MARYVILLE UNIVERSITY

Meet the Smart Motor
Grade Band Elementary

Engineering Design	**Next Generation Science Standards**
K-2 3-5-ETS1-1	Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost.
K-2 3-5-ETS1-2	Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints.
K-2 3-5-ETS1-3	Plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved.

Reading	**English Language Arts (Reading & Writing)**
RI.1.3 to RI.5.3	Describe relationships between labeled parts and their functions.
RI.2.7 to RI.5.7	Use labeled diagrams (Smart Motors diagram) to deepen understanding.
L.3.4 to L.5.4	Determine the meaning of domain-specific words (sensor, dial, port, input, LED).
Writing	
W.2.2 to W.5.2	Write how-to instructions based on using the diagram (e.g., “How I made the motor run”).
Measurement and Data	**Mathematics**
2.MD.1 to 5.MD.2	Use quantitative data when training the Smart Motors.
Operations & Algebraic Thinking	
3.OA.3 to 5.OA.3	Develop motor movement patterns using programming logic.

Geometry	
Mathematical Practice Standards	**Modeling & Problem Solving**
MP5	Use appropriate tools (e.g., sensors, measurement tools, graphing tools).
Computer Science	**Missouri K-5 Draft Standards**
DA.K-5.1	Collect and represent data in various ways.
AP.K-5.2	Create sequences of events to control the Smart Motors.
AP.K-5.3	Break down motor use into clear parts: connect sensor, set data points, test, refine.
AP.K-5.4	Test and refine programs based on feedback or performance.
IC.K-5.1	Understand how computing impacts daily life and the environment.

Made by: L. Holt-Hovis
v. 05.02.25