**Deconstructing Standards/Objectives:**

**How to Create Learning Targets**

**DOE**

**IS 185559**

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**SECTION 1.**

**Need Assessment Rationale:**Participants will choose 2 standards/objectives to deconstruct from the following, Hawaii Common Core Standards, New Generation Science Standards, CSTA K-12 Computer Science Standards, Hawaii Content and Performance Standards III, Hawaii DOE Subject Standards and ASCA Standards. They will base this selection upon the needs of their students and provide a rationale for that selection. This needs assessment rationale must include a caption for the rationale. **2 needs assessment rationales are required for this section.** (Stude­­­nt Centered)

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| **Standard/Objective #1**  **Standard/Objective:**  6.EE.6 Use variables to represent numbers and write expressions when solving a real-world or mathematical problem; understand that a variable can represent an unknown number, or, depending on the purpose at hand, any number in a specified set.  **Rationale for choosing this standard/objective (provide examples to support your rationale).**  Students often have a difficult time solving for unknowns in “real world” mathematical word problems. By utilizing variables for the unknowns and isolating the variables by completing a series of mathematical operations through order of operations using (PEMDAS), a student can solve for the unknown variable. There are a number of knowledge and reasoning skillsets that need to be completed in order for a student to solve expressions involving unknowns. I chose this standard because it is highly weighted on the SBA yearly assessment for 6th grade. Many of my students feel a sense of anxiety when having to work with word problems. I wanted to alleviate some of that anxiety by breaking down the standard into deconstructed learning targets that might be easily understood by my students. Many of my students have a very limited vocabulary and struggle as ELL learners. Standards are written in contexts that sometimes restrict understanding and comprehension. Another reason for addressing this standard through deconstructed learning targets is this process makes it easier for me to assess the specific knowledge, reasoning, skill, or product target being measured. Being able to assess where the student is at in relation to their learning targets helps me construct future interventions and strategic approaches to addressing the student’s needs. |
| **Standard/Objective #1 Caption**  **What is this document?** This document is a rationale of the standard I chose to deconstruct with relation to my 6th grade students needs and concerns.  **Why is it evidence?** It is evidence because it addresses the needs and concerns many of my students face when approached with the standard of using variables to represent numbers. The rationale explains “why” this approach is beneficial both for me and my students.  **What is it evidence of?** is evidence of me taking a proactive approach in utilizing a strategy that might help my students achieve a 6th grade standard many struggle with. It is evidence that there are multiple strategies to address learning concerns, and that we should be open to exploring and exposing ourselves to these approaches. |

**SECTION 2.**

**Deconstruction Template:**Participants will utilize the deconstructing Learning Template and clarify learning targets by taking the broad standard/objective, and breaking it down to more explicit learning targets. They will complete the template by indicating knowledge targets, reasoning targets, skill targets, and product targets for the Standard/Objective. A caption is required. **2 deconstruction templates are required for this section**. (Teacher Growth Centered)

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| **Template Standard #1**  Standard: (highlight the verbs in yellow, highlight the nouns in red)  6.EE.6 Use variables to represent numbers and write expressions when solving a real-world or mathematical problem; understand that a variable can represent an unknown number, or, depending on the purpose at hand, any number in a specified set.  Knowledge targets:  What are variables? What are real world examples?  What are expressions? What are mathematical operations?  What are equations? How do you isolate a variable?  How unknown numbers are represented?  Knowledge targets:  Reasoning targets:  Evaluate expressions, and use formulas and or operations to solve mathematical problems.  Simplify expressions by using properties of operations.  Create a mathematical expression from a word problem.  Skill targets:  None  Performance targets:  Correctly solve mathematical expressions involving known and unknown variables.  Simplify mathematical expressions  Apply PEMDAS to solve mathematical problems  Solve word problems with mathematical expressions |
| **Standard #1 Caption**  **What is this document?** This document is the deconstructed learning target of the 6th grade math standard 6.EE.6  **Why is it evidence?** It is evidence because it addresses the complexity of the standard, and the need for student’s to be able to focus in on the specific skill set being targeted. It also addresses the need for a teacher to recognize how to deconstruct the standard into learning targets that would be easier measured.  **What is it evidence of?** It is evidence of my intentional effort to deconstruct a complex standard and create learning targets that are easier understood by students. The evidence illustrates how to strategically take a standard, break it down to verbs and nouns, construct learning targets, so the target can easily be assessed by both the teacher and student on whether it was achieved or not. |

**SECTION 3.**

**Lesson Plan:** Participants will create a proposed lesson for each of the two standards. The lesson plan will address the learning targets indicated in the deconstruction template.  A caption is required for each lesson plan. **2 lessons are required for this section.** (Teacher Growth Centered)

