Conducting Cognitive Interviewing:
An Overview of the Interview and Coding Process

Developed Collaboratively within the Combined Program in Education and Psychology
University of Michigan

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Techniques emerging from the considerable research on cognitive aspects of survey methodology include various forms of probing and cognitive interviewing. These techniques can be used to examine whether respondents' interpretations of self-report items are consistent with researchers' assumptions and intended meanings given the constructs the items are designed to measure. This manual gives an overview of the interview and coding techniques that can be used to allow educational researchers to examine the validity of self-report items. Examples are presented from a prominent motivation-related instrument that assesses mastery classroom goal structure.

Although informal procedures are common, these procedures have not been systematically applied in educational research, with the exception of research emerging from the development and employment of the procedures described in this manual. The implications and pragmatics of adopting this approach are discussed further in an article in *Educational Psychologist* that describes how information derived from the systematic application of cognitive pretesting can contribute to determining the validity—designated cognitive validity—of self-report items. Please refer to the following article for more information:

Karabenick, S. A., Woolley, M. E., Friedel, J. M., Ammon, B. V., Blazevski, J., Bonney, C. R., De Groot, E., Gilbert, M. C., Musu, L. E., Kelly, K., Kempler, T. M. (2007). Cognitive processing of self-report items in educational research: Do they think what we mean? Establishing the cognitive validity of motivation-related assessments. *Educational Psychologist, 42*, 139-151.

Cognitive Interviewing Overview

COGNITIVE INTERVIEWING SCRIPT

"Thank you for helping us with the questions we are writing for our survey. We are going to go through (15-25) questions. I will record your answers, so that I can be sure to know exactly what you've said. I am going to ask you to read each question or sentence out loud, tell me what it is asking, choose the answer that is best for you, and tell me why you chose that answer. It is important for you to know that there are no right or wrong answers to these questions, only what you think is right for you. You can skip any questions you do not feel comfortable answering, and you can stop anytime if you want."

Turn the tape recorder on. TEST THE RECORDER TO MAKE SURE IT IS ON.
Complete the information on the cover page (Child ID, gender, age, teacher, grade, item set)

"Let's start with an example."

1. **"Please read that question out loud for me."**

If the child has trouble:

a. Read aloud to the child the word(s) he or she had trouble with.
b. Ask the child if he or she understands the word(s) after hearing you say it.
c. Ask the child to tell you what the problematic word(s) mean. If they clearly do not understand the word, you may offer other suggestions.
d. Note on the comment page what specific word or phrase was difficult for the child to understand.

2. **"What is that question trying to find out from you?"**

3. **"These numbers describe how different people feel about this (question/idea). Which number would <u>you</u> choose as your answer?"**

Read answer options. Ex: "Very confident, somewhat confident, not at all confident, <u>or somewhere in between</u>."

4. **"Please explain to me why you chose that answer."**

5. **FOR EXAMPLE ITEMS ONLY: "Let's talk about the other choices…"**

Guide the child through different response options. For example, you could ask:
"What do you think a 1 means? How about a 4? How is 4 different from 5?"

AFTER EXAMPLE: Decide whether the child understands how to use response scale.

- If you think the child does NOT understand, do a second example.
- If there is a second type of response scale, do a second example.

Otherwise you may begin the first item.

Follow-up Options:
Can you give me an example?
Can you tell me a little more about why you chose number ____?
Are there any other reasons why you chose number ____?
Is there anything else you can tell me about why you chose number ____?

Note problematic items/words:

- When a child has difficulty understanding a specific word
- When a child completely misinterprets an item
- Note non-verbal behavior that you think is important (i.e., child is very distracted; child seems anxious, nervous, or slow to respond; child seems puzzled or confused)

"Now let's do the (first/next) question."

Cognitive Interviewing Coding Report Overview

Introduction

Each item administered to students was evaluated by four independent coders. Five different ratings were given by each coder. A detailed explanation of each type of rating is given in the next section, *Cognitive Interviewing Code Descriptions.* The five ratings given by each coder are as follows:

I. Item Interpretation: Yes, No, Insufficient Prompt, Don't Know
II. Coherent Elaboration: Yes, No, Insufficient Prompt, Not Applicable
III. Congruent Answer Choice: Yes, No, Insufficient Prompt
IV. Cognitive Validity: 0-4, Insufficient Prompt
V. Rater Confidence: 0-4

For reporting purposes, ratings are organized by item and by coder within the report. Summary statistics are given at the item level, and include number of cases for which 3 out of 4 coders agreed upon a rating, and interrater reliability for each rating except Rater Confidence. The section *Summative Report Statistics* describes how these statistics were calculated and how they should be interpreted. Note that we use the words "coder" and "rater" interchangeably, to refer to those who assigned codes/ratings.

Cognitive Interviewing Rating Descriptions

I. Verbal Interpretation of Item: This is a dichotomous rating of whether the student interpreted the item as intended. When asked to put the item in his or her own words, say what the item means, or describe what the item is trying to find out (Question 2 and related follow-up questions), does the student's verbal interpretation of the item reflect what or who the question is asking about?

Yes - Student's verbal interpretation of the item indicates an acceptable level of understanding

- Student restates the item using significantly different words and phrases than are in the item
- Student uses some of the words or phrases in the item but adds or substitutes at least one of his or her own words in verbalizing an interpretation of the item that adds additional data to indicate an acceptable interpretation
- Student offers an adequate description or example to illustrate that s/he understands each of the key concepts, without concept-specific prompting from the interviewer

No - Student's verbal interpretation of the item reflects an unacceptable interpretation

- Student substitutes own words in his or her verbal interpretation of the item such that the interpretation no longer accurately reflects the key elements the item is intended to assess.

Don't Know – Student states that he or she does not know what the item means.

- Student responds s/he does not understand the item and does not respond to follow-up prompts by the interviewer to elicit a verbal interpretation of the item concept

Insufficient Prompts – The interviewer fails to ask all required questions, or fails to adequately probe the child's answers to appropriate questions, and therefore it is unclear whether the child understood and coherently answered the item.

II. Coherent Elaboration: Based on all responses related to this item, does the student describe interpersonal interactions, specific situations, observations, experiences, or a general pattern of events that accurately reflect what, who and where the question is asking about? Some items have two or three clauses or topics, and were accordingly given two or three coherent elaboration ratings. Rating CEA is a dichotomous rating of whether the student described coherent thoughts, feelings or memories that are relevant to the first section or component of the item. Likewise, rating CEB is for the second section or component of the item, and if necessary, rating CEC for the third. Please consult the code book about those items for a detailed description of criteria for each CE rating.

