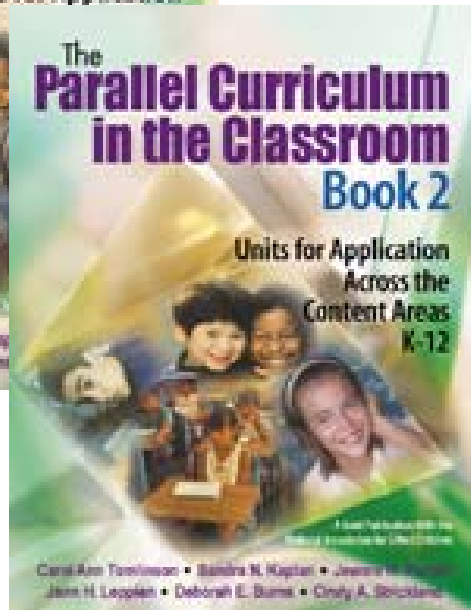
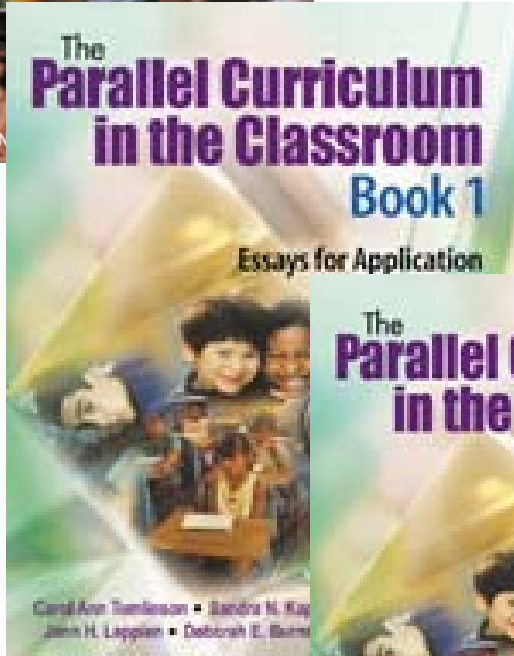


# Extreme Education: A Overview of the Parallel Curriculum Model



**Jeanne H. Purcell, Ph.D.**  
Jeanne.purcell@ct.gov

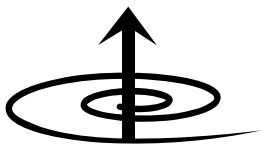
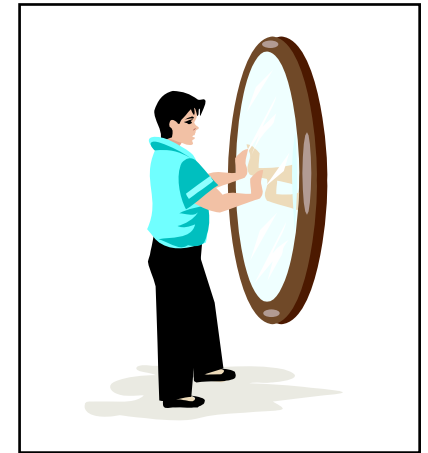
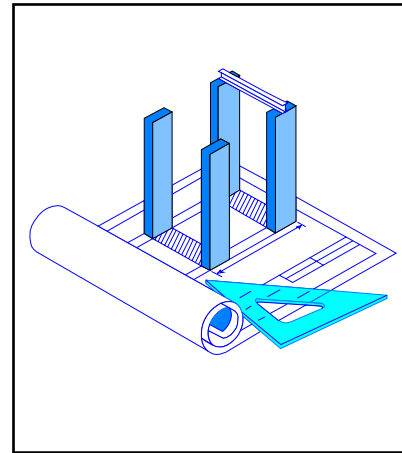
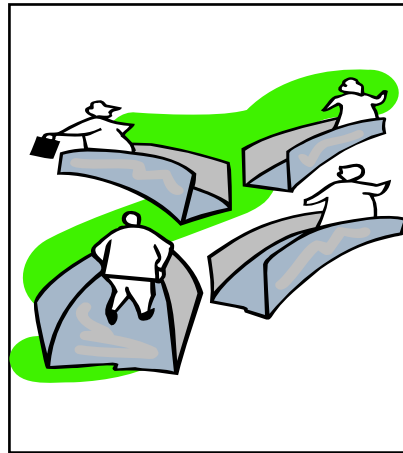
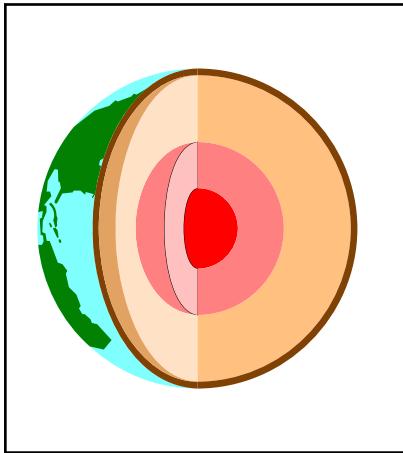
# The Parallel Curriculum Model

**CORE  
CURRICULUM**

**CURRICULUM  
OF  
CONNECTIONS**

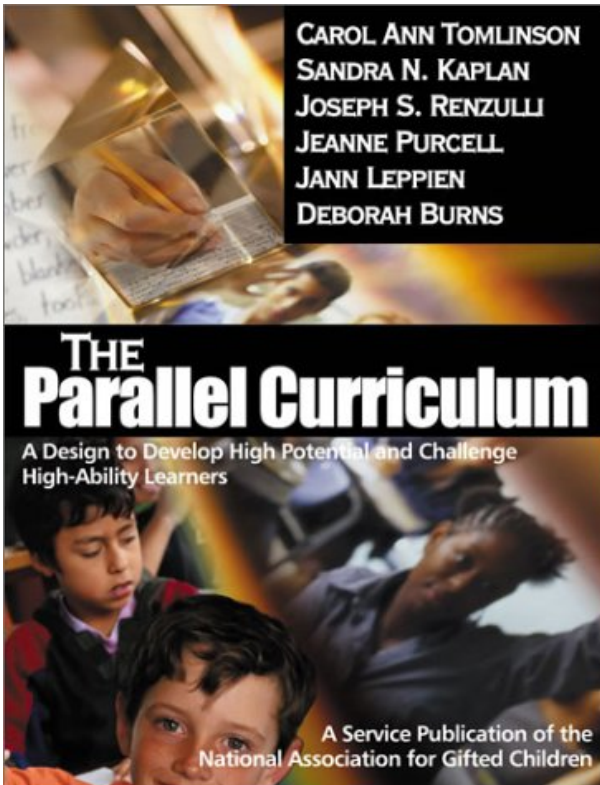
**CURRICULUM  
OF  
PRACTICE**

**CURRICULUM  
OF  
IDENTITY**



**ASCENDING INTELLECTUAL DEVELOPMENT  
(AID)**

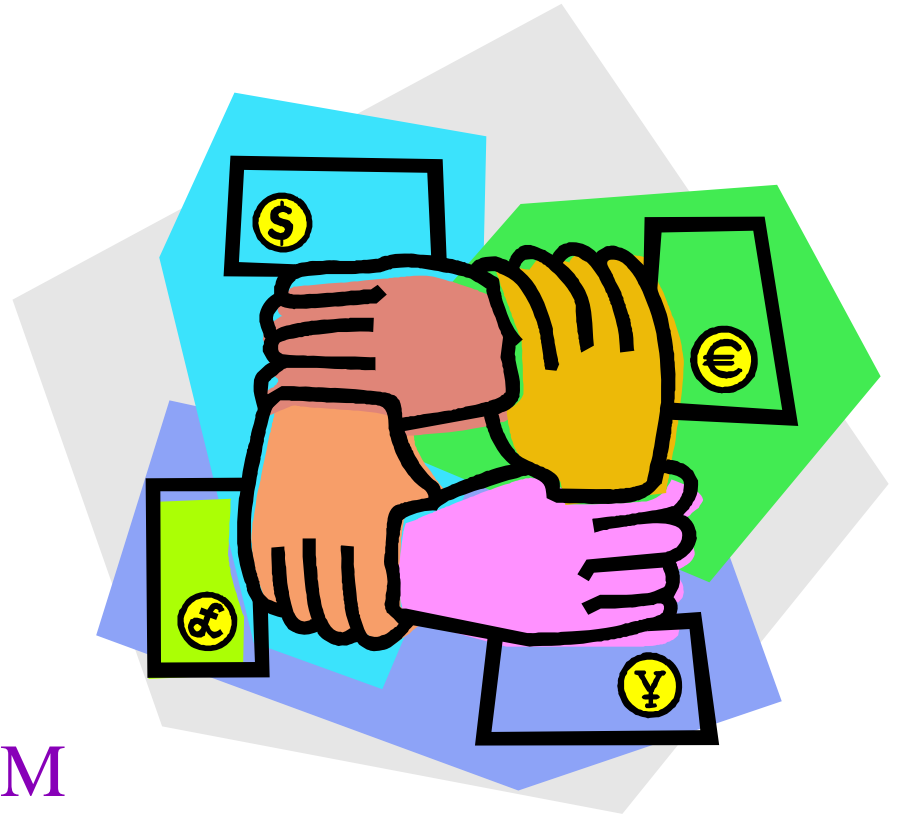
# The Parallel Curriculum Model



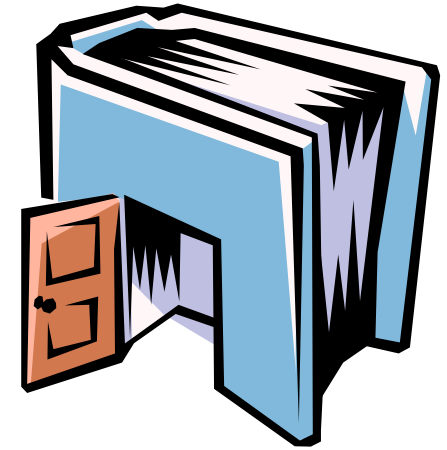
- One curriculum model of many in the field of education
- Four interrelated designs
- Used singly or in combination
- Each parallel is a unique way of organizing content, teaching, and learning
- Used for curriculum design or remodeling
- Includes an option for advanced level learning opportunities

# Introductions and Greetings

- Names
- Places
- Roles
- Related experiences
- Reasons for attending
- Prior knowledge about PCM
















