

**STANDARDS & CRITERIA for
CLASSROOM INSTRUCTION**

5 Students are performing higher order thinking.

4 Students engaged in at least one major activity occupying a substantial portion of time performing higher order thinking.

3 Students are primarily engaged in lower order thinking; there is at least one significant question or activity in which students perform higher order thinking.

2 Students are primarily engaged in lower order thinking; at some point higher order thinking performed as a minor diversion in lesson.

1 Students engaged in only lower order thinking.

5 Knowledge is deep because lesson is structured with focus on a significant topic; students demonstrate fullness and complexity of understanding.

4 Knowledge is relatively deep because lesson is structured with focus on a significant topic; students demonstrate complexity of an important idea.

3 Knowledge is treated unevenly during instruction; idea may be presented in depth but focus not sustained.

2 Knowledge remains superficial and fragmented.

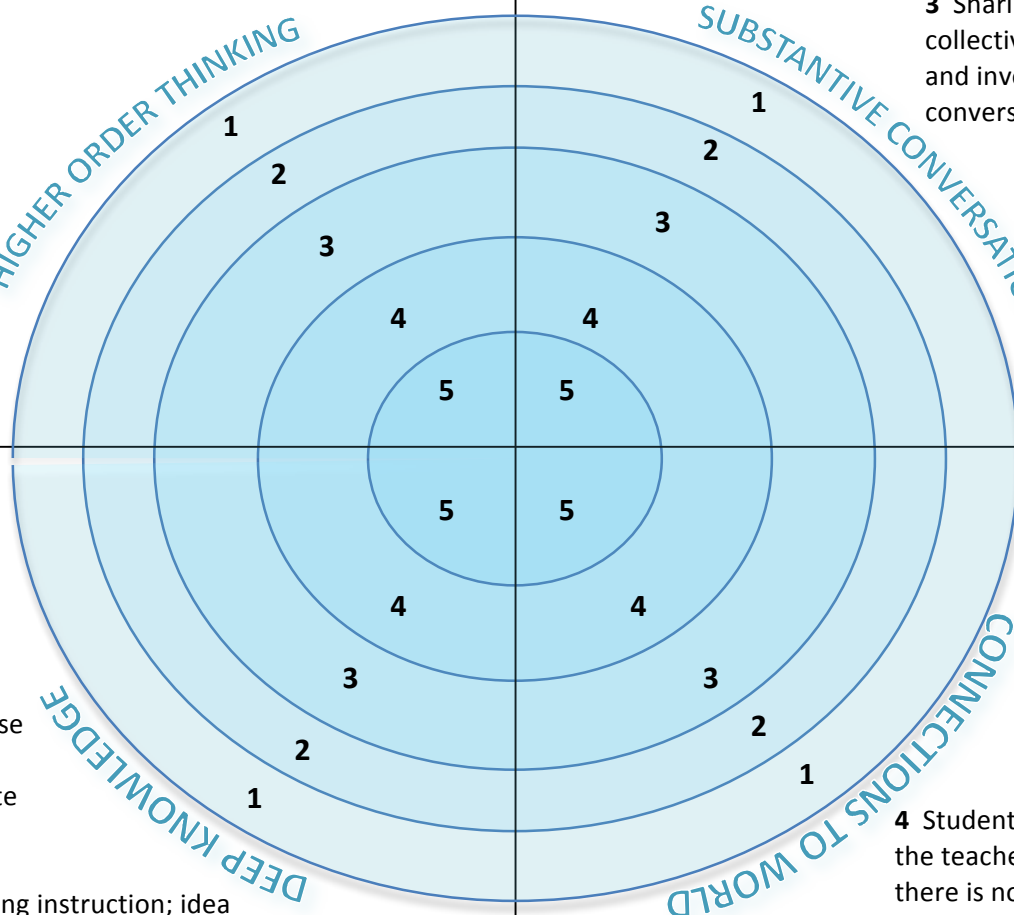
1 Knowledge is thin; coverage of simple information to be remembered.

HIGHER ORDER THINKING

SUBSTANTIVE CONVERSATION

DEEP KNOWLEDGE

CONNECTIONS TO WORLD



5 All features of substantive conversation occur, with at least one example of **sustained** conversation, and almost all students participate.

4 All features of substantive conversation occur, with at least one example of **sustained** conversation, and many students participate.

3 Sharing and/or coherent promotion of collective understanding of subject matter occur and involve at least one example of **sustained** conversation.

