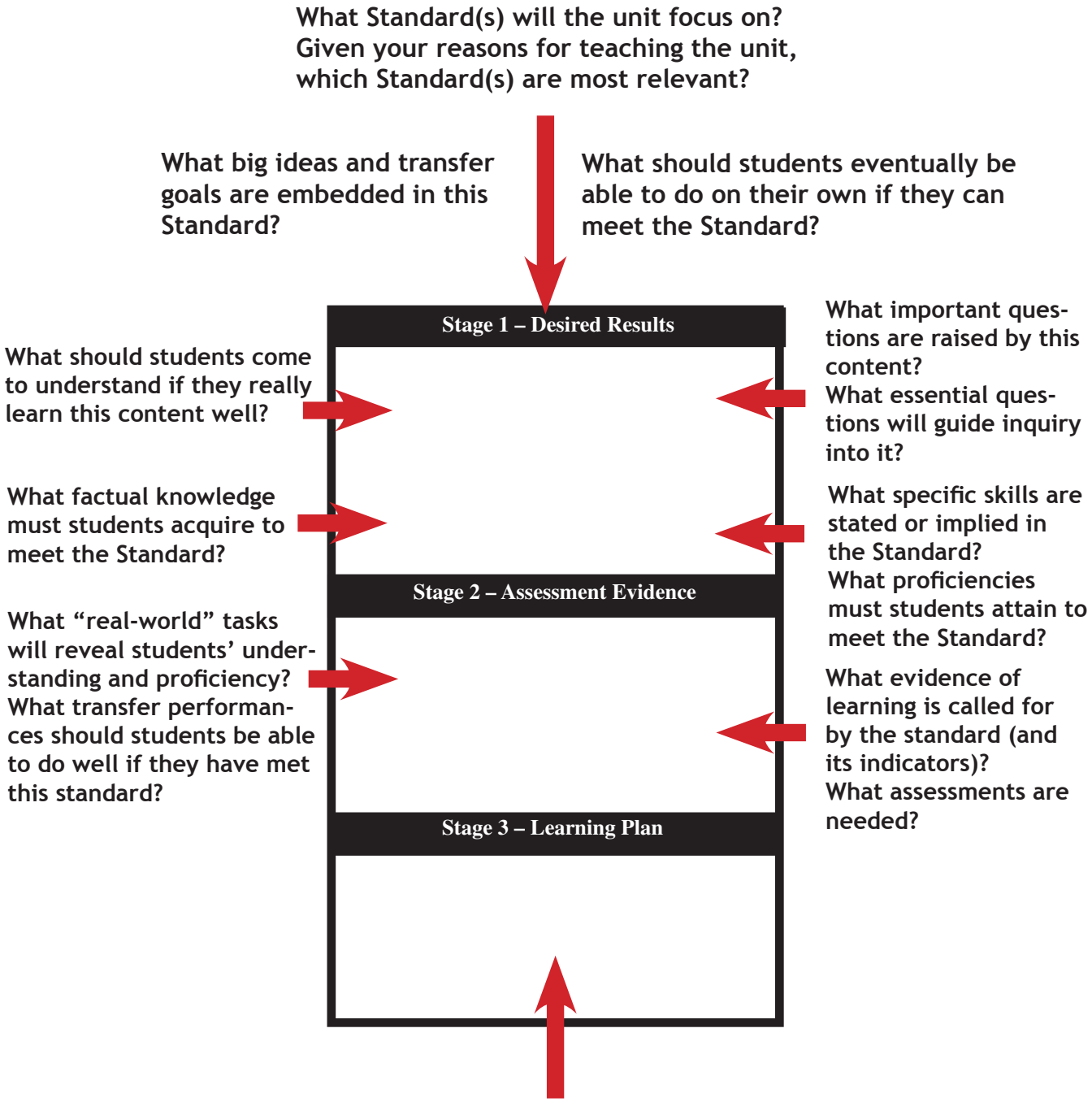
Working with Standards using UbD



Unpacking Standards – "Sideways" Method

Standards

MATHEMATICS Common Core State Standards

Mathematical Practices #4 - Model with mathematics
Mathematically proficient students can apply the mathematics they know to solve problems arising in everyday life, society, and the workplace. In early grades, this might be as simple as writing an addition equation to describe a situation. In middle grades, a student might apply proportional reasoning to plan a school event or analyze a problem in the community....

Mathematically proficient students who can apply what they know are comfortable making assumptions and approximations to simplify a complicated situation, realizing that these may need revision later. They are able to identify important quantities in a practical situation and map their relationships...

They can analyze those relationships mathematically to draw conclusions. They routinely interpret their mathematical results in the context of the situation and reflect on whether the results make sense, possibly improving the model if it has not served its purpose.

TRANSFER GOAL(S) *Students will be able to independently use their learning to...*

apply the mathematics they know to solve problems arising in everyday life, society, and the workplace.

UNDERSTANDINGS
Students will understand that...

1. Mathematical models simplify and connect phenomena so that we might better understand them.
2. Mathematical models must be viewed critically so that they do not mislead us into thinking that reality is that simple.

ESSENTIAL QUESTIONS
Students will keep considering...

1. How can I simplify this complexity without distorting it?
2. How do I know if my model is a good one (for this particular situation)?
3. What are the limits of mathematical models?

Knowledge *Students will know...*

Skill *Students will be skilled at...*

- simplifiying a complicated situation
- creating & critiquing mathematical models
- analyzing relationships mathematically

CRITERIA

PERFORMANCE TASKS

Other Evidence

Unpacking Standards – "Sideways" Method

Standards

Maine Learning Results - H/PE Motor Skills 1, 2, 7, 8

Performance Indicators:

1. Demonstrate the correct use of skills in simplified versions of a variety of physical activities.

2. Identify the critical elements of more advanced movement skills.

8. Use feedback from others to improve a skill by focusing on critical elements of the skill.

TRANSFER GOAL(S)

Students will be able to independently use their learning to...

