

Understanding Curriculum as Applied to Spectrum Programs

Advanced Learning

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Colleen Shea Stump & Roger Daniels

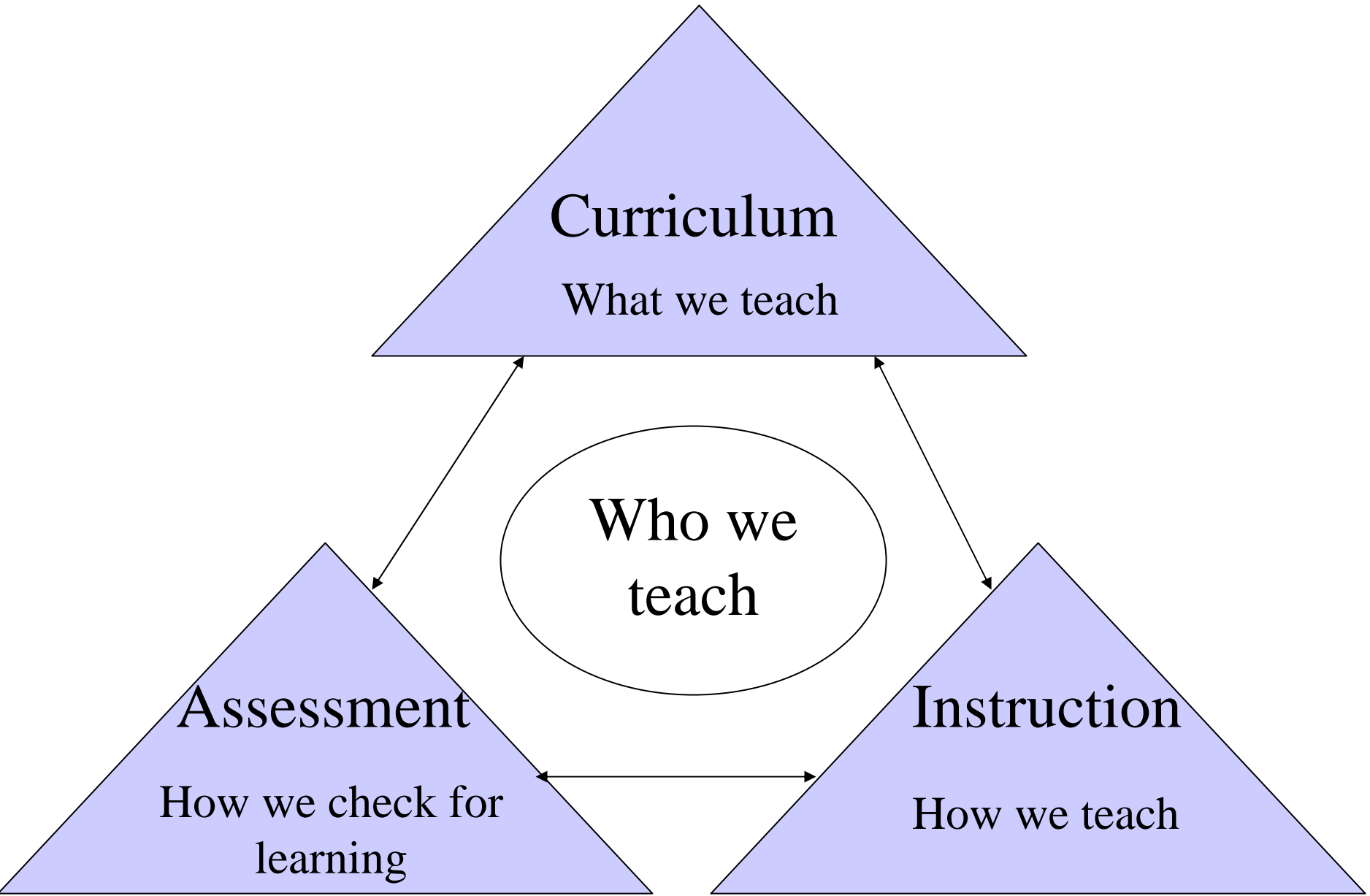
Advanced Learning

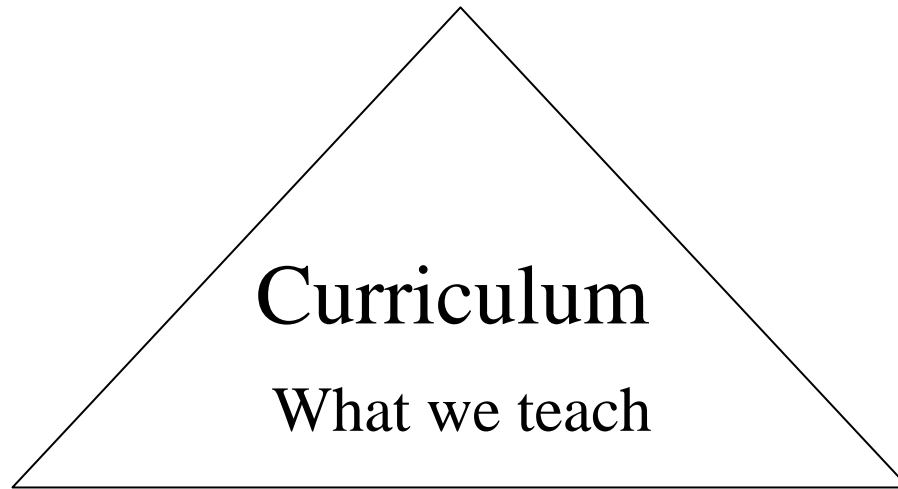
