

Cognitive Foundations Lesson Plan:

Topic/Lesson: Cognitive Foundations & Incorporating Student Engagement

Rationale and Context: Cognitive foundations is a quintessential aspect of understanding development from the perspective of a student understanding the basic psychological behavior of humans, as well as utilizing cognitive information as a form of best practice for instruction. Students will discover methodologies of engaging students in the classroom, as well as learning the essential components of cognitive principles.

Desired Results:

Unit Essential Question: How does the concept of cognitive foundations help educators engage students?

Common Core Standard: Reading:

Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas. Determine two or more central ideas of a text and analyze their development over the course of the text, including how they interact and build on one another to provide a complex analysis; provide an objective summary of the text.

Scaffolding Strategies for all Students: Though the scaffolding being utilized will be meant to assist all students in learning the material pertaining to cognitive foundations, the scaffolding will specifically target students that fall within level 3 of the WIDA Standards (Developing). The lesson is designed to ensure that ELL students within the developing level will not only be able to learn the material, but to also feel comfortable enough with cognitive foundations to write basic sentences and discuss stories and examples. The formative and summative assessments have been created with diligence to ensure that all students will properly be engaged.

Learning Objectives:

3.1 Four Stages of Piaget's Cognitive Development: Students will be able to describe the four stages of Piaget's Cognitive Development in order to better understand strategies to engage students. The students that are being taught are in the Formal Operations Stage, in which there is a great curiosity about possibilities and hypotheses.

- Level of Questioning: Knowledge/Remembering

Formative Assessment: A Nearpod survey will be utilized to ensure that everyone participates. Are students familiar with Piaget? What does cognitive development mean to you? Some anonymous answers will be read, and the class will justify the response. These responses will be compared with learning the 4 stages of cognitive development. Students will paraphrase the stages of Cognitive Development in this formative assessment.

- Level of Questioning: Comprehension/Understanding

Summative Assessment: Students will be paired into groups and each group would be assigned to a stage of cognitive development. Students will have 5 minutes to define in their own words what the stage of development is, and provide an example of development. The Jigsaw teaching strategy will be incorporated during this assessment. Students will also compare and contrast their definitions of their particular stage of development.

- Level of Questioning: Analysis/Examination

Scaffolding Strategies for ELL Students: Pause, Ask Questions, Pause, Review strategy. This particular strategy will allow all students who have previously read the course material to think about the material for the day. Additionally, the nearpod activity will allow students to have a visual prompt, as well as an auditory prompt in regards to the material of cognitive development. When the nearpod survey is completed, students will paraphrase the stages of cognitive development, allowing ELL students to have a better understanding of the homework (reading chapter 3).

3.5 Students will discover how short term, long term, and working memory can be utilized to engage students: Understanding the varying types of memory will help future educators utilize strategies to ensure that students are not only able to retain information, but to also have a deeper learning of the content provided.

- Level of Questioning: Knowledge/Remembering

Formative Assessment: Whip strategy. Each student will say why they might think memory skills can be beneficial to a learning experience

- Level of Questioning: Comprehension/Understanding

Summative Assessment: Students will create their own definition of short term, long term, and working memory, and one example of how engaging student could be applied to learning about varying types of memory. GOILS will be used to have students collaborate and share examples.

- Level of Questioning: Synthesis/Creating

Scaffolding Strategies for ELL Students: The think-pair-share strategy will be used through allowing students to discuss their understanding of the terminology. Having multiple people talking about what the definitions mean to them will allow time for people to process the information, as opposed to a lecture format. Applying actual examples of the vocabulary to make a real-world connection to the material.

3.10 Students will interpret how understanding the multiple forms of intelligence and the limitations of measuring intelligence can be applied to fostering student engagement:

It is crucial to understand that intelligent students are more than what they can demonstrate on a piece of paper. Some students may be highly talented in quantitative intelligence, while others may be more inclined in music intelligence. Though there is difficulty formally testing these intelligences, they simply cannot be disregarded, and they should be fostered to ensure that both the artistic student, and the math student are excited to learn the content.

- Level of Questioning: Application/Understanding

Formative Assessment: Students will be asked true or false questions regarding intelligence and some misconceptions of intelligence testing. For example: "Between the ages of 18-36, both males and females gain intelligence in both vocabulary and arithmetic," or, "the Intelligence Quota measures Spatial Intelligence & Interpersonal Intelligence." Knowing that there is roughly 20 years (18-38) of increasing IQ scores before there is either a plateau or a sharp decline emphasizes the crucial period students are in between high school and college, because this is the period in which they will learn and retain the greatest amount of information in their lives, as well as their largest increase in IQ scores.