- maximize force production and accuracy in all physical activities involving striking (e.g., tennis), throwing (baseball), and kicking (e.g., soccer).
- effectively seek and use feedback to improve their performance.

UNDERSTANDINGS

Students will understand that...

- A muscle that contracts through its full range of motion will generate greater force.
- Follow-through provides greater momentum on impact or release and helps to improve accuracy.
- Self-directed learners analyze performance and make adjustments on the basis of feedback to improve their performance.

ESSENTIAL QUESTIONS

Students will keep considering...

- *How can I hit with the greatest power without losing control?*
- *How can I improve my performance?*

Knowledge

Students will know...

- proper mechanics for grip, stance and swing
- factors affecting force production and control
- rules of the game (e.g., baseball, golf, tennis)

Skill

Students will be skilled at...

- executing swing with full range of motion and follow through
- making adjustments to swing/movement based on feedback

CRITERIA

- detailed observations of effect
- appropriate skill weaknesses identified
- full muscle contraction
- complete follow through

PERFORMANCE TASKS

Students watch a videotape of their performance and check off the skill areas where they see themselves performing consistently well and identify the skills on which they need to work. They practice based on feedback from teacher, peers, and the flight of the ball.

Other Evidence

Teacher and peer observations during practice drills and competition.

Unpacking Standards – "Sideways" Method

Standards

MATHEMATICS Common Core State Standards

Interpret the structure of expressions
1. Interpret expressions that represent a quantity in terms of its context.

Write expressions in equivalent forms to solve problems
3.Choose and produce an equivalent form of an expression to reveal and explain properties of the quantity represented by the expression.

Rewrite rational expressions
6.Rewrite simple rational expressions in different forms.

Mathematical Practices
1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.

TRANSFER GOAL(S)

Students will be able to independently use their learning to...

Solve non-routine **problems** by **persevering: simplify** them, **interpret expressions**, and use **equivalent forms** based on the properties of real numbers and the order of operations.

UNDERSTANDINGS

Students will understand that...

1. In mathematics, we accept certain truths as necessary to permit us to solve problems with logical certainty (e.g., the properties of real numbers), while other rules are conventions that we assume just for effective communication.
2. We can use the commutative, associative and distributive properties properties to turn complex and unfamiliar expressions into simpler ones.

ESSENTIAL QUESTIONS

Students will keep considering...

1. What important rules and conventions are required to make algebra "work"? (What does 'work' mean?)
2. Why and how do we best simplify algebraic expressions?

Knowledge

Students will know...

1. the **commutative**, **associative** and **distributive** properties and to which operation each applies
2. the "order of operations" mathematicians use and why is it needed
3. What it means to "simplify" an expression via equivalent forms

Skill

Students will be skilled at...

1. Write expressions in equivalent forms.
2. Rewrite rational expressions in different forms.
3. Identify equivalence that results from properties and equivalence that is the result of computation.
4. Justify steps in a simplification or computation.

CRITERIA

PERFORMANCE TASKS

Other Evidence

Unpacking Standards – "Sideways" Method

Standards

Maryland Visual Arts

Standard 1.2a: Compare how artists use narrative conventions in selected artworks

Standard 1.2b: Create narrative artworks from observation, memory, and imagination that show setting, characters, action, and differing points of view

Standard 2.3b: Plan personal artworks that interpret the unique styles and forms of different artists

Standard 3.2a: Communicate ideas and concepts by manipulating elements of art and principles of design to achieve specific visual effects

Standard 4.2c: Formulate, apply, and communicate criteria for making aesthetic judgments about personally created artworks and the artworks of others

TRANSFER GOAL(S) *Students will be able to independently use their learning to...*

- Create original narratives based on various themes and media.
- Use the artistic process in the creation of original narrative works.
- Select and effectively apply different media and coventions to the narrative.
- Analyze and critique works of art (including their own) against criteria.

UNDERSTANDINGS

Students will understand that...

- Ideas for artworks may come from observations, imagination, personal experiences, and other artists.
- Artists select, organize, and manipulate art elements and principles of design to create specific effects and communicate meaning.
- Decisions about art and artmaking can be based on established and personally developed criteria.

ESSENTIAL QUESTIONS

Students will keep considering...

- *Where do artists get their ideas?*
- *How do artists tell stories with images?*
- *How can meaning be communicated in artworks?*
- *What do artists consider when making decisions about their work?*

Knowledge *Students will know...*

- background information on selected artists
- key vocabulary and processes related to visual narrative, narrative conventions, art media and techniques
- stages of planning and finalizing compositions

Skill *Students will be skilled at...*

- comparing, analyzing and discussing artworks
- generating ideas through brainstorming and sketching
- planning, selecting and organizing a variety of materials and images in a composition

CRITERIA

- detailed analysis
- effective use of narrative conventions, art elements and design principles to communicate a story
- effective use of media

