STONEOAK MEDIA

CELEBRATING OUR 10 YEAR ANNIVERSARY!

2014 - 2024

STEM-Focused Project Based
3D Printing and **Augmented Reality** Lessons
Aligned With State/National Curriculum Standards

LINKS TO FREE 3D PRINTABLE STEM LESSON ENCLOSED

SAMPLE AUGMENTED REALITY ROCKET LAUNCH & MARS PROBE ENCLOSED

2024 - 2025 PRODUCT CATALOG

StoneOak Media, LLC has been pioneering STEM-focused educational products since 2014. Our products have been used by tens of thousands of students at thousands of schools across the globe.

StoneOak Media's initial products were some of the first to bring project-based augmented reality enhanced STEM content into the classroom. We are also one of the first companies to bring 3D Design and 3D Printing focused STEM lessons, centered on the Engineering Design Process, into the classroom.

Product Overview

STEMInventor 3D Printable STEM Lessons

Introducing the STEMInventor 3D printable construction system.

Whether you're looking for pre-designed kits that invite students to solve specific engineering design challenges or easy to replicate and 3D print construction system components to help students create their next invention(s), the STEMInventor suite of products is here to meet your needs!

Inexpensive Replication: Designed for grades 4-12 classrooms, public/school libraries, after school programs, camps, makerspaces, and home hobbyist use, the STEM Inventor suite of products make creating an unlimited* number of construction system components both easy and inexpensive. Need enough components for 60 students to complete an engineering design challenge? Looking for parts inexpensive enough to enable students to take their inventions home? Lost, broken, or stolen parts? Not a problem; simply 3D print all of the parts you need! ***Link to free 3D printable sample lesson on page 4.***

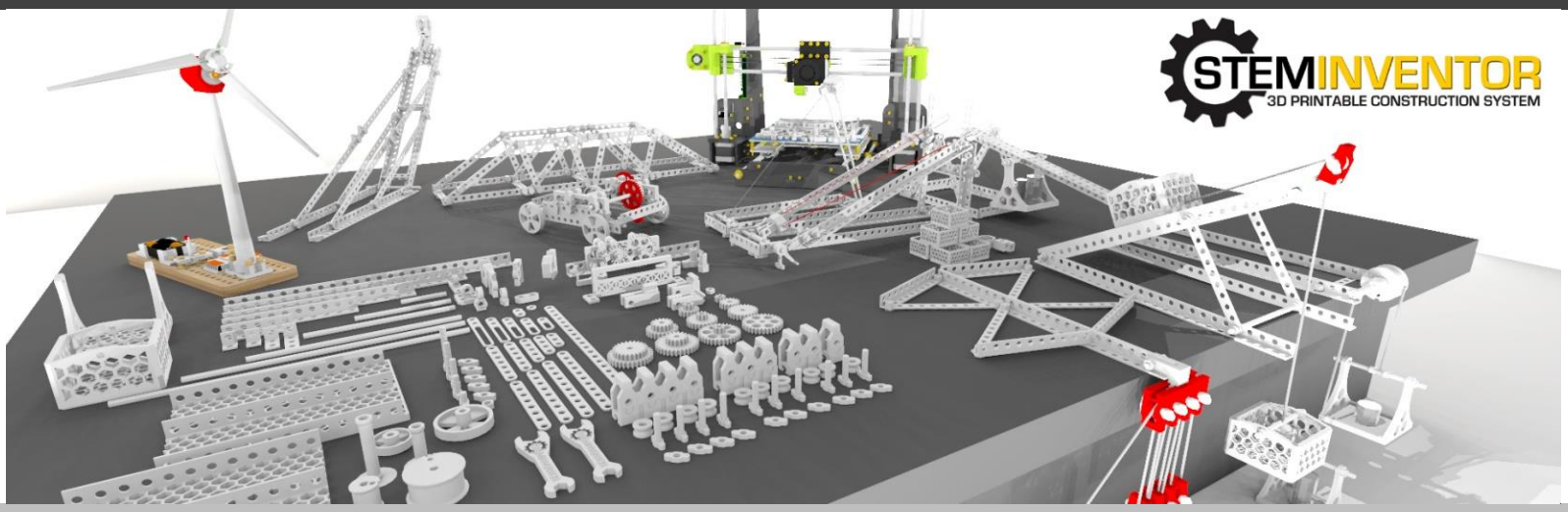
Rockwell Adventures: Augmented Reality Enhanced STEM

Embark on an Augmented Reality STEM Adventure!

In ***Solar System Expedition***, students explore each planet in the Solar System, take measurements of conditions there, and design a base capable of surviving the conditions on their planet of choice. ***Free demo experiences on pages 13 & 14.***

In ***Water Cycle Engineer*** students travel to several Moon bases to learn about the water cycle in the context of the sealed ecosystems they maintain. They complete the mission by setting up their own water cycle at a new underground base. ***See pages 16 & 17***

*Subject to licensing terms



Introducing the STEMInventor 3D Printable Construction System

Unleash student creativity with STEMInventor! From general 3D-printable construction components to pre-designed kits, we've got you covered. Perfect for classrooms, libraries, after school programs, camps, makerspaces, and home tinkering. Endless possibilities, limitless innovation! Simply download and 3D print your desired parts, then assemble, learn, and compete!

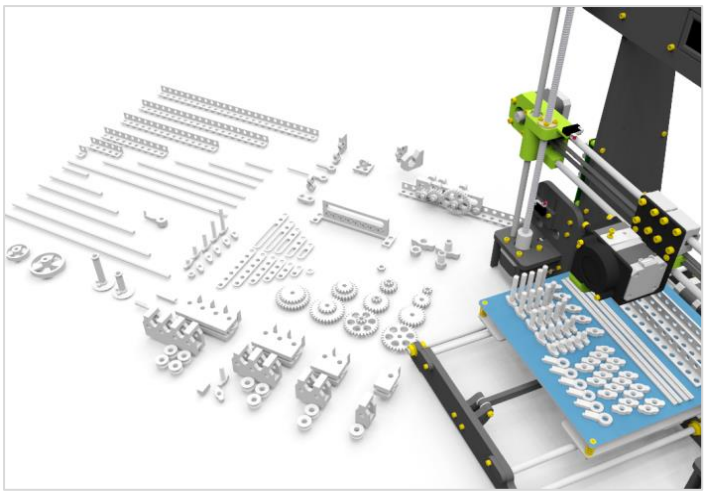
Login To STEMInventor.com

3D Print Unlimited Copies Based on License

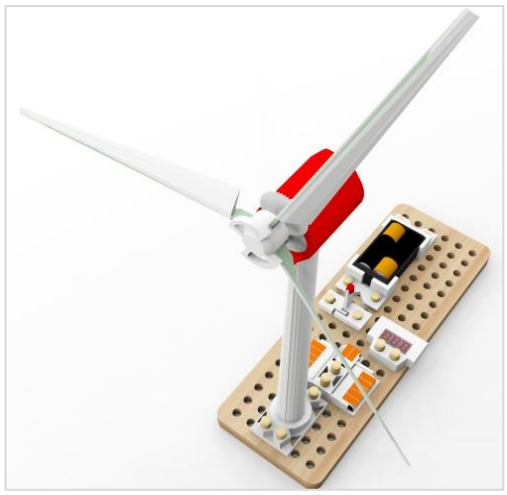
Assemble, Learn, & Compete!

Students can explore additive manufacturing and the engineering design process using either our library of general 3D printable construction system parts, or via focused, pre-packaged kits covering specific STEM topics. Each of these are described in more detail on the following pages..

