Cognition Theory	Pedagogical Strategies
Culture Teaches	Attend to the implied curriculum **Model the behaviors** students are expected to embrace (think aloud; listen carefully; paraphrase; ask questions; set up collaborative study groups and assess their effectiveness)
Learners' self perceptions as a learner influence their "will and perseverance" through intellectually challenging work	Be kind; encouraging: "with hard and continuous work you will learn" Be clear about academic expectations (rubrics) Align assessments to the Key content and skills in the class
Learning is strongly influenced by attitudes, perceptions, emotions and the senses	**Students attitudes and perceptions** about the class, teacher and tasks influences learning • **Cooperative strategies** rather than group • Use kind and shared **humor** • Relate class information to students' lives (build relevancy) • Use analogies to illustrate concepts
Humans are uncomfortable with ambiguity and cognitive dissonance	Professors envision class sessions prior to teaching them: anticipate potentially confusing ideas and intentionally "scaffold" the learning so learners become more proficient over time with practice
The human brain seeks patterns	Concepts, **big ideas, essential questions**, and metaphors provide advance organizers; provide road maps to link new ideas and content
Learners Link new information to prior knowledge	**Pre-assessments** illuminate prior knowledge (and potential links or lack thereof); formative assessments allow you to "check in" with students' sense-making process Use advance organizers (assisting the connections) and analogies, stories
Working memory "holds" new information for approximately 20 minutes	Stop after 9-15 minutes and allow students to associate new information to previously known information: Engage a sense, emotion, or memory (analogies and metaphors; associate with an experience; draw a picture, write a summary)
Learning occurs when the brain moves information from the "short term working memory" and associates it with prior knowledge	Plan short "Wake and Engage" activities that allow learners' brains a chance to integrate knowledge Plan questions that require thinking beyond recall
Brains do not discern the accuracy of information…they simply make "connections" to prior knowledge	Pre-assessments diagnose accuracy and extensiveness of prior knowledge Formative assessments monitor accurate sense-making

Human brains “trust” the practical world more than the abstract world	Learners need multiple opportunities to challenge ideas: cooperative group work; performance-based learning experiences; experiments, reflections Diagnose students’ misconceptions through assessments to assist in the identification of misconceptions and inaccurate information
Understanding has degrees	The continuous development of knowledge and skills must be intentionally incorporated into course and program design; embedded assessments, student reflections monitor development Intentional scaffolding of material assists learners construct learning over time: analyze where the points of difficulty are and pre-manage for these points in a course