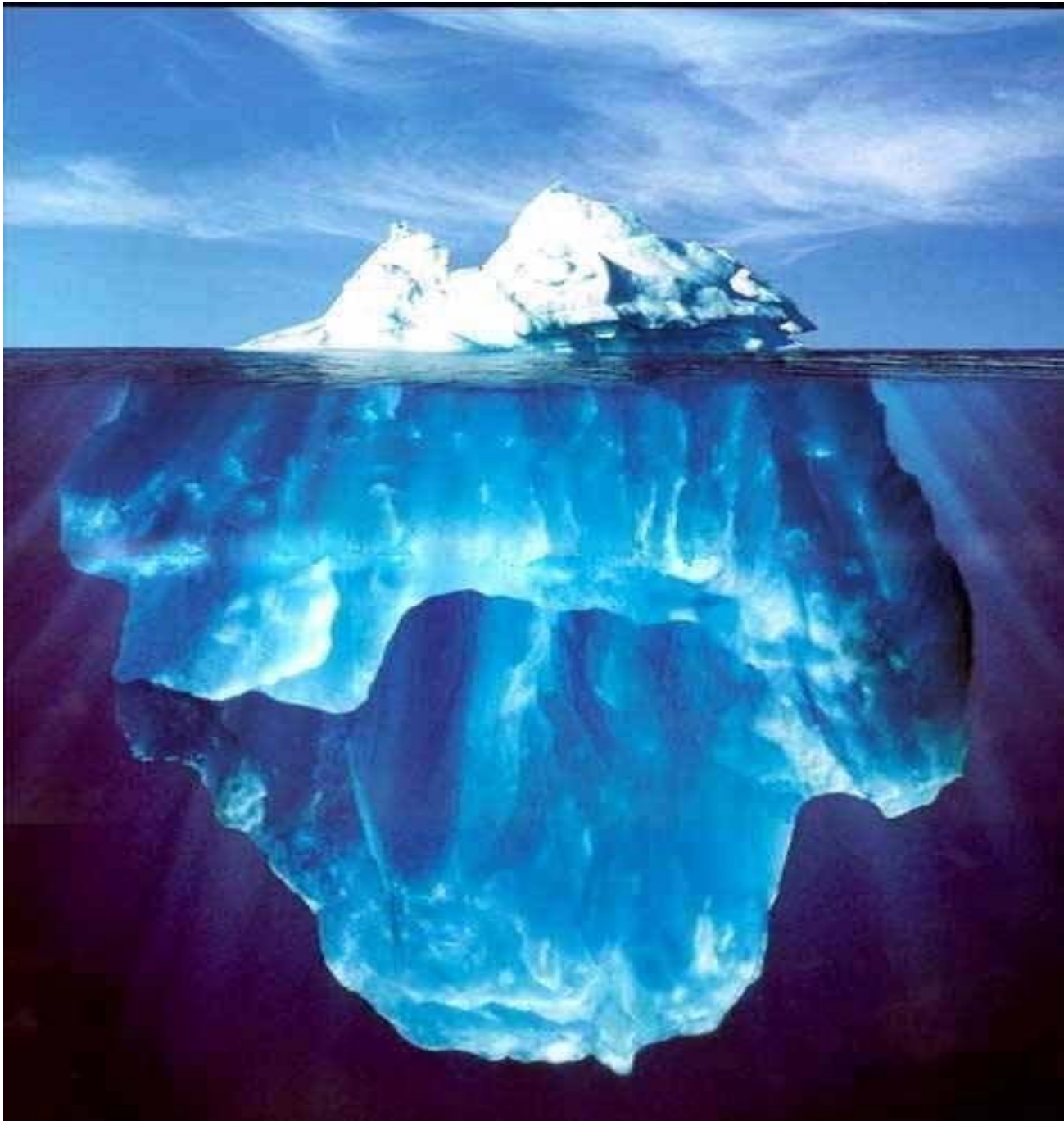
# Our agenda for this session:



- Curriculum and curriculum models
- Four metaphors for PCM
- PCM and content knowledge
- An introduction to the PCM parallels and AID
- PCM options, choices, and the design process

# PCM's Foundational Theory

|                        |  |   |   |
|------------------------|--|---|---|
| <b>Intelligence</b>    |  <p>Raymond<br/>Cattell</p> |  <p>Howard<br/>Gardner</p>   |  <p>Robert<br/>Sternberg</p> |
| <b>Learning</b>        |  <p>L.S. Vygotsky</p>       |  <p>Jean Piaget</p><br> <p>Albert Bandura</p> |   |
| <b>Thinking Skills</b> | <p>Robert<br/>Marzano</p>  | <p>Rueuven Feuerstein</p>    |   |
| <b>Curriculum</b>      | <p>Hilda<br/>Taba</p>     | <p>Ralph Tyler</p>    |   |
| <b>Knowledge</b>       |  <p>John Kendall</p>      |  <p>Jerome<br/>Bruner</p>                  |   |



# The Four Foundational PCM Concepts Include:

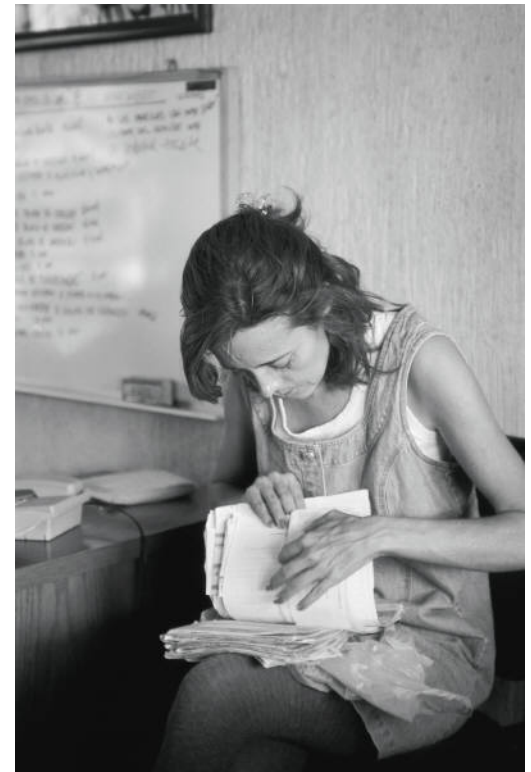
- Curriculum
- Curriculum Components
- Curriculum Models
- Content Knowledge





# Concept Number One: Curriculum

- With whom do you use this term? Colleagues? Students? Parents?
- How does your district define this term?
- How does your learning partner and/or her/his district define this term?
- What do you think the likelihood is that we all share common prior knowledge, experience's, and understandings of the term “curriculum?”



# Curriculum might be defined as....

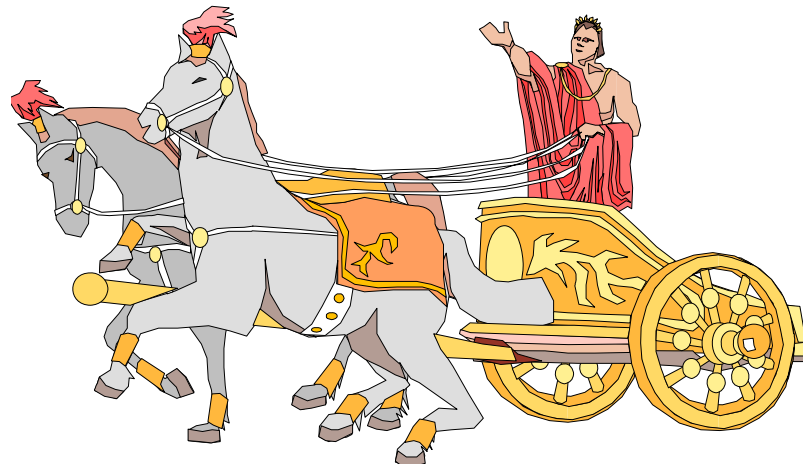


1. State standards
2. K-12 articulation
3. Grade level learning expectations
4. Teaching methods and strategies
5. Commercial programs
6. Teaching units
7. Learning materials

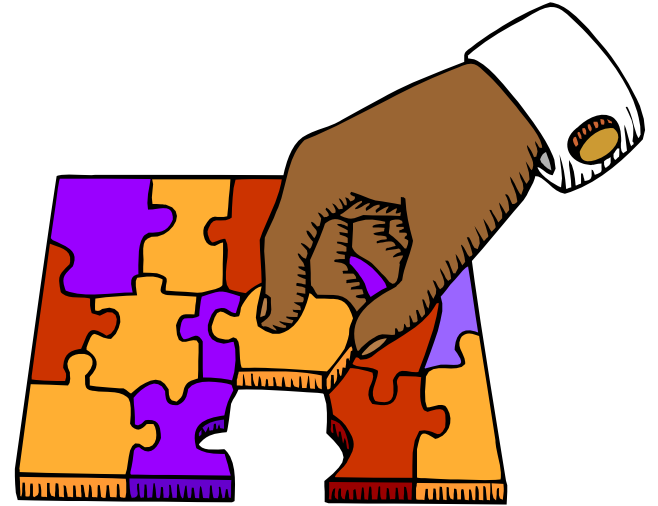
From Kim Marshall, Education Week, 9/1/04.

# The Word: Curriculum

- **Latin:** Running course or chariot path
- **Scotland 1603:** Carriage way, road
- **United States 1906:** Course of study leading to graduation
- **United States, 1940:** Plan for learning (study)



# Here is our answer to the question: What is curriculum?



Curriculum is a design **PLAN** that fosters the purposeful organization, sequencing, and management of interactions among the teacher, the learners, and the discipline-based content knowledge we want students to acquire.



# What is Curriculum?

**Discipline-Based Knowledge**

**DESIGN PLAN**

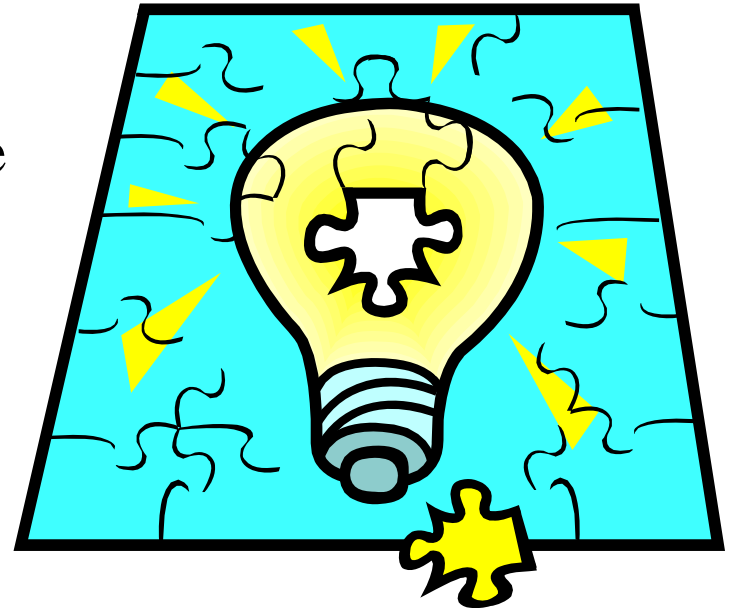
**Students**

**Teacher**



# Support Structure Number Two: Curriculum Components

- How would you define this term?
- How does your learning partner define this term?
- From the PCM perspective, **CURRICULUM COMPONENTS** are the puzzle pieces we use to build and implement a lesson or unit.



# Some of the components of a comprehensive curriculum unit



Content



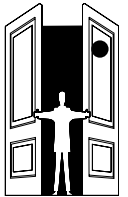
- Grouping and Pacing



Assessment



- Products



Introduction/Closure



- Resources



Teaching Strategies



- Extension Activities  
(Parallels)



Learning Activities



- Modifications/  
Differentiation (AID)



# Concept Number Three: Curriculum Models

- How familiar are you with this term?
- What examples can you give of a curriculum model?
- How does your learning partner define or describe this term?



# Our Definition of a Curriculum Model

A model is a format for curriculum design that has been developed to meet unique needs, contexts, and/or purposes. In order to address these goals, curriculum developers use a curriculum model as a framework for designing, reconfiguring, or rearranging one or more key curriculum components to fit the model's purpose and goals.





