International Center for Leadership in Education

Oklahoma Principal's Academy
February 21, 2013
Day 2

Collaborative Instructional Review Phase I Training

Knowledge Taxonomy

Student Driven

Teacher Driven

Evaluation: *"Judge the outcome"*		**6**
Compare and discriminate between ideas	Verify value of evidence / Recognize subjectivity	
Assess values of theories, presentations	Make judgments/choices based	
Make choices on reasoned arguments	on criteria/standards/conditions	

Synthesis: *"Putting together"*		**5**
Use old ideas to create new ones	Use creativity to make something new	
Relate knowledge from several areas	Generalize from given facts	
Reorganize parts to create new original thing, idea, concept	Predict or draw conclusion	

Analysis: *"Taking apart"*		**4**
See patterns/relationships	Organize parts	
Recognize of hidden parts	Identify components	
Take ideas/learning apart	Separate into component parts	
Find unique characteristics		

Application: *"Making use of knowledge"*		**3**
Use of information	Solve problems using required skills and/or knowledge	
Use methods, concepts, theories in new situations	Make use of learning in new or concrete manner, or to solve problems	

Comprehension: *"Confirming"*		**2**
Understand information	Order, group, infer causes	
Translate knowledge into new context	Interpret facts, compare/contrast	
Grasp meaning of materials learned, communicate learnings, and interpret learnings	Predict consequences	

Knowledge: *"Information gathering"*		**1**
Observation and recall of information	Mastery of subject matter	
Knowledge of dates, events, places	Gain specific facts, ideas, vocabulary, etc.	

C

Assimilation
Students extend and refine their knowledge so that they can use it automatically and routinely to analyze and solve problems and create solutions.
Student Think
(Relationships important)

D

Adaptation
Students have the competence that, when confronted with perplexing unknowns, they are able to use their extensive knowledge base and skills to create unique solutions and take action that further develops their skills and knowledge. **Student Thinks and Works**
(Relationships critical!)

A

Acquisition Students gather and store bits of knowledge and information and are expected to remember or understand this acquired knowledge.
Teacher Work
(Relationship of little importance)

B

Application
Students use acquired knowledge to solve problems, design solutions, and complete work. The highest level of application is to apply appropriate knowledge to new and unpredictable situations. **Student Work**
(Relationships important)

Rigor x Relevance x Relationships = Meaningful Learning
If one of these are missing, the equation equals 0
R x R x 0 = 0
R x 0 x R = 0
0 x R x R = 0

Application Model

1	2	3	4	5
Knowledge in one discipline	Apply knowledge in one discipline	Apply knowledge across disciplines	Apply knowledge to real world, predictable situations	Apply knowledge to real world, unpredictable situations

Classroom ⟶ Real Life

Using Rigor and Relevance to Create Effective Instruction

Verb List by Rigor/Relevance Quadrant

- Verbs are not always an absolute indicator of the level of rigor and relevance. Also consider the context and work in which students are engaged when determining the level of rigor and relevance.
- Some verbs are listed in multiple quadrants.
- Verbs are listed where they are used most frequently.

C

analyze	differentiate
categorize	discriminate
classify	evaluate
compare	examine
conclude	explain
contrast	infer
defend	judge
diagram	justify
	prove

D

adapt	justify
argue	modify
compose	predict
conclude	prioritize
construct	propose
design	rate
evaluate	recommend
formulate	revise
invent	teach

A

calculate	match
choose	memorize
count	name
define	recall
describe	recite
find	record
identify	select
label	spell
list	
locate	

B

adjust	interview
apply	make
build	model
calculate	play
construct	produce
demonstrate	relate
dramatize	sequence
draw	show
follow	solve
illustrate	use
interpret	

Product List by Quadrant

One way to identify the current levels of rigor and relevance as well as raise those levels is to reflect on the verbs used in test questions and the products that comprise student work. The following is a list of products linked to each quadrant. These products are not always perfect indicators of the level of rigor and relevance, but they often can be used to identify the level.