2 Sharing and/or coherent promotion of collective understanding of subject matter occur briefly and involve at least one example of **two consecutive** interchanges.

1 Virtually no sharing and/or collective understanding of subject matter; no substantive conversation.

5 Students study or work on a topic, problem, or issue the teacher and students see connected to personal experiences or contemporary issues; students recognize connection between classroom knowledge and situations outside classroom and make effort to affect or influence larger audience beyond classroom.

4 Students study or work on a topic, problem, or issue the teacher and students see connected...However, there is no effort to use knowledge beyond classroom...

3 Students study a topic, problem, or issue the teacher connects... implications of connections remain abstract or hypothetical; no effort to influence a larger audience.

2 Students encounter a topic, problem, or issue the teacher tries to connect... connection is weak and there is no evidence students make the connection.

1 Lesson topic and activities have no clear connection to anything beyond itself; teacher offers no justification beyond the need to perform well in class.

Tips for Scoring Higher Order Thinking

To what extent do students use lower order thinking processes? To what extent do students use higher order thinking processes?

- Lower order thinking occurs when students are asked to receive or recite factual information or to employ rules and algorithms through repetitive routines.
- Students are not required to do much intellectual work since the purpose of the instructional process is to simply transmit knowledge or to practice procedural routines.
- Higher order thinking requires students to manipulate information and ideas in ways that transfer their meaning and implications. This transformation occurs when students combine facts and ideas in order to synthesize, generalize explain, hypothesize or arrive at some conclusion or interpretation.
- When students engage in higher order thinking, an element of uncertainty is introduced into the instructional process and makes instructional outcomes not always predictable; i.e., the teacher is not certain what will be produced by students.

Tips for Scoring Deep Knowledge

To what extent is knowledge deep? To what extent is knowledge shallow and superficial?

- Knowledge is shallow, thin or superficial when it does not deal with significant concepts or central ideas of a topic or discipline. Knowledge is also shallow when important, central ideas have been trivialized by the teacher or students, or when it is presented as non-problematic.
- Evidence of shallow understanding by students exists when they do not or cannot use knowledge to make clear distinctions, arguments, solve problems and develop more complex understanding of other related phenomena.
- Knowledge is deep or thick when it concerns the central ideas of a topic or discipline and because such knowledge is judged to be crucial to a topic or discipline.
- For students, knowledge is deep when they develop relatively complex understandings of these central concepts. Instead of being able to recite only fragmented pieces of information, students develop relatively systematic, integrated or holistic understanding. Mastery is demonstrated by their success in producing new knowledge by discovering relationships, solving problems, constructing explanations, and drawing conclusions.

Tips for Scoring Substantive Conversation

To what extent is classroom discourse devoted to creating or negotiating understandings of subject matter?

High levels of substantive conversation include considerable teacher-student and student-student interaction about the ideas of a topic; the interaction is reciprocal, and it promotes coherent shared understanding. Features are:

- The talk is about subject matter in the discipline and includes higher order thinking such as making distinctions, applying ideas, forming generalizations, raising questions; not just reporting of experiences, facts, definitions, or procedures.
- The conversation involves sharing of ideas and is not completely scripted or controlled by one party. Sharing is best illustrated when participants explain themselves or ask questions in complete sentences, and when they respond directly to comments of previous speakers.
- The dialogue builds coherently on participants' ideas to promote improved collective understanding of a theme or topic. Substantive conversation resembles the kind of sustained exploration of content characteristic of a good seminar where student contributions lead to shared understandings.

Tips for Scoring Connections to the Real World/ Value Beyond School

To what extent is the lesson, activity, or task connected to competencies or concerns beyond the classroom?

- To what extent does the class have value and meaning beyond the instructional context? In a class with little or no value beyond, activities are deemed important for success only in school (now or later), but for no other aspects of life. Student work has no impact on others and serves only to certify their level of competence or compliance with the norms and routines of formal schooling.
- A lesson gains in authenticity the more there is a connection to the larger social context within which students live. Two areas in which student work can exhibit some degree of connectedness are:
 - a real world public problem; i.e., students confront an actual contemporary issue or problem, such as applying statistical analysis in preparing a report to the city council on the homeless;
 - students' personal experiences; i.e., the lesson focuses directly or builds upon students' actual experiences or situations.

High scores can be achieved when the lesson entails one or both of these.

Adapted from *A guide to authentic instruction and assessment: Vision, standards and scoring* by Fred M Newmann, Walter G. Secada, and Gary G. Wehlage (Paperback - 1995)