

District of Columbia Public Schools

**Assessment and Design Strategies with
Technology Tools**

University of Maryland

**Educational Technology Outreach
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Overview



Session 1: Overview and Excel

How Do Schools Improve Student Performance?

- Why the fuss?
- Data: how to analyze/interpret system-wide data
- Instructional Strategies to improve student achievement: *Instruction by Design*



Objectives

- We will cover Instructional Strategies to improve student achievement: *Instruction by Design*
 - **Background knowledge:** Data - How your school/classroom fits into the bigger picture
 - **Standards/Essential Skills/Pacing Charts:** What we want students to know - using the standards
 - **Determining Acceptable Evidence:** Tests/alternative assessments/activities/rubrics - how to ask good questions/write good assessments/collect data and re-teach/reassess
 - **Learning Experiences and Instruction:** Lesson plans/lesson units/data collection/re-teaching/alternative differential instruction



Process



- Introduction
- “Instructor Led” Overview
- Blended Instruction
 - Instructor led
 - Hands-on activities
- Debriefing
- “Homework”



Outcomes



- Understand the tie between data (school/district and classroom) and standards and instructional design
- Understand where to get DCPS/school data and content standards (as well as scope and sequence/pacing charts etc...)
- Understand how to interpret that data and utilize it to your advantage
- Understand some common design flaws
- Understand the Backward Design Model / Instruction by Design
- Interpret mock case studies
- Apply to your OWN lesson unit and lesson plan

Ready?





How Do Schools Improve Student Performance?



- **Standards**
 - Understanding Standards, Assessments and AYP
- **Process**
 - Leading the School Improvement Process
- **Data**
 - Analyzing and Using Data
- **Instruction**
 - Teaching and Assessing the Content Standards

DCPS: Backward Design Process

- School Data Analysis
- Standards/Goals/Outcomes/Indicators
- Acceptable Evidence/Lesson and Unit Plans



Backward Design Model



To begin with the end in mind means to start with a clear understanding of your destination. It means to know where you're going so that you better understand where you are now so that the steps you take are always in the right direction.

Stephen R. Covey, *The Seven Habits of Highly Effective People*



Instruction by Design: Understanding by Design



- Makes use of *Backward Design Model*
- Written by Grant Wiggins & Jay McTighe
- Design of ASSESSMENTS to reveal the extent of students UNDERSTANDING
- Design of curriculum to ENGAGE students and DEEPEN their understanding



Issues Illustrated by: *Understanding by Design*



- Explores common curriculum, assessments, and instruction practices that may interfere with student *understanding*
- Examines a *backward design* process and considers its value in helping to avoid common inadequacies in curriculum and assessment planning
- Presents a theory of *6 facets of understanding*
- Proposes approaches to engage students in inquiry, promote “uncoverage,” and make use of understanding the *big ideas*
- Examines a continuum of assessment practices focusing on the *degree* of student understanding
- Considers the degree of student *misunderstandings*



Similar Educational Initiatives



- Problem-Based Learning (Stepien & Gallagher, 1997)
- Project -Based Learning -Engineering Design (Leifer, Stanford, 1998)
- Socratic seminar, 4-MAT (McCarthy, 1981)
- Dimensions of Learning (Marzano & Pickering, 1997)
- The Skillful Teacher (Saphier & Gower, 1997)
- Wiske model (Wiske, 1997)
- Teaching and Learning Project Zero model (Harvard Graduate School, Blythe & Associates, 1998)
- Designing and Assessing Courses and Curricula (Diamond, 1997)
- Course Design (Felder & Brent, 1999)



Backward Design



- Stage 1: Identify Desired Results
- Stage 2: Determine Acceptable Evidence
- Stage 3: Plan Learning Experiences and Instruction



Why DCPS Interest in *Understanding by Design*



History

- *A Nation At Risk* published in 1983
 - US K-12 education not working well
 - US students poorly on NAEP- National Assessment of Educational Progress
- School Reform Effort
 - Education Summit -1989
 - President Clinton's Goals 2000 legislation
- Call for higher performance standards



History (continued)



Students and their families, teachers, and the entire school community must understand, embrace, work toward, and be held accountable for attaining legitimate and high standards of accomplishment.

- New types of assessment to measure what students know
- Decision making at the local level/data driven



Background to DCPS School Reform



- Paul Vance
 - The Children First Initiative, June 22, 2001
 - Transformation of Public High Schools, January 2002



Snags



- Data disseminated in paper format
- Data underutilized
- Statistical format with little comparison and planning

How do we compare with other schools?