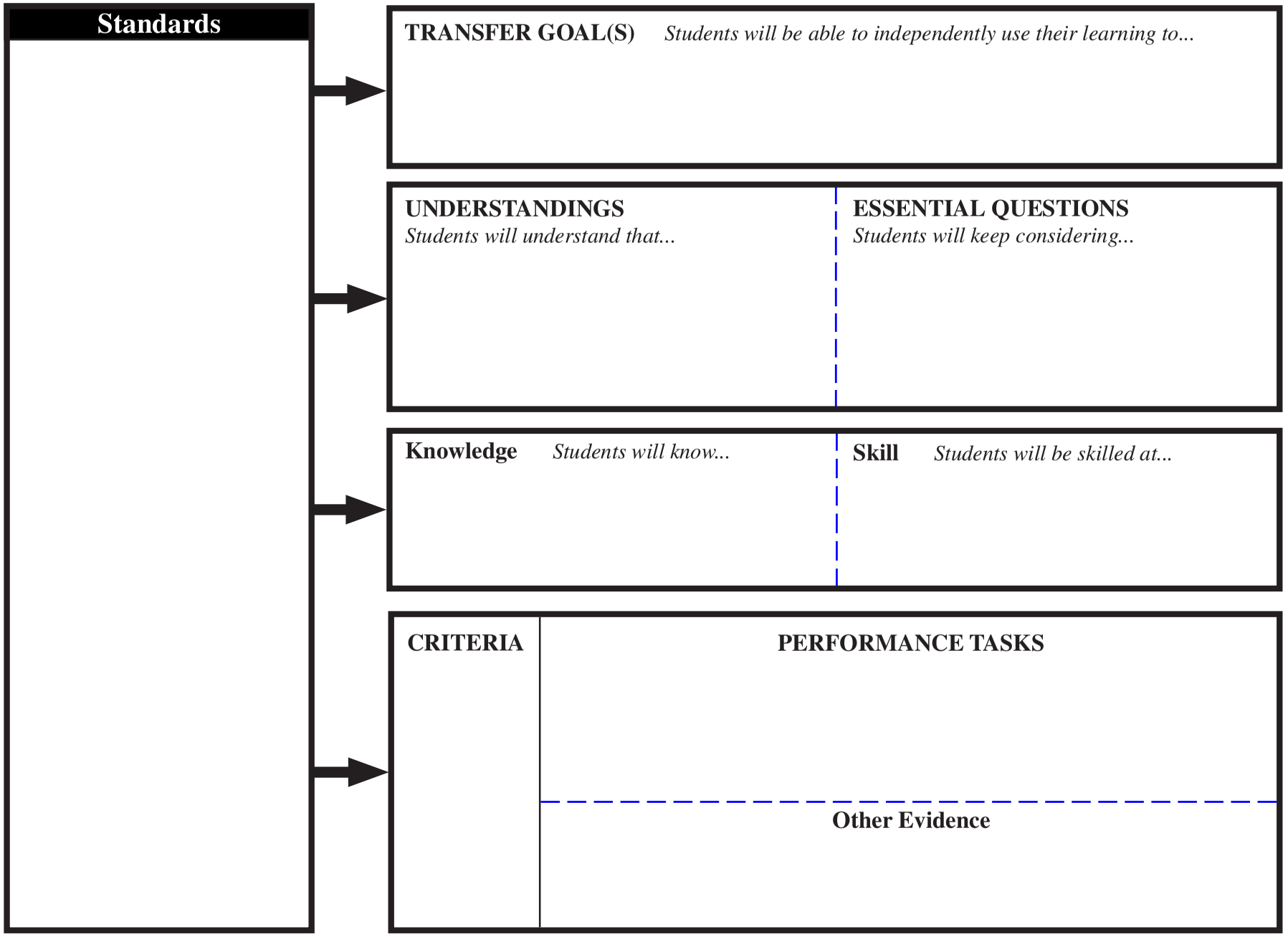
PERFORMANCE TASKS

Students will use information learned from an analysis of selected artists to generate ideas for a personal narrative by planning a series of sketches, selecting one idea to enlarge and finalize in a medium (collage, mixed media, and/or paint) influenced by their study. Students will include a written description of their process.