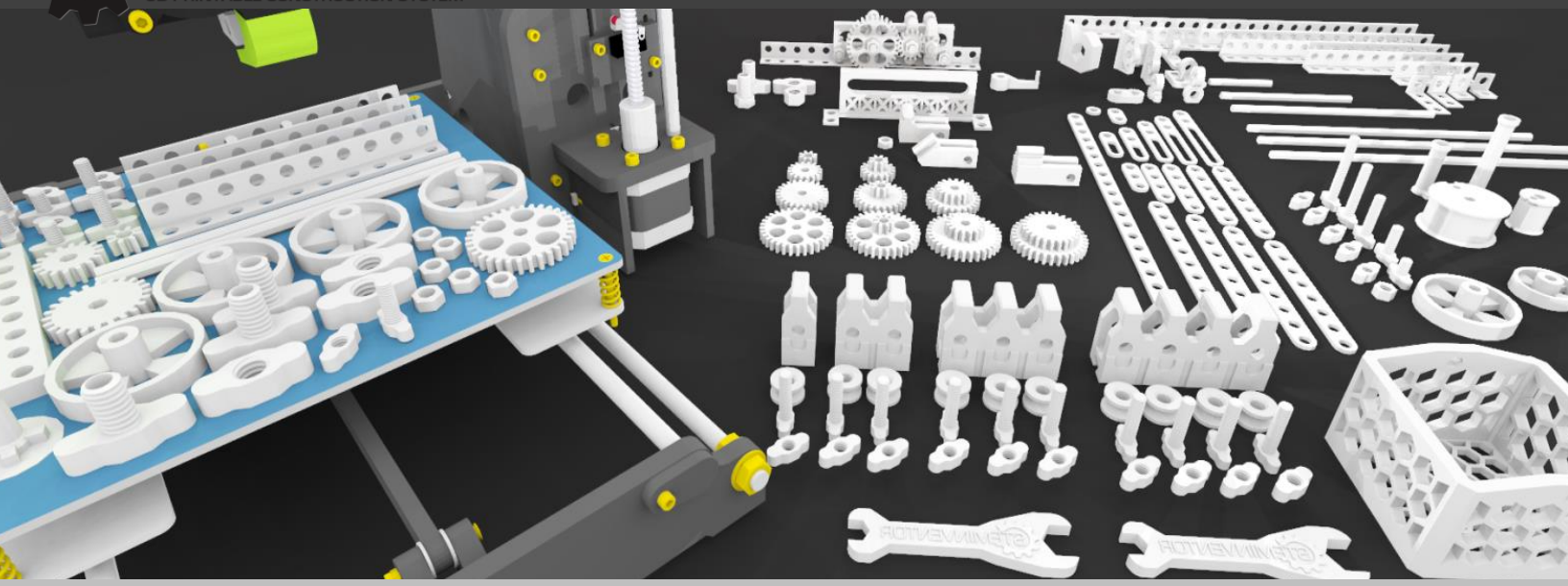
GENERAL 3D PRINTABLE PARTS

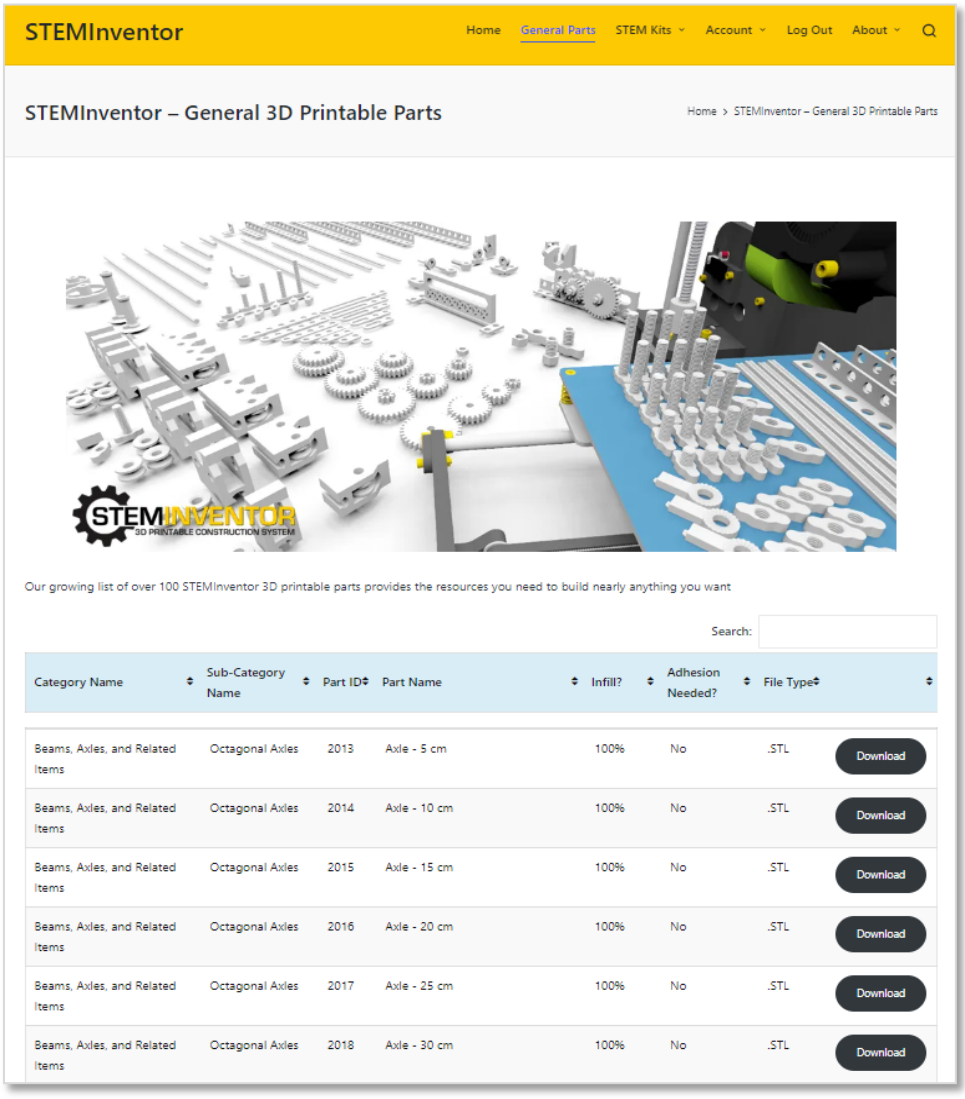


3D PRINTABLE STEM KITS



STEMINVENTOR 3D PRINTABLE CONSTRUCTION SYSTEM General 3D Printable Parts





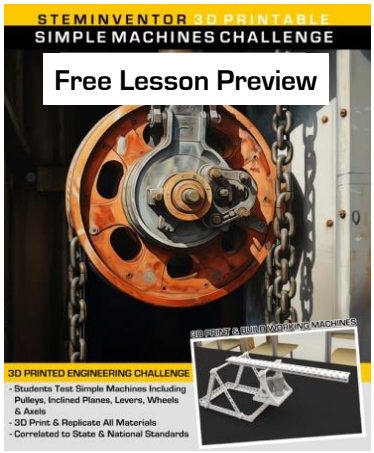
Supercharge Your Makerspace!

STEMInventor.com provides easy access to our extensive library of General 3D printable parts. Download and 3D print enough parts to fill your makerspace, and then watch students' imagination and creativity come alive as they build limitless STEM creations. This parts catalog includes over 100 easily replicatable mechanical components such as:

- **Structural Beams**
- **Axles**
- **Gears and Gearboxes**
- **Hooks**
- **Screws and Fasteners**
- **Spools**
- **Wheels**
- **Eyelets**
- **Much more!**

STEMInventor Kits

Our ever-growing list of STEMInventor kits provides pre-aggregated lists of easily downloadable and 3D-printable parts, lesson plans, educational videos, and more; everything you'll need to enable your students to dive into a variety of STEM topics. Each lesson also features an Engineering Design Challenge, that has students take what they've learned and compete to accomplish a STEM-related goal. The best design wins! From simple machines, to designing the best wind turbine blades, or the strongest bridge, and more, our lessons deliver both value and authentic learning across a number of state and national standards!



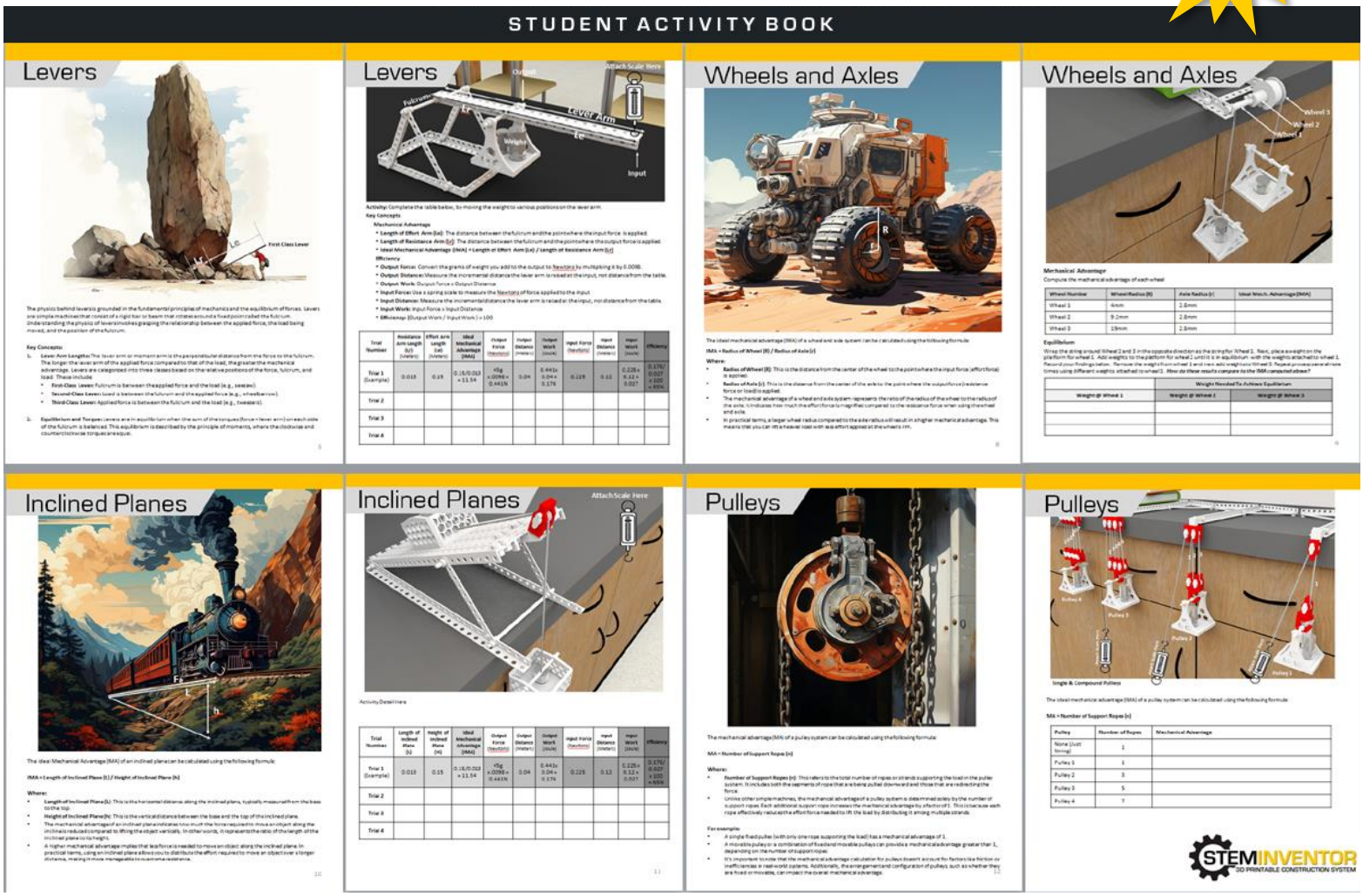
Simple Machines Challenge (FREE LESSON PREVIEW):

Fuel innovation with our Simple Machines Challenge! Students interact with various types of 3D printed simple machines, and learn about the principles behind them. They then compete to design the most efficient/effective machines. This lesson provides authentic, hands-on learning with 3D printable files and standards aligned curriculum. Design challenges include:

- **Maximum Mechanical Advantage:** Achieve the greatest mechanical advantage
- **Mechanical Advantage vs Weight:** Achieve the greatest mechanical advantage per weight of the simple machine used.