Yes - In general a coherent elaboration could include:

- Interactions with others that reflect the item concept – what, who and where
- Specific situations that are consistent with the item concept
- Observations about the child's environment consistent with aspects of the item concept
- Experiences that are consistent with the item concept
- Events that reflect who/what/where the question is asking about

No - Absence of data that fit the above bullets or presence of data that contradict item coherence as described in the codebook.

Insufficient Prompts – The interviewer fails to ask all required questions, or fails to adequately probe the child's answers to appropriate questions, and therefore it is unclear whether the child understood and coherently answered the item.

Not Applicable – This code was only used on select items. In some cases a student's response to Coherent Elaboration A indicated that they had no experience with the concept or event in question. Therefore, the student had no frame of reference within which to report on part B or C, so CEB or CEC was rated "not applicable".

III. Congruent Answer Choice: Does the student's description or explanation reflect the answer option chosen? This is a dichotomous rating of whether the answer chosen by the student accurately reflected the nature/extent of the concept measured by the item for that student given the student's explanation for that answer choice and all other data the interviewee gave about the item.

Yes - Answer choice matches the student's reason for answer

No - Answer choice does not match the student's reason for answer

Insufficient Prompts – The interviewer fails to ask all required questions, or fails to adequately probe the child's answers to appropriate questions, and therefore it is unclear whether the child understood and coherently answered the item.

IV. Cognitive Validity: Considering all three categories (verbal interpretation of item, coherent elaboration, and congruent answer choice), do the student's cognitive processing and responses indicate an overall conceptual understanding of the item?

Possible Ratings:

0	1	2	3	4
Clear evidence of misunderstanding		Some evidence of understanding		Clear evidence of comprehensive understanding

Insufficient Prompts – The interviewer fails to ask all required questions, or fails to adequately probe the child's answers to appropriate questions, and therefore it is unclear whether the child understood and coherently answered the item; or the child was not prompted to elaborate.

V. Rater Confidence: This rating reflects the how confident each rater was in the ratings he or she assigned for a given student's responses. Factors that may affect confidence include:

- The presence or absence of adequate data from which to judge validity
- Whether the interviewer allowed the subject to respond freely (i.e., were interviewer prompts leading?)
- Whether the interviewer adhered to the interview protocol
- The clarity with which subject responded to interview prompts.

Possible Ratings:

0	1	2	3	4
Not at all confident in my ratings		Somewhat Confident		Very confident in my ratings

Summative Report Statistics

I. Reliability Statistics – Reliability calculations were performed for both dichotomous ratings (e.g., Item Interpretation, Coherent Elaboration, and Answer Choice) and for Cognitive Validity. Due to the nature of the rating scales, reliabilities were necessarily calculated differently, as follows:

Cognitive Validity Reliability – This is a coefficient that indicates the level of reliability with which the four coders rated participant responses for one item on the overall validity performance of this item according to the criteria defined in the codebook. This coefficient was calculated by using the intraclass correlation coefficient for rater *consistency*, which means calibration differences between raters is deducted from the error variance in denominator of the formula (essentially algebraically equivalent to Cronbach's alpha coefficient). Ratings between 0.80 – 1.00 should be considered excellent, while between 0.60 – 0.80 should be considered good, with coefficients below 0.60 considered not adequate reliability. When an overall mean cognitive validity rating has good to excellent reliability, the rating can be interpreted with confidence as a reliable indication of item performance. If the reliability is not adequate, then the overall rating needs to be interpreted with caution. That can indicate a problem with the codebook or coding procedures for that item, a problem with the interview procedure or data collected, or with the item itself. Evaluation of the item should include some qualitative inspection of the interview data to further inform how the item performed.

Dichotomous Ratings Reliability – This description applies to reliability ratings for Item Interpretation, Coherent Elaboration and Congruent Answer Choice. Since these ratings are not on an interval scale, the reliability coefficients are a function of rater *agreement* and was calculated with the intraclass correlation coefficient for rater agreement (similar to Cohen's Kappa). Ratings other than "yes" or "no" were seen as ratings of the data or interview procedure, not of item performance, and were therefore treated as missing data. Therefore the number of responses utilized in reliability calculations varied across ratings. The same criteria as above (0.06 – 0.80 = good, 0.80 – 1.00 = excellent) can be used to evaluate this reliability coefficient.

II. Coder Agreement – For each *dichotomous* rating, we report the number of cases for which at least 3 out of 4 coders agreed on case-specific rating choices (e.g., for II, CE, and AC responses, the number of cases coders *agreed* should be rated Yes, No, or IP). Number of cases for which coders did NOT agree on a specific rating are also given; these cases were often difficult to interpret with confidence.

Item Performance **Revised** Codebook for Mastery Classroom Goal Structure Items
Bullet Format

Motivation for Learning Mathematics and Science (MLMS)
Cognitive Pretesting Inter-Rater Reliability Study

Wave 1 of CPT Data

IMPORTANT NOTES:

This codebook is for student items that reflect **students' perceptions** of the classroom goal structure. This set specifically focuses on students' perceptions of mastery-approach goal structure, which is a focus on learning. The concepts here are thus the student's perspective on the classroom structure and not their personal goals. Accordingly, any "I" statements in which a student is reflecting on his/her personal goals are inaccurate.

Some items administered to elementary students and middle school students varied. Elementary students were administered 24 items with two different stems ("In my science class" and "My teacher") to assess which stem was more effective in helping students understand the scope of the items. Furthermore, some items were eliminated or simplified for these younger students. Middle schools students were only administered items with the stem "In my science class." As such, some items may have fewer responses as middle school students were not administered both stems.

Organization of Codebook

- Mastery goal structure items
    - Items administered to both elementary and middle school students
    - Items administered to only elementary students
    - Items administered to only middle school students

Revisions Made for Second Round:
After three coders completed coding the first five items, it was decided that the rating scheme needed some revision. Changes made were:

(a) Item interpretation is accurate only if the student mentions both the context (or teacher) and the content of the item.
(b) Coherent elaboration A only assesses a student's understanding of the concept of the item; not dependent on whether or not the student mentions the context or teacher.
(c) Congruent answer choice now states "congruent w/**student's** intended meaning" so that coders are clear that this is a rating of a student's ability to use a scale and is not dependent on accurate interpretation or elaboration of the item's intended meaning.

