GRADE 5 DESIGN MEETS NEEDS. LIFT FORCE. SIMPLE MACHINES.

Each model encourages students to **plan, build, test, and improve** their designs—building STEM confidence and aligning with key **Science, Computer Science**, and **Wellness** outcomes in Grade 5.

ELEVATOR *Popular model

Focus: Discover how design meets needs while building teamwork through a functional elevator model.

Subject Connections:

Science – Energy and the Environment

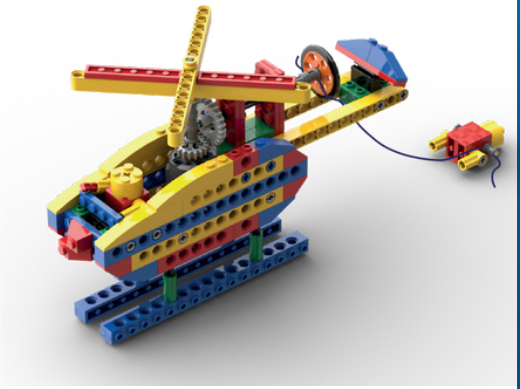
- ✓ Describe how energy produces motion in systems.
- ✓ Identify how design affects safety and function.

C***omputer Science*** – Design and Problem Solving

- ✓ Use the design process to solve a problem.
- ✓ Build, test, and improve in teams.

Well-Being

- ✓ Collaborate, share ideas, and solve problems together.
- ✓ Show responsibility and perseverance during challenges.



HELICOPTER

Focus: Explore how lift and drag make flight possible.

Subject Connections:

Science – Energy and the Environment

- ✓ Understand how forces like lift and drag affect motion.
- ✓ See how energy moves parts of a system (rotor blades).
- ✓ Explore how design impacts function and efficiency.

Computer Science – Design and Problem Solving

- ✓ Build, test, and improve the model.

OIL PUMP *Difficult Model

Focus: Learn how mechanical systems move non-renewable resources.

Subject Connections:

Science – Energy and the Environment

- ✓ Understand how oil is extracted and moved using energy.
- ✓ Explore how system parts work together to perform a task.
- ✓ Identify renewable vs. non-renewable resources.

Computer Science – Design and Problem Solving

- ✓ Build and improve a model using the design process.
- ✓ See how mechanical parts create motion.

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