# With which curriculum models are you familiar?

- Understanding By Design
- Standards-Based
- Writers' Workshop
- Problem Based Learning
- Everyday Mathematics
- Advanced Placement
- Foss Science Kits
- Textbooks
- Guided Reading
- History Alive



# Why do educators use different curriculum models?

- History or tradition
- Form follows function
- Varying learner profiles
- Varied subject areas and disciplines
- Evidence of need or effectiveness
- Availability
- Professional knowledge and training

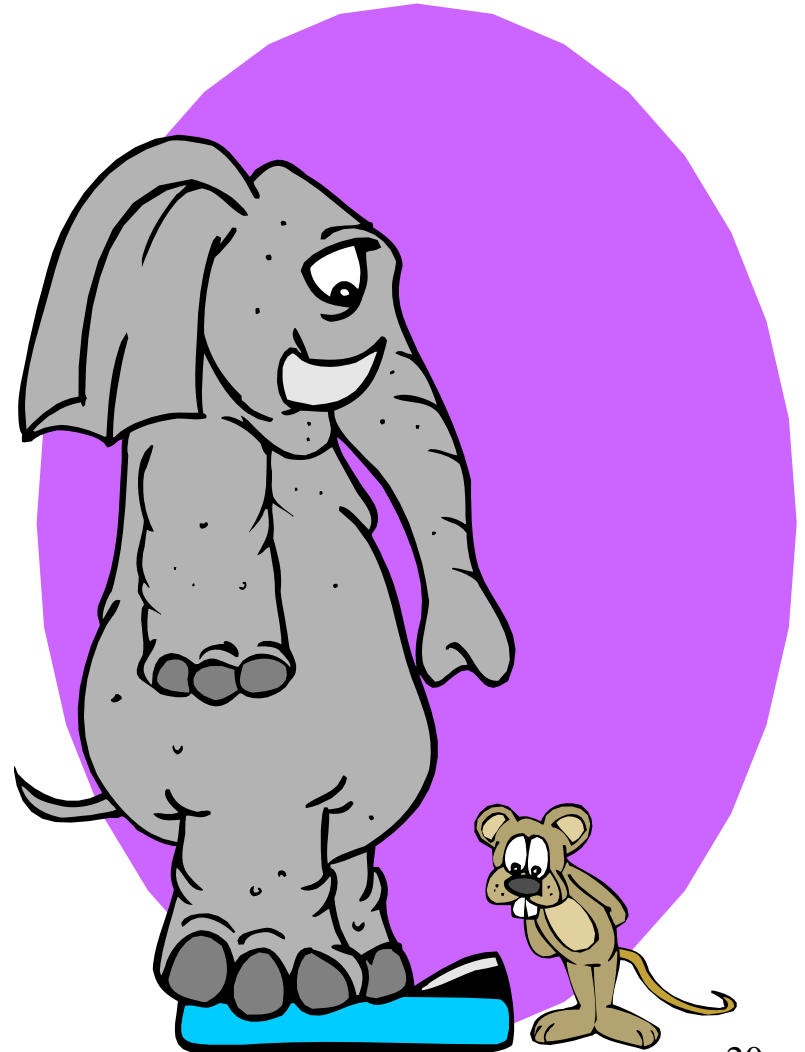




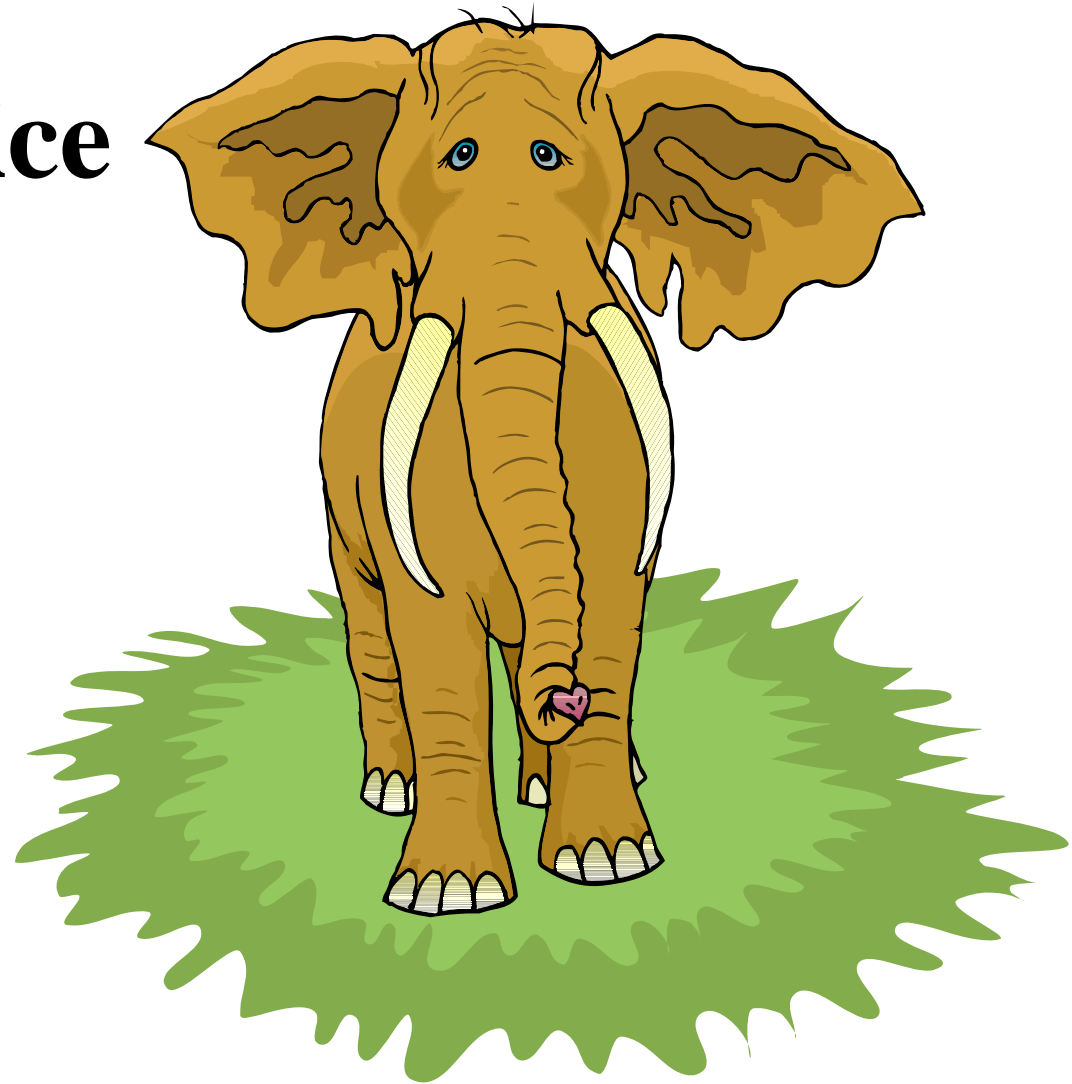
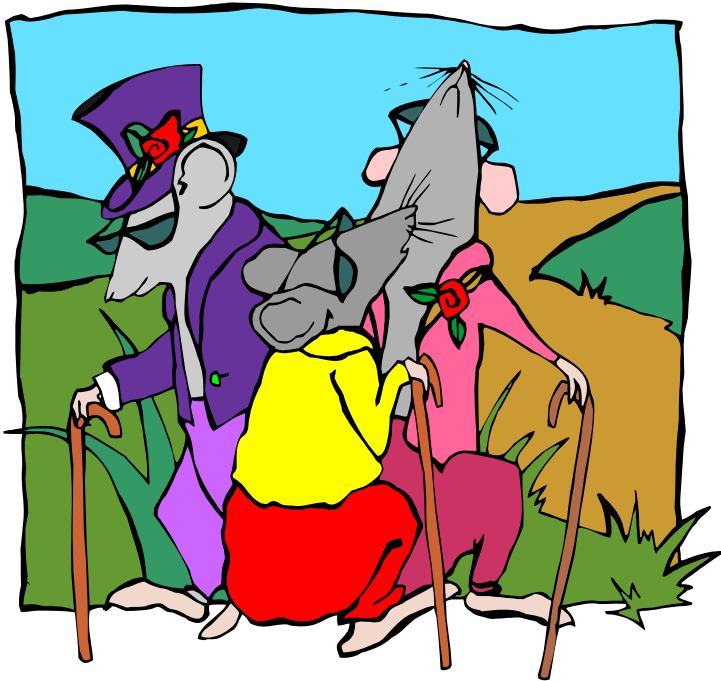
# The Elephant in the Room

What is qualitatively differentiated curriculum?

What could or should curriculum look like if it was different from the curriculum we currently have?



# PCM and the Allegory of the Seven Blind Mice



# Which Statements Reflect Your Beliefs About Curriculum?



## Curriculum could or should:

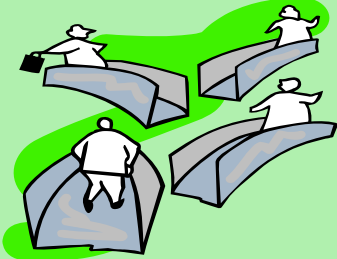
1. Guide students in mastering key information, ideas, and the fundamental skills of the discipline.
2. Help students grapple with complex and ambiguous issues and problems.
3. Move students from a novice to an expert level of performance in the disciplines.
4. Provide students opportunities for original work in the disciplines.
5. Help students encounter, accept, and ultimately embrace challenge in learning.
6. Prepare students for a world in which knowledge expands and changes at a dizzying pace.
7. Help students determine constants in the past and in themselves while helping them prepare for a changing world.
8. Help students develop a sense of themselves as well as their possibilities in the world in which they live.
9. Be compelling and satisfying enough to encourage students to persist in developing their capacities.



# A Metaphor to Consider: Curriculum as a Universal Travel Adapter



# PCM as a Universal Adapter for Students on a Learning Journey




CONNECTIONS

An illustration showing four stylized human figures in white, walking on a path of grey, 3D rectangular blocks that rise and fall like steps or a winding road. The background is a light green gradient.



PRACTICE

An illustration of a white scroll with a blue bar chart on top. The chart has four vertical bars of varying heights. A blue ruler and a blue set square are placed over the scroll. The background is a solid blue color.



IDENTITY

An illustration of a person in a light blue shirt and dark pants standing and looking at a large, vertical, circular object that resembles a mirror or a large lens. The background is a light cyan color.

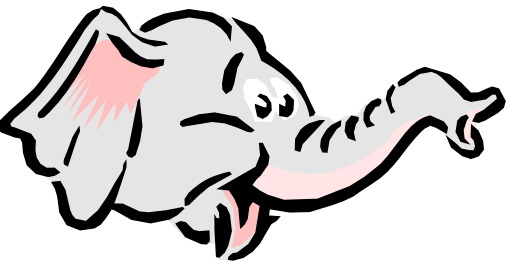
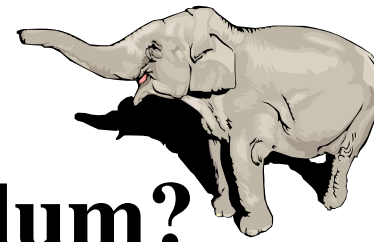


CORE

AID

A large black graphic consisting of a vertical arrow pointing upwards, with a spiral that starts at the bottom and winds around the arrow. The entire graphic is set against a light red background.

