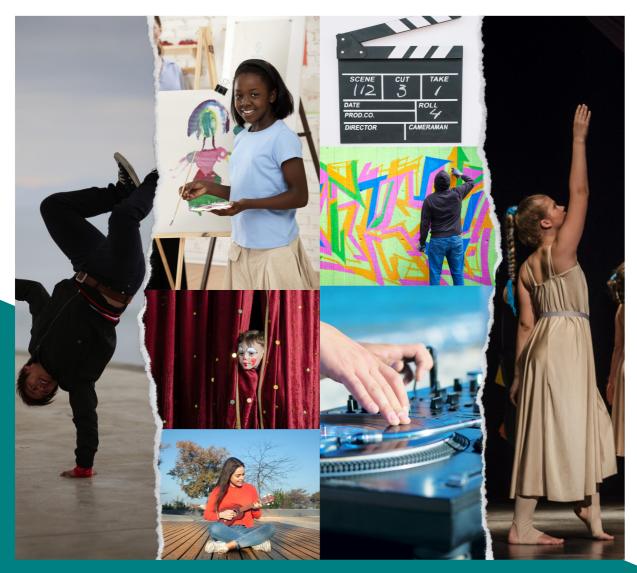
# Discovering Concept-Based Arts WORKBOOK



Discovering
Concept-Based Arts



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# MODULE ON LE

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WELCOME TO MODULE 1

What is your experience with concept-based teaching and learning up to now?
If you have past experience, what changes have you seen in students learning due to concept-based approaches?
What are you hoping to learn from this course? What are your burning questions?



UNDERSTANDING CONCEPTS

#### **Concepts in Fine and Performing Arts**

#### Sample Knowledge- and Skills-Based Concepts in Fine and Performing Arts

	Knowledge- Based Concepts Understanding	Process-Based Concepts Receptive and Expressive (* Some concepts can be both	n receptive and expressive)	
Dance  Media Arts  Music  Theatre	Archetype Beliefs Conflict Control Courage Freedom Genius Greed Identity Heroes Justice Loss Love Paradox Point of View Power Reform Revolution Sacrifice Theme Tradition Values	Aesthetics Analysis Artistic Intent Artistic Statement Audience Boundaries Composition Compositional Devices Connection Context - Cultural - Personal - Political - Social Conventions Creation Creative Process Critique Emotion Exploration Expressive Intent	Evaluation Form Function Genre Interpretation Mood Performance/Presentation Etiquette Performance/Presentation Process Perspective Practice Production Purpose Reflection Representation Response Research Process Stucture Style Technique	Body patterning Choreographic Devices Coordination Energy Space  Convention Digital Identity Experiential Design Hybridization Interactivity  Analog Tools Iconic Notation Polyphonic Text Setting Tonality  Dialogue Focus Gesture Script Analysis Inner Thoughts  Architecture Curation
				Image Quality Medium/Media Preservation

UNDERSTANDING CONCEPTS

#### **Reflection on Concepts**

Which concepts do you currently to	each?
From where are these concepts dra	awn - for instance standards
curriculum resources, other guiding	
Which other concepts are worthy c classroom - even if you might not t	
·	
·	
·	
·	each them yet?
classroom - even if you might not to	each them yet?
classroom - even if you might not to  Which of these concepts are know based?	each them yet?  Vledge based? Which are process