- Products listed in each quadrant are the typical products that students use to demonstrate learning in each quadrant. Also consider the context and work that students are engaged in when determining the level of rigor and relevance.
- Some products can be used in multiple quadrants.
- Products are listed where they are used most frequently.

C	
abstract	exhibit
annotation	inventory
blog	investigation
chart	journal
classification	outline
debate	plan
essay	report
evaluation	

D	
adaptation	new game
blueprint	newspaper
book	play
brochure	poem
debate	song
device	trial
editorial	video
estimation	website
invention	wiki
lesson	
model	

A	
definition	true/false
explanation	selection
list	reproduction
quiz	workbook
answer	worksheet
recitation	

B	
collage	notes
scrapbook	painting
collection	performance
data	service
set	skit
demonstration	solution
interpretation	survey

Teacher Questions by Quadrant

Ask questions to summarize, analyze, organize, or evaluate:

- How are these similar/different?
- How is this like_____?
- What's another way we could say/explain/express that?
- What do you think are some reasons/causes that _____?
- Why did_____changes occur?
- How can you distinguish between_____?
- What is a better solution to_____?
- How would you defend your position about_____?
- What changes to_____would you recommend?
- What evidence can you offer?
- How do you know?
- Which ones do you think belong together?
- What things/events lead up to_____?
- What is the author's purpose?

Ask questions to predict, design, or create:

- How would you design a_____to_____?
- How would you compose a song about_____?
- How would you rewrite the ending to the story?
- What would be different today, if that event occurred as _____?
- Can you see a possible solution to_____?
- How could you teach that to others?
- If you had access to all the resources, how would you deal with_____?
- How would you devise your own way to deal with _____?
- What new and unusual uses would you create for _____?
- Can you develop a proposal that would_____?
- How would you have handled_____?
- How would you do it differently?

C **D**

Note: Quadrants B and D involve students "doing" as well as answering questions, but these questions help to move students toward increased relevance.

A **B**

Ask questions to recall facts, make observations, or demonstrate understanding:

- What is/are_____?
- How many_____?
- How do/does_____?
- What did you observe_____?
- What else can you tell me about_____?
- What does it mean_____?
- What can you recall_____?
- Where did you find that_____?
- Who is/was_____?
- In what ways_____?
- How would you define that in your own terms?
- What do/did you notice about this_____?
- What do/did you feel/see/hear/smell_____?
- What do/did you remember about_____?
- What did you find out about_____?

Ask questions to apply or relate:

- How would you do that?
- Where will you use that knowledge?
- How does that relate to your experience?
- How can you demonstrate that?
- What observations relate to_____?
- Where would you locate that information?
- Calculate that for_____?
- How would you illustrate that?
- How would you interpret that?
- Who could you interview?
- How would you collect that data?
- How do you know it works?
- Can you show me?
- Can you apply what you know to this real-world problem?
- How do you make sure it is done correctly?

Student Performance – Knowledge Taxonomy

List Big Idea (Standard)

_____

_____

List Essential Knowledge/Skill

_____

_____

Directions:

☐ List a way students could show you they understand the benchmark at each level on the Knowledge Taxonomy

☐ Start with the knowledge (Awareness) level and work from the bottom up.

☐ Use your verb chart to help you.

