** and discuss strengths/weaknesses.
3. Review **Table 2. Design Example B** and discuss strengths/weaknesses.

Essential Questions

1. What are some ways to quickly determine if preformed curriculum is designed in the UbD format?

2. How can we adapt curricular resource to be more aligned to UbD?

The UbD Template

Wiggins and McTighe provide a template to use in successfully implementing the three stages of backward design. Referred to as UbD Template 2.0 is free and publicly available on McTighe's public web page. The older version (UbD Template 1.0) is also available online. To view the template with embedded descriptions of each component, see **Figure 1**.

Figure 1. UbD Template 2.0 with Descriptions

<table>
<tr><th colspan="3">Stage 1 – Desired Results</th></tr>
<tr><td rowspan="5">ESTABLISHED GOALS

The enduring understandings and learning goals of the lesson, unit, or course.</td><td colspan="2">Transfer</td></tr>
<tr><td colspan="2">Students will be able to independently use their learning to…

Refers to how students will transfer the knowledge gained from the lesson, unit, or course and apply it outside of the context of the course.</td></tr>
<tr><td colspan="2">Meaning</td></tr>
<tr><td>UNDERSTANDINGS
Students will understand that…

Refers to the big ideas and specific understandings students will have when the complete the lesson, unit, or course.</td><td>ESSENTIAL QUESTIONS

Refers to the provocative questions that foster inquiry, understanding, and transfer of learning. These questions typically frame the lesson, unit, or course and are often revisited. If students attain the established goals, they should be able to answer the essential question(s).</td></tr>
<tr><td colspan="2">Acquisition</td></tr>
<tr><td>Students will know…

Refers to the key knowledge students will acquire from the lesson, unit, or course.</td><td>Students will be skilled at…

Refers to the key skills students will acquire from the lesson, unit, or course.</td></tr>
<tr><th colspan="3">Stage 2 – Evidence and Assessment</th></tr>
<tr><td>Evaluative Criteria</td><td colspan="2">Assessment Evidence</td></tr>
<tr><td rowspan="2">Refers to the various types of criteria that students will be evaluated on.</td><td colspan="2">PERFORMANCE TASK(S):

Refers to the authentic performance task(s) that students will complete to demonstrate the desired understandings or demonstrate they have attained the goals. The performance task(s) are typically larger assessments that coalesce various concepts and understandings like large projects or papers.</td></tr>
<tr><td colspan="2">OTHER EVIDENCE:

Refers to other types of evidence that will show if students have demonstrated achievement of the desired results. This includes quizzes, tests, homework, etc. This is also a good point to consider incorporating self-assessments and student reflections.</td></tr>
<tr><th colspan="3">Stage 3 – Learning Plan</th></tr>
<tr><td colspan="3">Summary of Key Learning Events and Instruction

This stage encompasses the individual learning activities and instructional strategies that will be employed. This includes lectures, discussions, problem-solving sessions, etc.</td></tr>
</table>

Design Example A: Agricultural Project Planning

The following lesson has been adapted for demonstration purposes. With the information provided, identify each of the components found in the UbD template. After completing the template to the greatest extent possible with the provided information, ask the following questions:

1. Do all components align to one another? (Pay attention to learning goals vs. student evidence!)
2. Does this design allow for students demonstrate both knowledge *and* skills?
3. Are there strategies, methods, ideas, etc. that would be better for this lesson based on UbD principles?

Design Context: This lesson is intended for Introduction to Agriculture (Grade 9-10) and is a part of a larger instructional unit on agricultural mechanics. Prior to this lesson, students have learned English and metric linear measurement systems, how to scale when drafting project plans, and the purposes and names of specific shop tools.

Lesson Title: How It's Made

Lesson Description: By the end of this lesson, students should know and understand that agricultural projects involve planning, design, construction, implementation, and evaluation. Students will learn these concepts by writing a step-by-step direction set for a coast-to-coast trip and calculating the mileage and fuel cost. Students will also develop a complete project plan for a birdhouse including researching the needs of the bird, designing, sketching, drawing, writing directions, and estimating a bill of materials.

Key Questions: Important questions to be addressed in this lesson are:
1) Why is research critical to planning and design?
2) What processes are involved in planning and design?

Table 1. Design Example A

<table>
<tr><th colspan="3">Stage 1 – Desired Results</th></tr>
<tr><td rowspan="5">ESTABLISHED GOALS</td><td colspan="2">Transfer</td></tr>
<tr><td colspan="2">Students will be able to independently use their learning to…</td></tr>
<tr><td colspan="2">Meaning</td></tr>
<tr><td>UNDERSTANDINGS
Students will understand that…</td><td>ESSENTIAL QUESTIONS</td></tr>
<tr><td colspan="2">Acquisition</td></tr>
<tr><td>Students will know…</td><td>Students will be skilled at…</td></tr>
<tr><th colspan="3">Stage 2 – Evidence and Assessment</th></tr>
<tr><td>Evaluative Criteria</td><td colspan="2">Assessment Evidence</td></tr>
<tr><td rowspan="2"></td><td colspan="2">PERFORMANCE TASK(S):</td></tr>
<tr><td colspan="2">OTHER EVIDENCE:</td></tr>
<tr><th colspan="3">Stage 3 – Learning Plan</th></tr>
<tr><td colspan="3">Summary of Key Learning Events and Instruction</td></tr>
</table>

Design Example B: Plant Propagation

The following lesson has been adapted for demonstration purposes. With the information provided, identify each of the components found in the UbD template. After completing the template to the greatest extent possible with the provided information, ask the following questions:

1. Do all components align to one another? (Pay attention to learning goals vs. student evidence!)
2. Does this design allow for students demonstrate both knowledge *and* skills?
3. Are there strategies, methods, ideas, etc. that would be better for this lesson based on UbD principles?

Design Context: This lesson is intended for Introduction to Agriculture (Grade 9-10) and is a part of a larger instructional unit on horticulture. Prior to this lesson, students have learned basic principles of plant growth and care as well as identification and safe use of greenhouse tools and equipment.

Lesson Title: Plant Propagation

Lesson Description: By the end of this lesson, students should be able to define plant propagation, describe seed germination and the proper conditions for it, and describe three types of plant cuttings. Teachers will cover these concepts by explaining and using visual aids. Students will then conduct a leaf, stem, and root cutting from plants in the program's greenhouse.

Review/Summary: Use the learning goals to summarize the lesson. Have students explain the content associated with each objective. Students responses can be used in determining which objectives need to be reviewed or taught differently. Use observations as the basis for reteaching.

Table 2. Design Example B

<table>
<tr><th colspan="3">Stage 1 – Desired Results</th></tr>
<tr><td rowspan="6">ESTABLISHED GOALS</td><td colspan="2">Transfer</td></tr>
<tr><td colspan="2">Students will be able to independently use their learning to…</td></tr>
<tr><td colspan="2">Meaning</td></tr>
<tr><td>UNDERSTANDINGS
Students will understand that…</td><td>ESSENTIAL QUESTIONS</td></tr>
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<tr><td>Evaluative Criteria</td><td colspan="2">Assessment Evidence</td></tr>
<tr><td rowspan="2"></td><td colspan="2">PERFORMANCE TASK(S):</td></tr>
<tr><td colspan="2">OTHER EVIDENCE:</td></tr>
<tr><th colspan="3">Stage 3 – Learning Plan</th></tr>
<tr><td colspan="3">Summary of Key Learning Events and Instruction</td></tr>
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