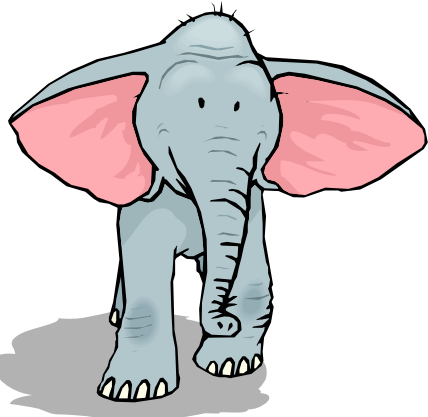
# So, how does PCM provide qualitatively differentiated curriculum?



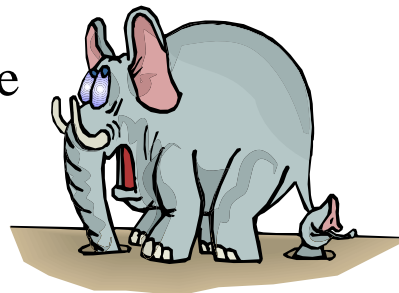
Opportunities to learn the **core knowledge** (enduring facts, concepts, principles, and skills) **within a discipline**



Opportunities to learn about the numerous **relationships and connections** that exist across topics, disciplines, events, eras, and cultures

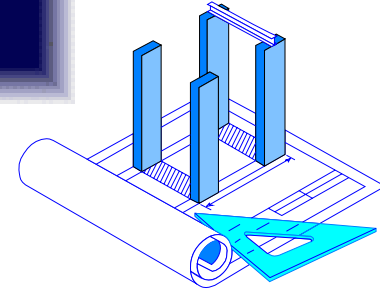
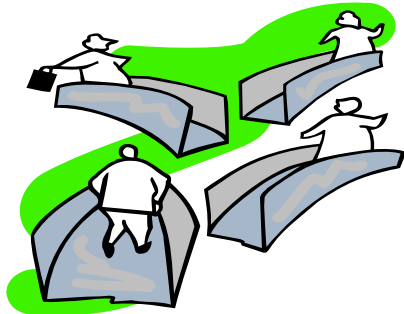
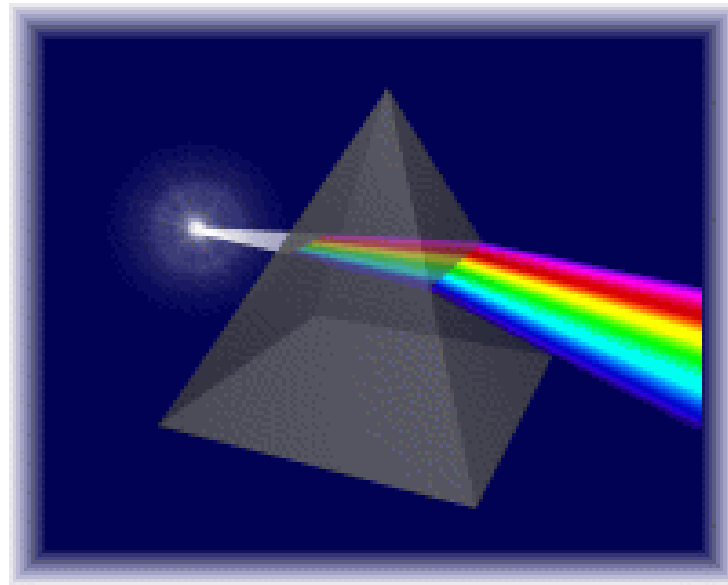
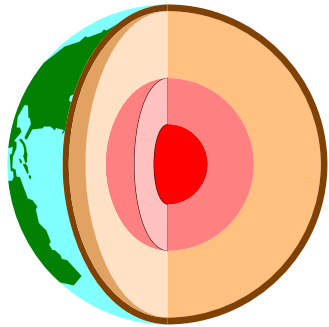


Opportunities to **learn or apply discipline-based skills, tools, and strategies** using the methods of the practitioner, researcher, and scholar

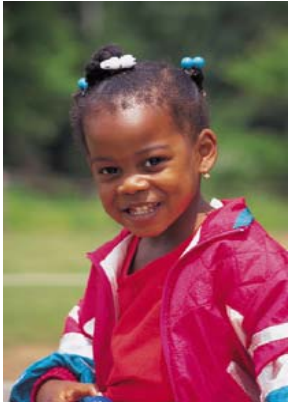


Opportunities for students to develop **intrapersonal knowledge and skills, and affinities** within and across disciplines

# A Prism as a Metaphor for the PCM Parallels



# How might PCM broaden and deepen each child's knowledge?



What should I remember forever?

**CORE**

How can I make the strange familiar?

**CONNECTIONS**



When and how will I ever use this knowledge?

**PRACTICE**

What does this have to do with me?

**IDENTITY**



# Can One Curriculum Unit Fit the Needs, Potentials, and Styles of all Learners?



**How versatile does it have to be?**

**How compact can it be?**

# PCM: What's In It For Each of My Students?



**What should I remember forever?**

**CORE**

**How can I make the strange familiar?**

**CONNECTIONS**



**When and how will I ever use it?**

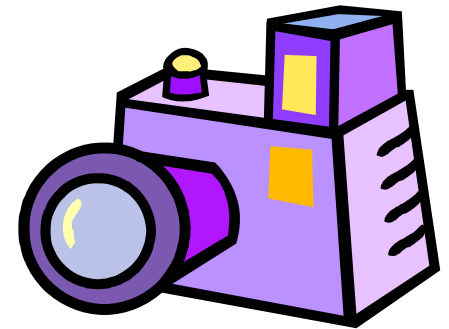
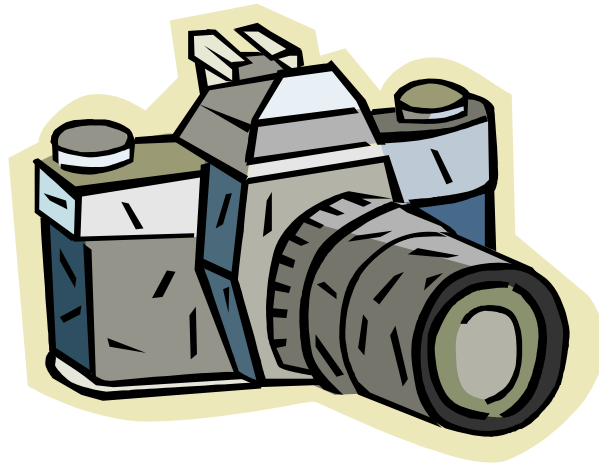
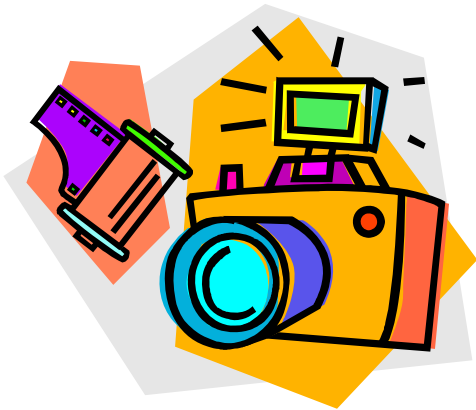
**PRACTICE**

**What does this have to do with me?**

**IDENTITY**

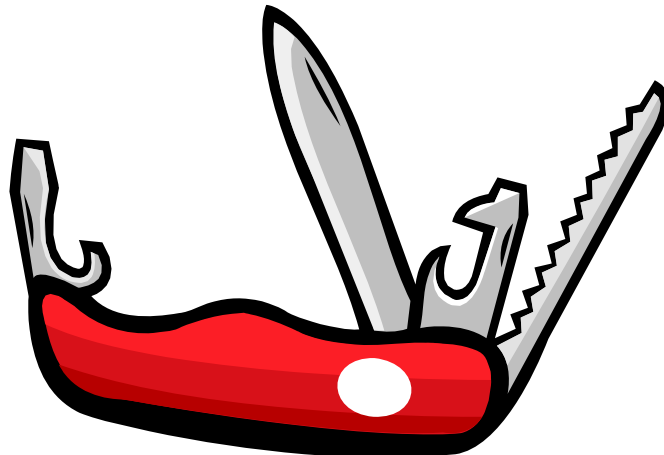


# A Camera and Lenses as Metaphors for PCM



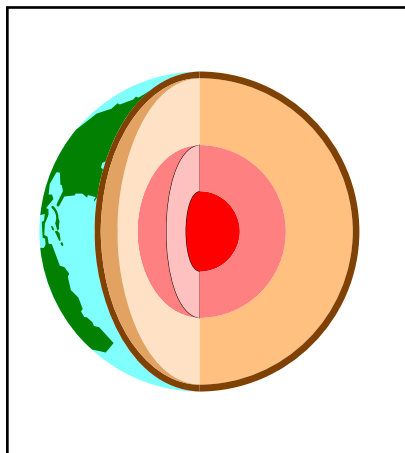
# Four Metaphors for PCM

- Universal Adapter
- Camera and Lenses
- Prism
- Swiss Army Knife

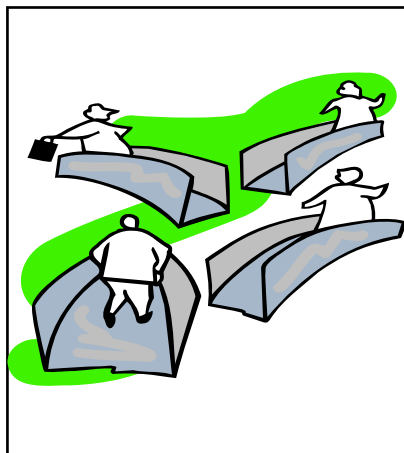


# The Parallel Curriculum Model: Four Ways of Knowing

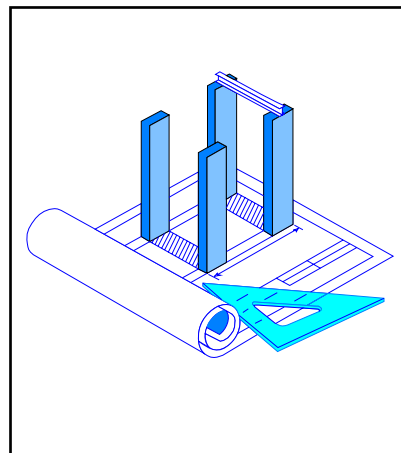
**CORE  
CURRICULUM**



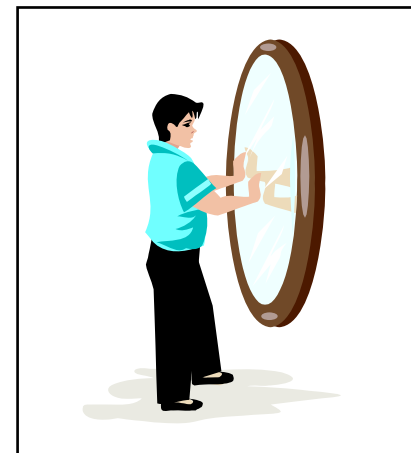
**CURRICULUM  
OF  
CONNECTIONS**



**CURRICULUM  
OF  
PRACTICE**



**CURRICULUM  
OF  
IDENTITY**



**KEY CURRICULUM COMPONENTS**



# Discipline Based Content: The Fourth Supporting Structure for the Parallel Curriculum Model



- Facts
- Concepts
- Generalizations
- Principles
- Skills, Tools, Processes, and Methods
- Applications
- Dispositions and Habits of Mind