6   Evaluation   _____

_____

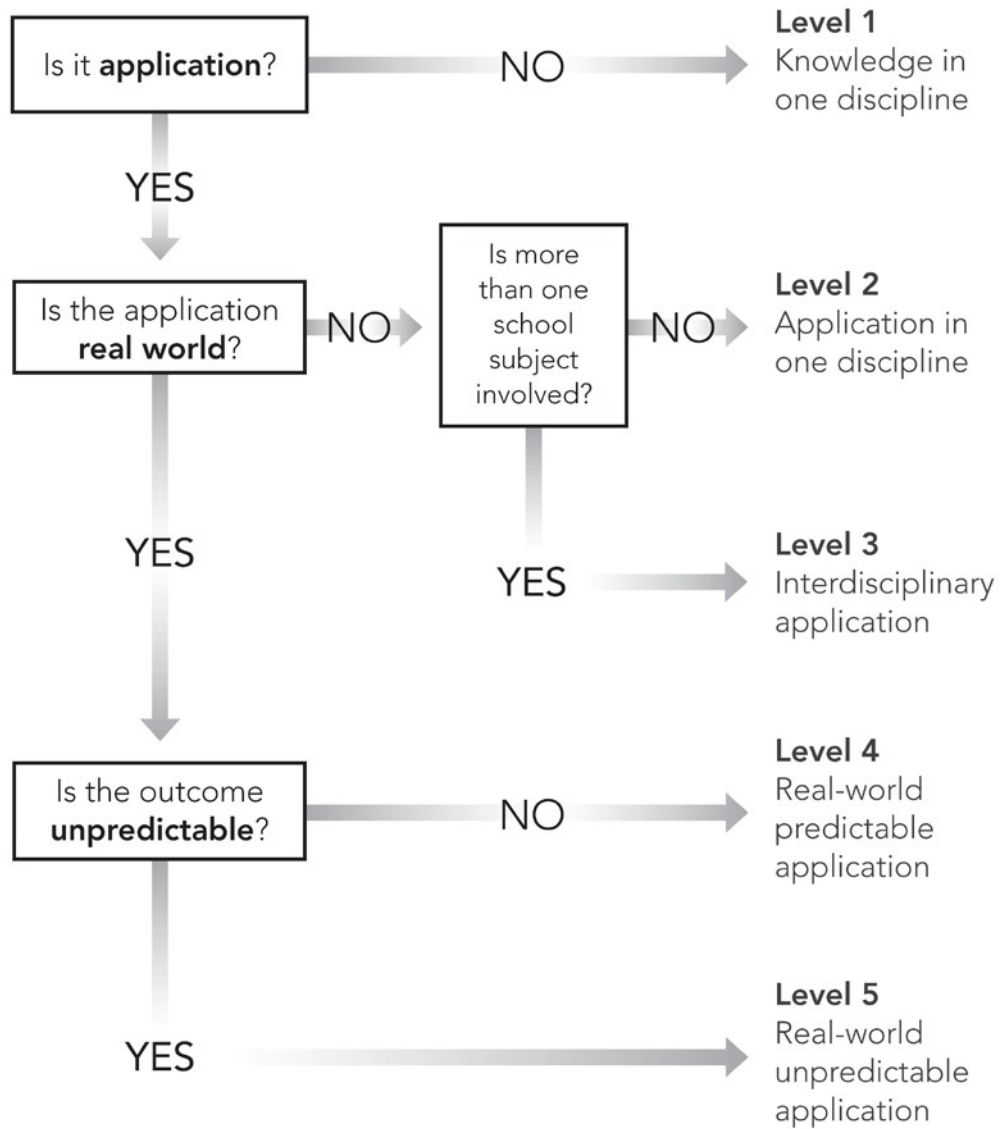5   Synthesis   _____

_____

4   Analysis   _____

_____

3   Application   _____

_____

2   Comprehension   _____

_____

1   Awareness   _____

_____

Application Model Decision Tree

Directions: Select a task, application, or activity and then answer the following questions. See next page for clarification of the questions.

```
Is it application?  ──NO──►  Level 1
                             Knowledge in
    │                        one discipline
   YES
    │
    ▼
Is the application  ──NO──►  Is more     ──NO──►  Level 2
real world?                  than one             Application in
                             school               one discipline
    │                        subject
   YES                       involved?
    │                            │
    │                           YES
    │                            │
    │                            ▼
    │                          YES  ──►  Level 3
    │                                    Interdisciplinary
    │                                    application
    ▼
Is the outcome      ──NO──►  Level 4
unpredictable?               Real-world
                             predictable
    │                        application
   YES
    │
    ▼
YES  ──────────────────────► Level 5
                             Real-world
                             unpredictable
                             application
```

Application Model Decision Tree

Directions: Use the following statements to clarify where a task, application, or assessment belongs on the Application Model.