Item CPGS_S01: In my science class, learning new ideas and concepts is very important. Item CPGS_ SE01: In my science class, learning new ideas and concepts in science is very important.	Response Options 1 2 3 4 5 Not at all true Somewhat VeryTrue
Item Performance Criteria Definitions	
Concept/Item Interpretation: Classroom context encourages and supports **learning new** concepts, strategies, or skills. New ideas may refer to those introduced by the teacher or by other students. Student must mention context ('we," "science class," etc.) **and** content of the item. **Coherent Elaboration:** **Behavior** Rating A: <u>Importance of learning.</u> Student demonstrates an understanding of the meaning of **learning** and mentions **whether or not** it is important. • Student might generally state why (e.g., to use in the future) or that learning is important or valuable. • A description of specific tasks, activities, statements, or other instances encouraging that **learning about science** is **important.** • Students might refer to instances when their teacher or other students point out how information will help them learn or understand the material better. *In classrooms where there is not emphasis on the importance of learning, students might refer to statements or instances where the teacher, other students, or part of the classroom structure do not emphasize the importance of learning science. May state they never talk about how learning science is important.* Rating B: <u>New concepts in science.</u> Students who demonstrate an understanding of the importance of learning, also demonstrate an understanding of the meaning of **new concepts and mentions whether or not these are important.** Learning new ideas refers to newly introduced science terms, concepts, activities, tasks, experiments, or ideas. • Student might generally state that new ideas are important to learn (e.g. need to learn new ideas, concepts, terms, etc. for future use, understanding, or assignments, etc.). • Students might refer to instances when teacher or others point out new information and how it will help them learn or understand material better. • Students might mention how there is an emphasis on how new concepts and ideas are important to learning new things and building up their knowledge and skills. *For students who say the classroom does not emphasize the importance of learning, code as N/A, unless the student was prompted during the interview (code response to the prompt).*	Note: Examples will be added to the codebook after the first round of coding, as we consider the variation in student responses.

Context Rating C: Student references the teacher, other students, **or** classroom structure (non-person aspects of the environment) when elaborating on the item. • Yes- student refers to the teacher, other students, **or** classroom structure when elaborating on the item. • No- student does not refer to the teacher, other students, **or** classroom structure when elaborating on the item. **Answer Choice** (congruent with **student's** intended meaning; may differ based on student interpretation) 5 or 4: Student refers to their teacher, other students, or classroom structure making a real effort to point out new information and encourage understanding of the material. 3: Student comments on only a few instances where the teacher or other students encourage understanding by learning new concepts and ideas, but it does not seem to be a common occurrence. 2 or1: Student does not perceive emphasis from teacher or other students highlighting the importance of learning new things or this is a rare occurrence.	

Item Number: CPGS_S01 and CPGS_SE01

Item Wording: In my science class, learning new ideas and concepts is very important.
In my science class, learning new ideas and concepts in science is very important.

Student ID	Item Interpretation	Coherent Elaboration A	Coherent Elaboration B	Coherent Elaboration C	Congruent Answer Choice	Cognitive Validity	Confidence
	Y N DK IP	Y N IP	Y N NA IP	Y N IP	Y N IP	0 1 2 3 4 IP	0 1 2 3 4
	Y N DK IP	Y N IP	Y N NA IP	Y N IP	Y N IP	0 1 2 3 4 IP	0 1 2 3 4
	Y N DK IP	Y N IP	Y N NA IP	Y N IP	Y N IP	0 1 2 3 4 IP	0 1 2 3 4
	Y N DK IP	Y N IP	Y N NA IP	Y N IP	Y N IP	0 1 2 3 4 IP	0 1 2 3 4
	Y N DK IP	Y N IP	Y N NA IP	Y N IP	Y N IP	0 1 2 3 4 IP	0 1 2 3 4

Item Number: CPGS_S01 and CPGS_SE01

Item Wording: In my science class, learning new ideas and concepts is very important.
In my science class, learning new ideas and concepts in science is very important.

Additional Comments on Items CPGS_S01 and CPGS_SE01:

Item CPGS_S02 and CPGS_SE02: In my science class, it's important to understand the work, not just memorize it.	Response Options 1 2 3 4 5 Not at all true Somewhat Very True
Item Performance Criteria Definitions	
Concept/Item Interpretation: Classroom context supports learning to understand the work (how and why), not just memorization/rote learning (what and who). Student must mention context ('we," "science class," etc.) **and** content of the item. **Coherent Elaboration:** **Behavior** Rating A: <u>More than simple recall of work.</u> Student demonstrates a grasp of the meaning to **understand work** and mentions **whether or not** this is important. • May generally state it is important to know what they are doing or understand the work rather than just memorizing the answers or work. • May refer to tasks in which deeper levels of understanding are required, not just lower levels of learning (e.g. rote methods, memorization, recall). • May refer to statements from the teacher or other students about the importance of understanding the work. *Students who do not perceive the emphasis on the importance to understand science work may mention the class focus is only on memorization of facts, definitions, etc.* **Context** Rating B: <u>Student references the teacher, other students, **or** classroom structure (non-person aspects of the environment) when elaborating on the item.</u> • Yes- student refers to the teacher, other students, **or** classroom structure when elaborating on the item. • No- student does not refer to the teacher, other students, **or** classroom structure when elaborating on the item. **Answer Choice** (congruent w/ **student's** intended meaning; may differ based on student interpretation) <u>5 or 4</u>: Student mentions teacher, other students, or class structure frequently encouraging deeper understanding of the material, not just memorizing facts, definitions, etc. <u>3</u>: Student mentions the classroom sometimes emphasizes deeper level understanding, but this does not seem to be a common occurrence. <u>2 or1</u>: Student mentions the classroom does not encourage, or rarely encourages, deeper understanding of material.	Note: Examples will be added to the codebook after the first round of coding, as we consider the variation in student responses.

Item Number: CPGS_S02 and CPGS_SE02

Item Wording: In my science class, it's important to understand the work, not just memorize it.

Student ID	Item Interpretation	Coherent Elaboration A	Coherent Elaboration B	Congruent Answer Choice	Cognitive Validity	Confidence
	Y N DK IP	Y N IP	Y N IP	Y N IP	0 1 2 3 4 IP	0 1 2 3 4
	Y N DK IP	Y N IP	Y N IP	Y N IP	0 1 2 3 4 IP	0 1 2 3 4
	Y N DK IP	Y N IP	Y N IP	Y N IP	0 1 2 3 4 IP	0 1 2 3 4
	Y N DK IP	Y N IP	Y N IP	Y N IP	0 1 2 3 4 IP	0 1 2 3 4
	Y N DK IP	Y N IP	Y N IP	Y N IP	0 1 2 3 4 IP	0 1 2 3 4

Item Number: CPGS_S02 and CPGS_SE02

Item Wording: In my science class, it’s important to understand the work, not just memorize it.

