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|  | **Grades K–2** | **Grades 3–5** | **Grades 6–8** | **Grades 9–12** |
| **DEFINE** | **Identify situations that people want to change as problems that can be solved through engineering** | **Specify criteria and constraints that a possible solution to a simple problem must meet** | **Attend to precision of criteria and constraints and considerations likely to limit possible solutions** | **Attend to a broad range of considerations in criteria and constraints for problems of social and global significance** |
| **DEVELOP** **SOLUTIONS** | **Convey possible solutions through visual or physical representations** | **Research and explore multiple possible solutions** | **Combine parts of different solutions to create new solutions** | **Break a major problem into smaller problems that can be solved separately** |
| **OPTIMIZE** | **Compare solutions, test them, and evaluate each** | **Improve a solution based on results of simple tests, including failure points** | **Use systematic processes to iteratively test and refine a solution** | **Prioritize criteria, consider trade-offs, and assess social and environmental impacts as a complex solution is tested and refined** |