Rosalind Wise, Jim Buchanan, Cathy Rutherford, & Art Mabbott

Instructional Services

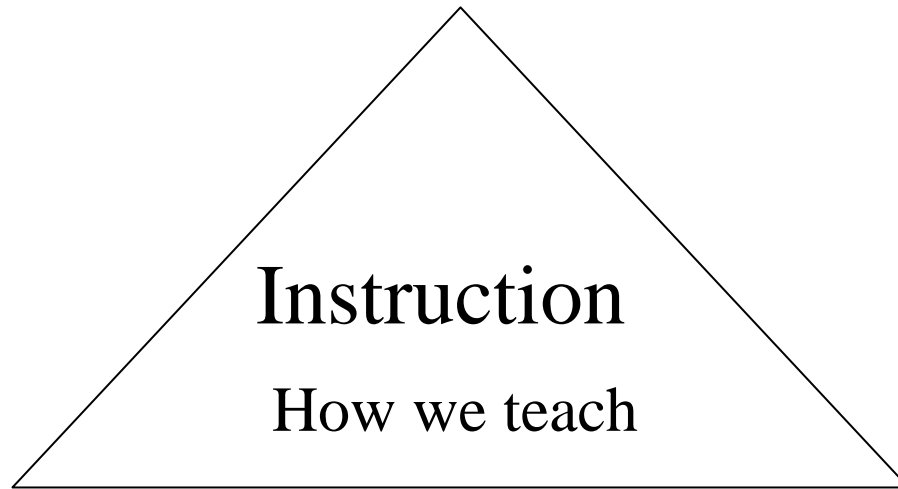
Agenda

- Introductions and Welcome
- Benchmarks and Grade Level Expectations
- Rigorous Curriculum
- Math Curriculum in Spectrum Programs

