

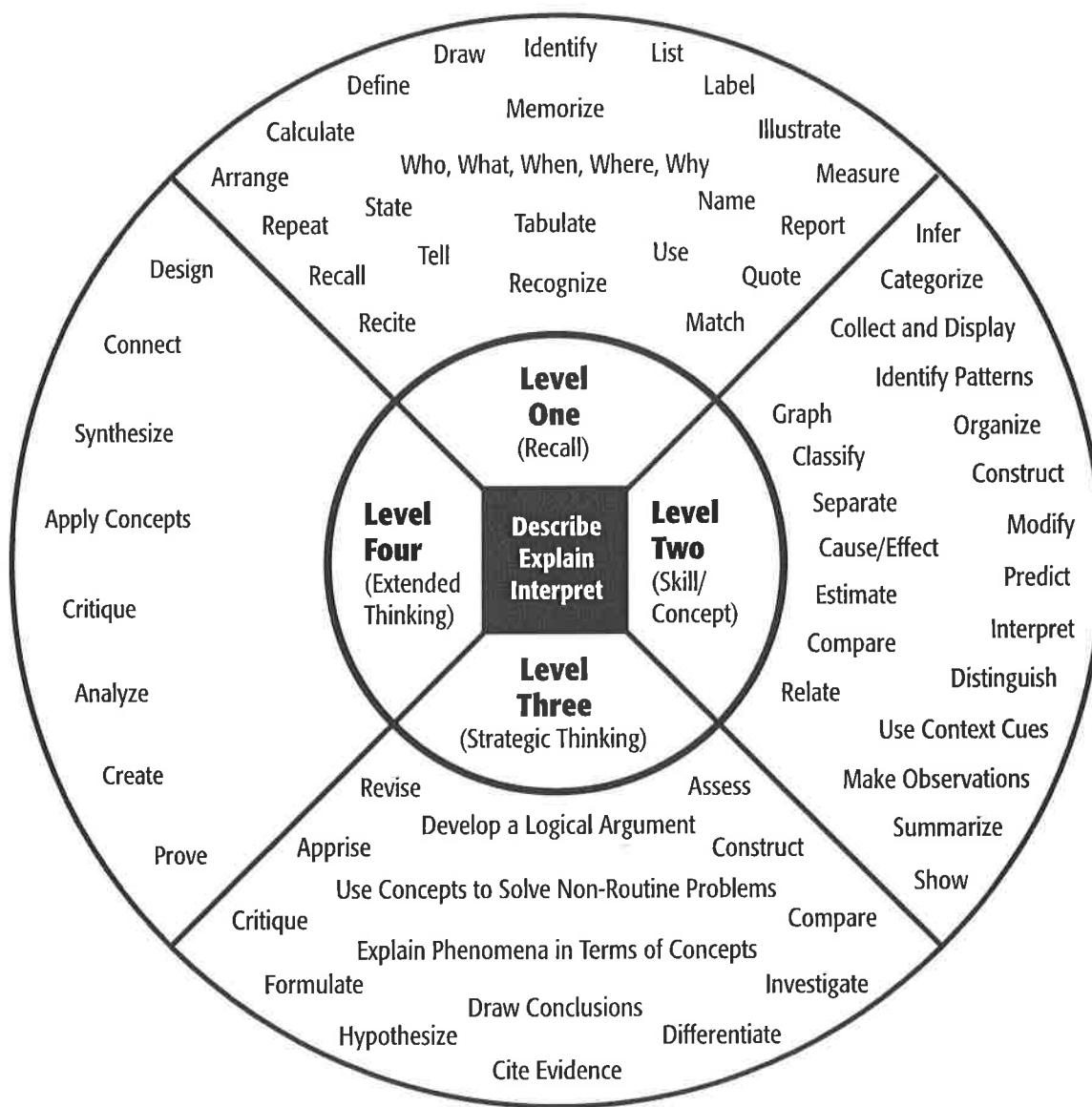
## Depth of Knowledge/Rigor Chart and Checklist

Use the following chart to help create and categorize assessment items. The range of rigor of the assessment items should reflect the rigor of the course content and instruction.