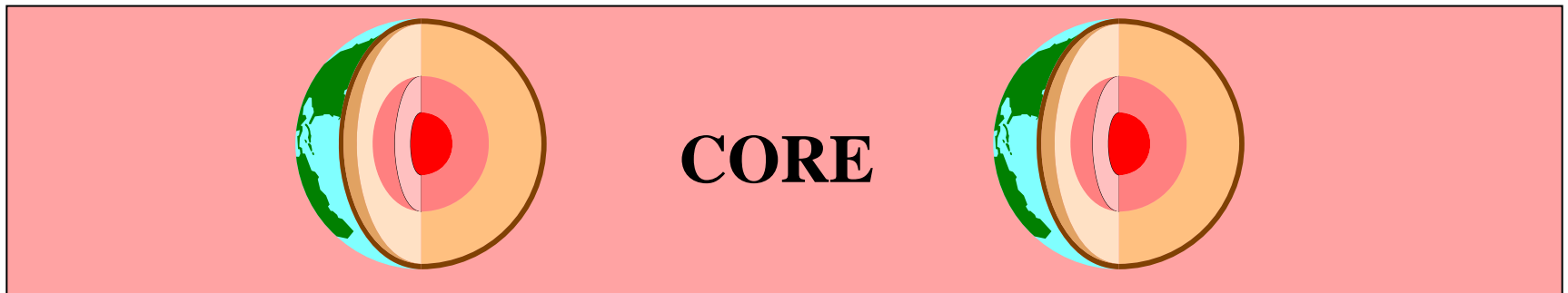
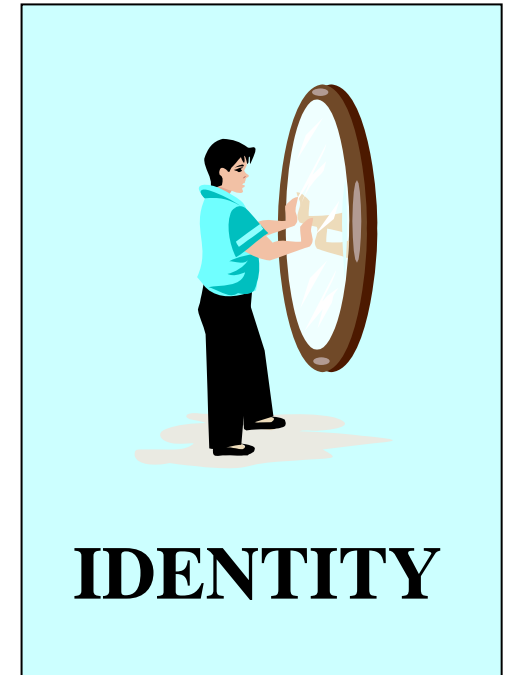
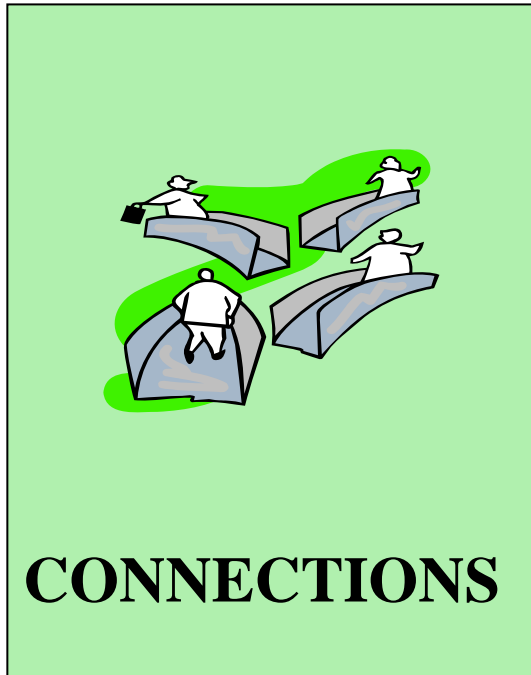
# Categorizing PCM Content

- Facts:** A fact is a specific detail, verifiable information, or characteristics about a particular object, person, or event. **PARTICULARS**
- Concepts:** A concept is a general idea or abstraction, especially a generalized idea of a thing or class of things; a category or classification. **IDEAS**
- Principles:** A principle is an underlying truth, law, or rule, that explains the relationship between two or more concepts. **RELATIONSHIPS**
- Generalizations:** A generalization is a statement that explains or describes a category of things or ideas. **FAT FACT**
- Skills:** A skill is a proficiency or ability to do work that involves techniques, strategies, methods, or tools. **STRATEGIES**
- Self Knowledge:** Intrapersonal knowledge involves reflections about inclinations, beliefs, state of mind, appreciations, interests, dispositions, and efficacy **REFLECTIONS**
- Applications:** The ability to generalize and transfer knowledge to familiar and novel contexts **PROBLEM SOLVING**

# Categorizing Content Knowledge

- **Fact:** Specific detail
- **Concept:** General idea; abstraction
- **Principle:** Underlying law or rule
- **Generalization:** Statement that explains or describes a category of things or ideas
- **Skill:** proficiency, skill, technique
- **Attitude:** belief, habits, attitudes, dispositions
- **Application:** ability to generalize or transfer

# A Closer Look at Each of the Parallels.....



# An Example of a PCM Unit: Astronomy for Kindergarteners

**Core Knowledge:** Sun, star, Moon, position, **distance**, **planet**  
apparent movement, patterns, characteristics, size, shape, color

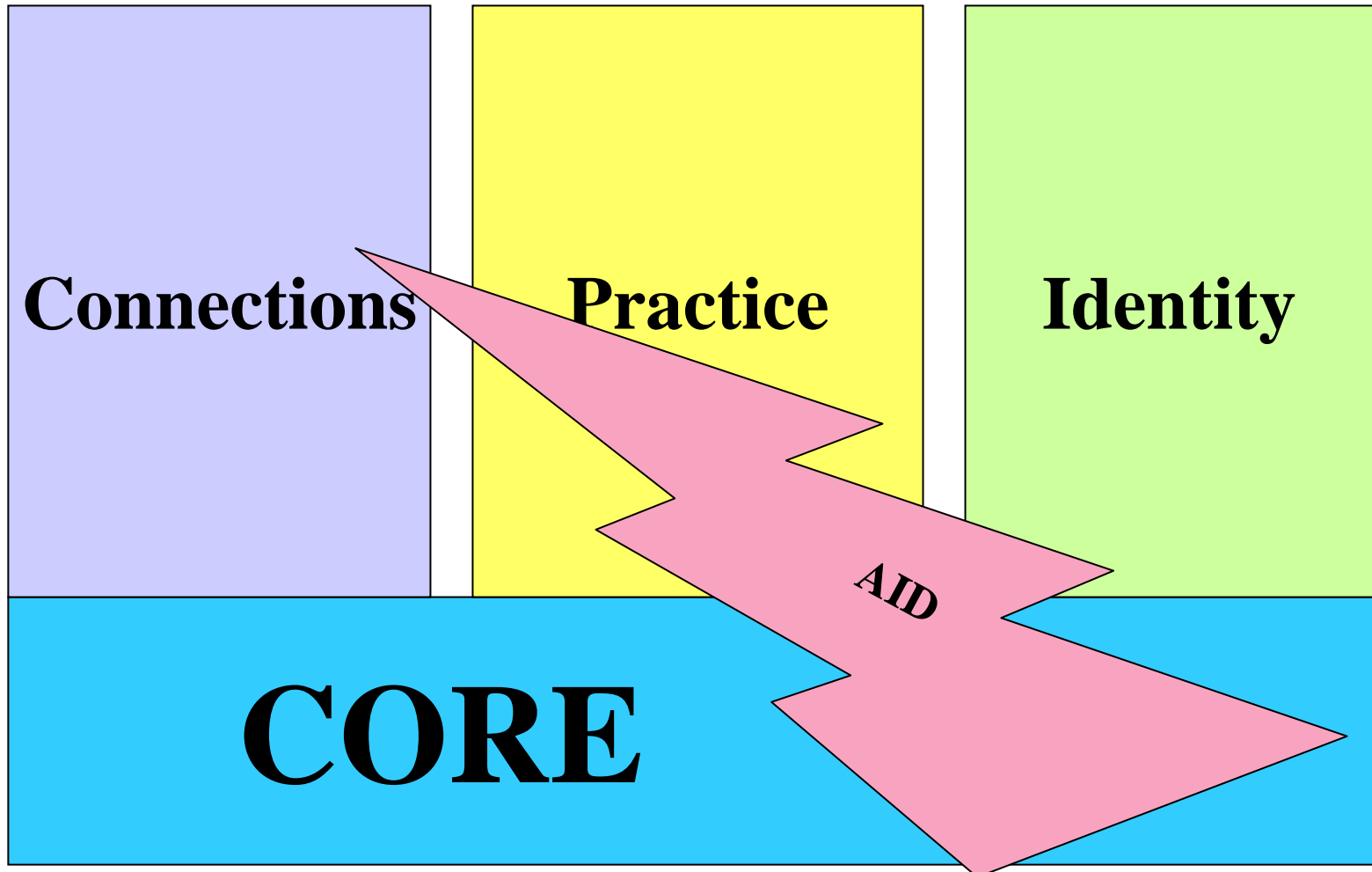
**Connections Knowledge:** **People seek to explain the phenomenon they observe:** constellations as cultural explanations.

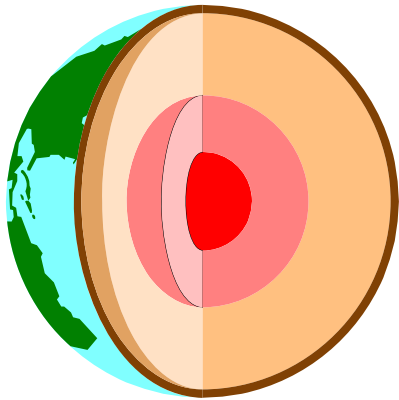


**Practice Knowledge:** Skills of a sky observer,  
**binoculars**, **star maps**

**Identity Knowledge:** **Do I like being a careful observer?** Do I like astronomy?

# CORE as the Foundation for the Parallels





# The Core Curriculum

The Core Curriculum addresses the **core concepts, principles, and skills of a discipline**. It is designed to help students understand essential and enduring discipline-based content through the use of **representative topics, inductive teaching, and analytic learning activities**.

