Dimensions of Depth and Complexity

Adapted from Educator to Educator Depth and Complexity Icon and Riverside Unified School District's GATE Program

GATE Services
Extended Programs Department
December 2009
Differentiating Content

Differentiation refers to differing content, process (or skills) and products of the core curriculum to make that curriculum more responsive to students’ individual needs, abilities, and interests.
Depth, Complexity and Differentiation

*Depth and Complexity Dimensions* are a method for differentiating content. These dimensions are represented by a term or prompt, the name of the dimension, and by a graphic icon.

The dimensions of depth and complexity can be used to facilitate the learning of content at differing levels of sophistication.
Depth, Complexity and Differentiation continued

Application of the dimensions to the content of a lesson or unit of study modify that content to more appropriately challenge gifted and advanced students to develop a deeper, more complex and extensive understanding of subject matter.
What is Depth?

Approaching or studying something from the concrete to the abstract, from the known to the unknown.

Requires students to examine topics by determining the facts, concepts, generalization, principles and theories related to them.
What is Depth? continued

- Requires uncovering more details and new knowledge related to a topic of study.
- Encourages students to adopt perspectives and to see patterns in connections.
Depth Dimensions with Icons

**Language of the Disciplines:** Specialized vocabulary, names of skills or tasks, tools used.

**Details:** Attributes, parts, factors, variables.

**Patterns:** Repetition, predictability.

**Trends:** Influence, forces, direction.

**Rules:** Structure, order, hierarchy, explanation.

**Ethics:** Points of View, Different Opinions, judging.

**Big Idea:** Generalization, principle, theory.

**Unanswered Questions:** Discrepancies, missing parts, unclear ideas, incomplete ideas.
What is Complexity?

- Includes making relationships, connecting other concepts, and layering.

- Why/how approach that connects and bridges to other disciplines to enhance the meaning of a unit of study.
Complexity encourages students to:

- Relate concepts and ideas at a more sophisticated level.
- See associations among diverse subjects, topics or levels.
- Find multiple solutions from multiple points of view.
Complexity Dimensions with Icons

**Over Time:** Looking at past, present, future, applying something historic to present knowledge, Applying from the past to present, noting change.

**Multiple Perspectives:** Different points of view, ways of seeing and reporting things, often dependent on time and place, affected by roles and responsibilities.

**Across Disciplines:** Multidisciplinary, Interdisciplinary connecting among disciplines, touching many subjects at once.
Dive Into Depth and Complexity

An essential part of differentiating the curriculum through depth and complexity is using the icons, and ensuring that students are familiar with them.
Frame Stories or Concepts With the Dimensions

- **Frame the Teacher**: Introduce four dimensions by making a frame around the topic of the teacher-you!
- **Frame Yourself**: Each student completes a similar frame.
- **Frame stories or concepts** with the dimensions.
Use the Dimensions Within Your Lessons

“Look for (appropriate dimension) in our lesson today on (content area).”

Use the Big Idea to summarize or end lessons.

Label your daily agenda and lesson plans with the dimension icons.

Have students label all work with the appropriate dimension icons.

Label all classroom work and charts with the dimension icons.
Post a set of the dimensions of depth and complexity posters clearly in your room.

*This prompts integration into discussions, and shows students you value the icons as intellectual tools.*
But remember,

we are not teaching the dimension icons, we are teaching concepts to new levels of depth and complexity using pictures to stand for the thinking strategies.
Connecting Depth and Complexity to Higher Order Thinking Skills

Each level of questions uses verbs to describe the objectives desired.

These verbs, with companion descriptors, serve as thinking keys to activate the type of learning that will occur within the depth and complexity.
Activate Deeper Learning

**Language of the Discipline:** categorize, identify.

**Details:** describe, differentiate.

**Patterns:** summarize, make analogies.

**Trends:** prioritize, predict.

**Rules:** judge credibility, hypothesize.

**Ethics:** judge with criteria, determine bias.

**Big Idea:** prove with evidence, identify main idea.

**Unanswered Questions:** note ambiguity, distinguish fact from fiction.
Activate more Complex Learning

Different Points of View: *argue*, *determine bias*, *classify*.

Relationships Over Time: *relate*, *sequence*, *order*.

Relationships Across Discipline: *compare and contrast*, *show relationship*.