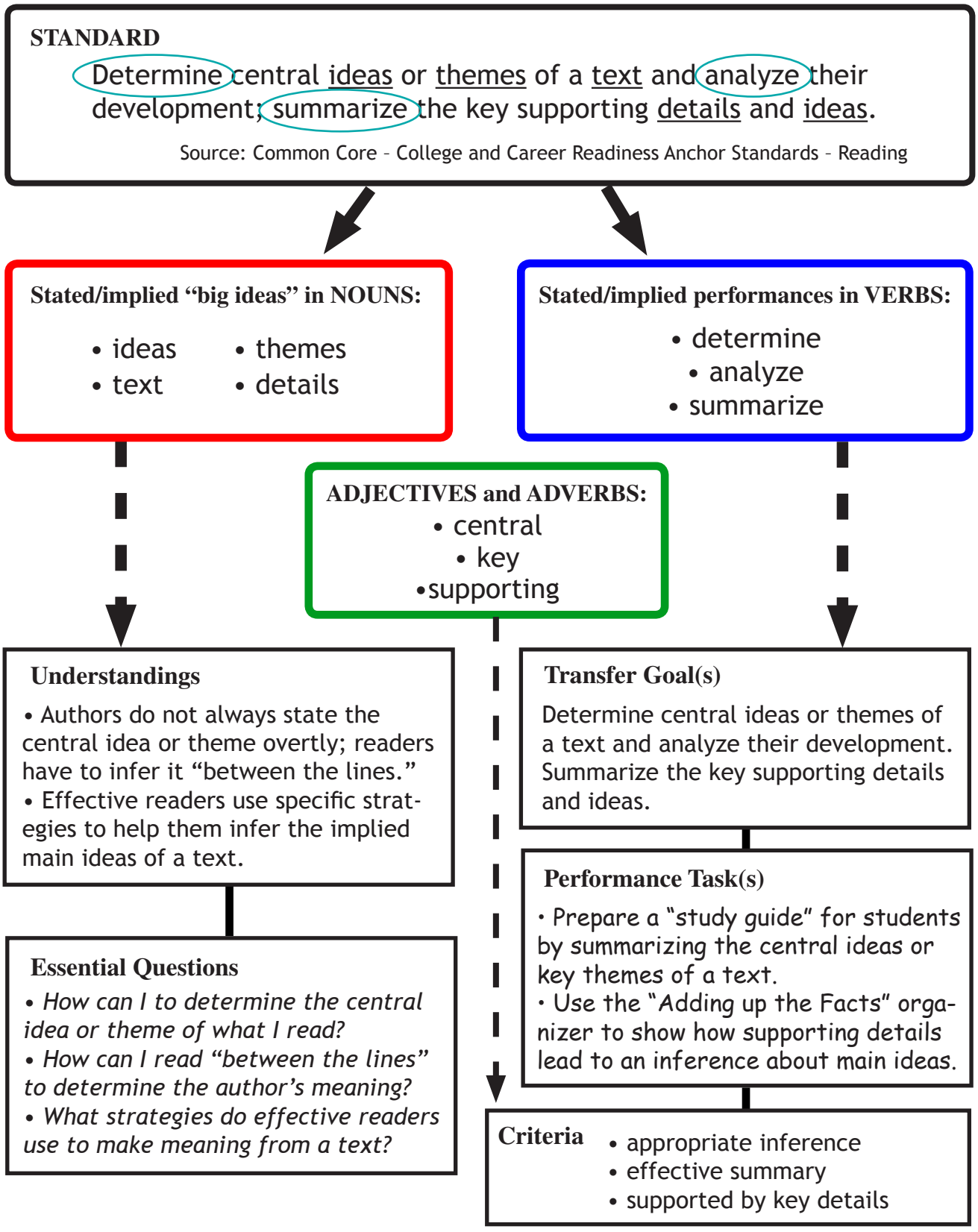
Other Evidence

- Student self-reflections defending decisions made in creating, selecting media, and completing narrative compositions.
- Teacher observations of the artistic process of planning and use of materials.

Unpacking Standards – "Sideways" Method



Unpacking Standards - "Inside Out" Method



Unpacking Standards - "Inside Out" Method

STANDARD

Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

Source: Common Core – College and Career Readiness Anchor Standards – Writing

Stated/implied "big ideas" in NOUNS:

• development • organization • style
• task • audience • purpose
("form follows function")

Stated/implied performances in VERBS:

Produce (writing)

ADJECTIVES and ADVERBS:

• clear
• coherent
• appropriate

Understandings

• A writer's purpose (e.g., to inform, entertain, persuade, etc.) and audience shapes the style, development and organization of the writing.
• Different writing genres and purposes have unique organizational patterns.

Essential Questions

• *What is my goal? For whom am I writing?*
• *How does purpose and audience affect a writer's style and organization?*
• *How do effective writers hook and hold their readers in different genres (e.g., mystery, essay, poem, historical fiction)?*

Transfer Goal(s)

Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

Performance Task(s)

• Write for the same purpose to different audiences, and explain the influence of the target audience on thestyle, word choice, etc.
• Write on the same content in two different genres and explain each genre's influence on organization, style, word choice.

Criteria

• clear • coherent
• appropriate to task, purpose, audience

Unpacking Standards - "Inside Out" Method

STANDARD

All students will connect mathematics to other learning by understanding the interrelationships of mathematical ideas and the roles that mathematics and mathematical modeling play in other disciplines and in life.

Source: New Jersey MATHEMATICS Standard 4.3

Stated/implied "big ideas" in NOUNS:

- mathematical ideas
- mathematical modeling
- disciplines and life

Stated/implied performances in VERBS:

- connect
- model

ADJECTIVES and ADVERBS:

Understandings

- Mathematical models simplify and connect phenomena so that we might better understand them.
- Mathematical models must be viewed critically so that they do not distort or mislead.

Essential Questions

- *In what ways is mathematical modeling useful?*
- *How do you know if your model is a good one (for a particular situation)?*
- *What are the limits of mathematical modeling?*

Transfer Goal(s)

apply the mathematics they know to develop mathematical models of real world phenomena

Performance Task(s)

- Create a mathematical model for a selected "real-world" situation (e.g., seasonal temperatures).
- Critically review a mathematical model for its appropriateness to a given situation.

Criteria

Unpacking Standards - "Inside Out" Method

STANDARD

Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence.

Source: Common Core – College and Career Readiness Standards – Writing

Stated/implied "big ideas" in NOUNS:

- arguments
- claims
- topics or texts
- evidence
- reasoning

Stated/implied performances in VERBS:

- write
- support (claims)
- analyze (topics/texts)
- reasoning

ADJECTIVES and ADVERBS:

- valid
- relevant
- sufficient

Understandings

- The effectiveness of an argument is dependent upon the quality of the supporting evidence used (validity, appropriateness) and how it is conveyed.

Essential Questions

- *What makes an argument convincing?*
- *What is the best evidence I can use to support my argument?*
- *How do I best organize and present my argument?*

Transfer Goal(s)