Additional comments on Item CPGS_S02 and CPGS_SE02:

<table>
<tr><td>Item CPGS_S03:
In my science class, really understanding the material is the main goal.</td><td>Response Options
1 2 3 4 5
Not at all true Somewhat Very True</td></tr>
<tr><td>Item Performance Criteria Definitions</td><td></td></tr>
<tr><td>Concept/Item Interpretation:
Classroom context emphasizes deeper-level understanding of concepts. Student must mention context (‘we,” “science class,” etc.) and content of the item.
Coherent Elaboration:
Behavior
Rating A: <u>Understanding the material.</u>
Student demonstrates a grasp of the meaning to understand material and mentions whether or not this is important or the main focus.
• Student may generally state that understanding the material is to really know what you are doing or to understand the work in depth and that this is valuable (e.g., understand work so can use it later, etc.), important, or the main focus.
• Student may mention tasks, activities, assignments, comments that emphasize the understanding of material and not just getting the right answer.
• Student may mention tasks such as showing their work, demonstrating procedure/process.
• Student may mention opportunities for revisions.
In a classroom where a focus on understanding the science material is not perceived the student might mention the class only focuses on repetition of material, getting work done, getting the right answer, etc and does not focus on the process or understanding the work.
Context
Rating B: <u>Student references the teacher, other students, or classroom structure (non-person aspects of the environment) when elaborating on the item.</u>
• Yes- student refers to the teacher, other students, or classroom structure when elaborating on the item.
• No- student does not refer to the teacher, other students, or classroom structure when elaborating on the item.
Answer Choice
(congruent w/ student’s intended meaning; may differ based on student interpretation)
<u>5 or 4</u>: Student mentions classroom context frequently fosters deep understanding of material.
<u>3</u>: Student mentions classroom context sometimes fosters deep understanding of material, but this is not a common occurrence.
<u>2 or1</u>: Student mentions classroom context does not or rarely fosters deep understanding of material.</td><td>Note:
Examples will be added to the codebook after the first round of coding, as we consider the variation in student responses.</td></tr>
</table>

Item Number: CPGS_S03

Item Wording: In my science class, really understanding the material is the main goal.

Student ID	Item Interpretation				Coherent Elaboration A			Coherent Elaboration B			Congruent Answer Choice			Cognitive Validity						Confidence				
	Y	N	DK	IP	Y	N	IP	Y	N	IP	Y	N	IP	0	1	2	3	4	IP	0	1	2	3	4
	Y	N	DK	IP	Y	N	IP	Y	N	IP	Y	N	IP	0	1	2	3	4	IP	0	1	2	3	4
	Y	N	DK	IP	Y	N	IP	Y	N	IP	Y	N	IP	0	1	2	3	4	IP	0	1	2	3	4
	Y	N	DK	IP	Y	N	IP	Y	N	IP	Y	N	IP	0	1	2	3	4	IP	0	1	2	3	4
	Y	N	DK	IP	Y	N	IP	Y	N	IP	Y	N	IP	0	1	2	3	4	IP	0	1	2	3	4

Item Number: CPGS_S03

Item Wording: In my science class, really understanding the material is the main goal.

Additional comments for Item CPGS_S03:

<table>
<tr><td>Item CPGS_S04 and CPGS_SE04:
In my science class, it's okay to make mistakes as long as you are learning.</td><td>Response Options
1 2 3 4 5
Not at all true Somewhat Very True</td></tr>
<tr><td>Item Performance Criteria Definitions</td><td></td></tr>
<tr><td>Concept/Item Interpretation:
Those in the classroom suggest making mistakes or errors is okay, can use them as a learning tool. Student must mention context ('we," "science class," etc.) and content of the item.
Coherent Elaboration:
Behavior
Rating A: <u>Mistakes are a part of learning.</u>
Student demonstrates a grasp of the meaning of mistakes being a part of learning and mentions whether or not it is okay to make mistakes.
• Student might mention mistakes or errors can be used as a means to clarify concepts, confusions, or misunderstandings.
• Student might refer to examples of explicit comments from the teacher or other students saying mistakes are okay.
• Student might mention opportunities or comments revealing mistakes or errors can be revised or re-worked.
In classrooms where mistakes are not acceptable, then students might mention other students making fun of errors, refer to practices or comments suggesting that mistakes are not part of learning, or mention students are not given the opportunity to revise or re-work science work.
Context
Rating B: <u>Student references the teacher, other students, or classroom structure (non-person aspects of the classroom) when elaborating on the item.</u>
• Yes- student refers to the teacher, other students, or classroom structure when elaborating on the item.
• No- student does not refer to the teacher, other students, or classroom structure when elaborating on the item.
Answer Choice
(congruent w/ student's intended meaning; may differ based on student interpretation)
<u>5 or 4</u>: Student indicates mistakes are frequently treated as a part of learning in class.
<u>3</u>: Student indicates mistakes are sometimes treated as a part of learning in science class, but this is not a common occurrence.
<u>2 or1</u>: Student indicates mistakes are rarely, if ever, treated as a part of the learning process in science class.</td><td>Note:
Examples will be added to the codebook after the first round of coding, as we consider the variation in student responses.</td></tr>
</table>

Item Number: CPGS_S04 and CPGS_SE04

Item Wording: In my science class, it’s okay to make mistakes as long as you are learning.

Student ID	Item Interpretation	Coherent Elaboration A	Coherent Elaboration B	Congruent Answer Choice	Cognitive Validity	Confidence
	Y N DK IP	Y N IP	Y N IP	Y N IP	0 1 2 3 4 IP	0 1 2 3 4
	Y N DK IP	Y N IP	Y N IP	Y N IP	0 1 2 3 4 IP	0 1 2 3 4
	Y N DK IP	Y N IP	Y N IP	Y N IP	0 1 2 3 4 IP	0 1 2 3 4
	Y N DK IP	Y N IP	Y N IP	Y N IP	0 1 2 3 4 IP	0 1 2 3 4
	Y N DK IP	Y N IP	Y N IP	Y N IP	0 1 2 3 4 IP	0 1 2 3 4

Item Number: CPGS_S04 and CPGS_SE04

Item Wording: In my science, it’s okay to make mistakes as long as you are learning.

