# Appendix A

## Understanding by Design

We've created this curriculum guide using the curriculum design framework, *Understanding by Design* (Wiggins and McTighe 1998), developed with the support of the Association for Supervision and Curriculum Development (ASCD). The *Understanding by Design* (UbD) approach is intended to deepen student understanding of important concepts and skills in such a way that this knowledge will endure over time. In contrast to the traditional way of designing curriculum (identifying objectives, planning lessons, and assessing results), the *Understanding by Design* framework uses a "backward design process" that identifies assessments before planning learning experiences and lessons. We've summarized the process of "backward design":

1. Identify desired results: *What is worthy of student understanding?*
2. Determine acceptable evidence: *How will students demonstrate their understanding?*
3. Plan learning experiences, lessons, and instruction: *What will we have students experience and do in order to achieve the desired results?*

Here is a visual organizer for the UbD curriculum design framework:

### Stage 1: Identify Desired Results
- What understandings are desired?
- What essential questions will guide this unit and focus teaching/learning?
- What key knowledge and skills will students acquire as a result of this unit?

### Stage 2: Determine Acceptable Evidence
- Through what authentic performance task(s) will students demonstrate understanding, knowledge, and skill?
- Through what prompts/academic problems, or test/quiz items will students demonstrate understanding, as well as more discrete knowledge and skill?
- Through what observations, work samples, etc., will students demonstrate understanding, knowledge, and skill?
- How will students reflect upon and self-assess their learning?

### Stage 3: Plan Learning Experiences and Instruction
- What sequence of teaching and learning experiences will equip students to develop and demonstrate the desired understandings?

- How will the design
  - W = Help the students know *where* the unit is going?
  - H = *Hook* the students and hold their interest?
  - E = *Equip* the students, *explore* the issues, and *experience* key ideas?
  - R = Provide built-in opportunities to *rethink* and *revise* their understandings and work?
  - E = Allow students to *evaluate* their work?

Each unit in this study guide contains a culminating performance task to assess the degree to which students have achieved the desired results of that particular unit. The culminating performance task is also designed to provide students the opportunity to apply what they have learned in the unit in a real-world context.

The *Understanding by Design Handbook* (McTighe and Wiggins, 1999, page 140) provides useful guidelines for designing a performance assessment task. An authentic performance task has the following characteristics:

- It is realistic. It simulates the way a person's knowledge and abilities are tested in the real world.
- It requires judgment and innovation. A student has to use knowledge and skills wisely and effectively to solve a real-world problem.
- It replicates or simulates the contexts in which adults are tested in the workplace, the community, or the home.
- It assesses the student's ability to efficiently and effectively use a variety of knowledge and skills to negotiate a complex task.

*The Understanding by Design Handbook* uses an acronym ("GRASPS") to help teachers design performance task scenarios. The meaning of GRASPS.

**G** What is the *goal* of the task? What is it designed to assess?
**R** What real-world *role* will the student assume as he/she is performing the task?
**A** Who is the *audience* for the task?
**S** What is the *situation* that provides the context for the task?
**P** What is the *product* or performance that is required by the task?
**S** By what *standards* will the product or performance be judged?

Each unit in this study guide has a culminating performance task designed using the GRASPS acronym. McTighe and Wiggins (1999) suggest that teachers and curriculum designers identify the culminating performance task for the unit before they begin to develop a unit's learning activities. In this way, the goal of all learning activities is clear: to help all students develop the knowledge and skills to successfully complete the culminating performance task. This approach to curriculum design is often referred to as "beginning with the end in mind."

The UbD model strongly suggests that in performance-based instruction, we let students know—before they begin work on a performance task—what criteria will be used to assess the quality of a student's performance on that task. Thus, expectations are known to all, and there are no surprises. For these reasons, a rubric or performance checklist accompanies the culminating performance task at the end of each of the three curriculum units in this guide.