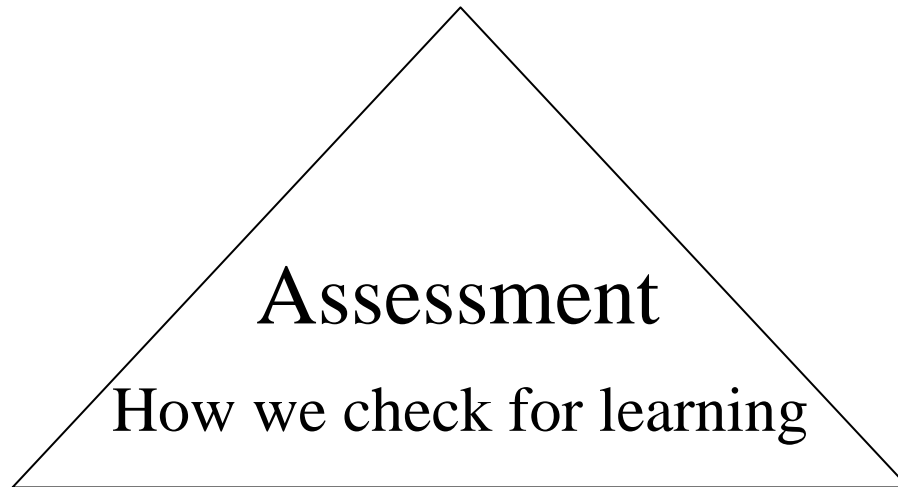




- What teachers teach and students learn
- Represented by standards



- Flexible groupings
- Differentiation, as appropriate
- Teacher strategies
- Learner strategies
- Materials we use
- Tasks we ask students to do



- Summative
 - ITBS
 - WASL
- Formative
 - Rubrics
 - Portfolios

Spectrum Curriculum

- Is the “What” we teach
- Rooted in GLEs and district benchmarks – considered on a continuum
- Balance of skill/knowledge building and group learning with in-depth, rigorous and differentiated learning experiences
- Augmented with a focus on complex thinking skills
- Selected with a lens towards rigor and depth on projects/assignments as appropriate
- Selected with a lens towards appropriate acceleration – not arbitrary, grade-level driven, but developmentally appropriate acceleration
- Selected with a lens toward differentiation, as appropriate
- Selected with a lens toward student diversity
 - Multilingual, multicultural, multi-SES
 - Being responsive to students’ experiences, prior knowledge, interests, talents, and intellectual gifts

Spectrum Curriculum

Diversity

Meeting Grade Level
Expectations at Grade
Level

Appropriate
Acceleration

Rigor

Complex Thinking
Skills

Differentiation

What: Standards-Based Systems

- Standards represent what teachers are to teach and students are expected to learn
- EALR: Essential Academic Learning Requirements
 - Washington State Standards
 - Broad expectations for learners grades K-12
- Components (substandard)
 - Specify knowledge and skills under the EALR
- GLE: Grade-level expectations (benchmarks)
 - Explain what students should know and be able to do
- Evidence of Learning:
 - List of student demonstrations – tasks they can do to demonstrate understanding

Standards Hierarchy: Grade 2

- EALR
 - 2.0 The student understands the meaning of what is read.
- Component (substandard)
 - 2.1: Demonstrate evidence of reading comprehension
- GLE (benchmark)
 - 2.1.3: Apply comprehension monitoring strategies before, during, and after reading: determine importance using theme, main idea, and supporting details in informational/expository text and/or literary/narrative text
- Evidence of Learning (tasks)
 - Identify the main idea of an informational/expository passage and support with text-based evidence with teacher guidance
 - Identify the theme/message in culturally relevant literacy/narrative text and support with text-based evidence with teacher guidance

Standards-Based & Spectrum

- Spectrum curriculum is based on the same standards as used for all other students
- Teachers first assess, and then teach toward, student demonstration of on-grade level GLEs
- When student demonstrates on-grade level performance
 - instruction can go “deeper and broader” into the content through further enrichment of the skills and knowledge being addressed *and/or*
 - teacher can assess for above grade level needs, and accelerate as appropriate
- Curriculum is not automatically focused on “one grade level above” but is selected to ensure development of skills and understanding at the students’ grade level, and as appropriate, beyond

Conceptual Framework for Spectrum Curriculum Planning: GLE/Benchmark Continuum

- Organizes GLEs or benchmarks along a continuum
- Provides a visual representation of skills across grade levels
- Goal: to ease curriculum development and decisions around acceleration

Math Continuum

	Grade 1	Grade 2	Grade 3
Number Sense	Adds whole numbers	Understands relationships between addition and subtraction Adds and subtracts whole numbers	Understands the meaning of multiplication and division of whole numbers Adds and subtracts whole numbers with fluency