Additional comments on Item CPGS_S04 and CPGS_SE04:

<table>
<tr><td>Item CPGS_S05: In my science class, how much you improve is very important
Item CPGS_SE05: In my science class, how much you improve is really important.</td><td>Response Options
1 2 3 4 5
Not at all true Somewhat Very True</td></tr>
<tr><td>Item Performance Criteria Definitions</td><td></td></tr>
<tr><td>Concept/Item Interpretation:
Classroom context supports students' improvements in skills and understanding. Student must mention context ('we," "science class," etc.) and content of the item.
Coherent Elaboration:
Behavior
Rating A: <u>Improvement in understanding.</u>
Student demonstrates an understanding of what it means to improve (in scores, understanding content in general) and mentions whether or not improvement is important.
Student may generally state that it is important to better understand your work or to do better than you did before.
Student might refer to tasks, activities, or other strategies the teacher or other students use to encourage improvement.
Student might refer to things such as improvement points, or the teacher or classmates acknowledging improvements in scores, grades, or understanding via written or verbal feedback.
Student might mention opportunities for revision on tasks, experiments, papers, tests, etc.
In classrooms in which this emphasis on improvement is not apparent, students might mention classroom only focuses on high scores/grades and not improving; or communicates students are not capable of improvement.
Context
Rating B: <u>Student references the teacher, other students, or classroom structure when elaborating on the item.</u>
Yes- student refers to the teacher, other students, or classroom structure (display boards, tasks, etc.) when elaborating on the item.
No- student does not refer to the teacher, other students, or classroom structure when elaborating on the item.
Answer Choice
(congruent w/ student's intended meaning; may differ based on student interpretation)
<u>5 or 4</u>: Student indicates classroom context (teachers, other students, or structure) frequently supports students' improvement in understanding.
<u>3</u>: Student indicates classroom context (teacher, other students, or structure) somewhat is supportive of students' improvement in understanding but this is not a common occurrence.
<u>2 or1</u>: Student indicates classroom context (teacher, other students, or structure) rarely, if ever, supports improvement in understanding. May indicate focus is only on high grades.</td><td>Note:
Examples will be added to the codebook after the first round of coding, as we consider the variation in student responses.</td></tr>
</table>

Item Number: CPGS_S05 and CPGS_SE05:

Item Wording: In my science class, how much you improve is very important.
In my science class, how much you improve is really important.

Student ID	Item Interpretation	Coherent Elaboration A	Coherent Elaboration B	Congruent Answer Choice	Cognitive Validity	Confidence
	Y N DK IP	Y N IP	Y N IP	Y N IP	0 1 2 3 4 IP	0 1 2 3 4
	Y N DK IP	Y N IP	Y N IP	Y N IP	0 1 2 3 4 IP	0 1 2 3 4
	Y N DK IP	Y N IP	Y N IP	Y N IP	0 1 2 3 4 IP	0 1 2 3 4
	Y N DK IP	Y N IP	Y N IP	Y N IP	0 1 2 3 4 IP	0 1 2 3 4
	Y N DK IP	Y N IP	Y N IP	Y N IP	0 1 2 3 4 IP	0 1 2 3 4

Item Number: CPGS_S05 and CPGS_SE05:

Item Wording: In my science class, how much you improve is very important.
In my science class, how much you improve is really important.

Additional comments for Item CPGS_S05 and CPGS_SE05:

Item CPGS_S06 and CPGS_SE06: In my science class, trying hard is very important.	Response Options 1 2 3 4 5 Not at all true Somewhat Very True
Item Performance Criteria Definitions	
Concept/Item Interpretation: Hard work and effort is important in science class. Student must mention context ('we," "science class," etc.) **and** content of the item. **Coherent Elaboration:** **Behavior** Rating A: <u>Effort is important.</u> Student grasps the concept of **effort** and mentions **whether or not** effort or trying hard is important. • Student might generally indicate that it is important to try hard or work hard. • Student might refer to effort points. • Student might refer to the teacher or other students explicitly or implicitly encouraging and/or acknowledging (in writing or verbally) the effort students put into activities, homework, or other tasks. • Students might reference that the tasks are challenging, and that it is important to try hard. *In classrooms in which effort is not viewed as important, students might mention teacher or other students' emphasize being smart or that effort is not recognized.* **Context** Rating B: <u>Student indicates emphasis is coming from the teacher, other students, **or** classroom structure (non-person aspects of the classroom).</u> • Yes- student indicates the emphasis is coming from the teacher, other students, **or** classroom structure. (note: this rating is independent of CEA) • No- student does not indicate the emphasis is coming from the teacher, other students, **or** classroom structure when elaborating on the item. May refer to personal goals. (note: this rating is independent of CEA) **Answer Choice** (congruent w/ **student's** intended meaning; may differ based on student interpretation) <u>5 or 4</u>: Student indicates teacher, classmates, or strategies used in science class encourage students' to try hard and give effort to learning. <u>3</u>: Student indicates teacher, classmates, or strategies used in science class somewhat encourage or acknowledge students hard work and effort, but that this is not a common occurrence. <u>2 or1</u>: Student indicates teacher, classmates, or strategies used in science class rarely or do not encourage or acknowledge that students' effort and hard work is important in science class. Students may mention class only emphasizes innate ability and those who have to try hard aren't as smart.	Note: Examples will be added to the codebook after the first round of coding, as we consider the variation in student responses.

Item Number: CPGS_S06 and CPGS_SE06

Item Wording: In my science class, trying hard is very important.

