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Tenets of Critical Techno Constructivism with Suggestions for Operationalizing the Theory.

Tenet	Question	Action
Personal Inquiry	Did the student develop the learning task?	Engage in open dialogue with students with the explicit purpose of developing together new assignments or topics of study. Work with students to define audience, purpose, resources, tools, and goals of the learning task. Think big with students about possible uses and aims of their work beyond the classroom and the confines of school. Encourage students to follow through and develop to its end what they pose as a problem to solve.
Compelling Problem or Question	Did the student arrive at an answer that led to more questions or problems?	Coach students as they work to keep a log of their progress, handwritten, typed, audio or video recorded, for the purpose of tracking ideas as they occur. Encourage students to spot potential new paths or questions to chase as they work. Develop with students some methodologies for addressing conflict and dissonance in their work and studies and possible applications.
Technology as Tool to Think With	Did the student use technology in the thinking process?	Choose technology wisely with students. Remember that analog tools may provide instant freedom in expression. Demonstrate how to think with the computer. Use machine learning, graphical statistics, programming language, and concordances or natural language processing. Make certain the computer remains an object-to-think-with, not a replacement of paper or a push-button terminal.
Formative Demonstration of Learning	Did the student demonstrate learning throughout the process?	Develop guidelines, rubrics, and expectations of outcomes with students. Adjust these as necessary throughout the process of their work, sometimes abandoning them when students find them restrictive. Consult with students about progress and engage in conversations less as an evaluator and more as an interested peer. Sparingly make suggestions so that students retain ownership.
Reflection as Learning	Did the student demonstrate a reflective approach in the formation of knowledge?	Explicitly teach the skills of mindfulness in short lessons. Engage wholeheartedly in the process of looking for student interest and joy in their work. Emphasize to students the importance of caring about their own interest levels. Engage in reflective questions that are genuine. Avoid leading statements about what you would do as this not-so-subtly shows teacher judgment.
Social and Cultural Critique	Did the student demonstrate a critical awareness of the larger established modes and forms of thought that shape thought?	If an understanding of larger social constructs does not yet show in their work, make a weighed decision to point them out. Building consciousness more authentically through self-realization is the most powerful, however, students will need coaching and guiding. Avoid moralizing or hijacking student work with your own politics, values, or experiences. Make mention of historical events, people, or concepts that students might consider for study on their own.
Sharing and Collaborating	Did the student actively seek out collaborators in the process of acquiring knowledge, testing theories, and creating a shareable artifact?	Demonstrate methods, procedures, and styles of communicating with people. Seek out experts and amateurs as guest speakers or consultants. Show the crossover of work done in school and out of school. Practice presentation skills. Create space and time in class to talk together about student progress. Explicitly teach and coach how to communicate respectfully with operationalized critique. Engage with students to develop multiple venues and audiences for sharing.