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Level	Learner Action	Key Actions	Sample Question Stems	Question Numbers/Portfolio Components
Level 1: <i>Recall</i>	Requires simple recall of such information as a fact, definition, term, or simple procedure.	List, Tell, Define, Label, Identify, Name, State, Write, Locate, Find, Match, Measure, Repeat	How many...? Label parts of the... Which is true or false...?	
Level 2: <i>Concept</i>	Involves some mental skills, concepts, or processing beyond a habitual response; students must make some decisions about how to approach a problem or activity.	Estimate, Compare, Organize, Interpret, Modify, Predict, Cause/Effect, Summarize, Graph, Classify	Identify patterns in... Use context clues to... Predict what will happen when... What differences exist between...? If x occurs, y will....	
Level 3: <i>Strategic Thinking</i>	Requires reasoning, planning, using evidence, and thinking at a higher level.	Critique, Formulate, Hypothesize, Construct, Revise, Investigate, Differentiate, Compare	Construct a defense of.... Can you illustrate the concept of...? Apply the method used to determine...? Use evidence to support....	
Level 4: <i>Extended Thinking</i>	Requires complex reasoning, planning, developing, and thinking, most likely over an extended time. Cognitive demands are high, and students are required to make connections both within and among subject domains.	Design, Connect, Synthesize, Apply, Critique, Analyze, Create, Prove, Support	Design x in order to.... Develop a proposal to.... Create a model that.... Critique the notion that....	

# Depth of Knowledge (DOK) Levels



Level One Activities	Level Two Activities	Level Three Activities	Level Four Activities
<p>Recall elements and details of story structure, such as sequence of events, character, plot and setting.</p> <p>Conduct basic mathematical calculations.</p> <p>Label locations on a map.</p> <p>Represent in words or diagrams a scientific concept or relationship.</p> <p>Perform routine procedures like measuring length or using punctuation marks correctly.</p> <p>Describe the features of a place or people.</p>	<p>Identify and summarize the major events in a narrative.</p> <p>Use context cues to identify the meaning of unfamiliar words.</p> <p>Solve routine multiple-step problems.</p> <p>Describe the cause/effect of a particular event.</p> <p>Identify patterns in events or behavior.</p> <p>Formulate a routine problem given data and conditions.</p> <p>Organize, represent and interpret data.</p>	<p>Support ideas with details and examples.</p> <p>Use voice appropriate to the purpose and audience.</p> <p>Identify research questions and design investigations for a scientific problem.</p> <p>Develop a scientific model for a complex situation.</p> <p>Determine the author's purpose and describe how it affects the interpretation of a reading selection.</p> <p>Apply a concept in other contexts.</p>	<p>Conduct a project that requires specifying a problem, designing and conducting an experiment, analyzing its data, and reporting results/solutions.</p> <p>Apply mathematical model to illuminate a problem or situation.</p> <p>Analyze and synthesize information from multiple sources.</p> <p>Describe and illustrate how common themes are found across texts from different cultures.</p> <p>Design a mathematical model to inform and solve a practical or abstract situation.</p>

# DOK Question Stems

**DOK 1**

- Can you recall \_\_\_\_?
- When did \_\_\_\_ happen?
- Who was \_\_\_\_?
- How can you recognize \_\_\_\_?
- What is \_\_\_\_?
- How can you find the meaning of \_\_\_\_?
- Can you recall \_\_\_\_?
- Can you select \_\_\_\_?
- How would you write \_\_\_\_?
- What might you include on a list about \_\_\_\_?
- Who discovered \_\_\_\_?
- What is the formula for \_\_\_\_?
- Can you identify \_\_\_\_?
- How would you describe \_\_\_\_?

**DOK 2**

- Can you explain how \_\_\_\_ affected \_\_\_\_?
- How would you apply what you learned to develop \_\_\_\_?
- How would you compare \_\_\_\_? Contrast \_\_\_\_?
- How would you classify \_\_\_\_?
- How are \_\_\_\_ alike? Different?
- How would you classify the type of \_\_\_\_?
- What can you say about \_\_\_\_?
- How would you summarize \_\_\_\_?
- How would you summarize \_\_\_\_?
- What steps are needed to edit \_\_\_\_?
- When would you use an outline to \_\_\_\_?
- How would you estimate \_\_\_\_?
- How could you organize \_\_\_\_?
- What would you use to classify \_\_\_\_?
- What do you notice about \_\_\_\_?