Student ID	Item Interpretation	Coherent Elaboration A	Coherent Elaboration B	Congruent Answer Choice	Cognitive Validity	Confidence
	Y N DK IP	Y N IP	Y N IP	Y N IP	0 1 2 3 4 IP	0 1 2 3 4
	Y N DK IP	Y N IP	Y N IP	Y N IP	0 1 2 3 4 IP	0 1 2 3 4
	Y N DK IP	Y N IP	Y N IP	Y N IP	0 1 2 3 4 IP	0 1 2 3 4
	Y N DK IP	Y N IP	Y N IP	Y N IP	0 1 2 3 4 IP	0 1 2 3 4
	Y N DK IP	Y N IP	Y N IP	Y N IP	0 1 2 3 4 IP	0 1 2 3 4

Item Number: CPGS_S06 and CPGS_SE06

Additional comments for Item CPGS_S06 and CPGS_SE06:

Item CPGS_SE21: My teacher thinks learning new ideas and concepts in science is very important.	Response Options 1 2 3 4 5 Not at all true Somewhat Very True
Item Performance Criteria Definitions	
Concept/Item Interpretation: **Teacher** encourages and supports learning new concepts, strategies, or skills. New ideas may include newly introduced science terms, concepts, or ideas presented by the teacher. Student must mention the teacher **and** the content of the item. Coherent Elaboration: **Behavior** Rating A: <u>Importance of learning.</u> Student demonstrates an understanding of the meaning of **learning** and mentions **whether or not** it is important. • Student might generally state why learning is important (e.g., to use in the future) or that learning is important or valuable. • Student might refer to instances, tasks, activities, or comments in which the teacher emphasizes that learning about science is important. • Student might refer to instances when their teacher points out how information will help students learn or understand the material better. Rating B: <u>Learning **new concepts.**</u> For those students who demonstrate a grasp of what it means for learning be important, also demonstrate an understanding of learning **new concepts** and specify **whether or not** learning new ideas is important. • Students might refer to instances when the teacher points out **new information** and how it will help students learn or understand the material. • Students might mentions how the teacher emphasizes **new concepts** and ideas are important to learning new things and building up their knowledge and skills. *For students who do not perceive the teacher as encouraging learning as important, code as N/A, unless the student was prompted during the interview (code response to the prompt).* **Teacher** Rating C: <u>Student references the teacher when elaborating on the item.</u> • Yes- student refers to **only** the teacher when elaborating on the item. • No- student does not refer to the teacher. Student may have referred to the classroom structure, other students, or themselves instead. **Answer Choice**	Note: Examples will be added to the codebook after the first round of coding, as we consider the variation in student responses.

(congruent w/ **student's** intended meaning; may differ based on student interpretation) 5 or 4: Student refers to their teacher making a real effort to point out new information and encourage understanding of the material. 3: Student comments on only a few instances where the teacher encourages understanding by learning new concepts and ideas, but it does not seem to be a common occurrence. 2 or1: Student does not perceive emphasis from the teacher highlighting the importance of learning new things or this is a rare occurrence.	

Item Number: CPGS_SE21

Item Wording: My teacher thinks learning new ideas and concepts in science is very important.

Student ID	Item Interpretation	Coherent Elaboration A	Coherent Elaboration B	Coherent Elaboration C	Congruent Answer Choice	Cognitive Validity	Confidence
	Y N DK IP	Y N IP	Y N NA IP	Y N IP	Y N IP	0 1 2 3 4 IP	0 1 2 3 4
	Y N DK IP	Y N IP	Y N NA IP	Y N IP	Y N IP	0 1 2 3 4 IP	0 1 2 3 4
	Y N DK IP	Y N IP	Y N NA IP	Y N IP	Y N IP	0 1 2 3 4 IP	0 1 2 3 4
	Y N DK IP	Y N IP	Y N NA IP	Y N IP	Y N IP	0 1 2 3 4 IP	0 1 2 3 4
	Y N DK IP	Y N IP	Y N NA IP	Y N IP	Y N IP	0 1 2 3 4 IP	0 1 2 3 4

Item Number: CPGS_SE21:

Item Wording: My teacher thinks learning new ideas and concepts in science is very important.

Additional comments for Item CPGS_SE21:

<table>
<tr><td>Item CPGS_SE22: My teacher wants us to understand our science work, not just memorize it.</td><td>Response Options
1 2 3 4 5
Not at all true Somewhat Very True</td></tr>
<tr><td>Item Performance Criteria Definitions</td><td></td></tr>
<tr><td>Concept/Item Interpretation:
Teacher supports learning to understand the work (how and why), not just memorization/rote learning (what and who). Student must mention the teacher and content of the item.

Coherent Elaboration:
Behavior
Rating A: <u>More than simple recall of work.</u>
Student demonstrates a grasp of the meaning to understand work and mentions whether or not this is important.
• Student may generally state it is important to know what they are doing or understand the work more in depth rather than just memorizing the answers to work.
• Student may refer to statements about the importance of understanding the work in science.
• Student may refer to tasks given which deeper levels of understanding are required, not just the regurgitation of facts or definitions.
Students who do not perceive teacher emphasis on understanding work in science may mention the teacher wants them to memorize facts, definitions, etc.

Teacher
Rating B: <u>Student references the teacher when elaborating on the item.</u>
• Yes- student refers to only the teacher when elaborating on the item.
• No- student does not refer to the teacher. Student may have referred to the classroom structure, other students, or themselves instead.

Answer Choice
(congruent w/ student’s intended meaning; may differ based on student interpretation)

<u>5 or 4</u>: Student indicates teacher frequently wants students to gain a deeper understanding of the material, not just memorizing facts, definitions, etc.
<u>3</u>: Student indicates teacher wants students to gain a deeper level understanding, not just memorizing facts and definitions in science, but this does not seem to be a common occurrence.
<u>2 or1</u>: Student indicates teacher does not or rarely wants students to gain a deeper level of understanding of the science material.</td><td>Note:
Examples will be added to the codebook after the first round of coding, as we consider the variation in student responses.</td></tr>
</table>

Item Number: CPGS_SE22

Item Wording: My teacher wants us to understand our science work, not just memorize it.

Student ID	Item Interpretation	Coherent Elaboration A	Coherent Elaboration B	Congruent Answer Choice	Cognitive Validity	Confidence
	Y N DK IP	Y N IP	Y N IP	Y N IP	0 1 2 3 4 IP	0 1 2 3 4
	Y N DK IP	Y N IP	Y N IP	Y N IP	0 1 2 3 4 IP	0 1 2 3 4
	Y N DK IP	Y N IP	Y N IP	Y N IP	0 1 2 3 4 IP	0 1 2 3 4
	Y N DK IP	Y N IP	Y N IP	Y N IP	0 1 2 3 4 IP	0 1 2 3 4
	Y N DK IP	Y N IP	Y N IP	Y N IP	0 1 2 3 4 IP	0 1 2 3 4

Item Number: CPGS_SE22

Item Wording: My teacher wants us to understand our science work, not just memorize it.