produce clear and coherent writing to persuade a target audience

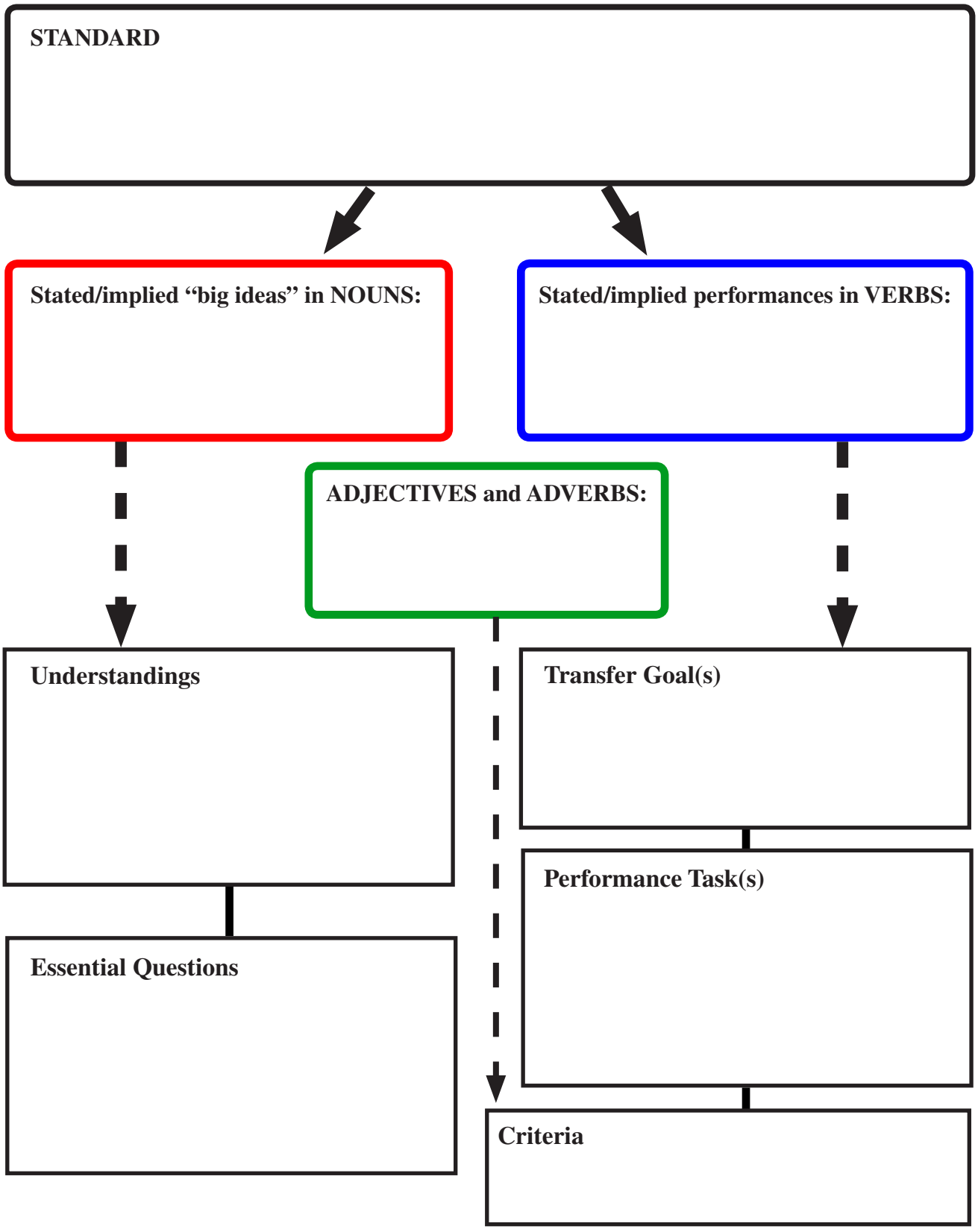
Performance Task(s)

Based on your reading of informational texts on a local or national issue, prepare a (report, letter to editor, essay) for a specific audience to convince them of your position. Your argument should follow a logical sequence with supporting evidence for your position (claim).

Criteria

- valid
- relevant
- sufficient

Unpacking Standards - "Inside Out" Method



Unpacking Standards – "Matrix" Method

Connecticut History/Social Studies
GLEs Grade 5 – The study of events, documents, and people addressing the founding of the United States as a nation, with connections to Connecticut and local history, emphasizing how government works today, with the use of primary source materials.

Content Standards

(selected)

1. Explain how specific individuals and their ideas and beliefs influenced U.S. history (e.g. John Smith, Anne Hutchison, Benjamin Franklin).
2. Compare and contrast the economic, political and/or religious differences that contributed to conflicts.
3. Analyze how some conflicts have been resolved through compromise (e.g. U.S. Constitution).
8. Compare the perspectives of England and the Colonies relative to the events preceding the American Revolution.
√ **9. Compare and contrast the factors leading to Colonial settlement.**
10. Compare and contrast the value of using local/regional/thematic maps to research early settlements in America.
√ **11. Examine the geographical/ topographical significance of the location of early American Colonial settlements (e.g. coastal areas, mountains, rivers, plains).**
√ **12. Describe how early colonists needed to adapt to their new environment.**
13. Compare and contrast settlement patterns in specific areas of the 13 American Colonies.
√ **14. Analyze and assess factors that contributed to European migration.**

Process Standards

Competence in literacy, inquiry, and research skills is necessary to analyze, evaluate, and present history and social studies information.

- ☑ (2.1) Access and gather information from a variety of primary and secondary sources
- ❑ (2.2) Interpret information from a variety of primary and secondary sources
- ☑ (2.3) Create various forms of written work to demonstrate an understanding of history/social studies issues
- ❑ (2.4) Demonstrate an ability to participate in social studies discourse through informed discussion, debate, and effective oral presentation
- ☑ (2.5) Create and present relevant social studies materials using both print and electronic media
- ❑ (3.1) Use evidence to identify, analyze and evaluate historical interpretations
- ❑ (3.2) Analyze & evaluate human action in historical/contemporary contexts from alternative points of view
- ❑ (3.3) Apply appropriate historical, geographic, political, economic, and cultural concepts and methods in proposing and evaluating solutions to contemporary problems

TRANSFER GOAL(S) *Students will be able to independently use their learning to...*

Use primary and secondary sources to produce an informed explanation of *what* happened, *why* it happened, and *how* it impacted the future.

PERFORMANCE TASK Ideas

Task 1 – Create an animated map (using PPT, Animoto, or other technology tool) to illustrate the "push" factors (reasons why people left Europe) and "pull" factors (reasons why people were needed in the New World) leading to settlements during the colonial period.

Task 2 – Students are given a set of cards, with each card representing an individual/group that has relocated to a particular colony for a particular reason. They consider the following questions for their deisgnated person or group: *What will life be like when they get there? How will they need to adapt to their new home?* Consider geography, climate, natural resources and economic factors. Then, students write a series of short letters to the new colonists about what he/she can expect, using their animated map to support their explanation and advice.