3-DIMENTIONAL ARTS EXAMPLE

#### 2-Dimensional vs. 3-Dimensional Arts at a Glance

Adapted from 2-Dimensi	onal v	vs. 3-Dimensional Literacy at a Glance, Concept-Based Literacy Lessons, pg. 141.
Common Characteristics of 2-Dimensional Arts		Characteristics of 3-Dimensional Arts
All students look at/listen to the same work of art	*	Teacher provides multiple works of art to give students choice, encouraging them to identify patterns across works while providing access to artworks that are at the right level of complexity and honoring student interest.
Focus on mastering skills, strategies, or processes	$\leftrightarrow$	Focus on mastering skills, strategies, or processes while also moving beyond the standard to develop an understanding of concepts important to the discipline. Students move from simply "doing" skills to understanding the "why" and "how" behind practices.
Questions remain at the factual or knowledge level	$\longleftrightarrow$	Factual, conceptual, and sometimes debatable guiding questions engage synergistic thinking and support students' discovery of the understanding of the generalization.
Units and lessons do not have a conceptual lens	<b>+</b>	A conceptual lens focuses and directs thinking.
Learning is locked to a specific text or a specific activity	$\leftrightarrow$	Learning is not locked to a specific text or assignment as conceptual understanding transfers to other situations. Learning through concepts develops schemata in the brain which act as building blocks for new learning.
Skills are often taught in isolation; learning is often a series of disconnected activities	<b>←</b>	Learning experiences, drawn from a cohesive curriculum unit, represent a guided inquiry approach while addressing what students must Know, Understand, and be able to Do (skills). Instruction may Pause and Zoom-in on specific skills as needed, but the more complex, authentic learning experience, where the skills will be applied, is never out of sight for long.
Learning targets are directly stated before engaging in the lesson	<b>\</b>	Lessons often start with a conceptual question or scenario designed to provoke curiosity or activate students' synergistic thinking.
Teaching a work of art with focused attention on the creator, content, and form of the work	$\leftrightarrow$	Teaching focuses on the creators, performers, and responders ongoing transaction of interplay with art and on developing an understanding of how the arts work.
Primarily deductive learning design	$\leftrightarrow$	Blends inductive and deductive learning design
Reflection is often limited to goal setting, of reflecting about a product	$\leftrightarrow$	Students reflect on their individual progress, the processes, strategies, and skills they are using, AND on their developing understanding of the major concepts and ideas essential to the art discipline under study.

Concept-Based Literacy Lessons: Designing Learning to Ignite Understanding and Transfer. Lois Lanning and Tiffanee Brown.

Corwin Press 2019.

5

MODULE 1 CONCLUSION

#### Reflection on 2D vs 3D Arts

Which characteristics are already a part of the teaching and learning practices in your classroom?
Which characteristics are unfamilar to you?
Which ones are you most interested in learning more about and including in your classroom practice?



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UNIT DESIGN IN THE ARTS

#### **Unit Design Reflection**

What are some successes you have had in designing units?
What have been some stumbling blocks or points of frustration?
What have you always wondered about unit design (but were afraid to ask)?



CREATING A BIG-PICTURE PLAN

#### **Big-Picture Overview Brainstorm**

Question #1 - Which course or grade level have you decided to create a big-picture plan for?
Question #2 - How many units will you teach across the school year?
Question #3 - Do you have some ideas or general areas of focus for each unit?
<b>Question #4</b> - Are you drawing from a unit that you've taught before or are you working with a new idea?



UNIT PLANNING STEPS 3, 4, AND 5: PROCESS WEB

#### **Visual Arts Example**

Strand 1: Understanding Art

Space

Color

Light

Linear Perspective

Strand 2: Responding to Art

Connection

Points of view

Perception

Collaboration



Unit Title:

How Artists Create Atmosphere

Conceptual Lens: Space, Texture



Strand 4: Producing Art

Installation

Technique

Unconventional

**Tools** 

Strand 3: Critiquing Art

Effectiveness

**Impact** 

Layering

Grouping





UNIT PLANNING STEPS 3, 4, AND 5: PROCESS WEB

#### **Music Example**

Strand 1: Understanding Music

Lyrics Audience Tempo Dynamics Strand 2: Responding to Music

Interpretation Listening Skills Research Connection



Unit Title: Sharing Our Music, Making a Difference Conceptual Lens: Purpose, Performance Process



