

# Assessing 21<sup>st</sup> Century Skills Feasibly (Not the Way We May Want)

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Presented in S. Kahl (Organizer), *Assessment of 21st Century Skills: A Return to Authentic Assessment of the '90s*, at the National Conference on Student Assessment, June 15, 2008, Orlando, FL

- Additional proof that I'm one of the aging former SADs referred to in the session description
- This is an assessment design situation
- If politics is “the art of the possible” (see below), then assessing 21<sup>st</sup> century skills may be an act of what's feasible

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Quote from the *Iron Chancellor*, Otto von Bismarck (1815-1898), in 1867; see [http://en.wikiquote.org/wiki/Otto\\_von\\_Bismarck](http://en.wikiquote.org/wiki/Otto_von_Bismarck). Economist John Kenneth Galbraith (1908-2006) retorted later that, rather, politics is “choosing between the disastrous and the unpalatable”; see <http://www.quotationspage.com/quote/26202.html>.

- MSPAP interdisciplinary tasks
- We targeted 21<sup>st</sup> century skills:
  - Real world applications, critical thinking and problem solving, interdisciplinary content, communication skills, collaboration
- We scaled, reported, and used the information
  
- Also:
  - Maryland Writing Test
  - Maryland high school assessment projects
  - Performance task based alternate assessments: IMAP, SC-Alt, NMAPA
  - NAEP Foreign Language conversational proficiency assessment, ELDA speaking assessment

- Grade 3, reading, writing, language usage, and science tasks (~1993)

1996 MSPAP  
PUBLIC RELEASE TASK

*Trouble with Flowers*

Grade 3

Reading  
Writing  
Language Usage  
Science

**NOTICE**

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Maryland State Department of Education  
March 1996

## **Task 2 Title: Trouble with Flowers**

**Total testing time for this task, beginning with oral directions, is 75 minutes.**

**MATERIALS NEEDED FOR EACH PAIR OF STUDENTS (not to be used until Activity 5)**

- 1 fresh stalk of celery at least 5" long—On the morning of testing, cut the bottoms of the celery.
- two magnifying glasses
- two green colored pencils
- two red colored pencils

**MATERIALS NEEDED FOR EACH PAIR OF STUDENTS (not to be used until after Activity 8)**

For each pair, prepare a tray that holds the following items:

- 1 clear 6-ounce container or glass containing red-colored water (container must be stable enough to support the celery stalk)
- two 6-inch strips of masking tape to label the glass with students' names
- a permanent marking pen

Wednesday, Task 2

Title: Trouble with Flowers

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## DIRECTIONS

With your partner, use the magnifying glass to look at the cut edge of the bottom of the celery stalk. You will have 10 minutes to look at the celery and to complete Activity 5.

- 5
 In the space below, tell three things you observed. You may write or draw a picture of the cut edge at the bottom of the celery stalk. If you draw, be sure to label the parts of your picture.

Thursday, Task 2

Title: Trouble with Flowers

- 3** Look at the celery that soaked overnight in red-colored water. Write a paragraph for your classmates explaining how the celery is the same or different from what you predicted yesterday. To help you remember, look at Activity 6 on page 32 of your Answer Book.



Handwriting practice lines consisting of seven horizontal lines for writing a paragraph.

- Assessing 21<sup>st</sup> century skills requires consideration of “authentic assessment” approaches
- We can learn from what we did in the 1990s
- MC items have a role in assessing 21<sup>st</sup> century skills

- **Content standards**
  - Continuing advances in specifying state content standards
  - Student models of cognitive development in content areas (e.g., construct maps; see Briggs, Alonzo, Schwab, & Wilson, 2006) and learning progressions work in NAEP and elsewhere (e.g., Smith, Wisner, Anderson, & Krajcik, 2006)
  - NAEP grade 12: readiness for college, work, and military
- **Advances in assessment design**
  - KWSK (learning, task, and interpretation models; see Pellegrino, Chudowsky, & Glaser, 2001), ECD and PAD (e.g., Mislevy & Haertel, 2006)
- **Innovations in assessment tasks and psychometrics**
  - Ordered MC items, automated item generation, automated CR scoring, computer-based simulations, online testing, technology assisted language assessment, simulated respondents (e.g., SIMmersion; see <http://www.simmersion.com>), gaming

- Actually, assessment *system* design situation
- In the spirit of this year's NCSA theme, *Balanced Assessment Systems to Guide Educational Improvement*
- Share the responsibility for designing a 21<sup>st</sup> century skills assessment system
  - Definition of the skills constructs, achievement standards, instruction, and assessment
  - Assessments at state level, school system level, and classroom level, maybe even the federal level
  - Plus K-16 or K-20

- Consider what we did in the 1990s, capitalize on what we've accomplished so far in the 2000s
  - Consider feasibility, especially administration time and cost
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1. Core subjects and interdisciplinary themes
2. Learning and innovation skills
3. Information, media, and technology skills
4. Life and career skills

- Flexibility and adaptability
  - Initiative and self-direction
  - Social and cross-cultural skills
  - Productivity and accountability
  - Leadership and responsibility
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- Interviews, observations, self-reports, in-basket and other live simulations

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- Simulated character responses are emotionally-based and unpredictable
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- Simulations allow for repeated practice with a different experience each time
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**Potential Applications:**

- Leadership and Management Development
- Recruitment
- Retention
- Diversity
- Security
- Compliance Issues
- Risk communication
- Many others

**Clients Include:**

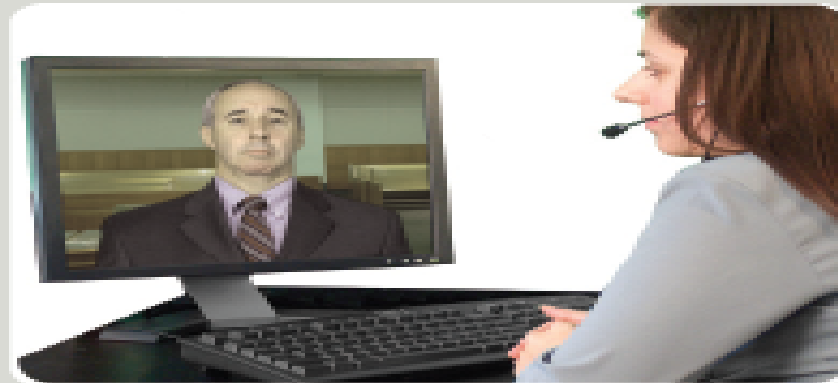
- Federal Bureau of Investigation (FBI)
- Drug Enforcement Administration (DEA)
- National Institutes of Health (NIH)
- U.S. Marine Corps
- U.S. Customs and Border Protection
- U.S. Army
- U.S. Air Force
- Other Major Institutions

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