Visit STEMInventor.com To Download & 3D-Print FREE

FREE SAMPLE

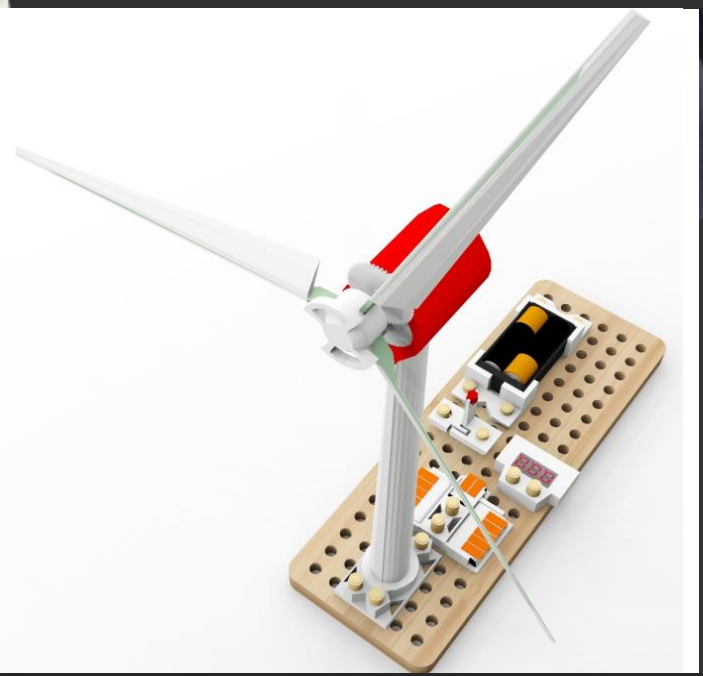


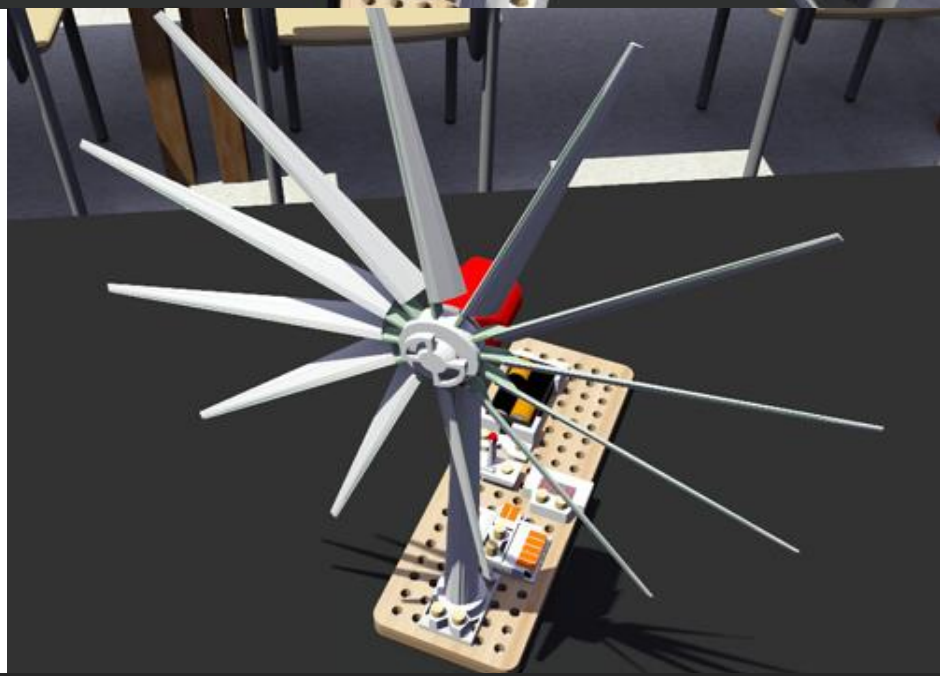
STEMInventor Kits: Wind Turbine Challenge

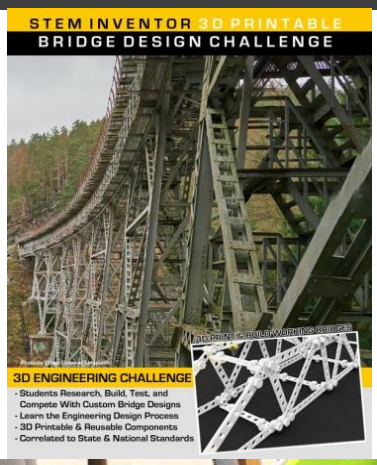
Wind Turbine Challenge:

Our 3D Printable Wind Turbine Challenge empowers students to explore various turbine blade and rotor designs as they compete to produce the most power from a wind turbine. This Authentic, Project Based Learning kit includes 3D printable files as well as electronic and other components. Additional parts purchase required. Engineering design challenges in this kit include:

- **Output:** Generate the most power/voltage output from a turbine by optimizing blade shape and count.
- **Most Energy Conversion:** Convert the wind's kinetic energy to the greatest subsequent forms: electrical, mechanical, and more.



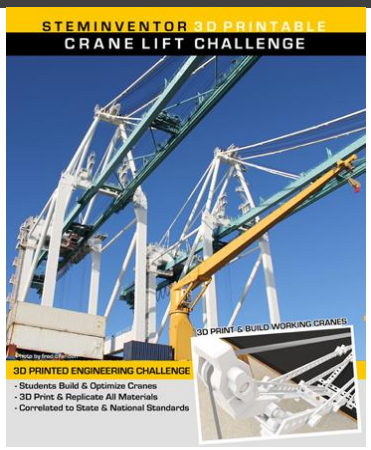




Bridge Design Challenge:

Embark on an epic journey of creativity with our 3D Printable Bridge Design Challenge! Students unleash their imagination and conquer engineering feats as they span a variety of bridge design related challenges. Dive into hands-on learning with ready-to-print designs and curriculum tailored to ignite innovation. Engineering design challenges in this kit include:

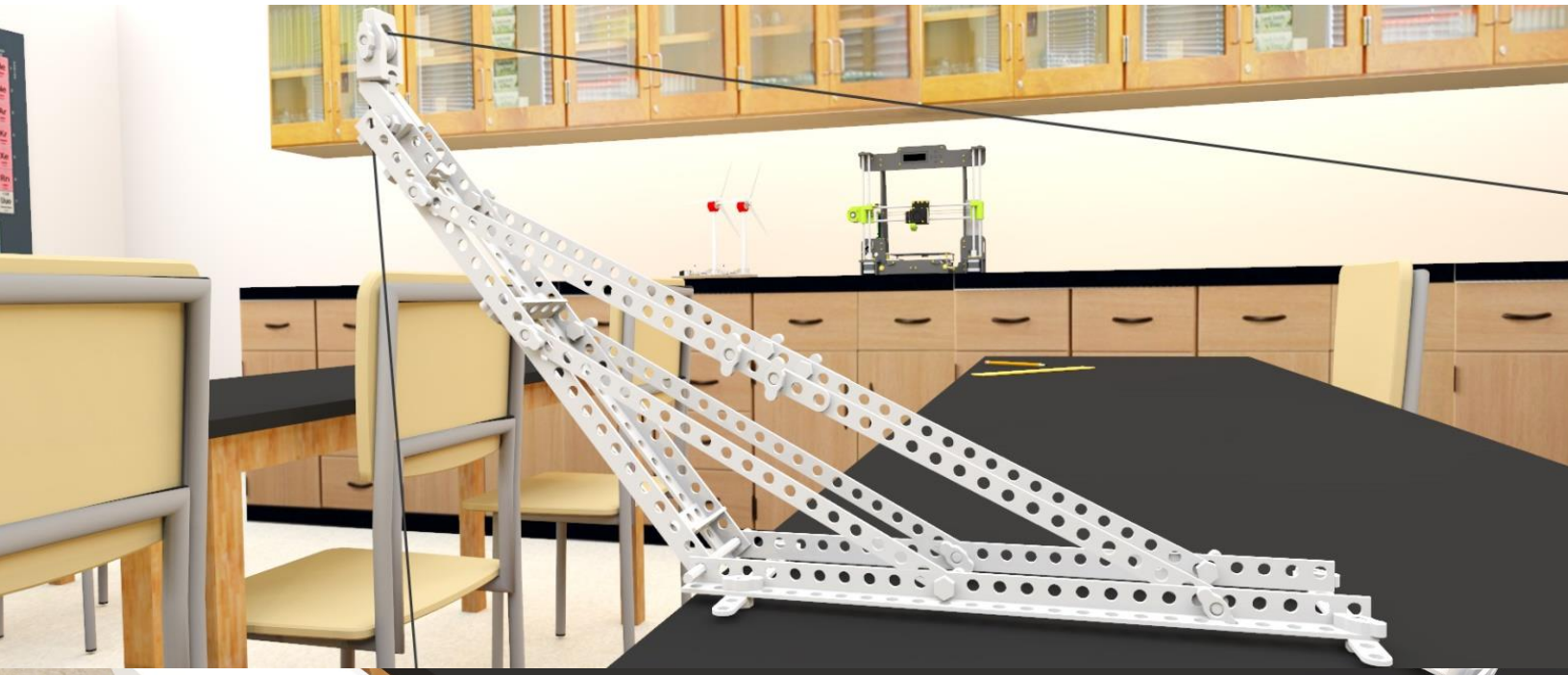
- **Strength:** Support the most weight across a given span
- **Strength vs Weight:** Support the most weight per bridge weight
- **Strength vs Distance:** Largest weight supported per bridge length