Strand 4: Producing Music

Performance Process Rehearsal Message Refinement Strand 3: Critiquing Music

Personal Preference Purpose Criteria Context



UNIT PLANNING STEPS 3, 4, AND 5: PROCESS WEB

#### Sample Arts Concepts by Strand

#### **Understanding Arts**

Elements

- melody
- harmony

Principles of Art

- balance
- emphasis

Theme

Conventions

Style

Genre

Medium

**Notation** 

#### **Responding to Arts**

Connections

Reflection

**Cultural Context** 

Feedback

Interpretation

Role

Responsibility

Agreements

Perspective

Collaboration

Self-regulation

**Decisions** 

#### **Producing Arts**

Performance

Creation

**Audience** 

**Artistic Intention** 

Purpose

Mood

Communication

**Practice** 

Revision

Technique

#### **Critiquing Arts**

Relevance

**Impact** 

Bias

Effectiveness

**Analysis** 

**Evaluation** 

Evidence

**Accuracy** 

Reasoning

Criteria



UNIT PLANNING STEPS 3, 4, AND 5: PROCESS WEB

How does your thinking and planning process change when you view creating, performing/presenting/producing, and responding as a means, not an end?



UNIT PLANNING STEP 6: WRITING GENERALIZATIONS

# Writing High-Quality Generalizations Checklist

- No proper or personal nouns
- No pronouns in the statement ("our, we, they...")
- No level 1 verb (influence, affects, impacts, is, are, have)
- Has a present tense verb
- Contains at least two concepts
- Is a transferable idea that is supported by examples
- May need a qualifier ("often, can, may") if not true in all situations, but is still an important idea.





# LESSON 2.9 UNIT PLANNING STEP 6: WRITING GENERALIZATIONS

How does your thinking and planning process change when you view creating, performing/presenting/producing, and responding as a means, not an end?



## LESSON 2.9 UNIT PLANNING STEP 6: WRITING GENERALIZATIONS

How common is it at your school for arts teachers to work with conceptual understanding as a target of instruction?
How are teachers currently approaching understanding in arts classrooms?
What possibilities do you see that aren't yet realized in your school or school system?





# MODULE THREE

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#### LESSON 3.1

UNIT PLANNING STEP 7: GUIDING QUESTIONS

#### **Types of Guiding Questions**

Concept Formation questions help students build a common understanding of the units driving concepts. It is important that students are able to understand the meaning of a single concept, before they are expected to explore relationships between concepts.

Factual questions help build the factual foundational knowledge students need to construct the target generalization. They focus thinking on a particular point, and the answers provide substantiation for generalizations.

Conceptual questions move student thinking to a higher level and help bridge a specific example to a conceptual idea. These questions ask about conceptual relationships, which forces linking, and they require more sophisticated levels of cognitive processing and thinking. Conceptual questions are transferable across multiple examples and situations.

**Debatable questions** require an analysis and synthesis of different sources and perspectives. The answer must be defended.



# LESSON 3.2 UNIT PLANNING STEP 7: GUIDING QUESTIONS

What is the current role of questions in your classroom?
How has the intentional use of questions impacted students learning?
Tiow has the intentional use of questions impacted stadents learning.





#### LESSON 3.3

UNIT PLANNING STEPS 8 AND 9: CRITICAL CONTENT AND KEY SKILLS

How is the approach to identifying critical content, understandings and skills presented in this lesson similar and different from the process of identifying learning targets you have used in the past?



# LESSON 3.4 COMMON QUESTIONS

What are the aspects of understanding you most want students to carry with them far beyond your classroom door?
How do we want students to understand the role and importance of art and artists in society and the world?
What kinds of art making and art appreciation do we want students to continue throughout their lives?





# MODULE FOUR

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## LESSON 4.2 UNIT PLANNING STEP 10: CULMINATING ASSESSMENT

How does assessment currently look in your classroom?
What works well in your current approach?
What challenges do you currently face in regards to assessment?
What new ideas have you gained?



### LESSON 4.3 STUDENT SELF-REFLECTION

Do students typically reflect on product, on process, or both?
What new ideas do you have?



### LESSON 4.4 ARTIST STATEMENTS

Why is it essential to gather evidence of understanding in addition to demonstration of skills?
Have you previously used artist statements in your classroom? If so, how?
What new ideas do you have?