Is it **application**?	YES	NO
	Requires use of knowledge	Requires only recall or understanding
	Requires students to actually use practice steps in a procedure	Requires learning steps in a procedure
	Uses previous knowledge to solve problems, create a design, or communicate information	Requires memorization of facts or formulas
	Asesses performance	Assess content knowledge

Is the application **real world**?	YES	NO
	Application occurs in same way it is used by adults	Application occurs only in school
	Standards for performance are same as for adult roles	Lower standards of performance are acceptable
	Students have access to real-world resources (tools, references, etc.)	Resources are limited
	Task must be completed in same time frame as real-world	Students have extended time to complete the task

Is the outcome **unpredictable**?	YES	NO
	Application has uncertain results	Application involves routine solution
	Unknown factors involved (environment, people, time)	Parameters are controlled
	Students have individual and unique solutions to problems	All students complete similar designs or solutions

Student Performance – Application Model

List Big Idea (Standard)

_____

_____

List Essential Knowledge/Skill

_____

_____

Directions:

☐ List a way students could show you they understand and can apply the benchmark at each level on the Application Model.

☐ Start with the lowest level of application (knowledge in one discipline) and work from the bottom up.

☐ Use your Application Model Decision Tree to help you.

5	Apply knowledge to real-world unpredictable situations	_____
4	Apply knowledge to real-world predictable situations	_____
3	Apply knowledge across disciplines	_____
2	Apply knowledge in discipline	_____
1	Knowledge in one discipline	_____

SCHOLASTIC
ACHIEVEMENT PARTNERS

Lesson Reflection Worksheet

Name:

District:

School:

Subject/ Grade:

Time of Visit:

Identify the unit of instruction that you will be covering during this visit.

Name of Unit or Experience:

Standard(s) Addressed:

1. Briefly identify what you expect students to learn in this lesson or experience.

2. Describe the key student work (content and/or skills) that students will do as part of this lesson or experience.

[ ]

3. Identify how this learning experience correlates to the standard(s).

[ ]

4. What assessments(s) will you use?

[ ]

5. Identify areas of high rigor/high relevance in this lesson.

[ ]

Collaborative Instructional Review - Classroom Visitation Rubric for Rigor

Evidence of Rigor	Beginning	Developing	Meeting	Exceeding
Thoughtful Work	Student work is easy, usually only requiring a single correct answer.	Student work occasionally requires extended time to complete, stretches student learning, and requires use of prior knowledge.	Student work requires extensive use of prior knowledge, is frequently creative and original, and requires students to reflect and revise for improved quality.	Student work requires extensive creativity, originality, design, or adaptation.
High-Level Thinking .	Student work requires simple recall of knowledge.	Student work requires explanation and understanding of knowledge and/or limited application. Students occasionally use higher order thinking skills.	Students demonstrate higher order thinking skills, such as evaluation, synthesis, creativity, and analysis. Students evaluate their own work and identify steps to improve it.	Students routinely use higher order thinking skills, such as evaluation, synthesis, creativity, and analysis. Students skillfully evaluate their own work and the work of others.
Oral Extended Student Responses	Students' oral responses demonstrate simple recall and basic understanding of knowledge as evidenced by single word responses or recital of facts.	Students' oral responses demonstrate comprehension by explaining information in their own words, and occasionally expressing original ideas and opinions. Students participate in discussions with peer groups.	Students' oral responses demonstrate an ability to extend and refine knowledge automatically, to solve problems routinely, and to create unique solutions. Students are able to facilitate class discussions.	Students' oral responses demonstrate logical thinking about complex problems, and the ability to apply prior knowledge and skills when confronted with perplexing unknowns. Students are skillful in discussions with peers and adults.