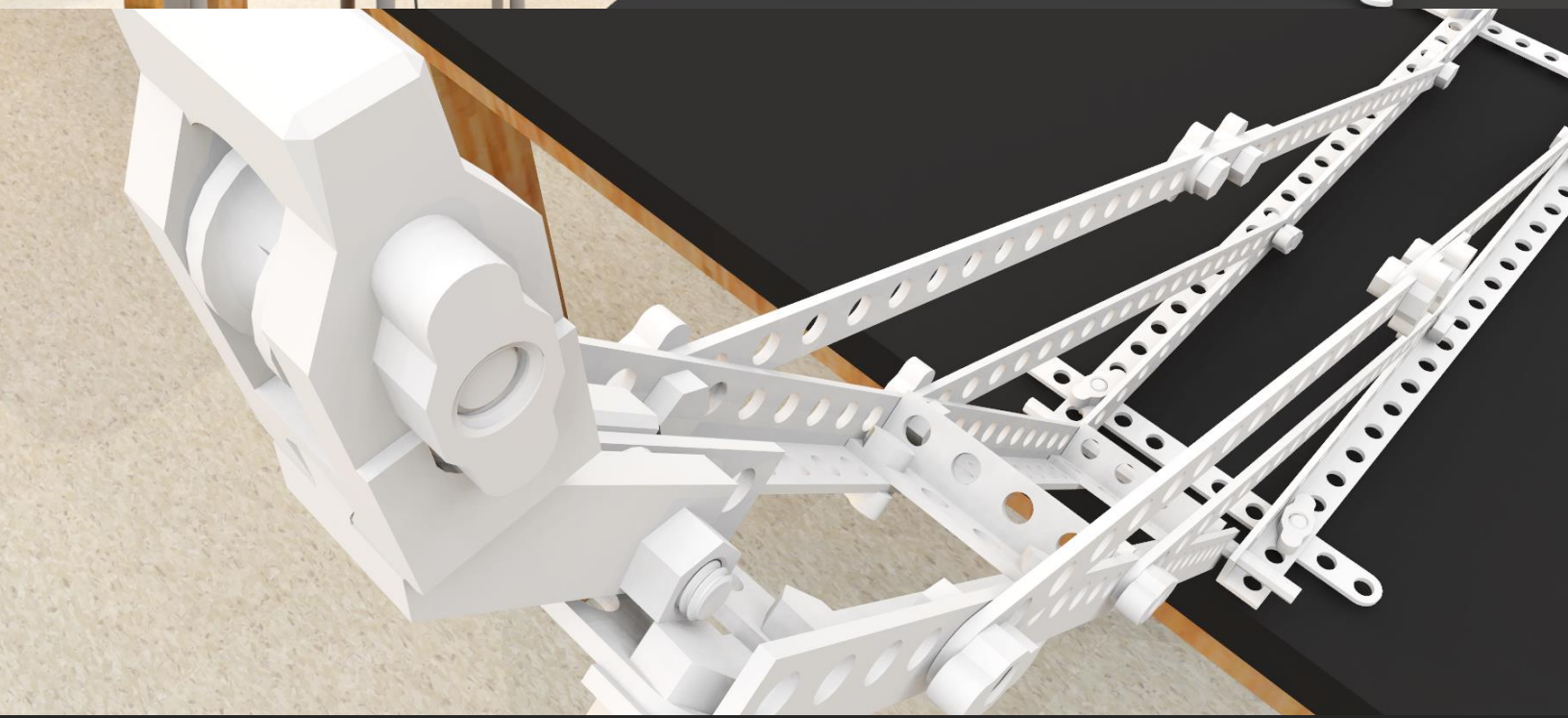


Crane Lift Challenge:

Our 3D printable Crane Lift Challenge empowers students to use the Engineering Design Process to assemble and refine customized cranes, and compete to accomplish various goals. The full kit includes all of the 3D printable files needed to get started as well as curriculum aligned to state and national standards. Engineering design challenges in this kit include:

- **Lifting Power:** Lift the most weight
- **Lifting Power vs. Crane Weight:** Achieve the highest lift to weight ratio
- **Max Reach:** Support a set weight at the greatest distance.

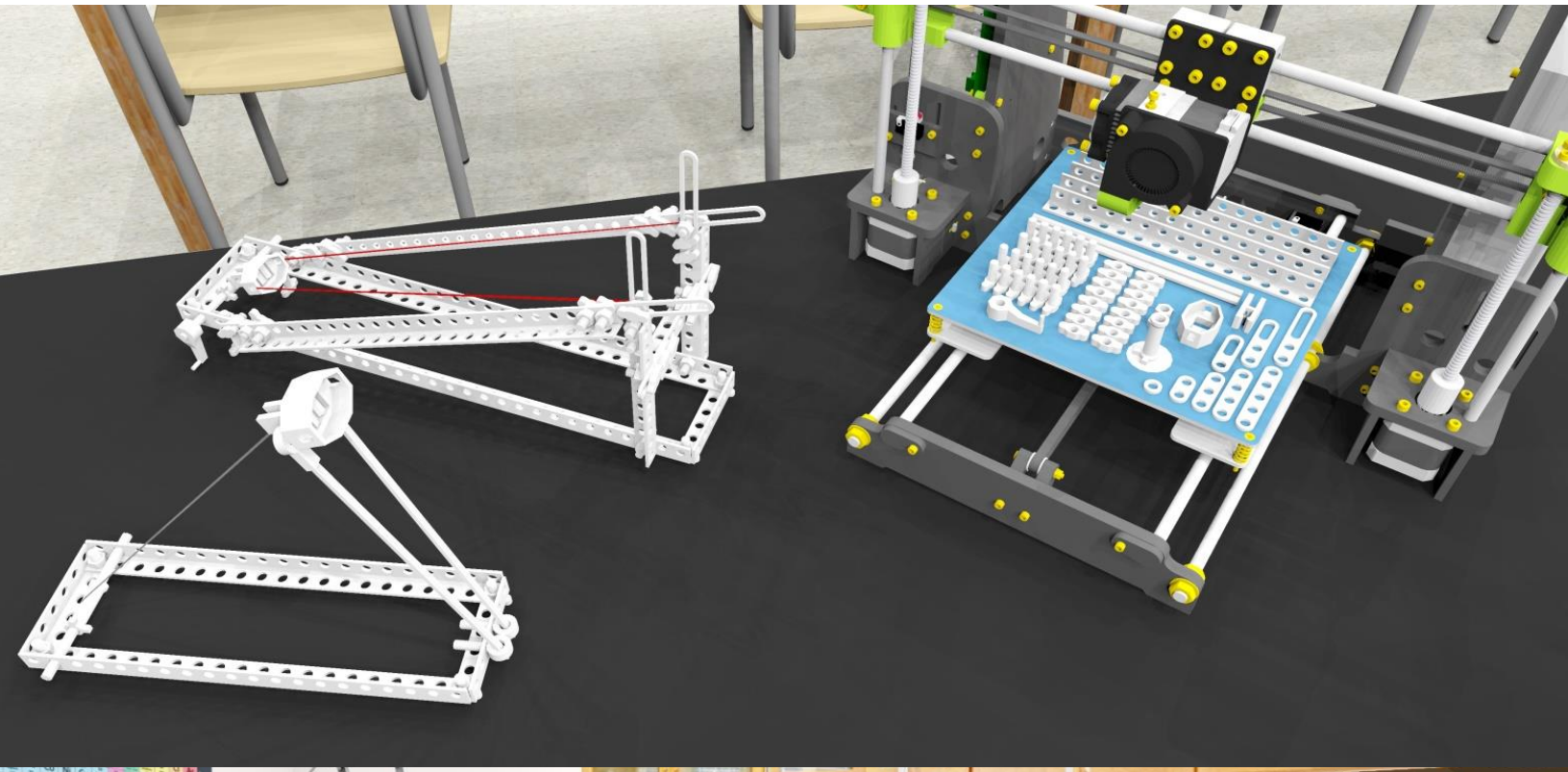




Catapult Launch Challenge:

Prepare for a high powered adventure with our 3D Printable Catapult Launch Challenge! Ignite innovation as students conquer engineering feats, and unleash catapult creations as they explore various payload launcher designs. Dive into hands-on learning with ready-to-launch designs and curriculum tailored for catapulting excitement! This Authentic, Project Based Learning kit includes all of the 3D printable files needed to get started, as well as curriculum aligned to state and national standards. Engineering Design challenges include:

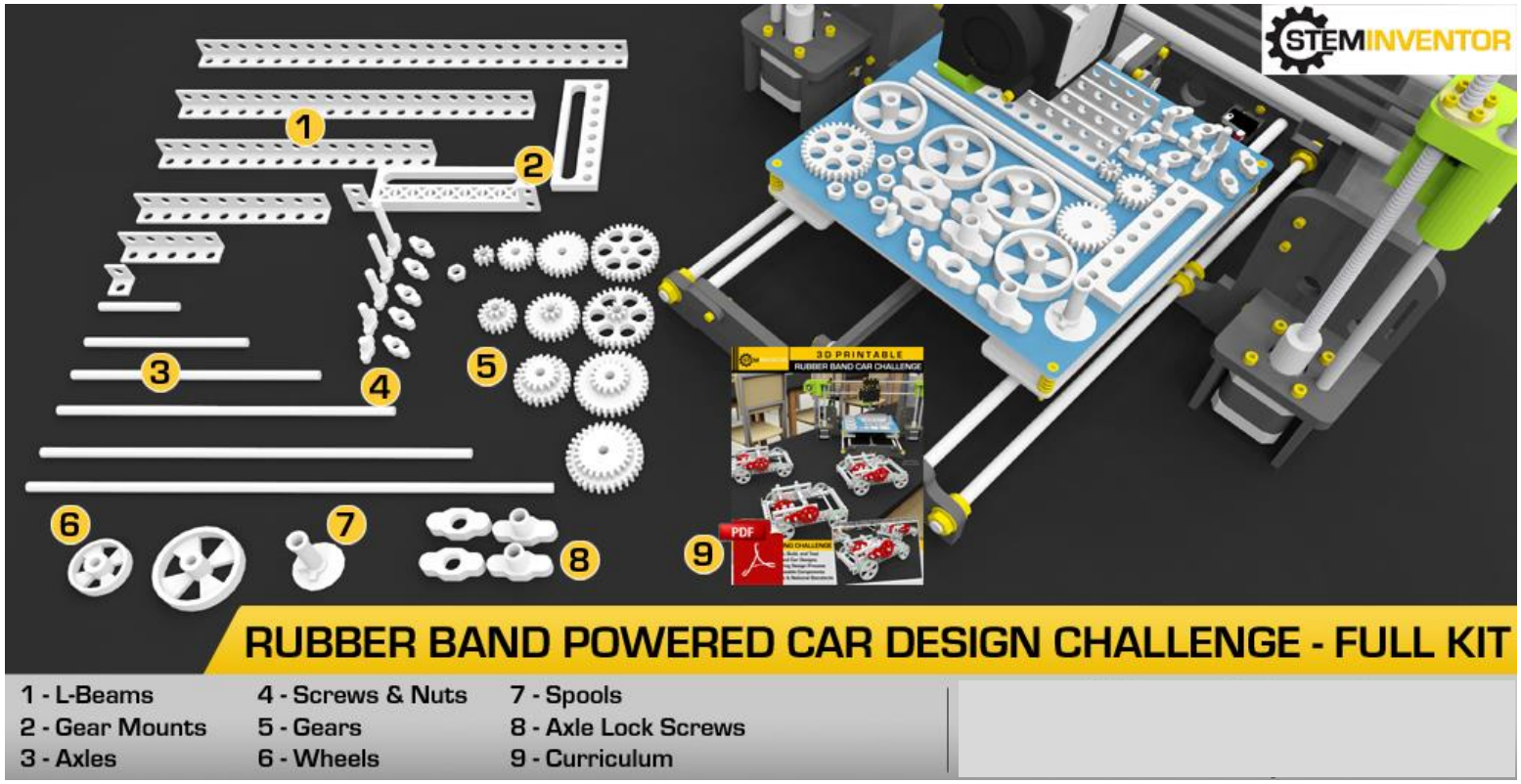
- **Distance:** Furthest distance catapulted
- **Accuracy:** Best accuracy at a given distance