**DOK 3**

- How is \_\_\_\_ related to \_\_\_\_?
- What conclusions can you draw \_\_\_\_?
- How would you adapt \_\_\_\_ to create a different \_\_\_\_?
- How would you test \_\_\_\_?
- Can you predict the outcome if \_\_\_\_?
- What is the best answer? Why?
- What conclusion can be drawn from these three texts?
- What is your interpretation of this text? Support your rationale.
- How would you describe the sequence of \_\_\_\_?
- What facts would you select to support \_\_\_\_?
- Can you elaborate on the reason \_\_\_\_?
- What would happen if \_\_\_\_?
- Can you formulate a theory for \_\_\_\_?
- How would you test \_\_\_\_?
- Can you elaborate on the reason \_\_\_\_?

**DOK 4**

- Write a thesis, drawing conclusions from multiple sources.
- Design and conduct an experiment. Gather information to develop alternative explanations for the results of an experiment.
- Write a research paper on a topic.
- Apply information from one text to another text to develop a persuasive argument.
- What information can you gather to support your idea about \_\_\_\_?
- DOK 4 would most likely be the writing of a research paper or applying information from one text to another text to develop a persuasive argument.
- DOK 4 requires time for extended thinking.

## Depth of Knowledge (DOK) Overview Chart

Level of Complexity (measures a student's Depth of Knowledge)	Key Verbs That May Clue Level	Evidence of Depth of Knowledge
<b>Level 1</b> <b>Recall/Reproduction</b> Recall a fact, information, or procedure. Process information on a low level.	<p><u>Bloom</u> <i>Know/Remember</i> "The recall of specifics and universals, involving little more than bringing to mind the appropriate material."</p> <p><i>Comprehend/Understand</i> "Ability to process knowledge on a low level such that the knowledge can be reproduced or communicated without a verbatim repetition."</p>	<ul style="list-style-type: none"> <li>• Explain simple concepts or routine procedures</li> <li>• Recall elements and details</li> <li>• Recall a fact, term or property</li> <li>• Conduct basic calculations</li> <li>• Order rational numbers</li> <li>• Identify a standard scientific representation for simple phenomenon</li> <li>• Label locations</li> <li>• Describe the features of a place or people</li> <li>• Identify figurative language in a reading passage</li> </ul>
<b>Level 2</b> <b>Skill/Concept</b> Use information or conceptual knowledge, two or more steps	<p><u>Bloom</u> <i>Apply</i> "Uses information in another familiar situation." (Executes - Carries out a procedures in a familiar task) (Implements - Uses a procedure in an unfamiliar task)</p>	<ul style="list-style-type: none"> <li>• Solve routine multiple-step problems</li> <li>• Describe non-trivial patterns</li> <li>• Interpret information from a simple graph</li> <li>• Formulate a routine problem, given data and conditions</li> <li>• Sort objects</li> <li>• Show relationships</li> <li>• Apply a concept</li> <li>• Organize, represent and interpret data</li> <li>• Use context clues to identify the meaning of unfamiliar words</li> <li>• Describe the cause/effect of a particular event.</li> <li>• Predict a logical outcome</li> <li>• Identify patterns in events or behavior</li> </ul>

Table 6, p. 42

Level of Complexity (measures a student's Depth of Knowledge)	Key Verbs That May Clue Level	Evidence of Depth of Knowledge
<b>Level 3 Strategic Thinking</b> Requires reasoning, developing a plan or a sequence of steps, some complexity <u>Bloom</u> <u>Analyze</u> "Breaking information into parts to explore understanding and relationship."	<u>Appraise</u> <u>Assess</u> <u>Cite evidence</u> <u>Check</u> <u>Compare</u> <u>Compile</u> <u>Conclude</u> <u>Contrast</u> <u>Critique</u> <u>Decide</u> <u>Defend</u> <u>Describe</u> <u>Develop</u> <u>Differentiate</u> <u>Distinguish</u> <u>Evaluate</u> "Checks/Critiques – makes judgments based on criteria and standards."	<u>Examine</u> <u>Explain how</u> <u>Formulate</u> <u>Hypothesize</u> <u>Identify</u> <u>Infer</u> <u>Interpret</u> <u>Investigate</u> <u>Judge</u> <u>Justify</u> <u>Reorganize</u> <u>Solve</u> <u>Support</u> <ul style="list-style-type: none"> <li>• Solve non-routine problems</li> <li>• Interpret information from a complex graph</li> <li>• Explain phenomena in terms of concepts</li> <li>• Support ideas with details and examples</li> <li>• Develop a scientific model for a complex situation</li> <li>• Formulate conclusions from experimental data</li> <li>• Compile information from multiple sources to address a specific topic</li> <li>• Develop a logical argument</li> <li>• Identify and then justify a solution</li> <li>• Identify the author's purpose and explain how it affects the interpretation of a reading selection</li> </ul>
<b>Level 4 Extended Thinking</b> Requires an investigation, time to think and process multiple conditions of the problem. Most on-demand assessments will not include Level 4 activities. <u>Bloom</u> <u>Synthesize</u> "Putting together elements and parts to form a whole"	<u>Appraise</u> <u>Connect</u> <u>Create</u> <u>Critique</u> <u>Design</u> <u>Judge</u> <u>Justify</u> <u>Prove</u> <u>Report</u> <u>Synthesize</u>	<ul style="list-style-type: none"> <li>• Design and conduct an experiment that requires specifying a problem; report results/solutions</li> <li>• Synthesize ideas into new concepts</li> <li>• Critique experimental designs</li> <li>• Design a mathematical model to inform and solve a practical or abstract situation.</li> <li>• Connect common themes across texts from different cultures</li> <li>• Synthesize information from multiple sources</li> </ul>