What is the target goal?



No Child Left Behind Act of 2001 (NCLB)



- A landmark in education reform
- Designed to improve student achievement and change the culture of America's schools
- Passage of *No Child Left Behind*, Congress reauthorized the *Elementary and Secondary Education Act (ESEA)*--the principal federal law affecting education from kindergarten through high school.

In amending *ESEA*, the new law represents a sweeping overhaul of federal efforts to support elementary and secondary education in the United States. It is built on four common-sense pillars:

- Accountability for results
- An emphasis on doing what works based on scientific research
- Expanded parental options
- Expanded local control and flexibility



NCLB



- “Although testing may be stressful for some students, testing is a normal and expected way of assessing what students have learned.
- The purpose of state assessments required under *No Child Left Behind* is to provide an independent insight into each child's progress, as well as each school's.
- This information is essential for parents, schools, districts and states in their efforts to ensure that no child--regardless of race, ethnic group, gender or family income--is trapped in a consistently low-performing school.”



NCLB



- *No Child Left Behind* requires
 - By the 2005-06 school year, each state must measure every child's progress in reading and math in each of grades 3 through 8 and at least once during grades 10 through 12.
 - In the meantime, each state must meet the requirements of the previous law reauthorizing *ESEA* (the *Improving America's Schools Act of 1994*) for assessments in reading and math at three grade spans (3-5; 6-9; and 10-12).
 - By school year 2007-2008, states must also have in place science assessments to be administered at least once during grades 3-5; grades 6-9; and grades 10-12.
 - Further, states must ensure that districts administer tests of English proficiency--to measure oral language, reading and writing skills in English--to all limited English proficient students, as of the 2002-03 school year.



NCLB



- Students may still undergo state assessments in other subject areas (i.e., history, geography and writing skills), if and when the state requires it.
- *No Child Left Behind*, however, requires assessments only in the areas of reading/language arts, math and science.
- *No Child Left Behind* requires that all children be assessed. In order to show adequate yearly progress (AYP), schools must test at least 95 percent of the various subgroups of children, including their students with disabilities and those with limited English proficiency.
- States must provide reasonable accommodations for students with disabilities or limited English proficiency.
 - native-language versions of the assessment;
 - however, in the area of reading and language arts, students who have been in U.S. schools for three consecutive years will be assessed in English.



Site Project



<http://www.k12.dc.us/dcps/data/dcdatabase.html>

- Provides a variety of statistical data about DCPS. Most of this information is available both on a school by school as well as a system-wide basis.
 - **Stanford-9 tests**
 - **SAT**
 - Demographic
 - Student Characteristics



Why NCLB

- Education is inconsistent across school districts, counties, and states
- No common measure of performance
- Apply Business Model
 - Identify schools that need assistance
 - “Take over” schools that continue to be poor performers
 - *If a franchise isn't working – put it under new management.*



Education as a Business



- Educational Community realized they are not meeting their goals
- Successful businesses are involving entire workforce
- Education moves to business model
 - New “processes” to succeed
 - Everyone must understand the processes
 - Teachers must understand goals, tests, assessments, and statistics to design for the classroom

You are the leaders of your school because of your knowledge of this model.



Understanding Assessments, Standards, and AYP



- What do students need to know and be able to do?
 - Curriculum Standards
- How do we test what students have learned?
- How does DCPS implement AYP (Adequate Yearly Progress)?



How does DCPS implement AYP (Adequate Yearly progress)?



- **What is AYP? What does NCLB require?**

NCLB requires that states establish accountability systems designed to:

- Ensure that all students achieve proficiency in reading/language arts and mathematics by the end of school year 2013-2014.
 - Based on state defined content standards in reading and mathematics.
 - Have assessments aligned to the content standards.
 - Defines at least three student achievement levels: Basic, Proficient, and Advanced.
 - Assesses the progress of subgroups, schools, school districts, and the state annually.
 - Must include other academic indicators.



How does DCPS implement AYP (Adequate Yearly Progress)?



- Must have consequences based on progress. States, school systems, and schools are accountable for:

	Proficiency in Reading/ English Language Arts	Proficiency in Mathematics	Another Academic Indicator for Elementary and Middle Schools	Graduation Rate for High Schools
All Students				
▪ American Indian				
▪ Asian				
▪ African American				
▪ White				
▪ Hispanic				
▪ FARMS				
▪ Sp. Ed.				
▪ LEP				



What are the Federal Requirements of AYP?