Collaborative Instructional Review - Classroom Visitation Rubric for Relevance

Evidence of Relevance	Beginning	Developing	Meeting	Exceeding
Meaningful Work	Student work is routine and highly structured, reflects knowledge in one discipline, and usually requires the memorization of facts and formulas or an assessment of content knowledge.	Student work is structured, reflects a basic application of knowledge, and occasionally, interdisciplinary applications. Students practice using the steps in a procedure and previous knowledge to solve problems and create solutions.	Student has choices for work that is challenging, often original, reflects application of knowledge, and requires performance, consistent with real-world applications.	Student work reflects real-world unpredictable applications of knowledge that have unknown factors, and individual and unique solutions to problems.
Authentic Resources	Students rely on the teacher as their primary resource to complete work.	Students use and rely on the teacher as their primary resource but also use textbooks, references, and secondary reading material to complete work.	Students use real-world resources such as manuals, tools, technology, primary source documents, and/or interviews to complete work.	Students select and use multiple real-world resources, as well as new or unique resources, perhaps unknown to teacher.
Learning Connections	Students see learning only as a school requirement Unrelated to their future or their outside lives.	Students begin to see connections between their learning and their lives as it relates to personal examples and applications to solve problems.	Students see connections between what they are learning and their lives, and can make links to real-world applications.	Students are committed to the learning experience as something that is an essential part of meeting their future goals and life aspirations.

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Collaborative Instructional Review - Classroom Visitation Rubric for Learner Engagement

Evidence of Learner Engagement	Beginning	Developing	Meeting	Exceeding
Verbal Participation	Students rarely share ideas, ask questions, or answer questions.	Students follow classroom procedures but may be reluctant to share ideas, or ask or answer questions.	Students are eager to share ideas, and ask and answer questions.	Students confidently share ideas, and ask and answer questions related to the learning experience.
Body Language	Students exhibit negative body language.	Students exhibit some negative and some positive body language.	Students exhibit positive body language, and make eye contact with others.	Students' body language shows commitment to learn.
Focus	Students lack focus on the learning experience.	Students are focused on the learning experience with limited distractions.	Students are focused on the learning experience.	Students are committed to high-quality work in the learning experience and persevere to completion.
Breadth	Few students are fully engaged in classroom instruction and activity.	Some students are fully engaged in classroom instruction and activity.	Nearly all students are fully engaged in classroom instruction and activity.	All students are fully engaged in classroom instruction and activity.

Collaborative Instructional Review- Classroom Visitation Rubric for Literacy

Evidence of Literacy	Beginning	Developing	Meeting	Exceeding
Text Complexity	Students comprehend simple text at an information retrieval level using texts or teacher read-aloud materials.	Students comprehend simple text for main idea, summary, and initial analysis of information. Students understand familiar vocabulary, clear cause-effect relationships, and simple sequences of events. Students can respond to basic questions for which answers are implicit or directly implied.	Students comprehend complex texts, determine meaning of virtually any word, understand subtle cause-effect relationships, understand simple sequence of events, and summarize, evaluate, or analyze the text.	Students comprehend complex texts, understand implied and complex cause-effect relationships, understand meaning of context-dependent words, analyze a complex set of ideas or sequence of events, and explain multiple interpretations of the story or event. Students can explain how specific ideas develop over the course of the text. Students are able to integrate information from primary and secondary sources.
Digital Use	Students' work often consists of copying directly from other sources. Use of digital tools is rare, and most often involves lower levels of rigor and relevance.	Students' use of digital sources is limited to demonstrating awareness, comprehension, or basic application of knowledge.	Students demonstrate effective integration of single and multiple digital sources to understand, infer, and act upon knowledge, to facilitate communication, and/or to create solutions. Students demonstrate the ability to apply information to relevant, real-life scenarios. Students demonstrate an ability to use basic citation.	Students integrate multiple digital sources, independently evaluating the credibility and accuracy of sources. Students skillfully use this information to create solutions, offer justifiable points of view, apply to relevant, real-life, and complex scenarios, and/or create a new project. Students correctly cite information and demonstrate the ability to teach digital strategies to others.

