	Instructional design	Classroom	Teacher	Student
Planning	Shows evidence of using students' data both formative and summative, to design instruction. Clear links to science standards with specific goals is evident. Planning follows science scope and sequence.	Seating encourages multiple learning strategies. Students have clear view of teacher, board, etc. Resources and materials appropriate for all levels and learning styles.	Current knowledge of the subject being taught as well as instructional practices. Knows their students and has data to support suppositions. Is organized. Utilizes multiple instructional practices.	Is prepared and ready to learn. Have materials necessary for personal success. (Notebook, folder, writing utensil, etc.)
Community	Community centered planning that encourages a culture of questioning, including a bit of risk taking. Expectations of high rigor for all students which encourages a "growth mindset". Facilitates active construction of meaning. Inquiry and discovery is the norm, not rote memorization.	Has culture of mutual respect where everyone talks science. All stakeholders are engaged. There are adequate and safe facilities, equipment and materials for science activities.	Encourages higher order thinking based on Bloom's taxonomy. Creates a supportive environment in which students know teachers are available to help.	Engaged in science instruction and learning with other students. Develop critical friends groups. Reflect and revise their work as well as that of their peers.
Assessment	Assessments are aligned to the rigor and relevance of the lesson. Assigns manageable tasks. Multiple methods of assessment of scientific learning are utilized, not just paper and pencil. Assessment includes authentic performance tasks (lab activities). There are clear evaluation criteria for student products and performance.	Displays evaluation criteria or scoring guides. Samples of current high quality student work are on display.	Informs students of expectations at the beginning of the lesson/unit. Identifies, confronts and resolves scientific preconceptions. Continuously assess to check for student learning and to provide prompt intervention. Adjusts instruction based on students' needs.	Can describe the goals (student performance) of the lesson or unit. Can explain what they are doing and why. Know criteria by which their work will be evaluated. Develop habits of mind associated with science.

	Instructional Design	Classroom	Teacher	Student
Relevance	Relevant/real world examples are included throughout science instruction. Text books are used as references rather than the main resource.	Student performance and essential questions are central to classroom activities where the process of investigation is as important as knowing the "correct" answers.	Instruction is hands-on, minds-on. Begins instructions with what students know and builds. Provides real world examples and encourages students to create their own.	Apply what they have learned to an unknown situation. Develop the ability to conduct their own investigations. Able to explain and justify their work using data.
Instruction/ learning	Uses the constructivist approach, scaffolds to develop student skills necessary for success. Instruction builds on what students know and think. Moves from concrete to abstract, employing learning cycles-observation, generalization, verification, application. Promotes critical thinking. Focus on depth as well as breadth of instruction.	Learning experiences are activity centered and uses a mix of direct teacher instruction, whole-class activates, large group presentations, groupings and individual activities. Is dynamic not static.	Engages student interest through multiple modalities. Differentiates instruction to include multiple strategies and learning styles. Facilitates active construction of meaning. Inquiry and discovery is the norm, not rote memorization.	Shows an increase in their understanding of the science subject matter investigated and gains an understanding of how scientists study the natural world by actively participating in a variety of hands on and inquiry based activities. Demonstrate and **practice** learned scientific skills.
Materials and Resources	Follows science programming (CPO and CMSD) as described with modifications for differences in learner styles and student needs.	Print rich, with safety and scientifically relevant posters and student work evident. Scientific tools evident and in use by all. Including, but not limited to: • CPO kits • Microscopes • Glassware • balances	Is provided opportunities to improve their science teaching through workshops, courses, planning sessions, coaching, scheduled time to plan and collaboration with colleagues.	Does not look to the teacher or text as sole source of information. Access to technology as a research tool. Familiar with science tools and materials, few teacher corrections and reminders are necessary. Has additional opportunity for science intervention and enrichment.