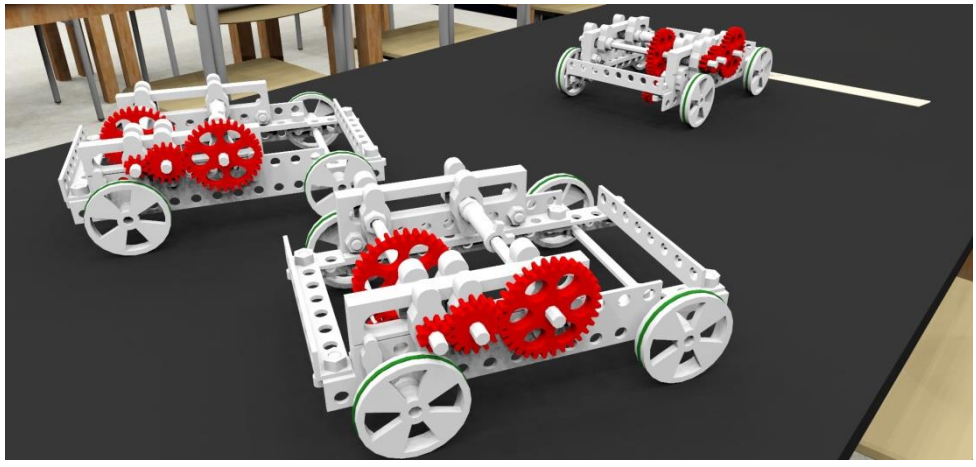


Rubber Band Powered Car Challenge:

Rev up for an adrenaline-fueled ride with our 3D Printable Rubber Band Powered Car Challenge! Blaze trails, engineer custom gear systems, and race towards innovation. Dive into hands-on learning with ready-to-print designs and curriculum tailored for "high-octane" excitement! This Authentic, Project Based Learning kit includes all of the 3D printable files needed to get started, as well as curriculum aligned to state and national standards. Engineering Design challenges include:

- **Distance:** Furthest distance travelled
- **Speed:** Fastest speed over a given distance
- **Weight Pulled:** Greatest weight pulled over a given distance

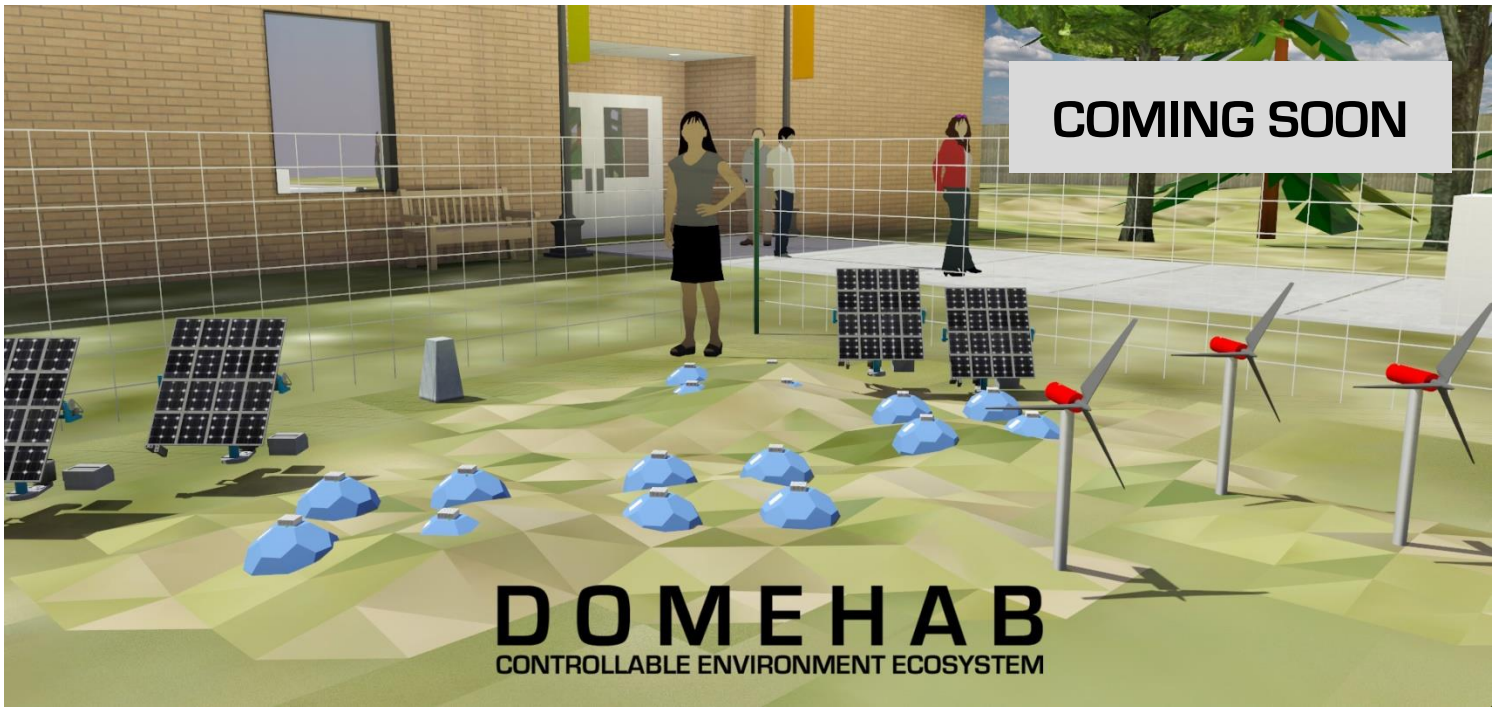


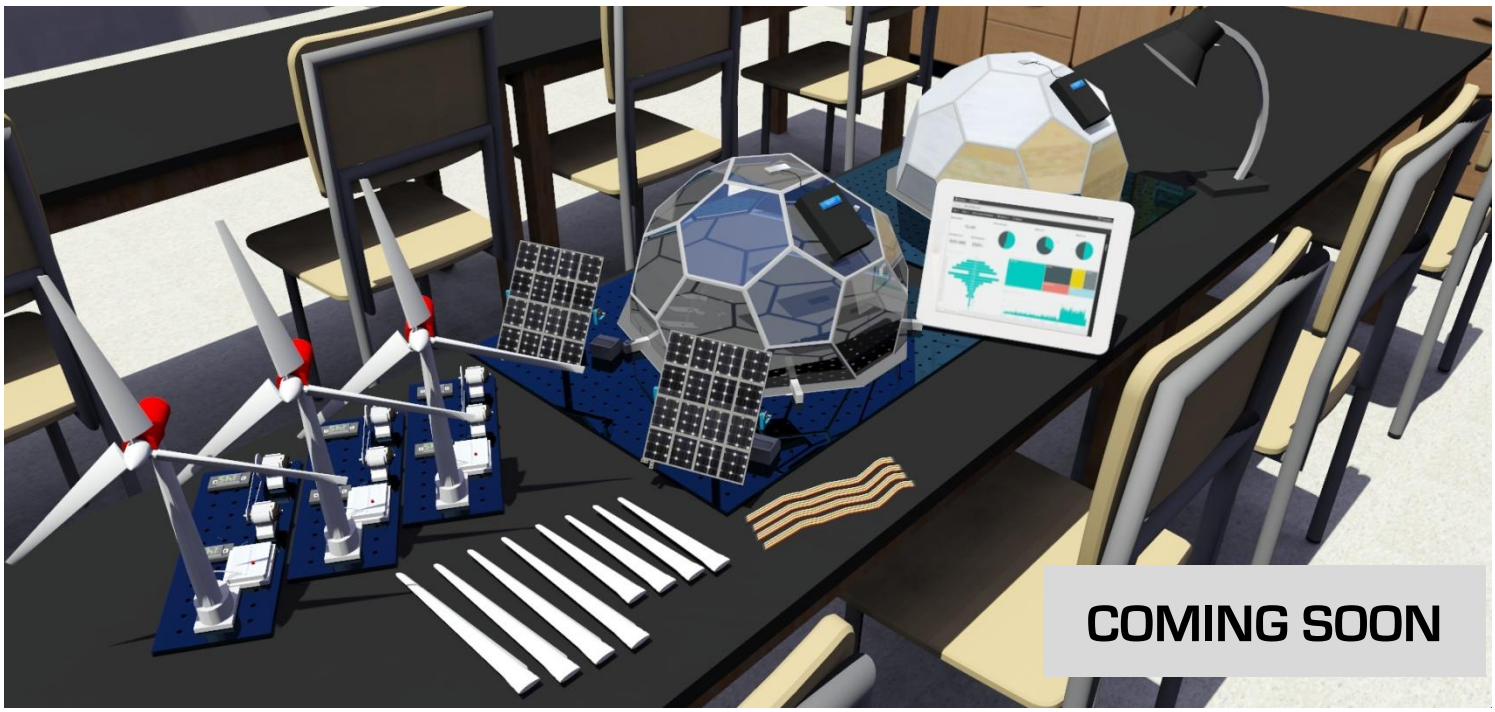


COMING SOON

DomeHab Challenge:

Step into the future of education with DomeHab! This groundbreaking kit empowers students to 3D print and assemble their own vibrant ecosystems. Dive into a world of discovery, innovation, and hands-on learning as students create thriving habitats. Unleash student imagination, nurture life, and embark on an epic journey of ecological exploration! This Authentic, Project Based Learning kit includes all of the 3D printable files needed to get started, as well as curriculum aligned to state and national standards. ***More details coming soon!***

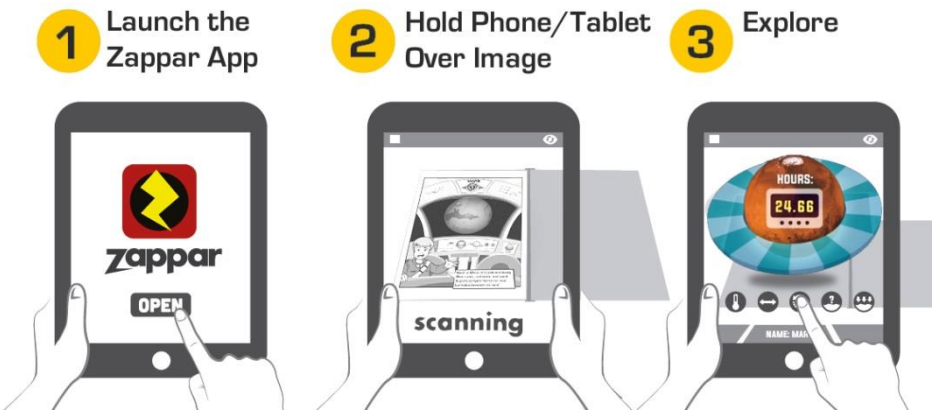




Rockwell Adventures: Augmented Reality Enhanced STEM Lessons

Introducing the Rockwell Adventures Educational Activity Books

Discover a new dimension of learning with StoneOak Media's captivating augmented reality (AR) books. Designed to bridge the gap between traditional education and cutting-edge technology, our AR books create immersive, interactive experiences that engage students like never before. By combining the power of print with the excitement of digital content, we empower learners to explore complex concepts in a fun, accessible way. Simply download the Zappar Augmented Reality app to school or student iOS or Android devices, scan various pages of each workbook, and explore!



Introducing the Rockwell Adventures Educational Activity Books

https://tinyurl.com/33c5a8v7

https://tinyurl.com/3ew6f5rk

Rockwell Adventures: Augmented Reality Enhanced STEM Lessons

Join the Rockwell family on their Top Secret mission to colonize a new planet. This fun-filled educational tour of the Solar System teaches students basic facts about each of the planets, and challenges them to design a base for the planet of their choice. State and national curriculum aligned STEM-focused student activities include:

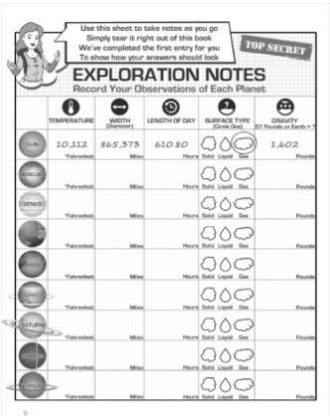
Exploring Each Planet: Using the FREE Zappar Augmented Reality app for iOS and Android, students are able to scan selected pages of the book to view, interact with, and measure photo-realistic 3D models of each planet.

Measuring Each Planet: The adventure doesn't end there. Using the Zappar Augmented Reality app, students next send virtual probes to each planet's surface to better understand conditions there. Measurements performed include determining the surface type, length of day, relative gravity, temperature, and the planet's diameter.

Designing a Suitable Base: Based on what the students record in their notes after visiting and measuring each planet, they are asked to both choose a planet where they would build a base, and produce a sketch of this base. Students are encouraged to design a base that will be able to accommodate the conditions they previously recorded on the planet they chose.

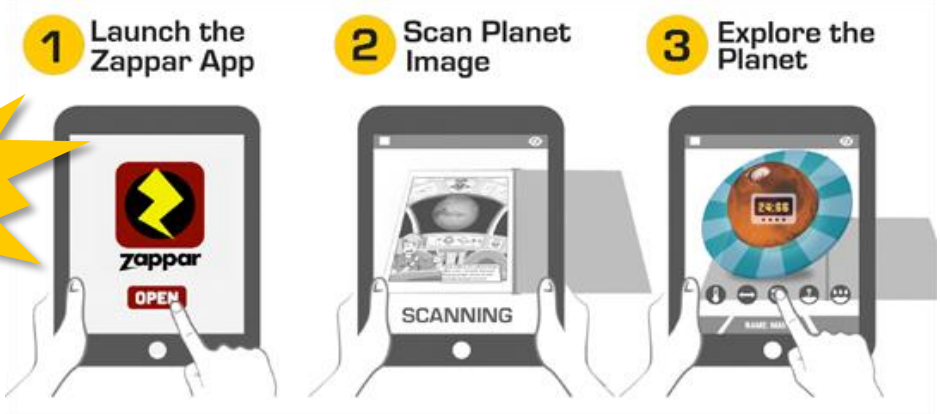
Technology Requirements: Any iOS or Android device. School iPads or student cell phones can be used. An active internet connection is required. Will not work on Chromebooks.

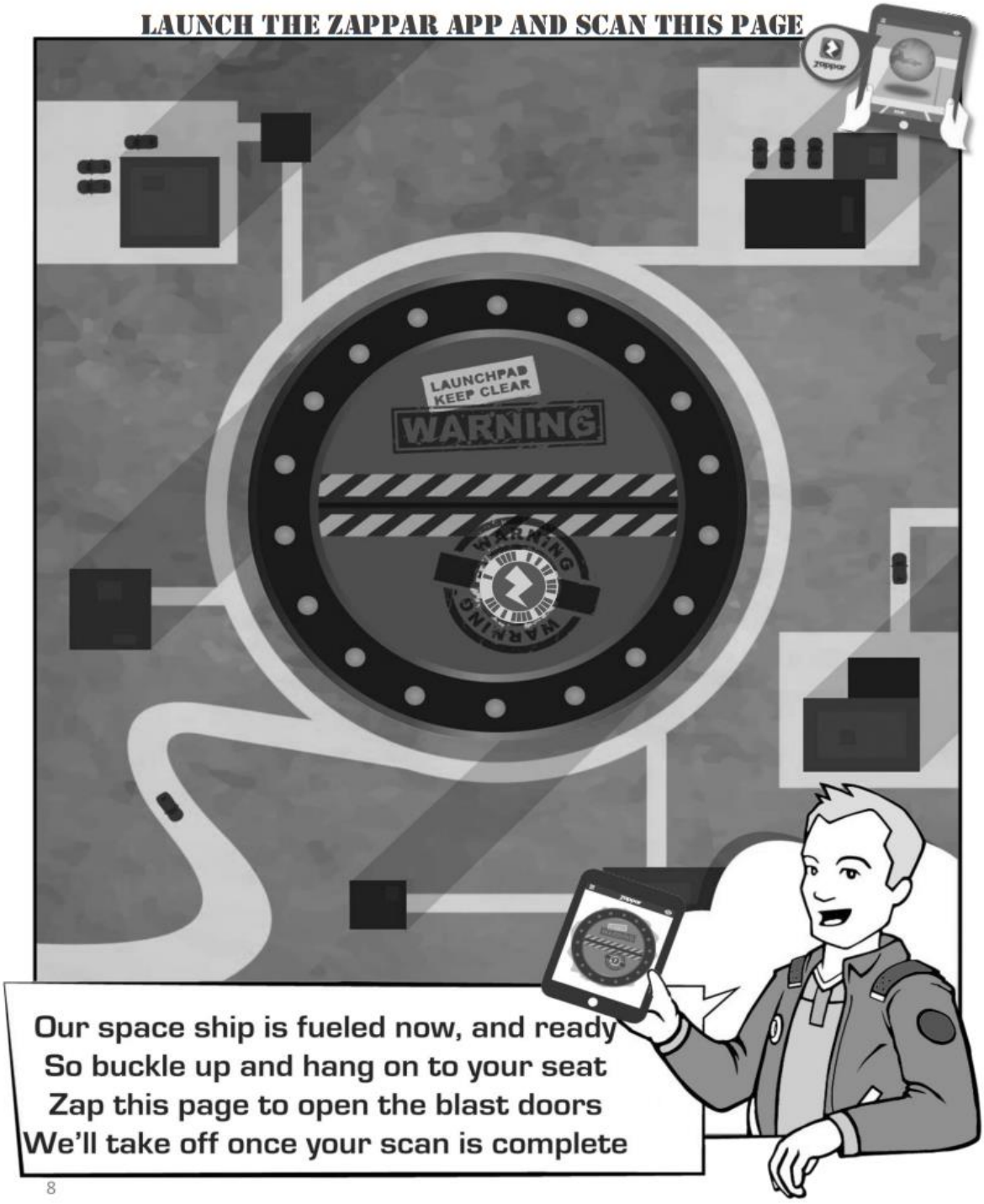
More Information: More information on Solar System Expedition, including a video showcasing the interactive augmented reality experiences in the book can be found at StoneOakMedia.com. Try the sample experience on the next page.



Try *Solar System Expedition* for yourself!