# MODULE HOLLE

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# LESSON 5.2 WHAT IS THE CONCEPT-BASED INQUIRY CYCLE?

What is your experience with the Concept-Based Inquiry cycle up to now?
Are there phases of the inquiry cycle you already use in your classroom?
Are there phases that are new to you?
What questions do you have at this point about the Concept-Based Inquiry cycle?



## LESSON 5.4 INDUCTIVE LEARNING IN THE ARTS

When do you currently use inductive learning in your classroom?
When do you use deductive learning?
What is the current balance of inductive and deductive learning in your classroom?
What might you like the balance to be?





## LESSON 5.5 ARTS-SPECIFIC VS. INTERDISCIPLINARY UNITS

What experiences do you have with integration between your art area and another discipline?
What has gone well? What has been challenging?
What is your school's "take" on integration? What is the purpose of integration?
What did you learn in this lesson that might help you focus, alter, or add to the current conversation on integration at your school?





# MODULE SIX

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# LESSON 6.3 CONCEPT-BASED INQUIRY PHASE 1: ENGAGE

Which works of art (audio, video, still, moving, etc) have been the most compelling or engaging for students as an introduction to a unit?	
Which new learning engagements might you like to try with students, based on your learning in this lesson?	





# LESSON 6.4 CONCEPT-BASED INQUIRY PHASE 2: FOCUS

Which concept formation activities might you like to try with students, based on your learning in this lesson?



# LESSON 6.5 CONCEPT-BASED INQUIRY PHASE 3: INVESTIGATE

Which case studies come to mind as most compelling or relevant for students in regard to the driving concepts and conceptual lens for the unit?
In terms of the Case Study Approaches, where would you start with the grade level, course, or class that will engage with this unit? (Concentric, Modeled, Networked, Authentic Connections, and Hybrid Model.)
Are there Strategies and Resources mentioned in the lesson that you use less often - but would like to consider trying in your classroom in regards to this unit?



# LESSON 6.6 CONCEPT-BASED INQUIRY PHASE 4: ORGANIZE

What visual organizers do you already use in your classroom? Which ones are most helpful? To which concepts do these organizers refer?
What new visual organizer ideas would you like to try in your classroom?
How might the answers to these questions apply to the unit you are creating for this course?



# LESSON 6.7 CONCEPT-BASED INQUIRY PHASE 5: GENERALIZE

As you consider one of the generalizations in your unit, which strategies to help students generalize would you like to employ?
Which supports might students need in order to successfully craft the generalization under study?





## LESSON 6.8 CONCEPT-BASED INQUIRY PHASE 6: TRANSFER

Which transfer ideas have you used in the past in your classroom? What have been the results?
Which transfer ideas were new to you in this lesson?
Which new or less familiar transfer learning engagements might you like to try in the future?
Which Transfer learning engagements seem like a good fit for the unit you are currently writing?





## LESSON 6.9 CONCEPT-BASED INQUIRY PHASE 7: REFLECT

Which reflective practices are already embedded in your classroom? Which new ideas were you drawn to in this lesson?
Which reflection ideas lend themselves most naturally to the unit you
are creating?





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# APPENDICES

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## APPENDIX 1 UNIT PLANNING STEPS

#### STEP 1: CREATE A UNIT TITLE

The unit title provides the context for conceptual learning. It can be written to captivate and engage student interest in the unit. A strong title outlines the unit content or direction of the unit.

#### STEP 2: IDENTIFY THE CONCEPTUAL LENS

The conceptual lens, usually a broad Macro concept, brings focus and depth to the study and ensures synergistic thinking. For International Baccalaureate teachers, the conceptual lens often comes from the list of Key Concepts, but it is not limited to these.

## STEP 3: USE A TOOL SUCH AS THE UNIT WEB (ERICKSON & LANNING, 2014)

In this step, we use the unit web to identify possible concepts and conceptual relationships between different unit strands. We visualize the unit as a cohesive whole, while nonetheless recognizing its discrete parts. At times, teachers are tempted to list activities at this stage. It is important to maintain focus on the concepts and subtopics of the unit.