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| **Lesson Plan #1**  **Lesson plan:**  Students complete Cornell Notes where they are introduced to the standard.  Cornell Notes include:   * Vocabulary * Fundamental facts involving: * Variables * Expressions * Distributive property * Isolating variables * Order of operations   Students will complete exercises translating word problems to expressions.  Students will solve for unknown variables through multiple examples and exercises.  Students will complete the lesson with a summative assessment unit exam.  ***Knowledge targets:***  What are variables? What are real world examples?  What are expressions? What are mathematical operations?  What are equations? How do you isolate a variable?  How unknown numbers are represented?  ***Reasoning targets:***  Evaluate expressions, and use formulas and or operations to solve mathematical problems.  Simplify expressions by using properties of operations.  Create a mathematical expression from a word problem.  ***Performance targets:***  Correctly solve mathematical expressions involving known and unknown variables.  Simplify mathematical expressions  Solve word problems with mathematical expressions |
| **Lesson plan #1 caption:**  **What is this document?** This is a lesson plan indicating the standard and deconstructed learning targets that will be addressed.  **Why is it evidence?** It is evidence because it is addressing the standard through deconstructed learning targets and hopefully presenting it in a strategic approach that is easily understood by the students and reproducible with other complex standards.  **What is it evidence of?** It is evidence of a strategic approach that will help meet the needs of students that have a difficulty with this complex standard of using variables to represent numbers. It is also evidence of me challenging my comfort zone and being willing to expose myself to additional pedagogical approaches to addressing student’s needs and observing standards through a different lens. |

**SECTION 4.**

**Instructor/Peer Feedback:** Participants will share their proposed lessons with peers and will receive feedback.  They will document the feedback received and reflect upon that feedback. A caption is required for the feedback. **Feedback from 2 sources is required for each of the 2 lesson plans (actions) for a total of 4 pieces of feedback.** (Collaboration Centered on Teacher Growth)

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| **Instructor/Peer Feedback Reflection Activity #1**  Instructor feedback:  **Joe’s Loverde**  Dave, your lesson looks very simple, organized, and direct. If it’s understandable to you, then great. But if someone had to come in and teach that lesson from your lesson plan, would they be able to? I’m sure you could define all the vocabulary words and help students complete their Cornell notes with examples, but do you think a few examples in the lesson plan would help guide and make the lesson plan more complete for someone else that had to step in…just a suggestion. I like the deconstructed skills involving the Knowledge, Reasoning and Product. I know there aren’t much performance skills when it comes to math standards, but do you think there might be one we could explore?  Peer feedback:  **JJ**  Dave, great lesson. Knowledge and reasoning targets are appropriate for your 6th grade students. The targets seem easily communicated and specific enough to assess. Did you think about adding some examples of problems kids will be completing in the performance targets?  **LM**  Hey Dave, your lesson looks like an outline. I’m not used to writing or seeing lesson plans that simple. My lesson plans include Domain, Cluster, CCSS Code, CCSS, Learning goals, Introduction, Activities, Vocabulary, Essential Question, Resources, Differentiation Strategies, Assessment Methods, and Assessment Next Steps. The learning targets would add four more components to my lesson plans, but it would streamline and focus my lessons even more which would lead to more comprehension and understanding of the standard.  **SD**  Hi Dave, I liked how simplistic and easy your lesson plan read. Your lesson plan is created BY you, FOR you. I like how simple your learning targets were. Your students easily understand it so they know what to aim at, and they know if they hit it or not. The knowledge targets were all what and how questions which is easily understood by students. If they can answer the question, they hit the target. I can’t express enough how I appreciate the simplicity. Why make something hard? Productivity is about efficiency and speed…the simpler, the better.  Personal Assessment  The response for my lesson plan was informative in that it made me reflect on the main purpose of a lesson plan. I want to be able to present information in the most clear and precise manner to communicate content and not confuse my students. This concept is already difficult for students with a limited vocabulary and minimal reading competency. So if I can create a lesson where I can instill content and minimize confusion…I will. Three of my feedbacks mentioned the simplicity and ease of my lesson, which was my intention. When addressing the learning targets, I want to make it easy for the student to aim and focus on the target. I think that can be done without an extensive lesson plan. The more information I see on a lesson plan, the more information I will want to make sure I cover and not miss. The more information I include, the more opportunity I create for confusion and misinterpretation. There was mention in some of the feedback of possibly providing examples to allow for “anyone” to teach my lesson. I think the examples can come from completing a few of the homework questions. This way, students feel like they’re already completing the homework in class while exercising specific steps and procedures to solve the problem. I may add some examples of exercises in my lesson plan because it was mentioned by more than one of my colleagues. However, I do believe I write my lesson plan for ME to administer and how I address concerns I feel my students are having difficulty with. I utilized the deconstructing standard through learning targets procedure to address concerns I felt my students face when working with a particular concept, so the lesson plan is written specifically to address my approach to the unit. |
| **Instructor/Peer feedback activity #1 caption:**  **What is this document?** This document is the feedback from colleagues and my reflection on their comments.  **Why is it evidence?** It is evidence because it addresses the need for collaboration and to obtain perspective from colleagues that may provide helpful insight.  **What is it evidence of?** It is evidence of me actively participating in the collaboration process. It allows me to challenge myself in seeking the perspectives of others to shape my professionalism and approaches to meeting the needs of my students. It is evidence of my colleagues actively evaluating a lesson plan from a pedagogical approach to a specific issue that doesn’t specifically affect their own students, which challenges their professionalism. |

**SECTION 5.**

**Implementation:** Participants will implement the two lessons and provide descriptions of the results through a case study template provided.**2 case study templates are required for this section.** A caption is required for each case study template.