# A Graphic Organizer for Core Curriculum Development

**Overarching  
Discipline(s) and  
Subject Areas**

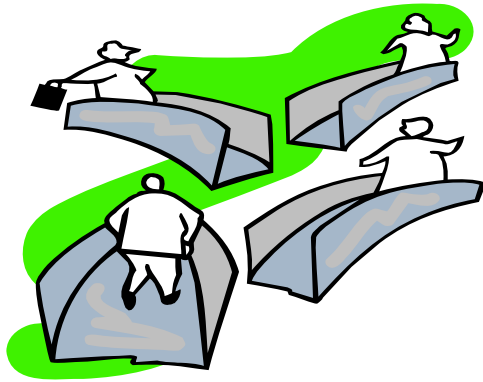
**Core Skills**

**Standards**

**Core Concepts**

**Representative  
Topic**

**Core Principles  
and Generalization**



# The Curriculum of Connections: Definition

The Curriculum of Connections builds upon the Core Curriculum. It is a plan that includes a set of guidelines and procedures to help curriculum developers connect overarching concepts, principles, and skills within and across disciplines, time periods, cultures, places, and/or events. This parallel is designed to help students understand overarching ideas as they relate to additional content and content areas.

# What kind of connections are we talking about?



- Connections across time, events, topics, disciplines, cultures, and perspectives
- Connections to self, other texts, and other people
- Understanding of intra and interdisciplinary macroconcepts
- Understanding of intradisciplinary generalizations
- Understanding of interdisciplinary themes

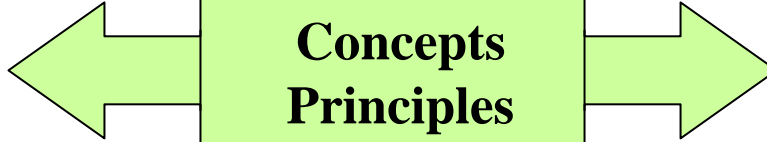
**Representative**

**Connective**

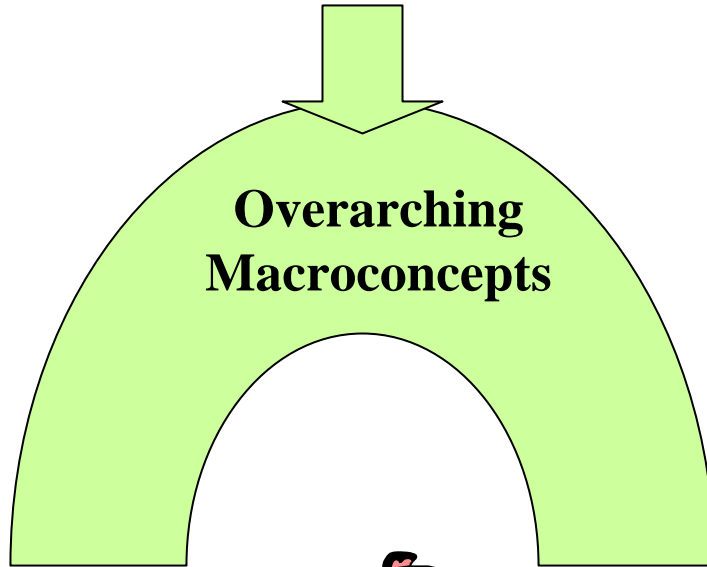
**Enduring**

**Powerful**

**Core  
Concepts  
Principles  
Skills**

A stack of three light-green rectangular boxes of decreasing size from top to bottom, representing the 'Representative' side of the curriculum. The largest box at the bottom contains a list of content elements.

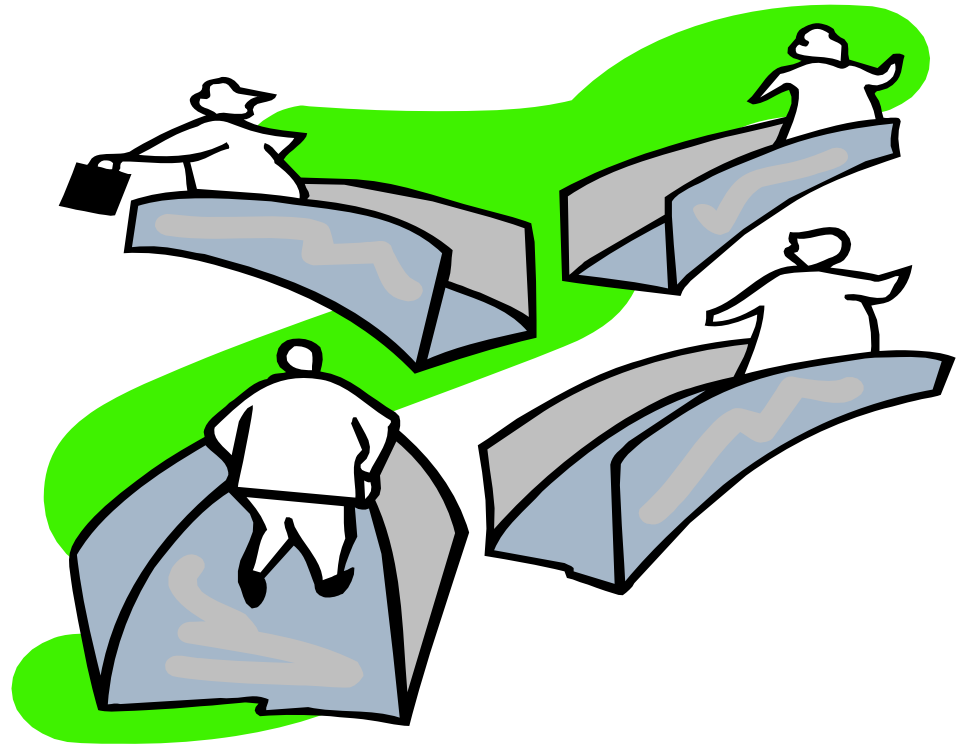
- Topics
- People
- Events
- Time
- Objects
- Stories
- Locations
- Cultures
- Conditions
- Perspectives
- Issues
- Products

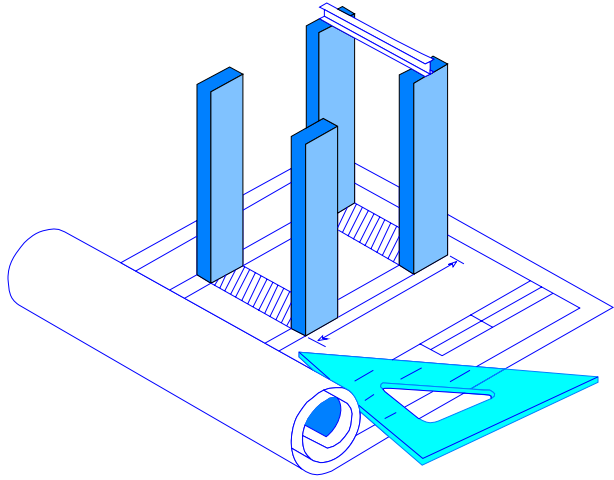
A stack of three light-green rectangular boxes of decreasing size from top to bottom, representing the 'Enduring' side of the curriculum. The largest box at the bottom contains a list of content elements.

- Topics
- People
- Events
- Time
- Objects
- Stories
- Locations
- Cultures
- Conditions
- Perspectives
- Issues
- Products

# Sample Macroconcepts for a Connections Curriculum

- Change
- Continuity
- Systems
- Interactions
- Patterns
- Interdependence
- Order
- Form

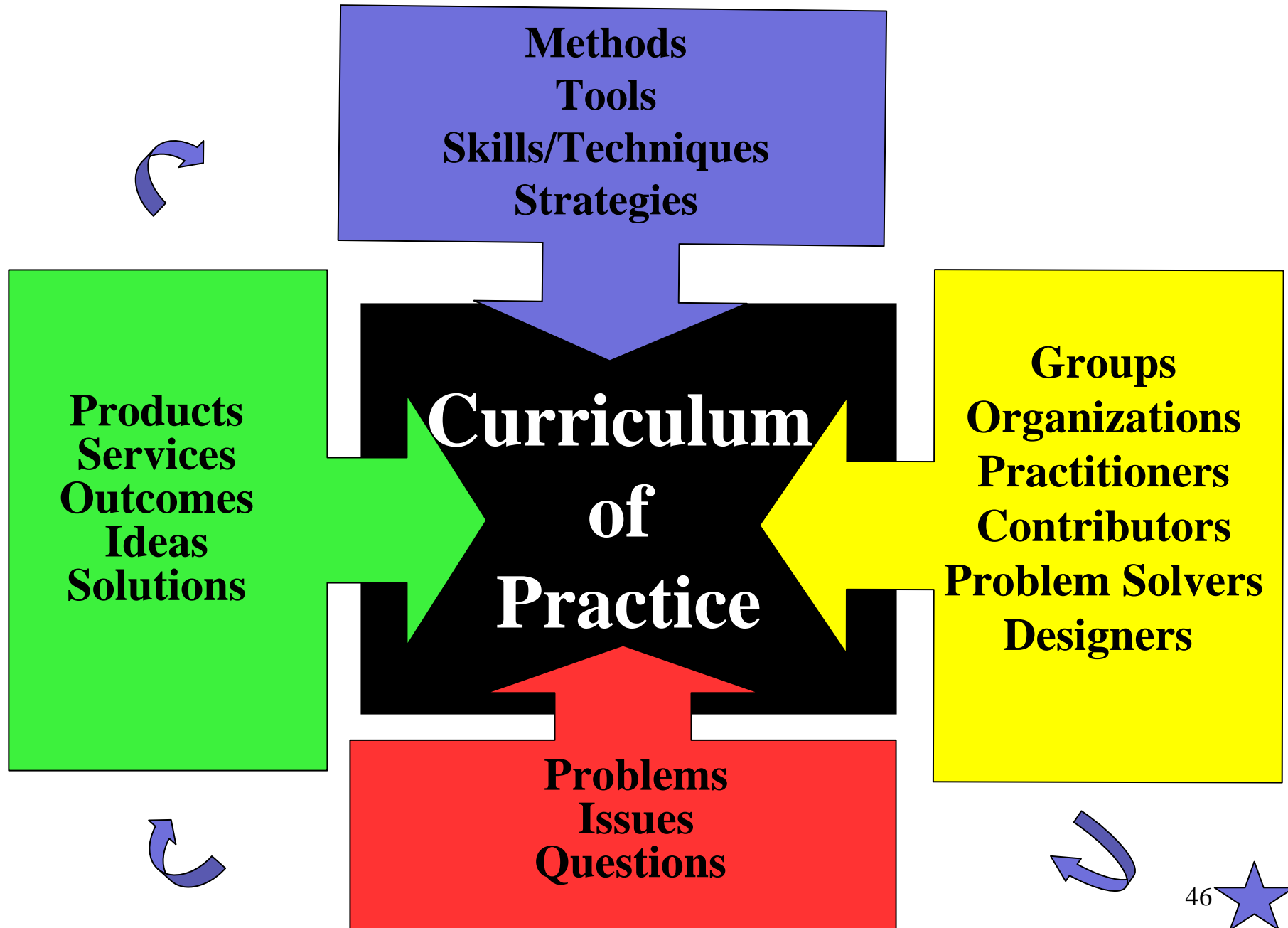




# The Curriculum of Practice: Definition

The Curriculum of Practice is a plan that includes a set of guidelines and procedures to help students understand, use, generalize, and transfer essential knowledge, understandings, and skills in a field to authentic questions, practices, and problems. This parallel is designed to help students function with increasing skill and competency as a researcher, creator, producer, problem solver, or practitioner in a field.