# Charlotte Danielson's FRAMEWORK FOR TEACHING

Table 7, p. 43

<b>DOMAIN 1: Planning and Preparation</b>		<b>DOMAIN 2: The Classroom Environment</b>	
1a <b>Demonstrating Knowledge of Content and Pedagogy</b>	• Content and the structure of the discipline • Prerequisite relationships • Content-related pedagogy	2a <b>Creating an Environment of Respect and Rapport</b>	• Teacher interaction with students, including both words and actions • Student interaction with students, including both words and actions
	1b <b>Demonstrating Knowledge of Students</b>	2b <b>Establishing a Culture for Learning</b>	• Importance of content and of learning • Expectations for learning and achievement • Student pride in work
	1c <b>Setting Instructional Outcomes</b>	2c <b>Managing Classroom Procedures</b>	• Instructional groups • Transitions • Materials and supplies • Performance of classroom routines • Supervision of volunteers and paraprofessionals
	1d <b>Demonstrating Knowledge of Resources</b>	2d <b>Managing Student Behavior</b>	• Expectations • Monitoring student behavior • Response to student misbehavior
	1e <b>Designing Coherent Instruction</b>	2e <b>Organizing Physical Space</b>	• Safety and accessibility • Arrangement of furniture and use of physical resources
	1f <b>Designing Student Assessments</b>		
<b>DOMAIN 3: Instruction</b>		<b>DOMAIN 4: Professional Responsibilities</b>	
3a <b>Communicating With Students</b>	3a <b>Using Questioning and Discussion Techniques</b>	4a <b>Reflecting on Teaching</b>	• Expectations for learning • Directions for activities • Explanations of content • Use of oral and written language
	3b <b>Engaging Students in Learning</b>	4b <b>Maintaining Accurate Records</b>	• Quality of questions/prompts • Discussion techniques • Student participation
	3c <b>Using Assessment in Instruction</b>	4c <b>Communicating with Families</b>	• Activities and assignments • Grouping of students • Instructional materials and resources • Structure and pacing
	3d <b>Demonstrating Flexibility and Responsiveness</b>	4d <b>Participating in a Professional Community</b>	• Assessment criteria • Monitoring of student learning • Feedback to students • Student self-assessment and monitoring of progress
	3e <b>Growing and Developing Professionally</b>	4e <b>Showing Professionalism</b>	• Involvement in culture of professional inquiry • Service to the school • Enhancement of content knowledge and pedagogical skill • Receptivity to feedback from colleagues • Service to the profession
		4f	• Integrity/ethical conduct • Service to students • Advocacy • Decision-making • Compliance with school and district regulation • Persistence

## Team Role Cards

### **FACILITATOR**

- Get the conversation started quickly.
- Ask all teammates to share their ideas/questions.
- Encourage everyone to contribute.

### **LEARNING MONITOR**

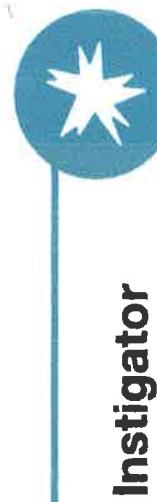
- Help all teammates understand the Success Criteria at the beginning.
- Reminds teammates to use Success Criteria as they work.
- Ask questions to see if the completed work meets the Success Criteria.