Summative Assessment: The teacher and the students will debrief and discuss what they have learned together. Each student will say one interesting concept they learned today, and why they found it interesting.

Scaffolding Strategies for ELL Students: Using the frontloading strategy, all students will be able to better interpret the multiple theories of intelligences through hearing specific examples that can be applied to each form of intelligence. This provides students the time to digest the information and make a real-life connection to the material.

Conclusion: After debriefing, students will fill out a 3-2-1 Sheet (3 keywords 2 new ideas 1 question you still have). This allows for students to have one last review of the material they have learned in class, while providing valuable feedback to the educator.

Lesson Plan:

Prior to Lesson Learning: Students will have been expected to read chapter three and have a cursory understanding of cognitive foundations. During the beginning of class, students will be expected to practice their quizlet as an intro activity. During this quizlet time, I will play soft background music to calm students, while the quizlet will transition the mindset of the students into the lesson at hand. While I am playing music, I will also use this time to do any final prep work that is necessary to begin the lesson. Additionally when the music stops, students will realize that it is time to put away the Quizlet and begin the lesson (this would be a routine in this particular class if it were more than one lesson). While students are working on their Quizlet, SWBAT will be displayed on the whiteboard, this is to help students focus and hone in on learning objectives for the day.

Lesson Plan:

Time: (Min)	Instructional Strategy:	Learning Outcomes:	Corresponding Definitions:
5	Quizlet	Students will refresh their vocabulary before class begins, students will be more focused on the task at hand.	Quizlet definitions.
5	Introduction: Why is learning about cognitive development so important? How can we use cog. dev. to engage students in the classroom? Reminder to connect the dots throughout the lesson.	Students will begin to think about the connection between student engagement and cognitive development. Students will provide reasoning as to why they might think cognitive development is so important. Beginning with a question, further focuses students on the task at hand.	-Cognitive Development -individual differences
5-10	Nearpod Survey: What do you know about Piaget, what do you	This formative assessment provides	-Piaget -4 Stages of

	know about the 4 stages of Cog. Dev?	students the opportunity to demonstrate any prior knowledge they might have. This will also provide the instructor information in terms of what aspects to focus on specifically.	Cog. Dev.
5	Presentation on Piaget's 4 Stages of Cognitive Development.	Students will understand more comprehensively the 4 Stages of Cog. Dev.	Stages of Cognitive Development -Sensorimotor -Preoperational -Concrete Operations -Formal Operations
5-10	Jigsaw activity	Students will become comfortable in presenting and explaining the definitions that they were assigned, as well feeling comfortable enough to share their definitions and teach to others in a group/class setting	-4 Stages of Cog. Dev
5	Introduce memory lesson/whip activity	Transitioning between different concepts in an overarching lesson will allow students to begin to connect the dots. The whip activity will allow every student to participate comfortable.	-memory
5	Presentation on Memory	Students will learn more comprehensively the different types of memory, as well as why they are important	-Short Term Memory -Long Term Memory -Working

		important to cognitive development.	Memory -Selective Attention* -Divided Attention* -Mnemonic Devices* *These definitions will not be used during the activity, but are important for students to understand
10	GOILS Activity	The GOILS activity allows all students to be able to think of their own examples and definitions, and as the groups are increasing in size, students will be able feel confident in sharing their answers with other students, and also understand other perspectives	-Short Term Memory -Long Term Memory -Working Memory -mutual perspective taking
5	Introduce Intelligence/true false activity	This activity allows students to understand the misconception around varying types of intelligences, and how intelligence is tested.	-dialectical thinking
5	Presentation on Intelligence	Students will have a more comprehensive understanding on the varying types of intelligence	-linguistic intelligence -logical/math -musical -kinesthetic -natural -spatial -interpersonal -intrapersonal

			-IQ/-Test/Retest
5	Debrief/Discussion	Students/educator will reflect, and review the information and why it is relevant to engagement and cog. dev.	-zone of proximal development -scaffolding
5	Conclusion/3-2-1 Activity	Students will fill out a 3-2-1 Sheet (3 keywords 2 new ideas 1 question you still have). This allows for students to have one last review of the material they have learned in class, while providing valuable feedback to the educator.	N/A

Total Estimated Time of Instruction: 65-75 minutes