Additional comments for Item CPGS_SE22:

Item CPGS_SE24: My teacher thinks it's okay to make mistakes in science as long as you are learning.	Response Options 1 2 3 4 5 Not at all true Somewhat Very True
Item Performance Criteria Definitions	
Concept/Item Interpretation: **Teacher** accepts mistakes as a part of learning. Student perceives the **teache**r thinks making mistakes is okay, can use them as a tool for learning. Student must mention the teacher **and** content of the item. **Coherent Elaboration:** **Behavior** Rating A: <u>Mistakes are a part of the learning process.</u> Student demonstrates an understanding of **mistakes being a part of the learning process** and mentions **whether or not** it is okay to make errors. • Student might mention mistakes or errors can be used as a means to clarify concepts, confusions, or misunderstandings. • Student might refer to examples of explicit comments from the teacher saying mistakes are okay. • Student might mention opportunities given by the teacher revealing mistakes or errors can be revised or re-worked. *In instances where the teacher does not think mistakes are acceptable, students might mention the teacher making derogatory comments about errors, getting punished, embarrassed, or having points taken away for making mistakes. May also mention teacher comments suggesting mistakes are not part of learning. Student might also say the teacher does not give opportunities for work to be revised or re-worked.* **Teacher** Rating B: <u>Student references the teacher when elaborating on the item.</u> • Yes- student refers to **only** the teacher when elaborating on the item. • No- student does not refer to the teacher. Student may have referred to the classroom structure, other students, or themselves instead. **Answer Choice** (congruent w/ **student's** intended meaning; may differ based on student interpretation) <u>5 or 4</u>: Student indicates teacher frequently encourages learning from mistakes in science. <u>3</u>: Student indicates teacher somewhat encourages learning form mistakes, but this is not a common occurrence. <u>2 or1</u>: Student indicates teacher rarely or never encourages learning from mistakes and perhaps frowns upon mistakes/errors.	Note: Examples will be added to the codebook after the first round of coding, as we consider the variation in student responses.

Item Number: CPGS_SE24

Item Wording: My teacher thinks it’s okay to make mistakes in science as long as you are learning.

Student ID	Item Interpretation	Coherent Elaboration A	Coherent Elaboration B	Congruent Answer Choice	Cognitive Validity	Confidence
	Y N DK IP	Y N IP	Y N IP	Y N IP	0 1 2 3 4 IP	0 1 2 3 4
	Y N DK IP	Y N IP	Y N IP	Y N IP	0 1 2 3 4 IP	0 1 2 3 4
	Y N DK IP	Y N IP	Y N IP	Y N IP	0 1 2 3 4 IP	0 1 2 3 4
	Y N DK IP	Y N IP	Y N IP	Y N IP	0 1 2 3 4 IP	0 1 2 3 4
	Y N DK IP	Y N IP	Y N IP	Y N IP	0 1 2 3 4 IP	0 1 2 3 4

Item Number: CPGS_SE24

Item Wording: My teacher thinks it’s okay to make mistakes in science as long as you are learning.

Additional comments for Item CPGS_SE24:

Item CPGS_SE25: My teacher thinks how much you improve in science is really important.	Response Options 1 2 3 4 5 Not at all true Somewhat Very True
Item Performance Criteria Definitions	
Concept/Item Interpretation: **Teacher** supports students' improvements in skills and understanding. Student must mention the teacher **and** content of the item. **Coherent Elaboration:** **Behavior** Rating A: <u>Improvement in work.</u> Student demonstrates and understanding of what it means to **improve** in understanding, work, or scores, and mentions **whether or not** this is important. • Student might generally state that understanding work better or doing better than you did before is important. • Student might refer to tasks, activities, or other strategies used by the teacher to encourage improvement. • Student might refer to things such as improvement points, or the teacher acknowledging improvements in scores, grades, or understanding via written or verbal feedback. • Student might mention opportunities given by the teacher for revisions on tasks, experiments, papers, tests, etc. *In instances where the teacher does not emphasize improvement, students might mentions the teacher only focuses on high scores/grades and not improving; or communicates students are not capable of improvement.* **Teacher** Rating B: <u>Student references the teacher when elaborating on the item.</u> • Yes- student refers to **only** the teacher when elaborating on the item. • No- student does not refer to the teacher. Student may have referred to the classroom structure, other students, or themselves instead. **Answer Choice** (congruent w/ **student's** intended meaning; may differ based on student interpretation) <u>5 or 4</u>: Student indicates teacher frequently supports students' improvement in understanding. <u>3</u>: Student indicates teacher somewhat is supportive of students' improvement in understanding, but this is not a common occurrence. <u>2 or1</u>: Student indicates teacher rarely, if ever, supports improvement in understand. May indicate teacher only thinks high grades are important.	Note: Examples will be added to the codebook after the first round of coding, as we consider the variation in student responses.

Item Number: CPGS_SE25

Item Wording: My teacher thinks how much you improve in science is really important.

Student ID	Item Interpretation	Coherent Elaboration A	Coherent Elaboration B	Congruent Answer Choice	Cognitive Validity	Confidence
	Y N DK IP	Y N IP	Y N IP	Y N IP	0 1 2 3 4 IP	0 1 2 3 4
	Y N DK IP	Y N IP	Y N IP	Y N IP	0 1 2 3 4 IP	0 1 2 3 4
	Y N DK IP	Y N IP	Y N IP	Y N IP	0 1 2 3 4 IP	0 1 2 3 4
	Y N DK IP	Y N IP	Y N IP	Y N IP	0 1 2 3 4 IP	0 1 2 3 4
	Y N DK IP	Y N IP	Y N IP	Y N IP	0 1 2 3 4 IP	0 1 2 3 4

Item Number: CPGS_SE25

Item Wording: My teacher thinks how much you improve in science is really important.

Additional comments for Item CPGS_SE25:

Item CPGS_SE26: My teacher recognizes us for trying hard in science.	Response Options 1 2 3 4 5 Not at all true Somewhat Very True
Item Performance Criteria Definitions	
Concept/Item Interpretation: **Teacher** acknowledges students' effort and hard work in science. Student must mention the teacher **and** content of the item. **Coherent Elaboration:** **Behavior** Rating A: <u>Recognition for effort.</u> Student demonstrates and understanding for what it means to be **recognized for effort** or trying hard and mentions **whether or not** this occurs. • Student might mention acknowledgement for trying hard. • Student might refer to teacher giving effort points. • Student might refer to the teacher encouraging and/or acknowledging (in writing or verbally) the effort students put into activities, homework, or other tasks. • Students might mention comments from the teacher that tasks are challenging, and that it is important to try hard. *In classrooms in which the teacher does not recognize effort, students might mention the teacher emphasizes being smart or that effort is not recognized. Student may say that it doesn't really matter how hard they try on their work.* **Teacher** Rating B: <u>Student references the teacher when elaborating on the item.</u> • Yes- student refers to **only** the teacher when elaborating on the item. • No- student does not refer to the teacher. Student may have referred to the classroom structure, other students, or themselves instead. **Answer Choice** (congruent w/ **student's** intended meaning; may differ based on student interpretation) <u>5 or 4</u>: Student indicates teacher frequently acknowledges students for trying hard and giving effort to learning in science. <u>3</u>: Student indicates teacher somewhat acknowledges students for trying hard and giving effort in learning science, but this is not a common occurrence. <u>2 or1</u>: Student indicates teacher rarely or never acknowledges students' effort and hard work in learning in science. May mention teacher only acknowledges innate ability	Note: Examples will be added to the codebook after the first round of coding, as we consider the variation in student responses.