When using unit webbing as a planning tool, begin by identifying unit strands, or areas of inquiry. Then organically web out the unit's topics and concepts.

Underline the concepts under each strand so they can be easily accessed in the next step.

## STEP 4: IDENTIFY DRIVING CONCEPTS AND MICRO CONCEPTS

While creating the unit web, driving concepts begin to emerge. Driving concepts frame the learning by marking the bounds of a unit. These are usually disciplinary in nature, reflecting the topic studied. Identify four to seven driving concepts that will guide the unit study. In this process, pertinent Micro concepts related to these driving concepts also become apparent.





# APPENDIX 1 UNIT PLANNING STEPS

#### STEP 5: CONFIRM UNIT STRANDS

Unit strands are areas of inquiry that break a disciplinary unit into manageable pieces. Strands are subject areas for interdisciplinary units or sub-strands for intradisciplinary units. We have an initial sense of strands after creating the web, but in this step, we confirm them. Make sure to cross-check standards from your school's curriculum to ensure appropriate coverage. The unit web strands for arts are always Understanding, Responding, Critiquing, and Producing.

#### STEP 6: WRITE GENERALIZATIONS

A generalization is a statement of relationship between two or more concepts.

Drawing on the concepts identified in the web, articulate the generalizations you expect students to derive from the unit.

Each unit includes five to nine generalizations, depending on the scope and length of the study. Write one or two generalizations that include the conceptual lens. While keeping the strands in mind, craft one or two generalizations for each strand that incorporate the unit's driving concepts and relevant microconcepts. Generalizations may relate to one or more areas of inquiry, especially in process-based disciplines.

#### STEP 7: DEVELOP THE GUIDING QUESTIONS

Guiding questions scaffold student thinking toward the generalizations. There are three types of questions that we construct: Concept Formation, Factual, Conceptual and Provocative. Each generalization needs a set of three to five factual and conceptual questions developed during the planning process, and two to three provocative questions for the unit.





# APPENDIX 1 UNIT PLANNING STEPS

#### STEP 8: IDENTIFY CRITICAL CONTENT

The critical content is the factual knowledge required for grounding the generalizations, deepening knowledge of the unit topic, and defining what students may need to know about particular processes. Depending on the unit, we may be aware of our critical content before writing our generalizations. In this step, we also consider "best" case studies, or factual examples, to reflect these generalizations.

#### STEP 9: IDENTIFY KEY SKILLS AND STRATEGIES

The key skills and strategies identify what students must be able to do by the end of the unit. Key skills transfer across applications and are not tied to specific topics until they appear in the learning experiences or assessments.

## STEP 10: WRITE THE CULMINATING ASSESSMENT AND ASSESSMENT CRITERIA

The culminating assessment reveals students' understanding of an important generalization (or two), their knowledge of critical content and key skills. Create assessment criteria as a scoring guide or rubric for evaluating student work.

#### STEP 11: DESIGN LEARNING EXPERIENCES

In this step, we design learning experiences that are meaningful, authentic and linked to the various stages of inquiry. They reflect what students should Understand, Know, and Be Able to Do by the end of the unit. As we make strategic choices about the learning experiences, we identify opportunities for formative assessment. Teachers plan learning experiences that support students in developing generalizations and transferring understanding.

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#### Unit Title, Conceptual LenUnit Web and Unit Overview:

• Is the unit title clear so that anyone reading it would know the topic of study?

Strong title: The Impact of Technology on Community Life Weak title: Widgets and Whirligigs

• Is the unit title neither too narrow, nor too broad?