# A Graphic Organizer for Curriculum of Practice Development

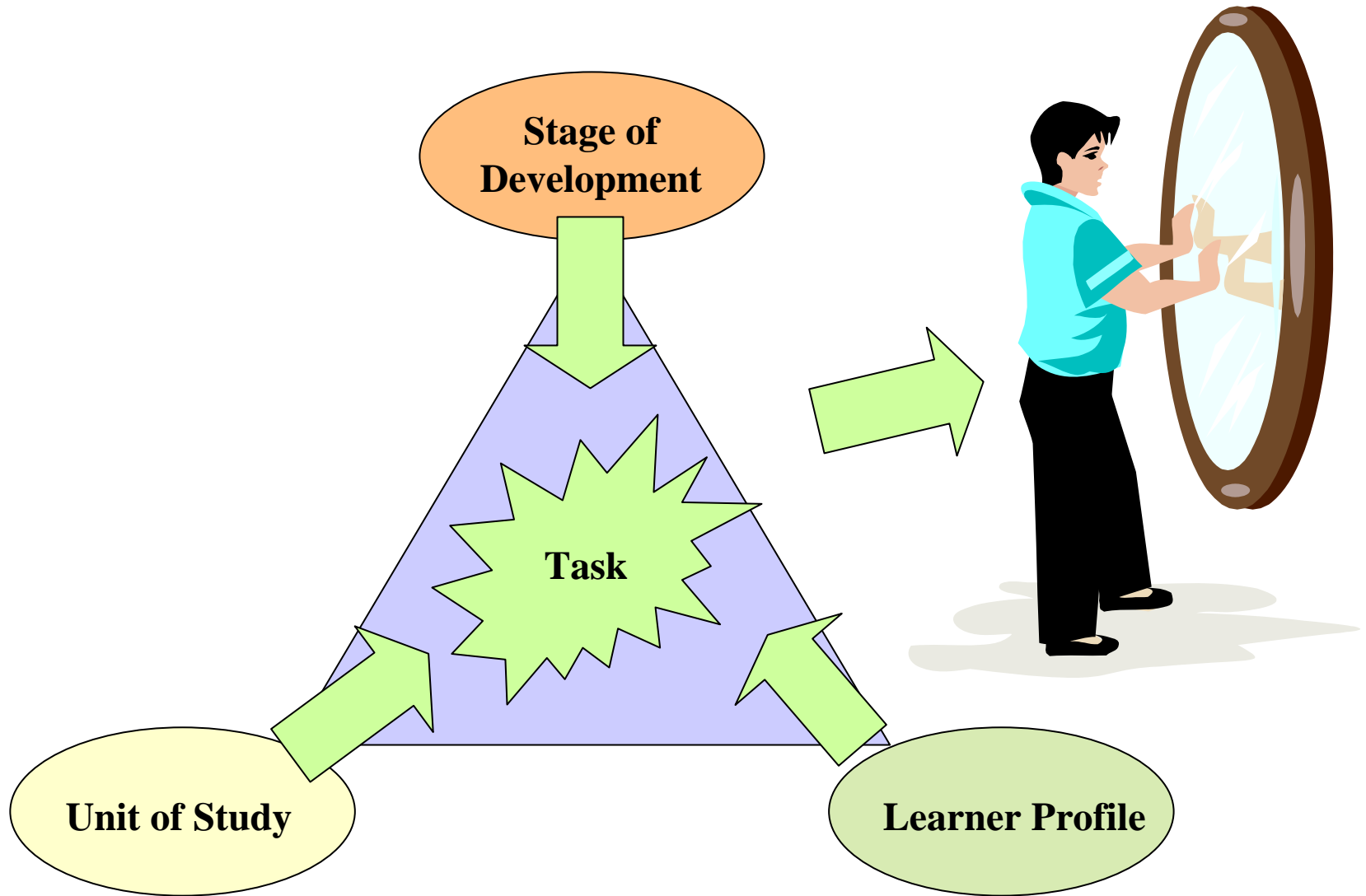




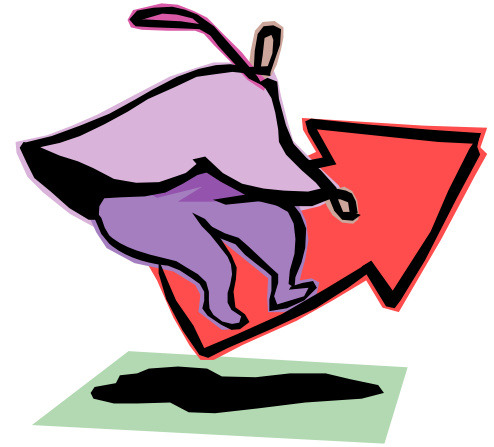
# The Curriculum of Identity: Definition

The Curriculum of Identity is a plan that includes a set of guidelines and procedures to assist students in reflecting upon the relationship between the skills and ideas in a discipline and their own lives, personal growth, and development. This parallel is designed to help students explore and participate in a discipline or field as it relates to their own interests, goals, and strengths, both now and in the future.

# A Graphic Representation of the Curriculum of Identity

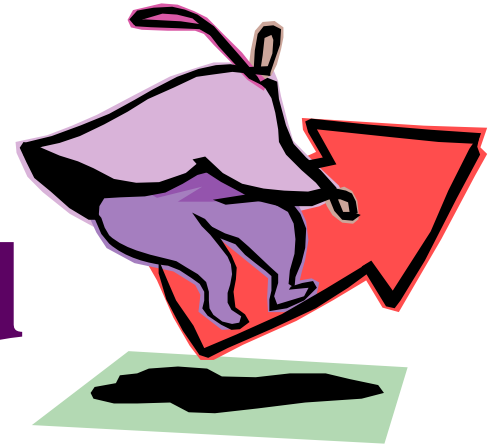


# Ascending Intellectual Demand



Ascending intellectual demand is the process that escalates one or more facets of the curriculum in order to match a learner's prior knowledge and skills and provide appropriate challenge and pacing. Previous knowledge and opportunities, existing scheme, and cognitive abilities are major attributes of a learner's profile. Teachers reconfigure one or more curriculum components in order to ensure that students are working in their zone of optimal development.

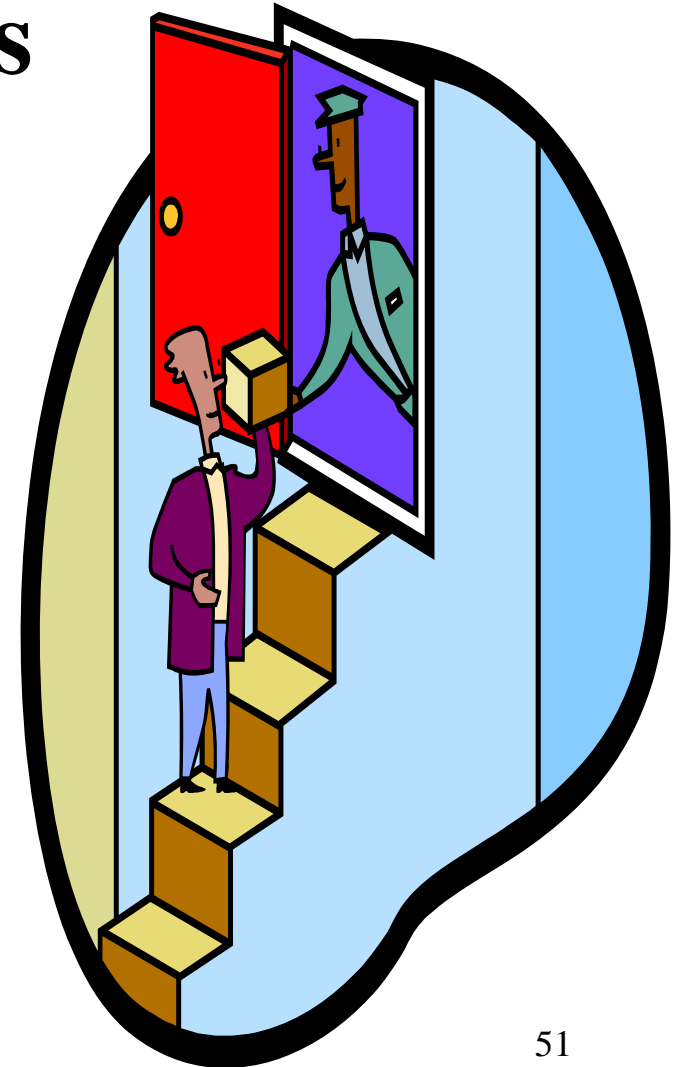
# Ascending Intellectual Demand



- Opportunities to forward children's **expertise** in one or more aspects of discipline based knowledge
- Aligned with the curriculum
- Long-term
- Can be used in any of the parallels

# Designing Ascending Intellectual Demand in the Curriculum of Connections

- Apply understandings, concepts, or principles in contexts that are markedly dissimilar.
- Analyze diverse perspectives on an issue or problem.
- Search for legitimate and useful connections among seemingly disparate elements.
- Look for patterns of interaction among multiple areas of connection.
- Look at broad swaths through an unfamiliar perspective.



# Ascending Intellectual Demand Takes Into Account Differences in Students' .....

- Opportunities to learn
- Cognitive abilities
- Prior knowledge
- Schema
- Learning rate
- Developmental differences
- Levels of abstraction

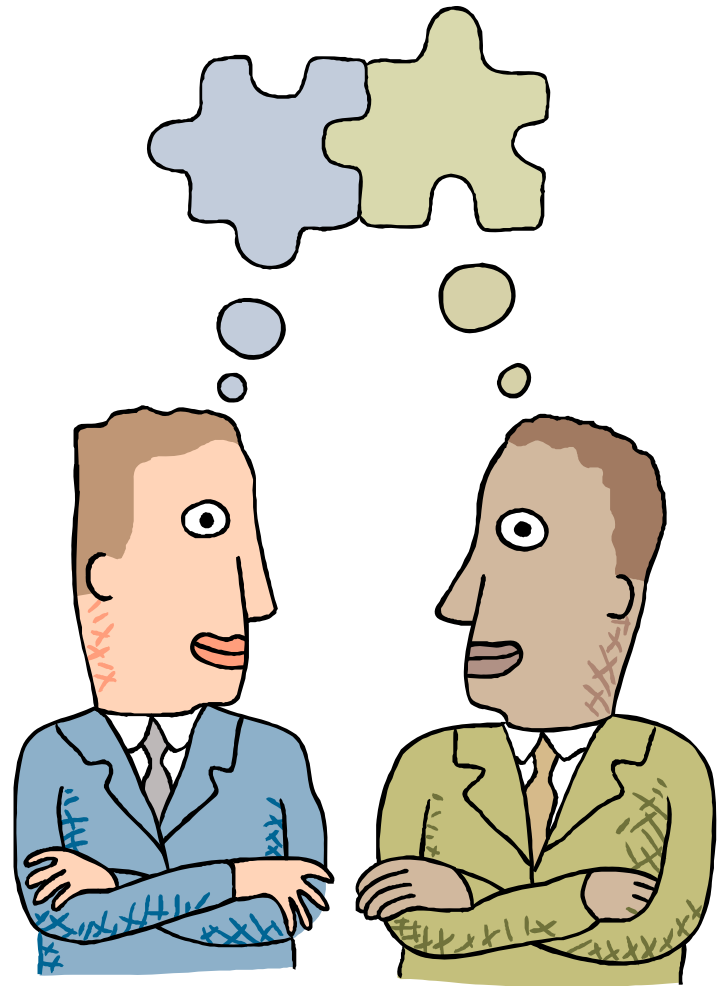


# Ten Unique Things About PCM

- Defines curriculum and curriculum models
- Describes the 10 components of curriculum design
- Unifies various concepts of differentiated curriculum
- Identifies specific goals for each parallel
- Describes how curriculum can be used to address the affective domain
- Describes specifics for increasing intellectual challenge
- Treats all parallels as equal in value
- Supports an inclusive approach to gifted education
- Addresses collaboration between gifted education and general education
- Stresses the development of gifts and talents