Item Number: CPGS_SE26

Item Wording: My teacher recognizes us for trying hard in science.

Student ID	Item Interpretation			Coherent Elaboration A			Coherent Elaboration B			Congruent Answer Choice			Cognitive Validity						Confidence				
	Y	N	IP	Y	N	IP	Y	N	IP	Y	N	IP	0	1	2	3	4	IP	0	1	2	3	4
	Y	N	IP	Y	N	IP	Y	N	IP	Y	N	IP	0	1	2	3	4	IP	0	1	2	3	4
	Y	N	IP	Y	N	IP	Y	N	IP	Y	N	IP	0	1	2	3	4	IP	0	1	2	3	4
	Y	N	IP	Y	N	IP	Y	N	IP	Y	N	IP	0	1	2	3	4	IP	0	1	2	3	4
	Y	N	IP	Y	N	IP	Y	N	IP	Y	N	IP	0	1	2	3	4	IP	0	1	2	3	4

Item Number: CPGS_SE26

Item Wording: My teacher recognizes us for trying hard in science.

Additional comments for Item CPGS_SE26:

ID: 104
CPGS_S01

In my science class, learning new ideas
and concepts is very important.

I: So, here is your first question, of the actual survey. Very similar to our sample questions. Can you read that for me?

C: In my science class, learning new ideas and concepts is very important.

I: And do you know what that means?

C: Uh…in science class, learning new ideas is very important.

I: Mm-hmm, mm-hmm. And how would you answer that question?

C: Uh, very true.

I: And do you have any, uh, anything to say about why you chose number five?

C: Because the concepts could help you on your test.

I: Mm-hmm, very good.

ID: 106
CPGS_S01

In my science class, learning new ideas
and concepts is very important.

I: Can you read this question out loud for me?

C: In my science class, learning new ideas and con – I can't read that one.

I: Concepts.

C: …concepts is very important.

I: Good. Um, so what is this trying to – what is this, um, what is this question trying to get from you?

C: Like, um……um, like, trying to get, like…what ideas are you getting in our classroom.

I: Mm-hmm. And so what would be – concept is a tricky word, right? Um, what could be, like, a new idea? Do you know what a concept is? Or is that hard?

C: It's kind of hard for me.

I: Yeah, it is tricky. What would be, like, en example of something new that you're learning in science?

C: Um…the insides of a flower.

I: Ok, good. So, if you were going to answer this question, what number would you pick?

C: Five.

I: And why five?

C: Because Mrs. Ober always tells us that it's very true, like, she always tells us that we should learn new ideas and so we end up using – learning new ideas each week.

I: Like a bunch of different things? Ok, good. Do you like learning about flowers?

C: Kind of.

I: Kind of?

ID: 107
CPGS_S01

In my science class, learning new ideas
and concepts is very important.

I: Go ahead and read that one.

C: In my science class, learning new ideas and [short pause] concepts is very important.

I: What do you think that means?

C: Um / that it's important to pay attention in class

I: Ok, what do you think that they mean by concepts?

C: / to do what you're suppose to do?

I: Ok, and how would you answer that?

C: / a three

I: Why?

C: I mean a five because-

I: A five

C: cause your suppose to do what you do in your class

I: Ok, can you give me an example?

C: like say, well I mean, / about plants and like you had-the teacher asked you a question and you didn't know and she known you weren't paying attention

I: Ok, that's a good example.

ID: 160
CPGS_SE01

In my science class, learning new ideas and concepts in science is very important.

I: [Interviewer skipped prompt]

C: In science class, we're learning new ideas, new ideas and concepts in science is very important.

I: What does that mean, you suppose?

C: Hmm. That, if you're, if you're, that learning new things is very important. Hmm. I'd say very true, because if we didn't, then by the time we went to, like, college we'd be so far behind, we'd get kicked out the first day.

I: Ok.

ID: 163
CPGS_SE01

In my science class, learning new ideas and concepts in science is very important.

I: Ok can you read that one out loud for me?

C: In my science class, learn learning new ideas and concepts in science is very important.

I: Ok, good. What is that question asking you?

C: Um is it important um in class you get new ideas and pay attention.

I: Ok um do you know what that concepts means?

C: No.

I: That's what um the girl before you though too. Um ok. So good, that's what it's asking you. How would you answer it?

C: Um with a number five.

I: Can you tell me why?

C: Cause if you um pay attention when you get older you'll be smart and you'll know a lot about science.

I: Ok, good.

ID: 164
CPGS_SE01

In my science class, learning new ideas and concepts in science is very important.

I: OK

C: In my science class, learning new ideas and concepts in science is very important.

I: What is that trying to find out?

C: It's trying to find out if, um, if, uh, I can relate to stuff and um, in um, my life and stuff, that, um, of the new ideas and concepts, and that we learn in science

I: Ok, and what would you pick?

C: I would say, maybe a 2.

I: A two? How come.

C: Cuz, what, maybe this whole class, I've never not, uh, about the food chain, food web, not by, I learned one thing but I have to compare it in my life.

I: Ok

Sample coder consensus for the transcripts provided:

ID	Item Interpretation	Coherent Elaboration A	Coherent Elaboration B	Coherent Elaboration C	Answer Choice	Cognitive Validity
104	6 = No	6 = No	6 = No	11 = Disagreed	5 = Yes	2.00
106	6 = No	6 = No	5 = Yes	5 = Yes	5 = Yes	3.25
107	6 = No	6 = No	6 = No	5 = Yes	5 = Yes	0.50
160	6 = No	5 = Yes	11 = Disagreed	11 = Disagreed	5 = Yes	2.50
163	6 = No	5 = Yes	6 = No	6 = No	5 = Yes	2.25
164	6 = No	6 = No	5 = Yes	11 = Disagreed	5 = Yes	2.00