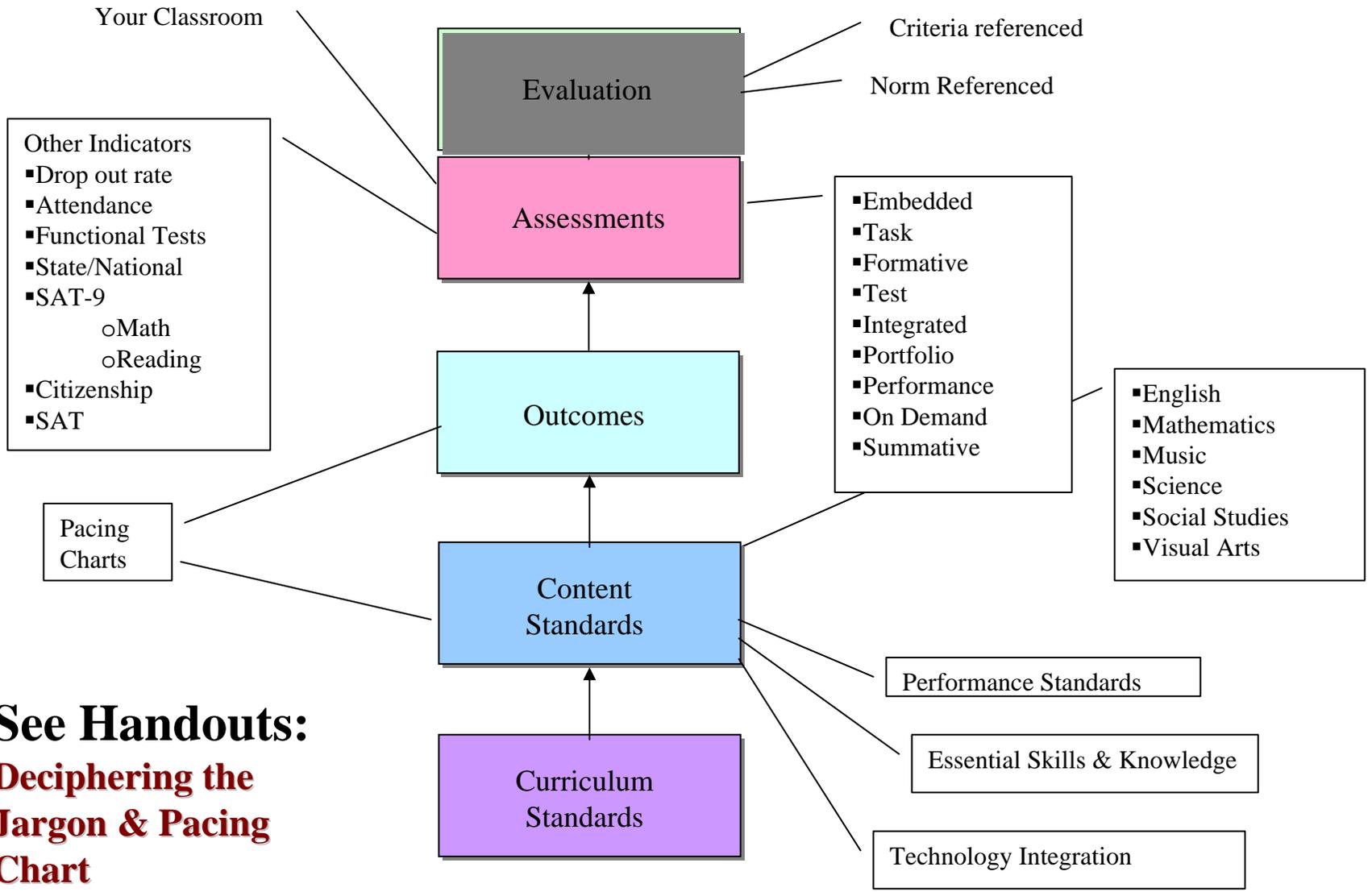
- Adequate yearly progress is designed to ensure continuous improvement each year toward the goal of 100% proficiency in 2014.
 - Improvement targets are particularly focused on subgroups of students who, historically, have the furthest to go.
 - The goal of 100% proficiency ensures that all students not just low performing students are expected to **continuously progress**.



