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| SEP1Asking questions and defining problems: formulating, refining, and evaluating empirically testable questions and design problems using models and simulations.  | SEP1Asking questions and defining problems: formulating, refining, and evaluating empirically testable questions and design problems using models and simulations.  | SEP1Asking questions and defining problems: formulating, refining, and evaluating empirically testable questions and design problems using models and simulations.  | SEP1Asking questions and defining problems: formulating, refining, and evaluating empirically testable questions and design problems using models and simulations.  |
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| SEP3Planning and carrying out investigations: investigations that provide evidence for and test conceptual, mathematical, physical, and empirical models.  | SEP3Planning and carrying out investigations: investigations that provide evidence for and test conceptual, mathematical, physical, and empirical models.  | SEP3Planning and carrying out investigations: investigations that provide evidence for and test conceptual, mathematical, physical, and empirical models.  | SEP3Planning and carrying out investigations: investigations that provide evidence for and test conceptual, mathematical, physical, and empirical models.  |
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| SEP4Analyzing and interpreting data: detailed statistical analysis, the comparison of data sets for consistency, and the use of models to generate and analyze data.  | SEP4Analyzing and interpreting data: detailed statistical analysis, the comparison of data sets for consistency, and the use of models to generate and analyze data.  | SEP4Analyzing and interpreting data: detailed statistical analysis, the comparison of data sets for consistency, and the use of models to generate and analyze data.  | SEP4Analyzing and interpreting data: detailed statistical analysis, the comparison of data sets for consistency, and the use of models to generate and analyze data.  |
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| SEP5Mathematical and computational thinking: using algebraic thinking and analysis, a range of linear and nonlinear functions including trigonometric functions, exponentials and logarithms, and computational tools for statistical analysis to analyze, represent, and model data. Simple computational simulations are created and used based on mathematical models of basic assumptions.  | SEP5Mathematical and computational thinking: using algebraic thinking and analysis, a range of linear and nonlinear functions including trigonometric functions, exponentials and logarithms, and computational tools for statistical analysis to analyze, represent, and model data. Simple computational simulations are created and used based on mathematical models of basic assumptions.  | SEP5Mathematical and computational thinking: using algebraic thinking and analysis, a range of linear and nonlinear functions including trigonometric functions, exponentials and logarithms, and computational tools for statistical analysis to analyze, represent, and model data. Simple computational simulations are created and used based on mathematical models of basic assumptions.  | SEP5Mathematical and computational thinking: using algebraic thinking and analysis, a range of linear and nonlinear functions including trigonometric functions, exponentials and logarithms, and computational tools for statistical analysis to analyze, represent, and model data. Simple computational simulations are created and used based on mathematical models of basic assumptions.  |
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| SEP8Obtaining, evaluating, and communicating information: evaluating the validity and reliability of the claims, methods, and designs.  | SEP8Obtaining, evaluating, and communicating information: evaluating the validity and reliability of the claims, methods, and designs.  | SEP8Obtaining, evaluating, and communicating information: evaluating the validity and reliability of the claims, methods, and designs.  | SEP8Obtaining, evaluating, and communicating information: evaluating the validity and reliability of the claims, methods, and designs.  |
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