Unpacking Standards – "Matrix" Method

The College Board
Advanced Placement Program

WORLD HISTORY

Content Standards

Theme 1: Interaction between humans and the environment
- o Demography and disease
- ✔ Migration
- ✔ Patterns of settlement
- o Technology

Theme 2: Development and interaction of cultures
- o Religions
- ✔ Belief systems, philosophies, and ideologies
- o Science and technology
- o The arts and architecture

Theme 3: State building, expansion and conflict
- o Political structures and forms of governance
- o Empires
- o Nations and nationalism
- o Revolts and revolutions
- o Regional, transregional, and global structures and organizations

Theme 4: Creation, expansion and interaction of
- o Agricultural and pastoral production
- o Trade and commerce
- o Labor systems
- o Industrialization
- o Capitalism and socialism

Theme 5: Development and transformation of social structures
- o Gender roles and relations
- o Family and kinship
- o Racial and ethnic constructions
- o Social and economic classes

Process Standards

Historical Thinking Skills:

❑ **Crafting historical arguments from historical evidence**
✔ Historical argumentation ✔ Appropriate use of relevant historical evidence

❑ **Chronological reasoning**
✔ Historical causation ❍ Patterns of continuity and change over time ❍ Periodization

❑ **Comparison and contextualization**
❍ Comparison ❍ Contextualization

✔ **Historical interpretation and synthesis**
❍ Interpretation ❍ Synthesis

TRANSFER GOAL(S) *Students will be able to independently use their learning to...*

Use primary and secondary sources to produce an informed explanation of *what* happened, *why* it happened, and *how* it impacted the future.

PERFORMANCE TASK Ideas

Consider this questions – *How did the coercive labor systems in the Americas impact the economic growth and cultural patterns of both Africa and the Americas?*
In 1998, UNESCO decreed that August 23rd is the "International Day for the Remembrance of the Slave Trade and its Abolition." The focus of this year's remembrance is how economy shapes public behavior. Prepare a keynote address that describes how coercive labor systems impacted Africa and the Americas both economically and culturally. Be sure to consider alternate points of view in your address as there are some areas of disagreement amongst historians.

Unpacking Standards – "Matrix" Method

Common Core State Standards
Mathematics

Content Standards

Grade 6:

☑ Understand ratio concepts and use ratio reasoning to solve problems.

☑ Apply and extend previous understandings of multiplication and division to divide fractions by fractions.

❑ Compute fluently with multi-digit numbers and find common factors and multiples.

❑ Apply and extend previous understandings of numbers to the system of rational numbers.

❑ Apply and extend previous understandings of arithmetic to algebraic expressions.

❑ Reason about and solve one-variable equations and inequalities.

❑ Represent and analyze quantitative relationships between dependent and independent variables.

☑ Solve real-world and mathematical problems involving area, surface area, and volume.

❑ Develop understanding of statistical variability.

❑ Summarize and describe distributions.

Process Standards

Standards for Mathematical Practice:

☑ 1. Make sense of problems and persevere in solving them.

❑ 2. Reason abstractly and quantitatively.

❑ 3. Construct viable arguments and critique the reasoning of others.

☑ 4. Model with mathematics.

❑ 5. Use appropriate tools strategically.

☑ 6. Attend to precision.

❑ 7. Look for and make use of structure.

❑ 8. Look for and express regularity in repeated reasoning.

TRANSFER GOAL(S) *Students will be able to independently use their learning to...*

apply mathematical reasoning to solve problems involving ratio.

PERFORMANCE TASK Ideas

A former NBA legend, Hoops McGinty, has pledged money to the local science museum for an exhibit on our solar system. He pledges the money under one condition: that a regulation NBA basketball be used to represent some aspect of the scale display and that other NBA-related shapes and sizes be used (e.g., a basketball be used to represent a planet or mon). The building floor space is 300 by 800 feet. As designer, how do you propose that the main exhibit hall with a model of the solar system be built to scale? Prepare a diagram with accurate measurements drawn to scale. Show your work so that Hoops will approve and select your design.

Unpacking Standards – "Matrix" Method

A Framework for K-12 Science Education: Practices, Crosscutting Concepts, and Core Ideas Science

High School Biology

Content Standards

Core Concepts of Science and Engineering

✔ 1. **Patterns.** Observed patterns of forms and events guide organization and classification, and they prompt questions about relationships and the factors that influence them.

✔ 2. **Cause and effect**. Mechanism and explanation. Events have causes, sometimes simple, sometimes multifaceted. A major activity of science is investigating and explaining causal relationships and the mechanisms by which they are mediated. Such mechanisms can then be tested across given contexts and used to predict and explain events in new contexts.

3. **Scale, proportion, and quantity.** In considering phenomena, it is critical to recognize what is relevant at different measures of size, time, and energy and to recognize how changes in scale, proportion, or quantity affect a system's structure or performance.

4. **Systems and system models.** Defining the system under study – specifying its boundaries and making explicit a model of that system – provides tools for understanding and testing ideas that are applicable throughout science and engineering.

5. **Energy and matter**. Flows, cycles, and conservation. Tracking fluxes of energy and matter into, out of, and within systems helps one understand the systems' possibilities and limitations.

6. **Structure and function.** The way in which an object or living thing is shaped and its substructure determine many of its properties and functions.

✔ 7. **Stability and change.** For natural and built systems alike, conditions of stability and determinants of rates of change or evolution of the system are critical elements of study.