US Department of Education Overview



- The Accountability and AYP PowerPoint and PDF files developed by the US Department of Education describe the federal requirements of AYP:
 - <http://www.mdk12.org/mspp/ayp/accountabilityayp.ppt> (2.1 MB) Downloadable PowerPoint file for high speed connections.
 - <http://www.mdk12.org/mspp/ayp/accountabilityayp.pdf> (388 KB) Printable PDF Acrobat file.



See Handouts:
Deciphering the
Jargon & Pacing
Chart



Content vs. Performance Standards



“ Note that **content standards** are different from **performance standards**. Content standards specify the inputs-What is the content that should be covered?
Performance standards specify the desired output—What must the student do, and how well, to be deemed successful?” (Wiggins, G., & McTighe, J., 1998, p. 4).



Deciphering the Jargon



- Exploring School Achievement Scavenger Hunt
 - Break up in small groups
 - Each group should access a computer
 - See handout- **Scavenger Hunt Activity**



Identifying Desired Results

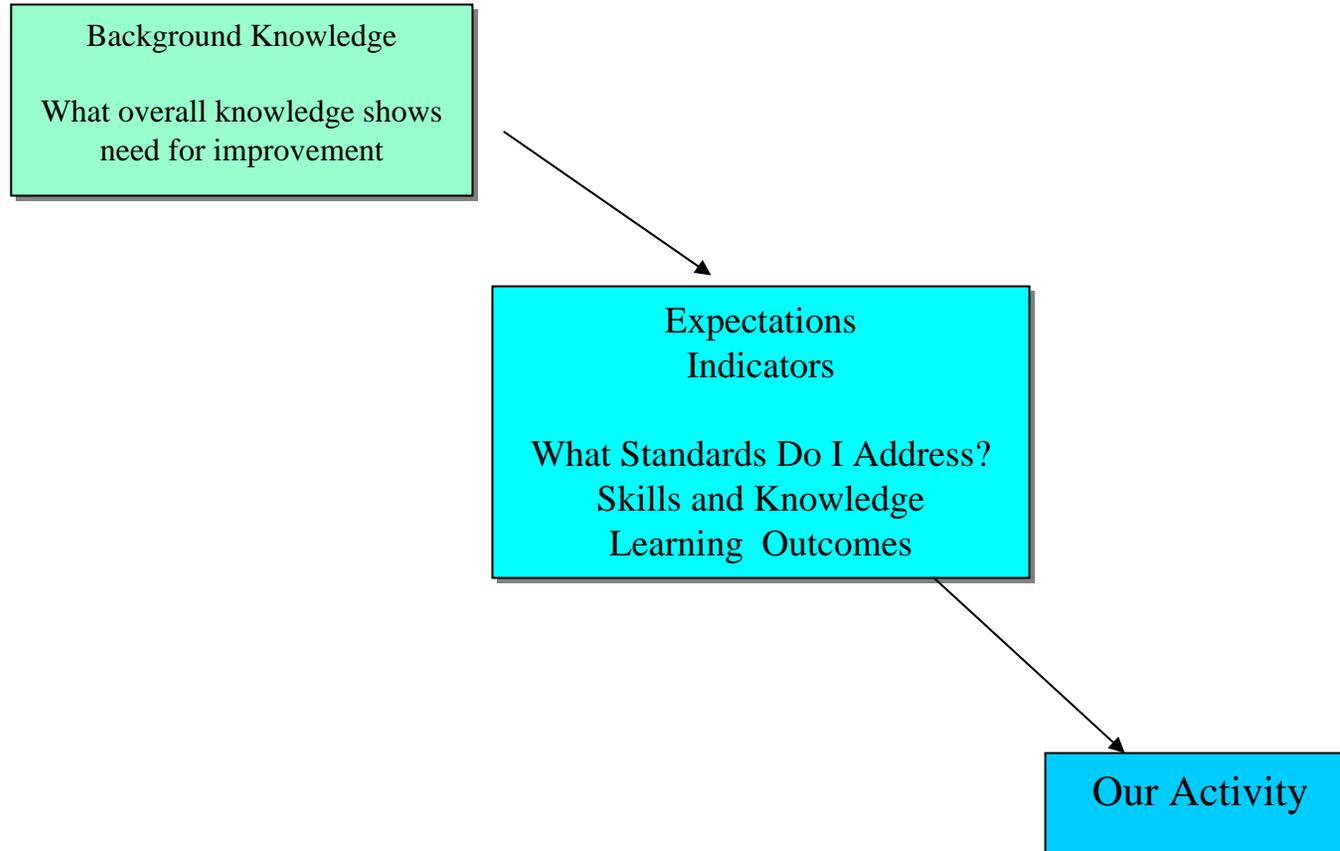


- From your scavenger hunt you had the chance to visit several background data resources regarding your school
- Give an overview of the school, student population and academic achievement
- Other possible resources or information not obtainable through the data resources?



