



STEAM Design Challenges

DEVELOPING ENGINEERING SKILLS FOR THE 21ST CENTURY

No matter what your classroom looks like this year, MyStemKits' comprehensive series of Design Challenges teach students design thinking, problem-solving, and even 3D modeling so that they can develop the skills and tools necessary for success in the 21st century. Perfect for hybrid and distance learning, this collection of lesson plans brings STEAM into the virtual classroom.

Basic

These lessons presuppose zero experience using 3D modeling software and provide step-by-step instructions on how to build simple objects to get students comfortable working and thinking in three dimensions.

Intermediate

Expanding on the skills learned in the Basic design challenges, these step it up a notch and help students create more complex shapes using the advanced tools available in the software.

Advanced

For students who are already comfortable working in 3D space, these open-ended design challenges allow the students full creativity to solve, design, build, and implement solutions to real-world problems.

MyStemKits provides Basic, Intermediate, and Advanced Design Challenges at every grade level 3-12* so that whatever age students may be when they take on 3D modeling, they'll be able to have the tools and challenges necessary to guide their journey.

*Some activities may be done at lower grades.



In each Design Challenge, students are recruited by an individual who needs their help, whether it's aerospace engineer Sofia who needs models of space station modules or film director Marc who needs to recreate a lost file, students will be challenged to create and customize files according to specific needs. Moreover, each activity integrates math and science concepts such as measuring, geometry, and engineering.

Included with any MyStemKits subscription!

Sign up at www.MyStemKits.com

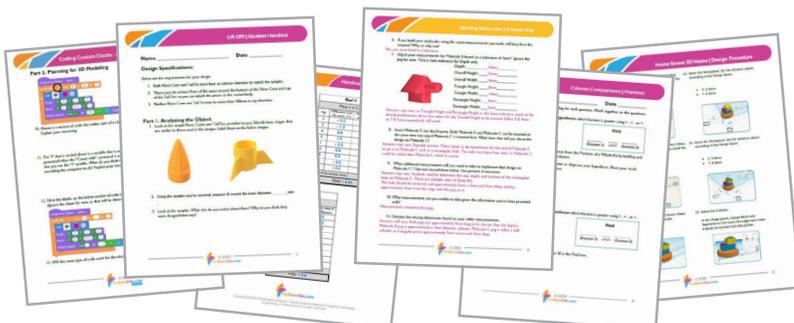
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STEAM Design Challenges

Complexity	Title	Grades	STEAM Career
• Basic	Pattern Block Building	Grades 2 - 3	Textile Designer
• Basic	Derby Wheels	Grades 2 - 5	Automotive Engineer
• Basic	Tessellation Tails: Intro to Codeblocks	Grades 3 - 12	Tile Designer
• Basic	Spinner Partitions	Grades 4 - 5	Teacher
• Basic	Stacking Block Building	Grades 6 - 8	Landscape Architect
• Basic	Catapult Basket	Grades 6 - 12	Film Director
• Basic	Turbine Design	Grades 6 - 12	Environmental Engineer
• Basic	Missing Molecules	Grades 9 - 12	Medical Researcher
• Intermediate	Time to Design	Grades 2 - 3	Interior Designer
• Intermediate	Home Sweet 3D Home	Grades 4 - 5	Architect
• Intermediate	Coding Custom Clocks	Grades 4, 6	Horologist
• Intermediate	Rover Wheels	Grades 4 - 12	Aerospace Engineer
• Intermediate	Driving Gears	Grades 6 - 8	Bicycle Engineer
• Intermediate	Engineering 3D Vertices: Prisms	Grades 6 - 8	Civil Engineer
• Intermediate	Spinner Probabilities	Grades 6 - 12	Marketing Manager
• Intermediate	Catapult Lever	Grades 6 - 12	Film Director
• Advanced	Lift Off!	Grades 2 - 5	Aerospace Engineer
• Advanced	Sailing Regatta	Grades 3 - 5	Naval Architect
• Advanced	3D Dream Home	Grades 3 - 5	Architect
• Advanced	3D Derby	Grades 4 - 7	Automotive Engineer
• Advanced	Ship Design	Grades 6 - 12	Project Manager
• Advanced	Bulldozer Blade	Grades 6 - 12	Automotive Engineer

... and many more!



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