Process Standards

Scientific and Engineering Practices:

- ❑ 1. Asking questions (for science) and defining problems (for engineering)
- ❑ 2. Developing and using models
- ☑ 3. Planning and carrying out investigations
- ❑ 4. Analyzing and interpreting data
- ❑ 5. Using mathematics, information and computer technology, and computational thinking
- ❑ 6. Constructing explanations (for science) and designing solutions (for engineering)
- ❑ 7. Engaging in argument from evidence
- ☑ 8. Obtaining, evaluating, and communicating information

TRANSFER GOAL(S) *Students will be able to independently use their learning to...*

Design and conduct a scientific investigation and communicate results for a self-generated hypothesis.

PERFORMANCE TASK Ideas

Task 1 – *How does exercise affect the pulse rate?*
Design and conduct an investigation that compares normal pulse rate to changes caused by two selected physical activities (e.g., jogging, swimming, push-ups, squats) for designated intervals. Prepare a report including:
• an explanation of homeostasis, oxygen/carbon dioxide feedback loop, effect of pulse rate
• an interpretation of the results
Answer these questions in your report – *How did the pulse rates during exercise compare to the normal (resting) pulse rate? How do CO2 and O2 levels effect the heart rate? How does the heart rate effect pulse rate? How does this affect homeostasis? Is the respiratory rate also affected? • How can your design be improved?*

Task 2 – Design and construct a scientific experiment to test which of four antacids would be the most effective for neutralizing acid. Prepare a (news article, podcast, Power Point slide show, Animoto animation) to communicate your findings to the general public.

*Source: pals.sri.com

Unpacking Standards – "Matrix" Method

Common Core State Standards
Mathematics

Content Standards

Grade 3:

❑	Represent and solve problems involving multiplication and division.
❑	Understand properties of multiplication and the relationship between multiplication and division.
❑	Multiply and divide within 100.
☑	Solve problems involving the four operations, and identify and explain patterns in arithmetic.
❑	Use place value understanding and properties of operations to perform multi-digit arithmetic.
❑	Develop understanding of fractions as numbers.
❑	Solve problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects.
☑	Represent and interpret data.
❑	Geometric measurement: understand concepts of area and relate area to multiplication and to addition.
❑	Geometric measurement: recognize perimeter as an attribute of plane figures and distinguish between linear and area measures.
❑	Reason with shapes and their attributes.

Process Standards

Standards for Mathematical Practice:

- ❑ 1. Make sense of problems and persevere in solving them.
- ☑ 2. Reason abstractly and quantitatively.
- ❑ 3. Construct viable arguments and critique the reasoning of others.
- ☑ 4. Model with mathematics.
- ❑ 5. Use appropriate tools strategically.
- ❑ 6. Attend to precision.
- ❑ 7. Look for and make use of structure.
- ❑ 8. Look for and express regularity in repeated reasoning.

TRANSFER GOAL(S) *Students will be able to independently use their learning to...*

Collect, organize, display data on real-world phenomena; analyze data to identify patterns; use patterns to make predicitons; communicate clearly using mathematical terminology.

PERFORMANCE TASK Ideas

Every seven weeks students work in groups of four to measure the height of each other using tape measures affixed to the classroom walls. By mid-May, the class has obtained six height measures. Then, students create a simple graph (height in inches plotted against the months of the school year) and plot the data. Using rulers, they connect the dots to see "rise over run" (a visual representation of their growth over time). The chart papers are posted throughout the room, and the students circulate in a gallery walk to view the changes in heights of the various groups.
Students then analyze the data to answer guiding questions: "In what months did we grow the most this year?" "Is there a difference between how boys and girls have grown in second grade?" "How does our class growth compare to that in the other second grades?" "What can we predict for next year's second graders about how they will grow based on our data?" Students are then work in their groups to develop a presentation for the current 2nd graders to predict how much they will grow in 3rd grade.

Unpacking Standards – "Matrix" Method

Content Standards	Process Standards
	TRANSFER GOAL(S) *Students will be able to independently use their learning to...*
	PERFORMANCE TASK Ideas

Unpacking Standards: Top Down Method

Standard

STANDARD 4 (elementary): Scientific progress is made by asking meaningful questions and conducting careful investigations.

Source: California Science Standards

In order to meet the standard(s), students will need to understand *that*...

- Scientific knowledge develops as a result of carefully controlled investigations.
- The scientific method deliberately isolates and controls key variables. (It is not just "trial and error.")
- Scientific knowledge must be verified through replication.

In order to understand, students will need to consider such questions as...

- *How do we know what to believe in science?*
- *To what extent is science "trial and error"?*
- *What's the difference between scientific theory, common sense and strong belief?*
- *How do we make and validate predictions?*

In order to consider such questions well, students will need to...

know

- key terms related to scientific investigation -- attribute, classification, comparison, conclusion, data, hypothesis, measure, observation, prediction, variable

be able to...

- make predictions based on patterns of observation (rather than guessing)
- measure length, weight, temperature, and liquid volume with appropriate tools
- express measurements in standard and non-standard units
- compare and sort common objects based on two or more physical attributes
- write or draw descriptions of a sequence of steps, events or observations

Unpacking Standards: Top Down Method

Standard

Visual Arts, Goal 2 – The student will recognize the visual arts as a basic aspect of history and human experience.

Source: Baltimore County, MD Public Schools

In order to meet the standard(s), students will need to understand *that*...

- Artistic expression is influenced by time, place, and culture.
- One gains insights into a culture by analyzing and interpreting its visual arts.
- Available tools, techniques, materials and resources influence the ways in which artists/artisans express themselves.

In order to understand, students will need to consider such questions as...

- *To what extent is art shaped by time, place, and culture?*
- *In what ways does art shape culture?*
- *Are artists cultural visionaries, reporters, or reactionaries?*
- *Who determines the meaning of art?*
- *How does technology influence artistic expression?*

In order to consider such questions well, students will need to...

know

- visual art design elements (concepts and terminology) – line, color, form, texture, pattern, space
- visual art design principles – balance, rhythm, perspective, emphasis, unity
- ways in which various technologies are employed by artists
- relevant historical and cultural information about various periods

be able to...