Too broad: Life; Patterns; Systems
Too narrow: The Earth's Crust; Manifest Destiny; Two-digit
Multiplication

- Is there a suitable conceptual lens attached to this unit of study?
  - Does the lens provide a clear focus for the Unit Title?
  - Does the lens relate to, and reflect a deeper understanding of the unit under study?
  - Does the lens suggest transferable connections to other subject areas or topics?
- Do the Strands represent the major areas of study for this unit?
- Are the critical sub-topics, as well as sub-concepts, listed under each strand? (Especially in content-heavy subjects like history.)
- Do the sub-concepts and sub-topics under each strand represent the requirements of academic standards or national curricula, and provide a complete treatment of the strand for this grade level?
- Does the unit overview provide a concise and engaging summary of the unit of study?
- In process-driven subjects, do the strands show the concepts derived from the unit Processes/Strategies/Skills?

Checklist Page 1/5

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#### **Generalizations:**

- Do the generalizations reflect the most important conceptual understandings that students are to take away from the study?
- Do the generalizations enable students to transfer knowledge to a broader context?
- Are the generalizations clear: Can fellow teachers immediately relate the generalization to the unit content?
- Are the generalizations devoid of level 1 verbs: affect, impact, influence, is, are, have?
- Do the unit generalizations collectively represent all the strands of the unit web?
- In content-driven discipline units (social studies, science, mathematics, etc.), are there any essential process generalizations that need to be included?
- Do the generalizations use present tense, active verbs?
- Do the verbs avoid passive voice (e.g. "affected by"). Note: if a verb tense is passive voice, flip the sentence, putting the end of the sentence at the beginning. This will ensure a present tense, active verb.
- Do the generalizations exclude the use of pronouns, proper nouns or topics that would lock the ideas in time, place or situation?
- Do the generalizations include a qualifier (often, can, may) when a statement does not hold true in all cases?
- Do the generalizations avoid making a "value statement" (signaled by words like "should" or "must")?
- Does each generalization represent a statement of relationship between at least 2 concepts joined by a strong verb?

Checklist Page 2/5



#### **Guiding Questions:**

- Are there mixes of 3-5 Factual and Conceptual questions for each generalization? Note: Level 1 verbs are fine in questions but not in the generalizations.
- Are there a few Debate questions for the entire unit? Note: Debate questions can be open-ended, or they may include proper nouns, past tense verbs and/or level 1 verbs. These questions must be debatable.
- Do the questions guide student thinking from facts and skills to the target generalization (generally inductive teaching)? Note: It is fine to pick up exact language from the generalization and build it into the conceptual question. Tip: It is helpful to have teachers code each question (F, C, D).
- Do the Conceptual and Debatable questions invite student inquiry?

#### **Critical Content (Know):**

- Is the critical content a list of essential factual KNOWledge, rather than a set of content objectives with verbs? (KNOW is the verb for the entire list.)
- Is the critical content written as a list of essential factual knowledge, rather than generalizations?
- Does the critical content provide support for the generalization and reflect other important knowledge relative to the topic under study?
- Does the critical content that is not tied directly to generalizations still reflect important knowledge for the unit topic?

#### **Key Skills:**

- Are the key skills drawn from standards documents or national curricula?
- Do the skills represent a range of thinking processes?
- Are the skills written so they can be transferred across many different applications?
- Do the skills avoid naming a specific topic? (A skill can be written so that it transfers within a discipline, e.g. "Manipulate polygons to illustrate transformations" but it cannot name a particular topic, e.g. "Evaluate primary and secondary source documents to learn about World War II.") Checklist Page 3/5



#### **Assessment:**

- Does the Culminating Assessment address the three critical components of a Concept-based unit: Understand (Generalization), Know (Critical factual content) and Do (Skills)?
- Does the performance pick up language from the target generalization to ensure that the performance reflects deep, conceptual understanding?
- Are the What/Why/How components correct? (What = unit title; Why = most important unit generalization; How = the performance)
- Is the Culminating Assessment rigorous and does it require students to apply or transfer learning to a new context, situation, or problem?
- Are there a variety of assessment types and methods to gather data throughout the unit to provide evidence of what students Understand, Know, and can Do?