### **TEAM MEMBERS**

- Participate in team discussion.
- Bring your own thinking to the team.
- Be responsible for your own learning as well as the learning of the team.

## Discussion Roles

Discussion roles help students to manage talk and encourage the development of certain speaking and listening skills.



### Instigator

Starts the discussion or opens up a new topic for discussion

Will say:

I would like to start by saying ...  
I think we should consider ...  
We haven't yet talked about ...  
Let's also think about ...



### Prober

Digs deeper into the argument, asks for evidence or justification of ideas

Will say:

What do you think would be the effect of ...?  
Why do you think ...?  
Can you provide an example to support what you are saying?



### Challenger

Gives reasons to disagree or presents an alternative argument

Will say:

I disagree with you because ...  
You mentioned X but what about ...  
To challenge you X, I think ...  
I understand your point of view, but have you thought about ...?



### Clarifier

Simplifies and makes things clearer by asking questions

Will say:

What do you mean when you say ...?  
Can you explain a bit more about ...?  
Does that mean ...?  
Please can you clarify what you meant by ...?



### Summariser

Identifies the main ideas from the discussion. This might be during the discussion, to help move the conversation forward, or at the end of the discussion.

Will say:

Overall, the main points were ...  
The main ideas raised today were ...  
Our discussion focused on ...  
The three main things we talked about were ...



### Builder

Develops, adds to or runs with an idea

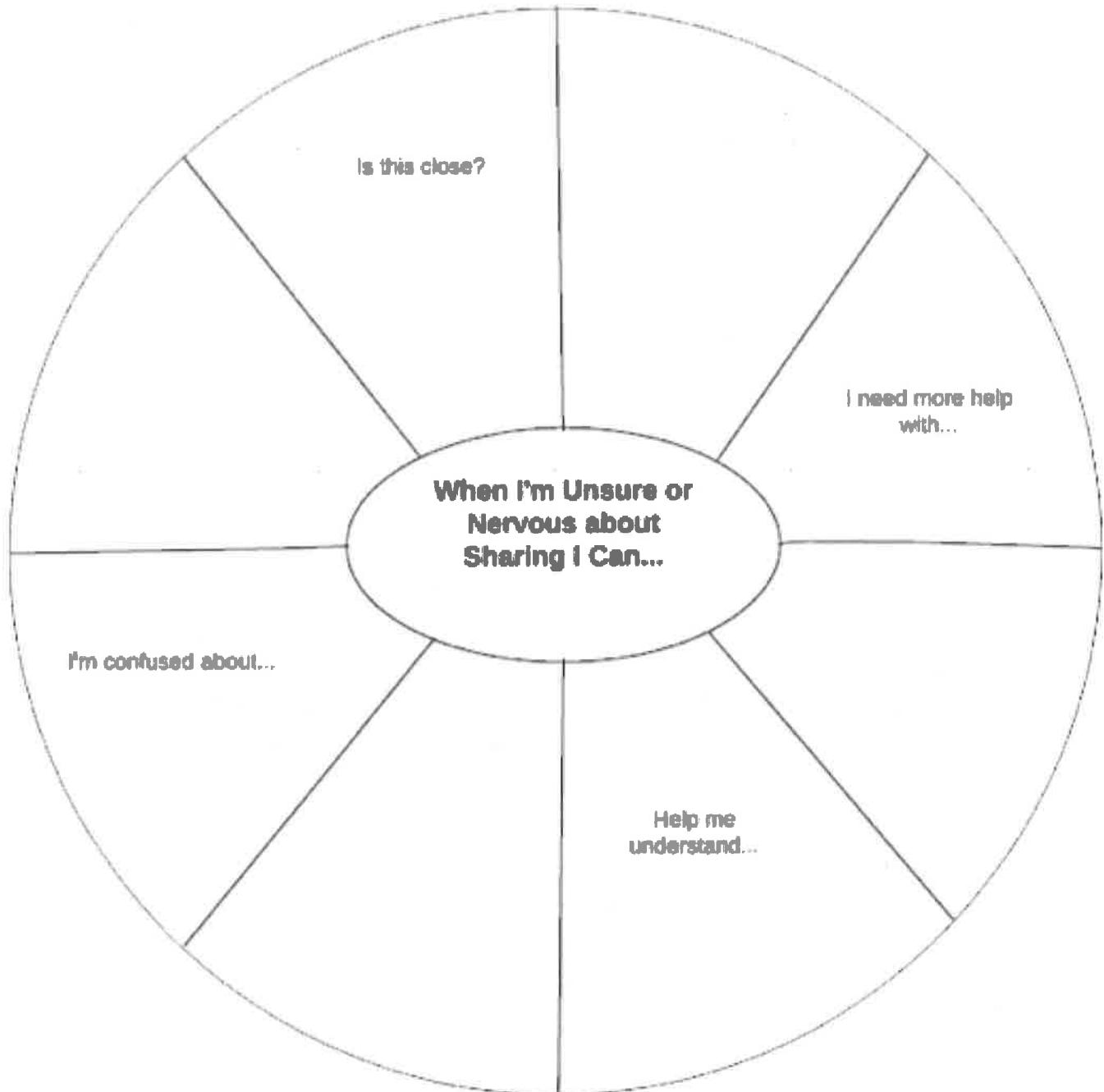
Will say:

I agree, and would like to add ...  
Building on that idea, I think ...  
Linking to what X said, I think ...

Figure 2, p. 45

## Team Talk Wheel

Students brainstorm steps they can take when they feel nervous about participating and add them to the wheel.



# Talk Moves

# Talk Moves

## ADD ON

“I would like to add on to what \_\_\_\_\_ said.”

## ADD ON

“I would like to add on to what \_\_\_\_\_ said.”

## REASONING

“I agree because \_\_\_\_\_.”

“I disagree because \_\_\_\_\_.”

“This is true because \_\_\_\_\_.”

## REASONING

“I agree because \_\_\_\_\_.”

“I disagree because \_\_\_\_\_.”

“This is true because \_\_\_\_\_.”

## REPEATING

“I heard you say \_\_\_\_\_.”

“Can you repeat what you said?”

## REPEATING

“I heard you say \_\_\_\_\_.”

“Can you repeat what you said?”

## REVOICING

“So, you are saying \_\_\_\_\_.”

“What I think you said was \_\_\_\_\_.”

“Did you mean \_\_\_\_\_?”

## REVOICING

“So, you are saying \_\_\_\_\_.”

“What I think you said was \_\_\_\_\_.”

“Did you mean \_\_\_\_\_?”

## SAY MORE

“Can you say more about that?”

“Can you give us more examples?”

## SAY MORE

“Can you say more about that?”

“Can you give us more examples?”

## PRESS FOR REASONING

“Why do you think that?”

“What is your evidence?”

## PRESS FOR REASONING

“Why do you think that?”

“What is your evidence?”

## Team Question Prompts



- Can you explain?
- Which part of the Success Criteria does that meet?
- Why do you think that?
- Is there another way we can solve this?
- Have we met the Success Criteria yet? Why or why not?

## Team Question Prompts



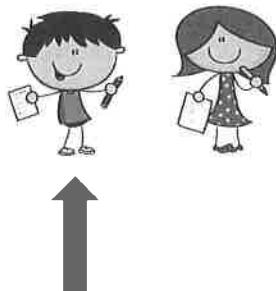
- Can you explain?
- Which part of the Success Criteria does that meet?
- Why do you think that?
- Is there another way we can solve this?
- Have we met the Success Criteria yet? Why or why not?

## Partner Conversations

1. Turn to your partner

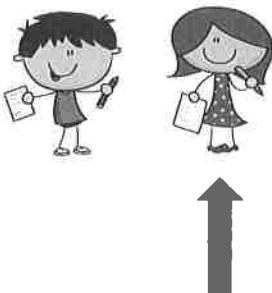


2. Partner A shares



3. Partner B adds to what partner A said

- \* I agree because
- \* I disagree because
- \* I think...





## Partner Conversations

- Partner A and B turn to one another
- Partner A begins by sharing their ideas or new learning to partner B
- Partner B agrees or disagrees and explains why or adds on to partner A
- Be prepared to share new learning with the whole group

Thoughts...

# Northeast Range Sample Group Norms

Students are encouraged to establish “Group Norms” before starting a group project. This sample of “Group Norms” was completed by students in the journalism/media class at the beginning of a multimedia project.