Rigor

- Rigor (n) 1. Strictness; severity. 2. A trying circumstance: hardship. 3. Precision. 4. A shivering, as from a chill. (Webster)
- Rigor mortis (n) 1. A temporary muscular stiffening after death. (Webster)
- “Rigor is the goal of helping students develop the capacity to understand content that is complex, ambiguous, provocative, and personally or emotionally challenging” (Strong, p. 7)
 - Sees rigor as a curriculum goal of teaching students how to manage difficult content
 - Implies that in order to have rigor, students must regularly work with difficult texts and ideas
 - Describes different ways that content can become rigorous

Attributes of Rigor

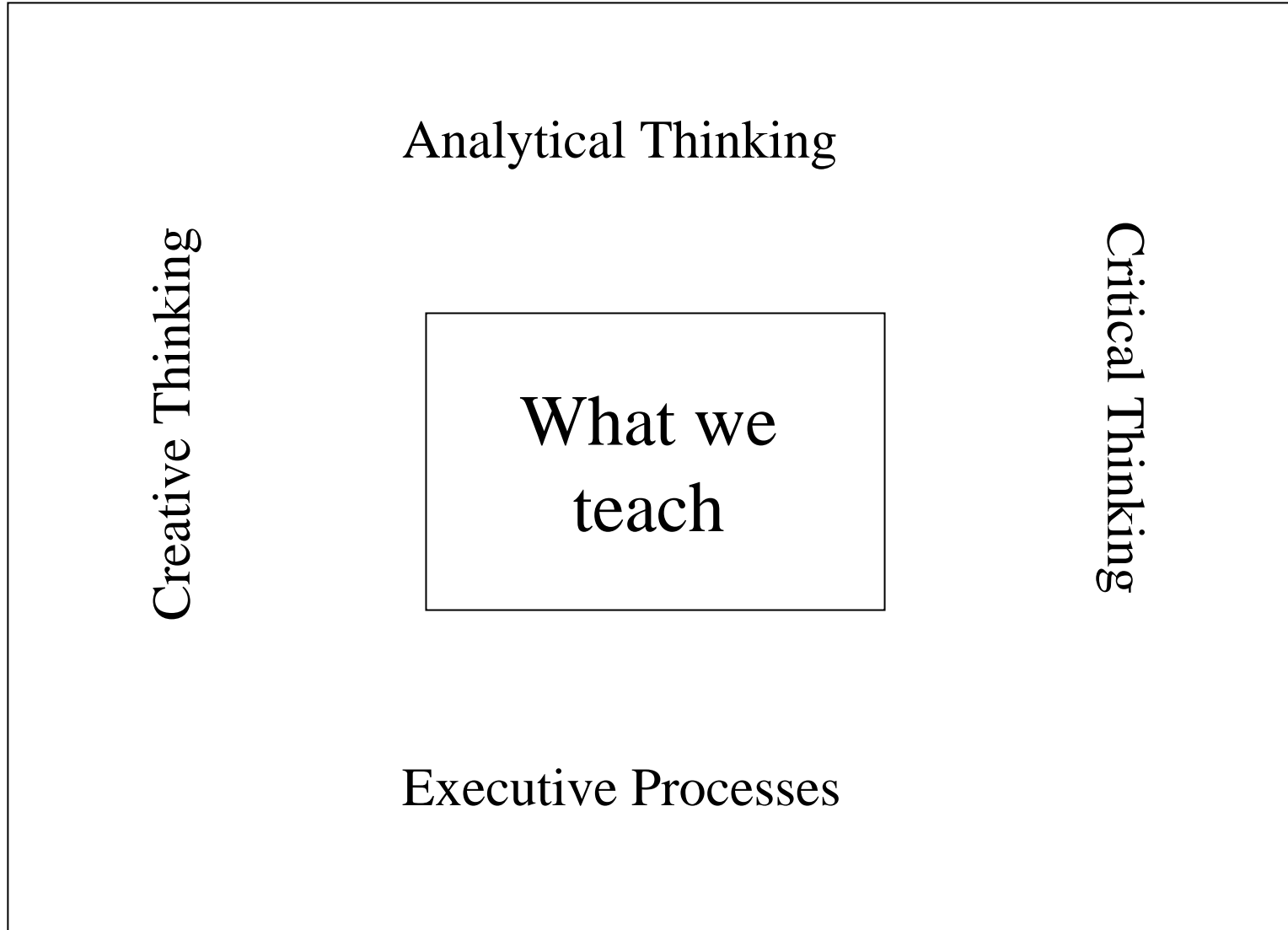
Strong, Silver & Perini, 2001

- Complexity
 - “To what extent is the curriculum organized around complex, interrelated concepts?”
- Emotion
 - “To what extent does the curriculum arouse strong feelings?”
- Provocativeness
 - “To what extent is the curriculum concerned with central problems in the discipline that challenge students’ previous concepts?”
- Ambiguity
 - “To what extent does the curriculum focus on symbols and images packed with multiple meanings?”

Why Rigor is Important

- Rigorous content demands attention, thought, and critical thinking
- Rigorous content helps us handle uncertainty- simple texts make concepts seem simple and can mask complexities and interrelationships; rigorous content challenges us to deal directly with uncertainty and to search out nuance and interrelationships
- Rigorous content increases flexibility in thinking – helps us build schema that is broad, flexible, and adaptable to multiple contexts
- Rigorous content rewards effort and helps us develop perseverance, intellectual modesty and tolerance of others' views
- Rigorous content creates self-confidence because we know the task will be difficult, but with effort, we will be able to accomplish our goals

Complex Thinking



Complex Thinking

- Analytical Thinking skills
 - Comparing and contrasting
 - Categorizing
 - Classifying
 - Ranking, prioritizing, and sequencing
 - Seeing relationships
 - Finding patterns
 - Determining cause and effect
 - Making predictions
 - Making analogies

Complex Thinking

- Executive Functions
 - Summarizing
 - Setting goals
 - Generalizing
 - Decision making
 - Planning
 - Metacognitive skills
 - Problem solving

Complex Thinking

- Critical Thinking Skills

- Inductive thinking

- Cause and effect
 - Making inferences

Analyzing open-ended problems

Determining relevant information