Speaking, Listening, and Collaborating	Students work in isolation. They demonstrate limited ability to apply their language skills to communicate effectively, frequently, and persuasively in academic and/or social communication.	Students collaborate and communicate integrated information to demonstrate awareness, comprehension, or basic application of knowledge.	Students collaborate and communicate integrated information to adapt, create, solve, justify, and apply knowledge. Students are given an opportunity to evaluate other's points of view and present their own information.	Students collaborate in person and virtually to contribute fully to point-of-view conversations, debates, problem solving, and integration of the ideas of others to achieve a common goal. Students are able to present information, reasoning, and supporting evidence. Students understand and use language, culture, and verbal and non-verbal communication methods.
Document and Quantitative Literacy	Students have few or no opportunities to utilize strategies for comprehending information in tables, charts, graphs, and other visual modes of presenting information.	Students can comprehend simple information contained in tables, charts, graphs, and other visual modes of presenting information.	Students compare or combine information contained in tables, charts, graphs, and other visual modes of presenting information, using inference, analysis, synthesis, and evaluation skills. Students use new information to make predictions based on the data.	Students use complex visually-based sources of information, as well as numeracy-based sources to develop solutions, analyze the correctness and usefulness of data, determine how to use the information to complete complex tasks, and evaluate the results of actions or predict outcomes.

Written Communication	Students' writing skills are underdeveloped and/or interfere with the ability to communicate in writing for a purpose and audience.	Students use basic writing skills to communicate. Writing demonstrates limited development of ideas, some evidence of organization, minor errors in sentence structure, and acknowledgement and basic justification of point of view.	Students use the skills and characteristics of good writing to communicate simple ideas for a purpose and audience. Writing demonstrates clear ideas, effective organization, complete sentences, and acknowledgement and basic justification of point of view. Students demonstrate a limited ability to edit their work.	Students use the skills and characteristics of good writing to communicate complex ideas and concepts in multiple formats for a variety of purposes and audiences. Writing demonstrates clarity of analysis, use of complex sentence structure, effective organization, acknowledgement and justification of point of view, and creative solutions or insights. Students demonstrate an ability to edit their work and/or the work of others.

Classroom Visitation Protocol – Tool

School Name:_____   Lexile:_____

Date:_____   Time:_____   Duration:_____   Teacher:_____

Rigor

Evidence of Rigor	Beginning	Developing	Meeting	Exceeding	Not Observed	Evidence to Support Rating
Thoughtful Work	○	○	○	○	○	
High-Level Thinking .	○	○	○	○	○	
Oral Extended Student Responses	○	○	○	○	○	

Relevance

Evidence of Relevance	Beginning	Developing	Meeting	Exceeding	Not Observed	Evidence to Support Rating
Meaningful Work	○	○	○	○	○	
Authentic Resources	○	○	○	○	○	
Learning Connections	○	○	○	○	○	

Learner Engagement
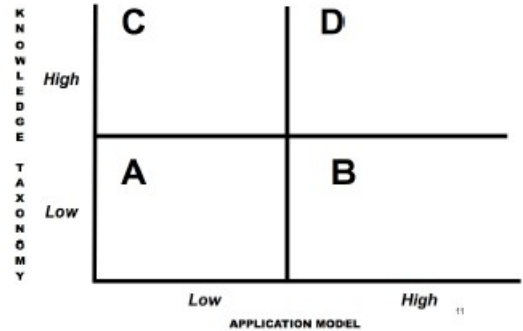
Evidence of Learner Engagement	Beginning	Developing	Meeting	Exceeding	Not Observed	Evidence to Support Rating
Verbal Participation	○	○	○	○	○	
Body Language	○	○	○	○	○	
Focus	○	○	○	○	○	
Breadth	○	○	○	○	○	

Literacy

Evidence of Literacy	Beginning	Developing	Meeting	Exceeding	Not Observed	Evidence to Support Rating
Text Complexity	○	○	○	○	○	
Digital Use	○	○	○	○	○	
Speaking, Listening, and Collaborating	○	○	○	○	○	
Document and Quantitative Literacy	○	○	○	○	○	

Written Communication	○	○	○	○	○	

Overall Rating

Overall Rating of Rigor and Relevance		Please check the overall quadrant rating.
Quadrant A	Teacher centered, student recall and comprehension, memorization, no application of learning	
Quadrant B	High application, students working independently or in groups, interdisciplinary and real world	
Quadrant C	High level thinking and reflection, summarizing, analyzing, student original work, school-based problems	
Quadrant D	Challenging real-world problems, student design, creativity, original solutions, real-world products	