Works on any iOS or Android Device





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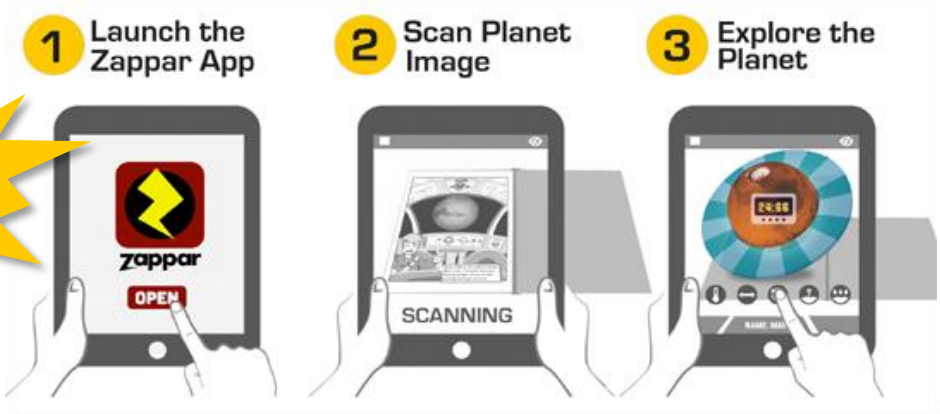
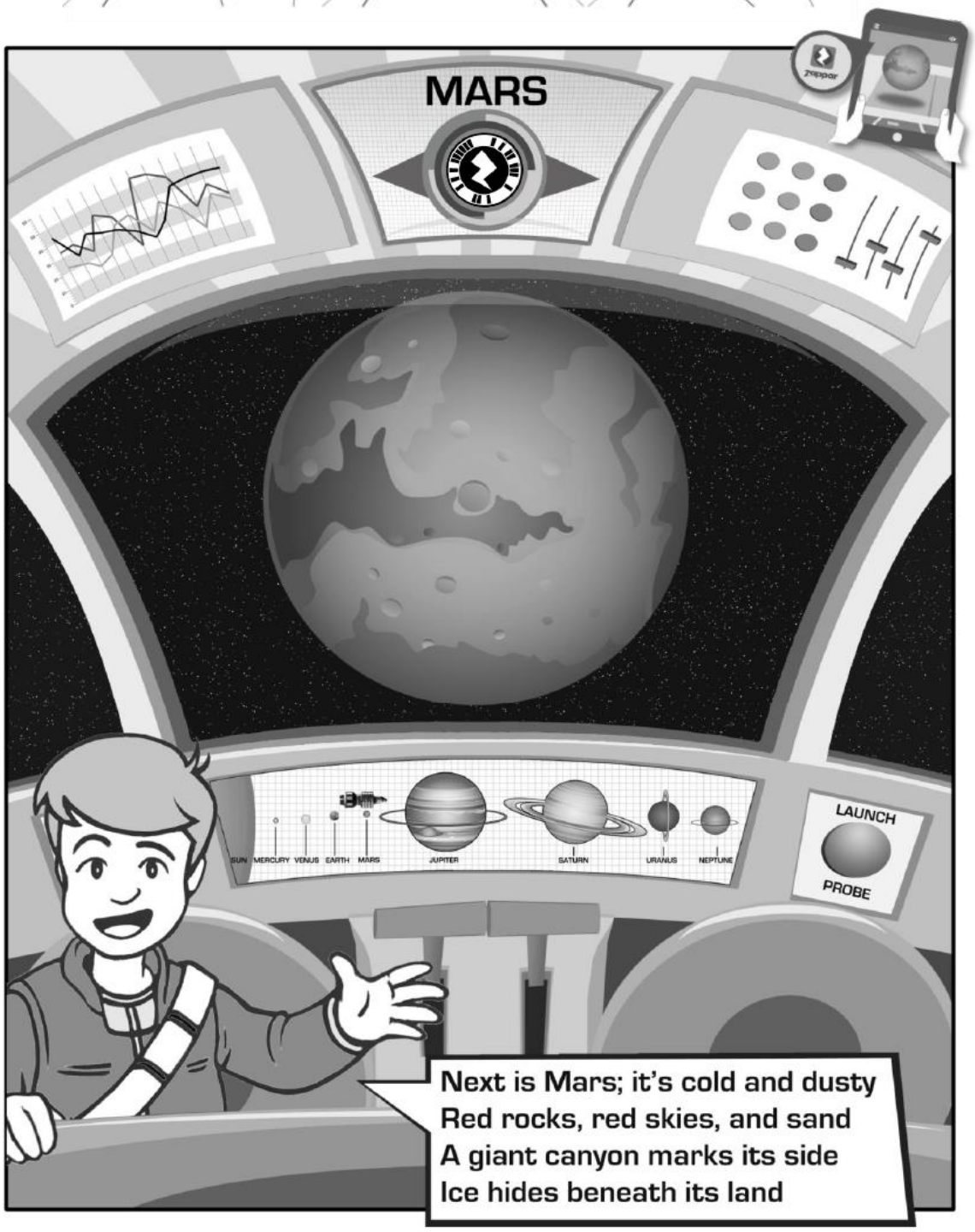
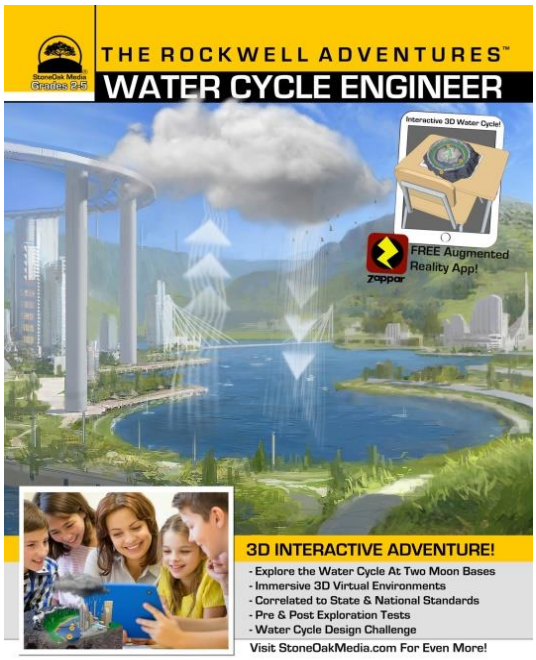




Augmented Reality Enhanced Products (continued)

THE ROCKWELL ADVENTURES–WATER CYCLE ENGINEER



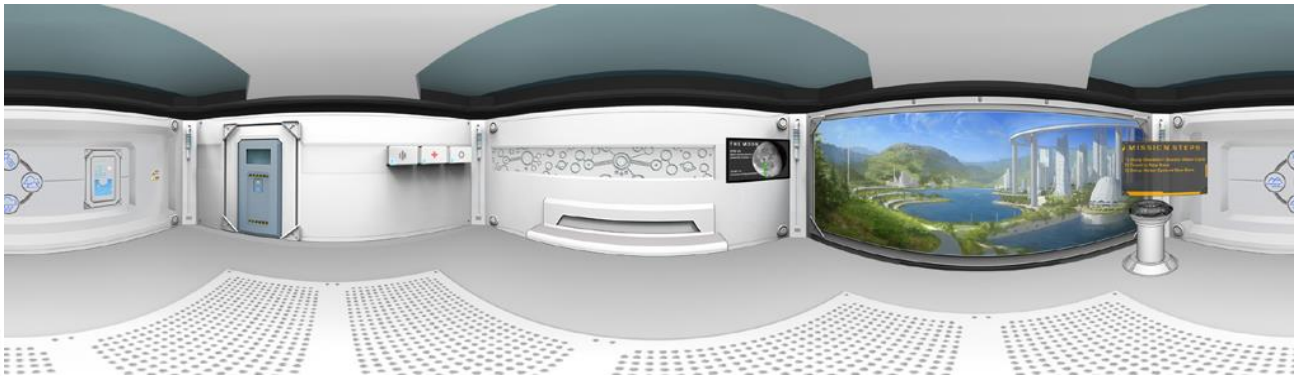
Join the Rockwell family as they travel to several colonies on the Moon to learn more about the water cycle. This fun-filled educational adventure teaches students basic facts about each step of the water cycle, and challenges them to setup the water cycle at a new underground Moon base under construction.

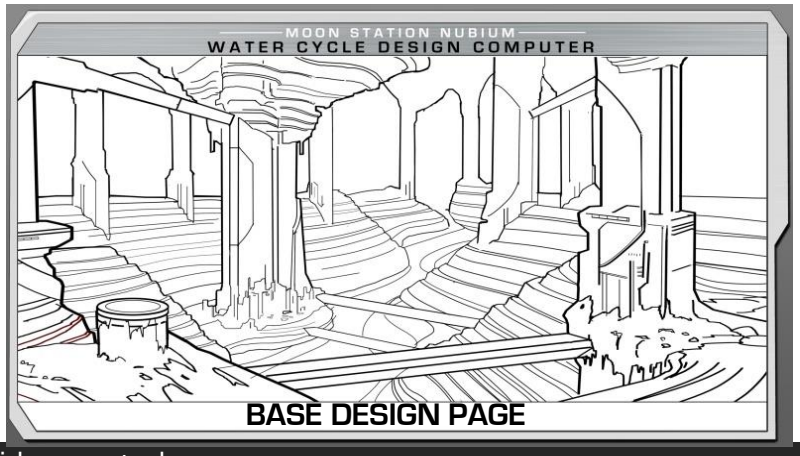
The Mission: After answering some initial questions, the student's mission begins with their observing a fully implemented water cycle at a futuristic base on the Moon. Students first take a virtual tour of the various stages of the water cycle within this base, using both Augmented Reality and Virtual Reality. They'll be amazed as they see steam rise, clouds form, and rain fall, all virtually on their desk.

Once their knowledge of water cycles is firmly in place, they then travel to a new underground Moon Base that is under construction, and design the equipment setup needed to create a sustainable water cycle in the base's frozen environment.

Technology Requirements: Any iOS or Android device. School iPads or student cell phones can be used. An active internet connection is required. Will not work on Chromebooks.