- Deductive thinking

- Using logic

Spotting contradictory statements

- Evaluative thinking skills

- Distinguishing between fact and opinion
 - Judging credibility of a source
 - Identifying central issues and problems
 - Recognizing underlying assumptions
 - Evaluating hypotheses
 - Classifying data
 - Predicting consequences
 - Comparing similarities and differences
 - Evaluating arguments

Complex Thinking

- Creative Thinking Skills
 - Listing attributes of objects/situations
 - Generating multiple ideas (fluency)
 - Generating different ideas (flexibility)
 - Generating unique ideas (originality)
 - Generating detailed ideas (elaboration)
 - Synthesizing information
 - Predicting – seeing patterns, compare and contrast, identify relationships, determine cause and effect, anticipate likely events in the future

Complex Thinking Skills that Support Rigor

- Problem Solving
 - Searching out and defining problems, experimenting with solutions, and looking for holes in our thinking
- Inquiry
 - Asking questions, forming hypotheses, searching for evidence, testing solutions
- Communication
 - Expressing learning and ideas in multiple ways addressing
- Knowledge Acquisition
 - Organizing information into patterns around key principles and concepts
- Reflection
 - Self-assessing to expose weaknesses in learning; to illuminate problems, misunderstandings and confusions; and to determine directions for new growth

Preparing for Rigor

- Understanding students' learning profiles
- Understanding students' current skills and knowledge through assessment
- Considering how to differentiate based on learning profiles and current skills/knowledge
- Considering materials to be used
 - Primary sources Advanced texts/materials
- Considering what students are going to be asked to do
 - What is the process the students will go through to complete the assignment?
 - What products will the students generate as a result of their work?

Spectrum Math Issues

- Articulation
 - Grade to grade
 - Elementary to middle school
- Acceleration of the curriculum
- Rigor/depth of the curriculum
- Materials
- Actions
 - Teacher survey of current practices to go out after the holiday
 - Work with Instructional Services, Math Manager & Coaches

Purpose of the Math Presentation Today

- For parents/guardians to experience the math program materials and instructional approach
 - Focuses on complex thinking
 - Allows for differentiation
 - Supports rigor – especially the depth
 - Accelerates conceptual understanding