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| |  |  | | --- | --- | | **CASE**  **STUDY MANAGEMENT** | Date of Action: 9/14/20  Standard #1: 6.EE.6 Use variables to represent numbers and write expressions when solving a real-world or mathematical problem; understand that a variable can represent an unknown number, or, depending on the purpose at hand, any number in a specified set. | | Lesson plan: | Students complete Cornell Notes where they are introduced to the standard.  Cornell Notes include:   * Vocabulary * Fundamental facts involving: * Variables: A letter that represents a number * Expressions: A mathematical problem that contains numbers, operations, and/or variables. An expression DOES NOT have an “equal sign” (=). * Equations: A mathematical problem that contains numbers, operations, and/or variables and has an “equal sign”. * Distribute: To multiply a number outside a parentheses with numbers within a parentheses * Isolating variables: To shift mathematical expressions by eliminating some operations by creating opposite operations * Order of operations: Utilizing the PEMDAS method to simplify a mathematical expression.   Teacher with Class will discuss notes and review examples given in the notes.  Teacher and class will conduct the “Cycle Of Instruction” with further examples:   * I do…you watch * I do…you help * You do…I help * You do…I watch   Students will partcipate in “learning communities” to utilize language acquisition skills to communicate learning and conceptualize understanding.  Notes:    Students will complete exercises translating word problems to expressions. The sum of seven and a number, multiplied by three.  3(7 + n)  The difference of a number and sixteen added to the product of four and a number  (n – 16) + 4n  If Jon travels eight miles in a day, how many days will it take to travel thirty two miles?  8d = 32  Students will solve for unknown variables through multiple examples and exercises. 2n + 8 = 20  -8 -8  2n = 12  2n = 12  2 2  n = 6  Students will complete the lesson with a summative assessment unit exam.  Approximate duration of lesson: 1 week (4-5 days)  ***Knowledge targets:***  What are variables? What are real world examples?  What are expressions? What are mathematical operations?  What are equations? How do you isolate a variable?  How unknown numbers are represented?  ***Reasoning targets:***  Evaluate expressions, and use formulas and or operations to solve mathematical problems.  Simplify expressions by using properties of operations.  Create a mathematical expression from a word problem.  ***Performance targets:***  Correctly solve mathematical expressions involving known and unknown variables.  Simplify mathematical expressions  Solve word problems with mathematical expressions | | Result(s) of Action | All students completed notes in their Cornell notebook.  Most students completed exercises practicing the learning targets and standard.  Some students utilized their Cornell Notebook resource habitually to refer to concepts being exercised throughout the unit on formative assignments.  My summative assessment unit exam produced these results:  Performance scores  22% Exceeds Proficiency  32% Meets Proficiency  28% Approaching Proficiency  18% Bellow Proficiency | | Student Evidence | Pictures of:  Cornell Notebook  Homework assignments  Summative Test  *Remember to REDACT student names* | |
| **CASE STUDY CAPTION:**  **What is this document?** This is a case study of utilizing learning targets to address the Math standard 6.EE.6  **Why is it evidence?** It is evidence because it addresses the need for a data gathering tool with regards to the standard 6.EE.6 and the use of learning targets. It is also evidence because it allows for the tool to break down information in specific categories to make it easily understood and communicated.  **What is it evidence of?** It is evidence of my proactive approach to addressing a concern I have for my students to understand a specific math concept I feel they struggle with. It is evidence of my professionalism being challenged and me utilizing the data gathering tool to help collect, display, and reflect on data to design more meaningful and efficient teaching strategies for future use. The application of learning on the teacher’s end was to use the deconstructed standard of creating learning target approach to formulate more focussed lessons. The application of learning on the student’s end was engaging in a lesson that focussed on specific targets rather than the overall standard. |

**SECTION 6.**

**Implementation Reflection:** Participants will provide a written reflection regarding the lessons and the targets addressed. They will reflect upon what changes they may or not make in the future related to each lesson. **2 reflections are required for this section.** A caption is required for this part. (Teacher Growth Centered)

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| **Implementation Reflection Activity #1**  Write reflection here: |
| **Activity #1 caption:**  **What is this document?**  **Why is it evidence?**  **What is it evidence of?** |

**SECTION 7.**  
**Culminating Reflection:**  Participants will reflect on their personal and/or professional growth though this course.  They will provide a summary of information learned and how they can apply it to meet the needs of future students. A caption is required.  (Teacher Growth Centered)

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| **Culminating Reflection**  Write reflection here: |
| **Reflection caption:**  **Why is it evidence?**  **What is it evidence of?** |