#### **Scoring Guide or Rubric:**

- Does the scoring guide/rubric clearly describe the criteria for the Standard Level of Performance for Understanding, Knowledge (Content), and Skills (Process)?
- Does the scoring guide encourage student self-assessment and selfreflection?

Checklist Page 4/5



#### **Learning Experiences:**

- Do the learning experiences allow students to explore the generalizations, knowledge, and skills in a way that is authentic to the field or discipline?
- Does the assigned work represents an authentic, meaningful context (as much as possible) and is it relevant to future leaning?
- Do the learning experiences address the other generalizations, knowledge, and skills not addressed in the Culminating Assessment?
- Do the learning experiences require students to reason their way through the work through a primarily inductive process? (E.g. The tasks necessitate students' intellectual engagement in "figuring things out," integrating thinking, and ongoing reflection and self-assessment.)
- Do the guiding questions, paired with the texts, tasks, and/or case studies/examples students are investigating, lead to and exemplify the target generalization?
- Do the learning experiences help students to uncover and link patterns across different examples?
- Do the learning experiences often require peer collaboration?
- Do the learning experiences ensure equitable access for all learners...
  - ... by providing multiple points of entry into the concepts under study?
- ... by how students are grouped, by making sure the materials (e.g. text) are at
  - an appropriate level?
  - ... by the complexity of the learning experience?
  - ... by the amount of teacher guidance and scaffolding provided?
  - ... by providing opportunities for student voice and choice?
  - Do the learning experiences contain enough description so that another teacher could easily follow the plan?

Checklist Page 5/5



#### APPENDIX 3

#### TIPS FOR DEVELOPING STRONG GENERALIZATIONS

#### USE...

#### AVOID...

### TIPS TO SCAFFOLD STUDENT THINKING

Strong verbs to describe conceptual relationships in precise ways, for example, drives, leads to, increases Verbs like is, are,
have, influences,
impacts, and affects.
They create a weak
conceptual

relationship.

Use the questions "How?" "Why?" and "So what?" to help students bring clarity to their ideas, for example, "I like this idea, but I think we can make it even stronger. Can you tell me how . . . ?"

General third person pronouns, such as **they** and **their** to make understandings transferrable

The pronouns **I, me,**we, or us, and
specific third person
pronouns such as he
and she.

Challenge the specificity of the pronoun. For example, "Is it just us, or could we say that about all dancers?"

Qualifiers as needed to ensure statements remain true and transferrable, for example, **can, may** or **often.**  Overgeneralizing how or when concepts connect. For example: Personal conflict changes an individual's identity. Is that always true?

Ask: "Is that true all of the time/in all situations?" or "That is an important idea, but was that true in (case study)? How could we change the idea to make it true?"

\*It may sometimes be appropriate to use the pronouns **I, me, we,** or **us** in preschool or Kindergarten.

This table is continued on the next page.

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#### APPENDIX 3

#### TIPS FOR DEVELOPING STRONG GENERALIZATIONS

#### USE...

# Active voice to make relationships clearer between concepts, for example, "Intentional rehearsal strategies leads to increased technical skill."

#### AVOID...

# Passive voice. This often orders the sentence so the most important concept comes last, and makes the generalization less clear, for example, "Technical skill is increased as the result of intentional rehearsal strategies."

## TIPS TO SCAFFOLD STUDENT THINKING

Say: "The most important idea in the sentence is at the end; let's try flipping the sentence to see if that makes it clearer."

Two or more concepts to express conceptual relationships.

Only one concept in a generalization. It fails to express a conceptual relationship.

Say: "You have only used one concept in that idea. Let's see if we can add another one to build a stronger idea."

Present tense to ensure transferability.

Past or future tense verbs. They inhibit transfer.

Ask: "Is that idea still true now, and do you think it will be in the future?" or "Can you change this verb to make this idea timeless?"

Statements that are free of judgment or values.

Value laden statements containing verbs such as must or should.

Ask: "That is what you/we think, but would people in (other place, time, or situation) agree with that? Have another think and see if you can come up with something that doesn't include an opinion."

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