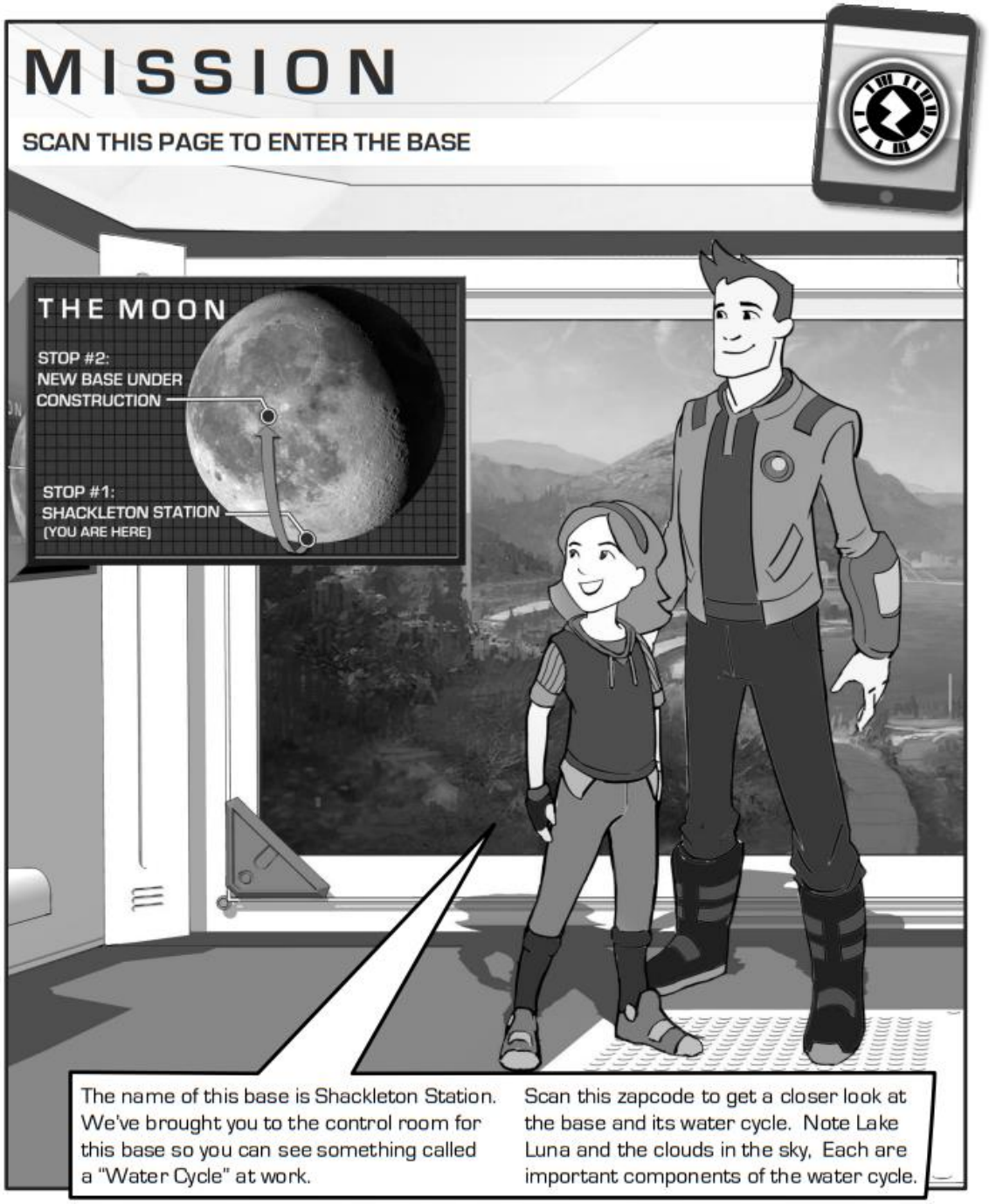
More Information: More information on Water Cycle Engineer, including a video showcasing the interactive augmented reality experiences in the book can be found at StoneOakMedia.com. Try the sample experience on the next page.





Try *Water Cycle Engineer* for yourself!

Works on any iOS or Android Device



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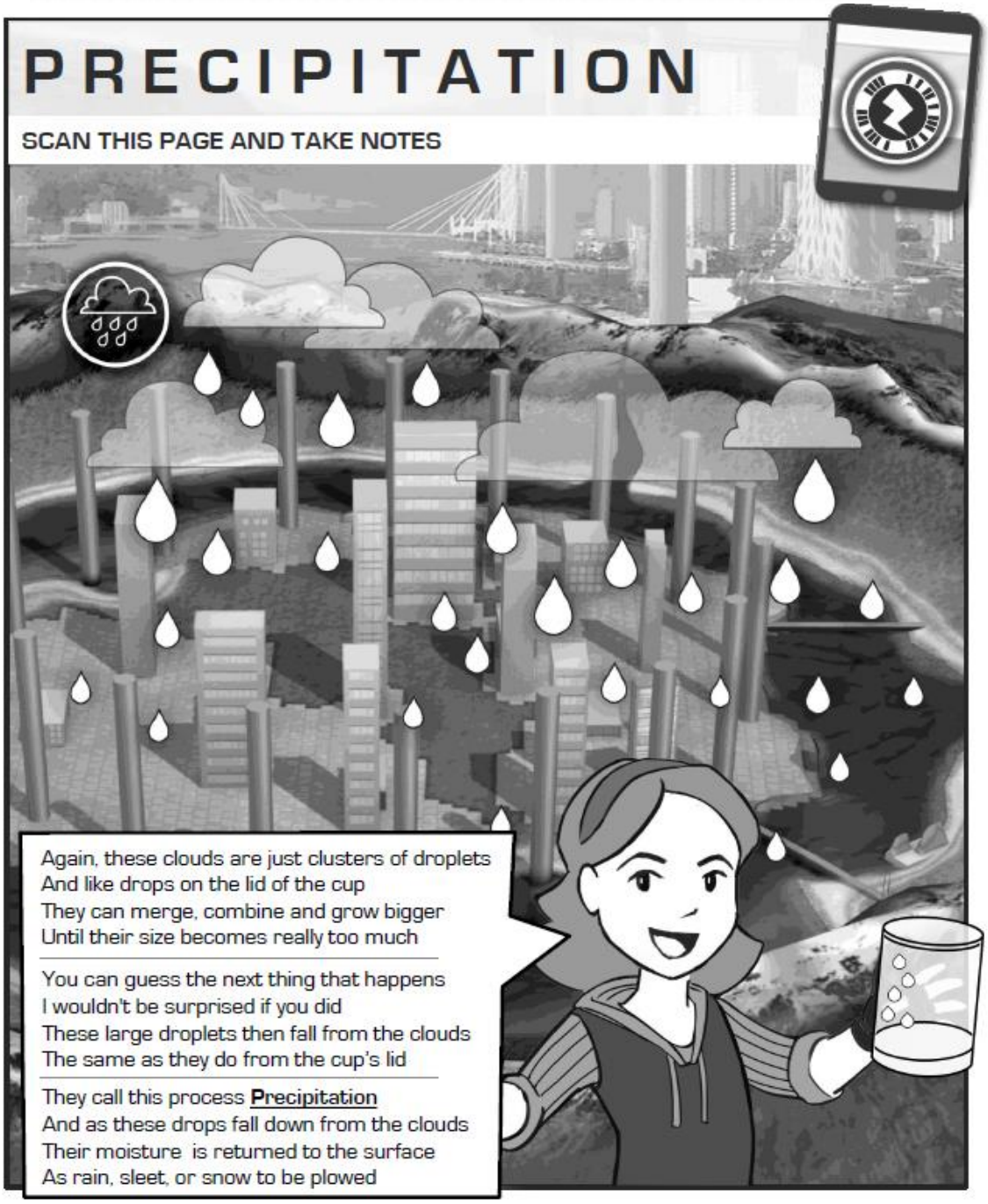

Product Pricing

Prices subject to change. Visit StoneOakMedia.com for latest details.

Product Category	Product	Grade	Single School: Price/Unit	5-10 School: Price Per Unit (~5% off)	Full District: Price Per Unit (~10% Off)	Shipping Per Unit
Augmented Reality Lessons	**Solar System Expedition**	Elementary, 25 Book Package	$449	$427	$399	$15 Discounts Available
	Solar System Expedition	Middle, 30 Book Package	$538	$511	$484	$15 Discounts Available
	Water Cycle Engineer	Elementary, 25 Book Package	$449	$427	$399	$15 Discounts Available
	Water Cycle Engineer	Middle, 30 Book Package	$538	$511	$484	$15 Discounts Available
STEM Inventor	**STEMInventor.com Platform Access**	4-12	$239/year ($19.95/mo x 12 mo)	$227	$215	$0 (Digital Delivery)
	Wind Turbine Challenge: Hardware Kit (Needed to produce power)	4-12	$59	$56	$53	$8/Unit Discounts Available
	Wind Turbine Challenge: Max Energy Conversion Extension Kit	4-12	$7	$6	$5	$5/Unit Discounts Available

Optional Add-On Items: Order Only If You Don't Presently Have On-Hand

Associated STEMInventor Kit	Product	Purpose	Amazon Link	Price (Subject to change by Amazon)
All	PLA 3D Printer Filament	High quality PLA filament	https://amzn.to/43rUg7H	$25
All	Rolling Bin Rack	3D Printed Parts Storage	https://amzn.to/4cqh6QZ	$199
Wind Turbine Challenge	12" Fan	Provides wind for turbine	https://amzn.to/3TP2Z0w	$26
Wind Turbine Challenge	Safety Glasses x10	Eye protection	https://amzn.to/3IRvHY6	$16
Simple Machines	Pulley String: Light	String to support weight	https://amzn.to/4cA84AU	$10
Simple Machines	Spring Scales	Measure simple machine performance	https://amzn.to/3VqzGm5	$13
Crane Lift Challenge & Bridge Design Challenge	Pulley String: Heavy	String to support heavier weights	https://amzn.to/3Ts8T6l	$7
Crane Lift Challenge & Bridge Design Challenge	Bucket	To hold weights	https://amzn.to/3TNYnYh	$5
Catapult Launch Challenge	Rubber Bands	To store catapult energy	https://amzn.to/3VxxHfU	$15

To place your order or ask questions, please contact us at:

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Email: CustomerService@StoneOakMedia.com
Phone: 512-887-1692
Fax: 210-441-7222

STONEOAK MEDIA

Augmented Reality and 3D Printing STEM Curriculum

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STONEOAK MEDIA

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