# Who might design PCM Core curriculum?

- G/T teachers
- Special education teachers
- Classroom teachers
- Vertical teams
- Grade level teams
- Curriculum developers
- Subject area departments
- Graduate students
- NAGC members
- Researchers



# What PCM products might teachers create?

- Change just one component
- Change several components
- Offer parallel components
- Revise an existing task
- Design a new task
- Revise an existing lesson
- Design a new lesson
- Revise an existing curriculum unit
- Design a new curriculum units
- Use it in a specific subject area



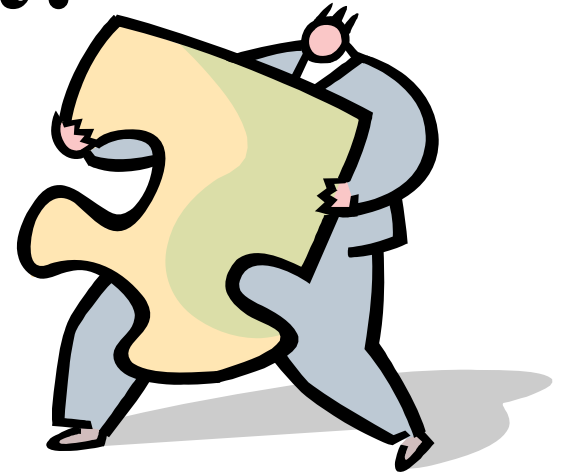
# With whom might I use PCM lessons and units?

- Individual students
- Small groups of students
- Entire classes
- Students with specific interests and affinities
- Students who are currently unmotivated by traditional curriculum
- Students with advanced levels of prior knowledge
- Students with latent strengths and abilities
- Students with advanced cognitive abilities



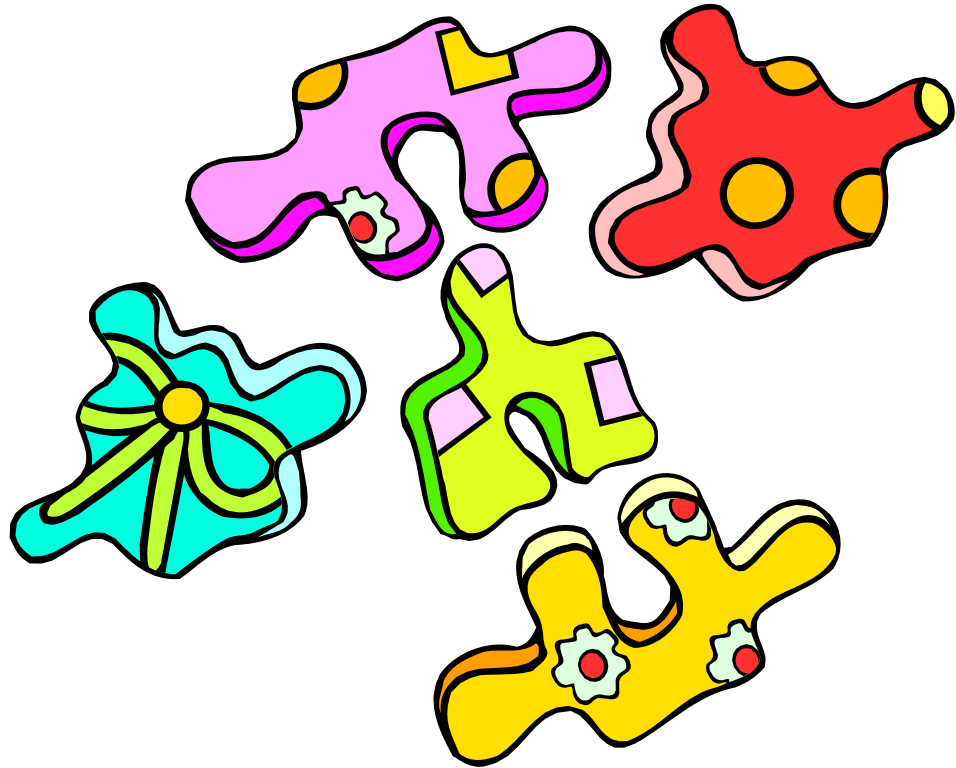
# When, in an instructional sequence, might I insert a PCM task, lesson, or curriculum unit?

- At the beginning of a lesson or unit
- In the middle of a lesson or unit
- At the end of the lesson or unit
- As a lesson or unit supplement
- By supplanting an existing task, lesson, or unit
- By using one parallel at the same time another teacher uses another parallel
- By using a particular parallel after one teacher has used another parallel
- Move back and forth between parallels within the same unit
- Use a parallel as an extension of a core unit
- Use parallel activities as optional activities



# How might I manage or deliver PCM activities?

- Contracts
- Centers
- Agendas
- Independent Study
- Homework
- Options
- Alternatives
- Choices



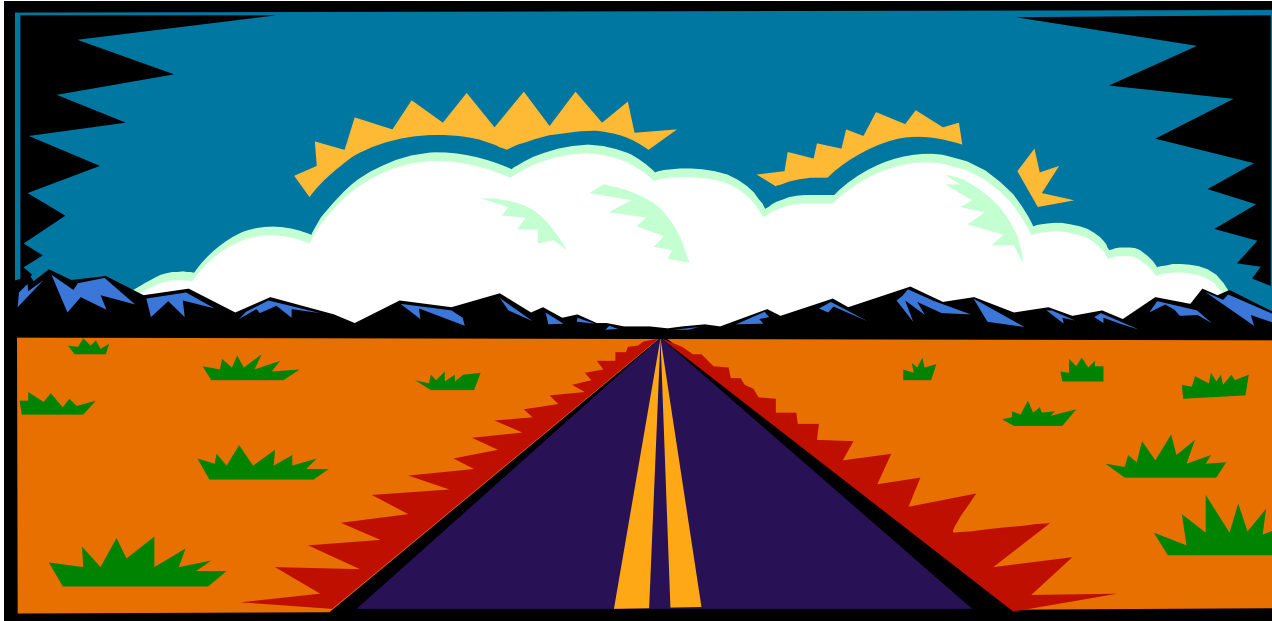
# What district factors should we consider before using of PCM?

- What is the present status and quality of our curriculum?
- Which content areas are in greatest need of improvement?
- What are the varying strengths and needs of our students?
- How do we want students to be different as a result of our curriculum revision efforts?
- Who shares, or needs to share, a similar vision for curriculum revision before we undergo a major initiative?
- How much time can we allocate to this initiative?
- What kind of professional learning must we do first?
- What kind of content learning do we need to conduct?
- What are our available resources (i.e., curriculum materials, budgets, personnel, time allocations, class size, professional expertise)?
- How might we sequence and pace a PCM initiative?



# Your Questions and Concerns





**Where do we go from here?**

# One Strategic Plan for the 21<sup>st</sup> Century

- 1. Get a copy of PCM**
- 2. Form a Book Club**
- 3. Use a set of discussion questions to guide Book Club members**
- 4. Develop institutes**
- 5. PCM II and video**
- 6. Select a unit to revise**
- 7. Identify a cadre of pioneers**
- 8. Analyze and write together**
- 9. Attend to Lydia**
- 10. Implement the lessons/unit**
- 11. Develop a pre and post assessment**
- 12. Gather reflections (teachers and students)**
- 13. Revise**

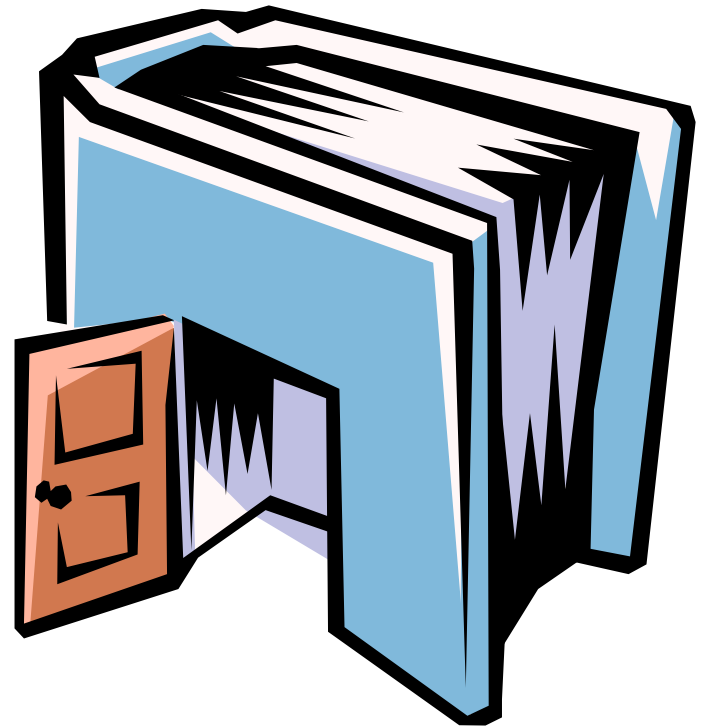
**First, I do not sit down at my desk to put into verse something that is already clear in my mind. If it were clear in my mind, I should have no incentive or need to write about it.**

**We do not write in order to be understood; we write in order to understand.**

-Robert Lewis

# During the last hour we examined lots of different ideas about:

- Curriculum
- Content and Knowledge
- PCM Parallels and AID
- PCM options, choices, and the design process



**But the most important purpose of today's session is to look at curriculum from a different perspective.**