- analyze and interpret works of art
- compare works of art from different periods and cultures to determine the distinguishing visual characteristics (e.g., Medieval and Renaissance)
- communicate their analyses and interpretations verbally and visually

Unpacking Standards: Top Down Method

Standard

Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence.

Source: Common Core State Standards - Writing

In order to meet the standard(s), students will need to understand *that*...

- Arguments need support.
- Not all support is equal.
- Complex issues require consideration of multiple views.
- An effective argument anticipates and addresses counter points.

In order to understand, students will need to consider such questions as...

- *What constitutes effective support for an argument?*
- *What makes evidence relevant and sufficient in support of an argument?*
- *How might we determine different points of view?*
- *How might we anticipate and refute objections to our argument?*

In order to consider such questions well, students will need to...

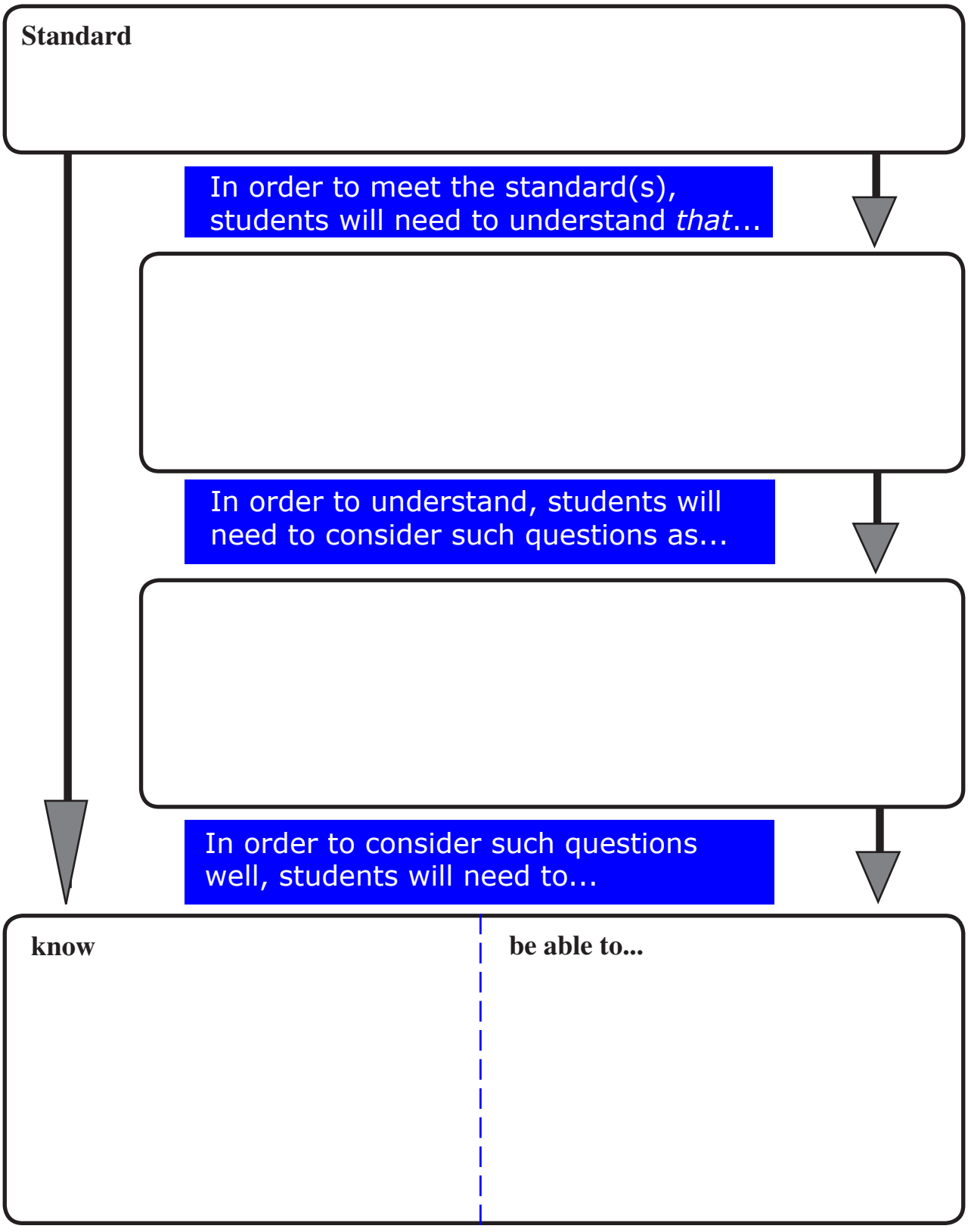
know

- types of evidence
- components / structure of an argument
- related terms -- claim, counterpoint, evidence, relevant, refute, substantive

be able to...

- identify a position and develop an argument
- determine relevance and sufficiency of evidence
- build support for an argument
- anticipate and refute objections

Unpacking Standards: Top Down Method



Degree of Autonomy Rubric

Independently
The learner is able to successfully complete the task with complete autonomy. The learner employs effective strategies without hints or other supports.
With Minimal Assistance
The learner is able to complete parts of the task independently, but needs occasional hints or minor support (e.g., checklist, graphic organizer).
With Some Assistance
The learner requires some assistance in completing the task. Scaffolds such as graphic organizers, a step-by-step checklist, and hints are needed by the learner to successfully complete the task.
Only with Considerable Assistance
The task can only be completed with significant support. Specific help and "hand-holding" is required at every step. The learner would be unable to complete the task without considerable assistance.
Unable to Complete Task
The learner cannot (or does not) complete the task, even with considerable assistance.