Connecting to the *Instruction by Design* Model

Introduction



SUMMARY REPORTS - READING SUMMARY FOR OAK HILL YOUTH CENTE, DIVISION SENIOR HIGH

New Report



[Download Table](#)



[Email table as CSV](#)

Division: **Senior High**

School: **OAK HILL YOUTH CENTE**

Year: **Spring 2003**

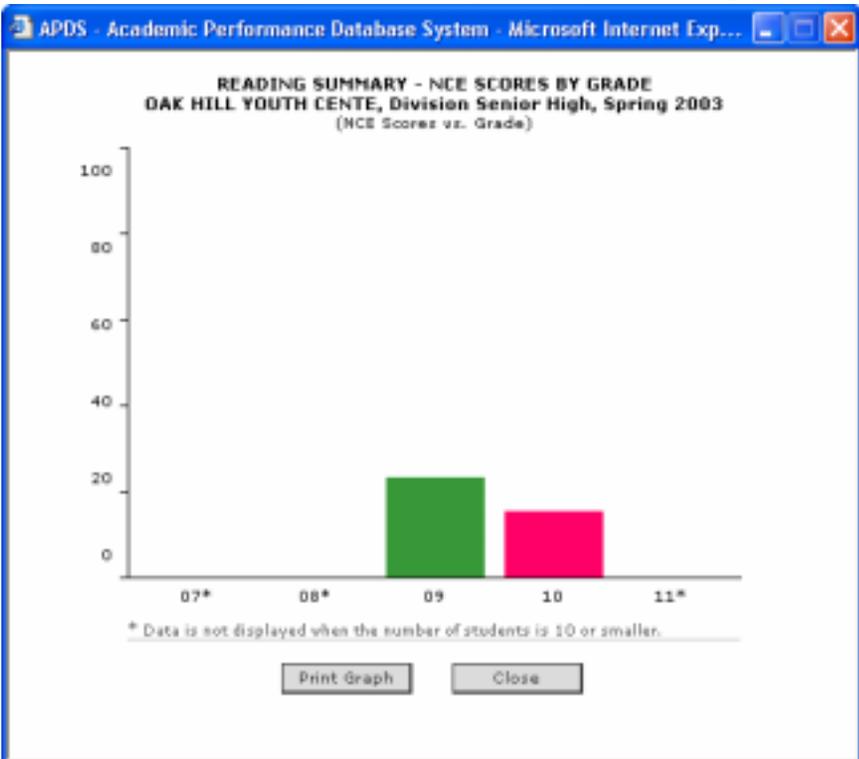
SUMMARY OF READING - OAK HILL YOUTH CENTE, Division Senior High, Spring 2003

Grade	Tested	Scale Score Avg.	Meet/Exc. Std. (%)	Below Std. (%)	Performance Level (%)				NCE Average	Percentile Rank
					Advanced	Proficient	Basic	Below Basic		
07*	4	-	-	-	-	-	-	-	-	-
08*	9	-	-	-	-	-	-	-	-	-
09	29	652.86	20.69	79.31	0.00	0.00	20.69	79.31	23.26	10
10	14	644.43	0.00	100.00	0.00	0.00	0.00	100.00	15.35	5
11*	1	-	-	-	-	-	-	-	-	-
Totals:	43	650.12	13.95	86.05	0.00	0.00	13.95	86.05	20.68	8

* A dash (-) is displayed when the number of students in the group is less than 10.

[Bar Chart - Reading Scale Scores](#)

[Bar Chart - Reading NCE Scores](#)





Data Shows



- Debriefing about your school



Data!



- How can I collect , keep track of and monitor the wealth of data?
- Excel Exercises



Tools That Help

- Excel Exercise 1: To Get Started
- Excel Exercise 2: Grades
- If Time:
 - Excel Exercise III: Class Attendance
- Homework: Excel tutorials and Activity

Questions?

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