# STEM Curriculum Map_SY23-24

Mrs. Askuvich

| | Quarter 1 | Quarter 2 | Quarter 3 | Quarter 4 |
|---|---|---|---|---|
| PreK | What is STEM?<br><br>What is the Engineering Design Cycle?<br><br>How can we use observations to identify a problem?<br><br>How can we use the Engineering Design Cycle to help us solve problems creatively? | | | |
| K | What is STEM?<br><br>What is the Engineering Design Cycle?<br><br>How can we use observations to identify a problem?<br><br>How can we use the Engineering Design Cycle to help us solve problems creatively? | | How can we use our understanding of properties of materials to design a solution to a problem?<br><br>How can we use our understanding of properties of materials to design a solution to a problem?<br><br>How can we compare and test designs to find the best design solution? | |
| 1 | What is STEM?<br><br>What is the Engineering Design Cycle?<br><br>How can we use observations to identify and solve problems? | | How can we use our understanding of properties of materials to design a solution to a problem?<br><br>How can we compare and test designs to find the best design solution? | |
| 2 | | How can we use observations to identify a problem?<br><br>How can we use the Engineering Design Cycle to help us solve problems creatively? | | How can we use our understanding of properties of materials to design a solution to a problem?<br><br>How can we compare and test designs to find the best design solution? |

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| 3 | | How can we use the Engineering Design Cycle to help us solve problems creatively?<br><br>How can we follow a set of criteria and constraints to design a solution to a problem? | | How can we follow a set of criteria and constraints to design a solution to a problem?<br><br>How can we test and optimize our design to develop the best possible solution? |
| 4 | How can we use the Engineering Design Cycle to help us solve problems creatively?<br><br>How can we follow a set of criteria and constraints to design a solution to a problem? | | How can we follow a set of criteria and constraints to design a solution to a problem?<br><br>How can we test and optimize our design to develop the best possible solution? | |
| 5 | | How can we use the Engineering Design Cycle to help us solve problems creatively?<br><br>How can we follow a set of criteria and constraints to design a solution to a problem? | | How can we follow a set of criteria and constraints to design a solution to a problem?<br><br>How can we test and optimize our design to develop the best possible solution? |
| 6 | How can we define the criteria and constraints of a design problem?<br><br>How can we recognize and define computational problems? | | How can we create computational artifacts?<br><br>How can we test and refine computational artifacts? | |
| 7 | | How can we define the criteria and constraints of a design problem?<br><br>How can we recognize and define computational problems? | | How can we create computational artifacts?<br><br>How can we test and refine computational artifacts? |

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| 8 | How can we define the criteria and constraints of a design problem?<br><br>How can we evaluate competing design solutions using a systematic process to determine how well they meet the criteria and constraints? | | How can we analyze data from tests to compare several design solutions to identify and combine the best characteristics of each so that they can be combined into a new solution that meets the criteria?<br><br>How can we design an iterative process to test the solutions and optimize them? | |