## Group 1 Norms

1. Hold Each Other Accountable
2. Be Respectful and Keep an Open Mind
3. Commit to Your Role and Complete Tasks
4. Stay on Task
5. Come to Group Prepared

All group members agree to the established Group Norms. Students will work together to complete the Learning Task that has been assigned. Groups will be graded on overall group work, individual work within the group, and final product. Checkpoints with teacher should review progress and update on individual team member progress towards Learn Target.

Team Member Signatures:

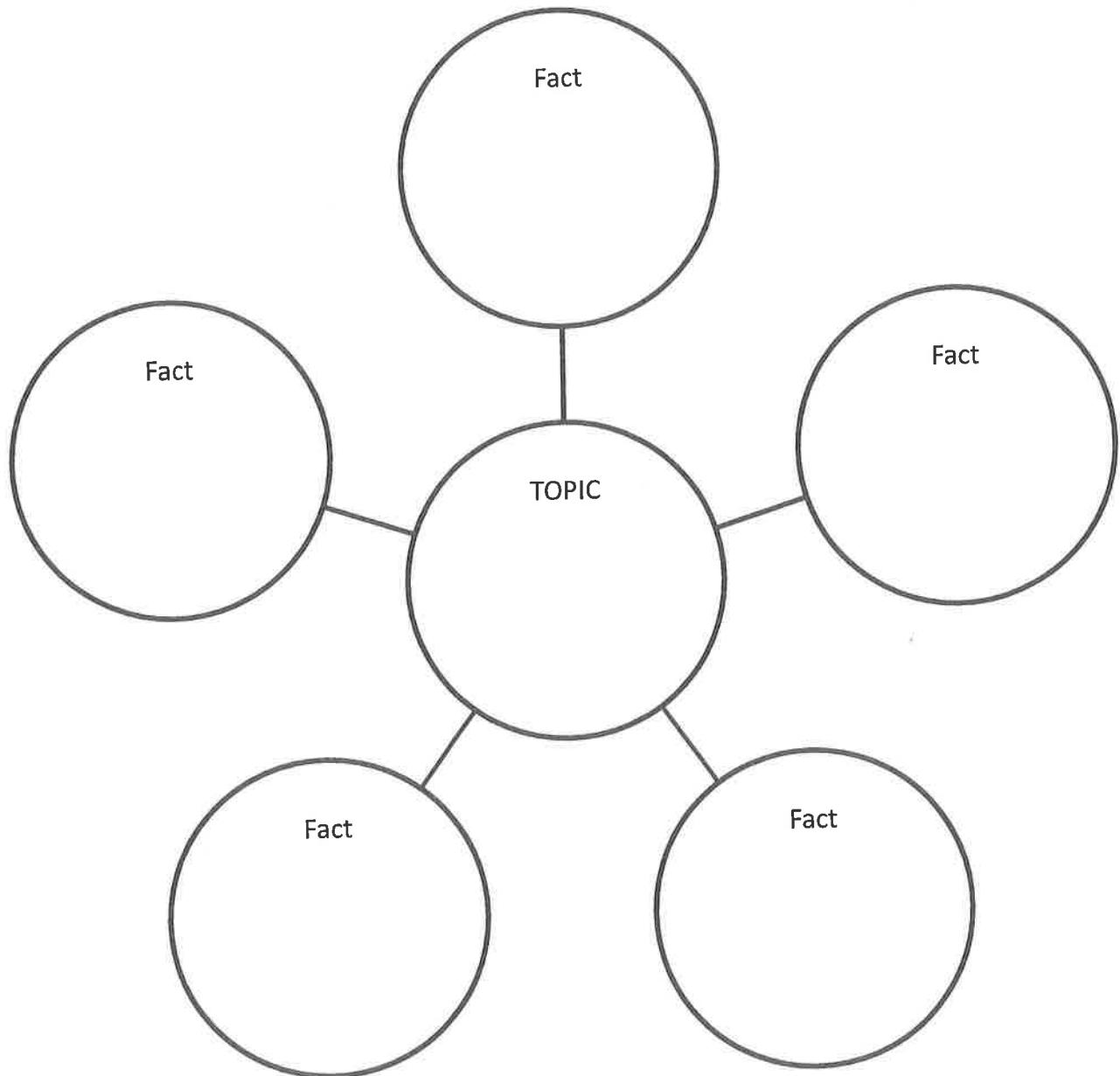
Teacher Signature:

Checkpoint Review Dates:


Final Completion Date

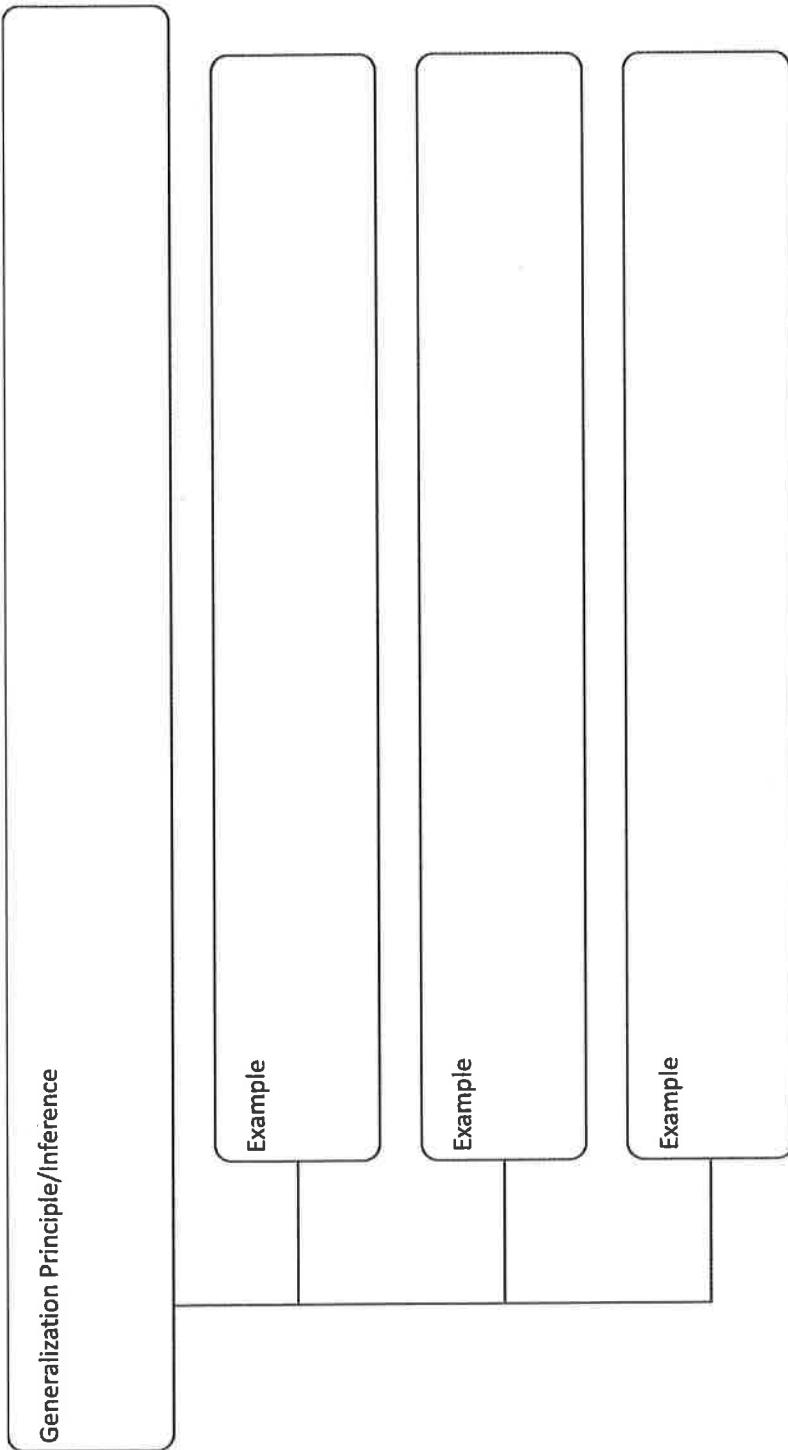
Advanced Organizer

## Descriptive Pattern



Advanced Organizer

**Generalization Organizer**



## Note Taking

Class Notes

Name: \_\_\_\_\_ Date: \_\_\_\_\_ Topic: \_\_\_\_\_

Target:

Figure 11, p. 54





Advanced Organizer

## Get the Gist

Name \_\_\_\_\_

Title \_\_\_\_\_

Concept/Source \_\_\_\_\_

1. Critical Information:

Who:

What:

When:

Where:

Why:

How:

2. Write a 20-word GIST summary.

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