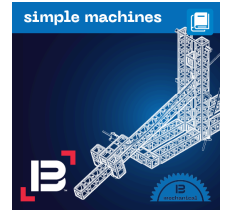




Sphero Blueprint

Overview



Explanation/Description: Bring engineering excitement to your upper elementary, middle and high school learners. The Blueprint Build Kit supports 1–2 learners and will help students learn foundational engineering concepts as they design and build working prototypes. With its approachable design, easy-to-handle parts, and supporting content, Blueprint Build makes engaging with mechanical and structural engineering hands-on, fun, and accessible to aspiring engineers of all abilities.

NGSS Alignment: There are a wide range of standards, most with an emphasis on problem-solving and engineering. They include, but are not limited to:

MS-ETS1-1 Define the criteria and constraints of a design problem with sufficient precision to ensure a successful solution, taking into account relevant scientific principles and potential impacts on people and the natural environment that may limit possible solutions.

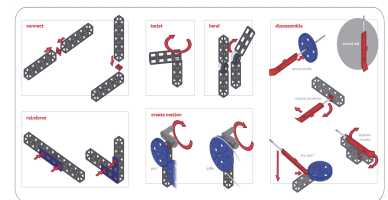
MS-ETS1-3 Analyze data from tests to determine similarities and differences among several design solutions to identify the best characteristics of each that can be combined into a new solution to better meet the criteria for success.

HS-ETS-2 Evaluate a solution to a complex real-world problem based on prioritized criteria and trade-offs that account for a range of constraints, including cost, safety, reliability, and aesthetics as well as possible social, cultural and environmental impacts.

Grade Levels: 3rd-PHS

Time: 30-60 minutes dependent on activity. Students may continue on same builds through multiple class periods and/or days

Materials/Lessons: There are dozens of lessons on the Sphero website for the blueprints. For each one, there is a lesson plan, teacher and student resources, worksheets, slides, build instructions and ties to NGSS standards.



<https://edu.sphero.com/blueprint>

Tips/Preparation: Familiarize yourself with the materials and teacher manual(s). There are dozens of lessons and project ideas on-line at the site noted above as well as the QR code to the right.

