



Life-long Learning Begins Here

PBS LearningMedia

gpb.pbslearningmedia.org

PBS LearningMedia offers a searchable repository of digital collections (150K+) based on PBS shows. All resources can be streamed, shared, saved, and curated for an efficient and engaging instructional experience.

Teaching Strategies

https://docs.google.com/document/d/152VPU9bbX2mT9MB30kQ4H_4Tor0V5PRZm3zeiqVW69Q/edit?usp=sharing

Access hundreds of micro strategies from multiple organizations to deliver engaging instruction in the classroom, be it physical or virtual.

Resources for Engineering and Design

DIY Activities, Design Thinking, and Project-based Learning

GPB Education • PBS LearningMedia

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FOUNDATIONS

PHYSICS IN MOTION (GPB)

<https://gpb.pbslearningmedia.org/collection/physics-in-motion/>

This new digital series for high school physics is comprised of seven units of study divided into segments with support materials designed to provide practice and reinforce concepts.

GEORGIA TECH LIVE EXPLORATION (GPB)

<https://gpb.pbslearningmedia.org/resource/5ec5884a-131d-4cf0-bb83-2b26c65338ce/georgia-techs-invention-studio-live-exploration/>

Take a special trip to Georgia Tech's Flowers Invention Studio. This interactive virtual exploration offers students an inside look at the world's largest student-run makerspace as they learn about the engineering design process, hear from Georgia Tech students and professors, and see ideas transform into inventions.

MIT: SCIENCE OUT LOUD

<https://gpb.pbslearningmedia.org/collection/mits-science-out-loud/>

These videos take the traditional concepts taught in middle and high school science, engineering, and math classes and put them in a context completely outside the classroom.

NOVA ENGINEERING AND TECHNOLOGY

<https://gpb.pbslearningmedia.org/collection/engineering-technology-applications-of-science/>

Students should come to understand the interactions of nanotechnology and synthetic biology that blur the lines between science and engineering with resources to solve problems.

AEROSPACE ENGINEERING

<https://gpb.pbslearningmedia.org/collection/aeroeng/>

Explore video and interactive media resources that support the middle and high school Engineering Design core ideas and practices of the Next Generation Science Standards and related state standards.

GPB PD Videos

https://www.youtube.com/playlist?list=PLMniSm5GhmXa1j_O8fb2INd_ou5rHEb0

More than 20 sessions conducted by our education outreach team on almost any topic imaginable!

NASA PHYSICS AND ENGINEERING

<https://gpb.pbslearningmedia.org/collection/npe11/>

This collection is designed to bring real-world applications of physics and engineering concepts into high school classrooms through videos and interactive presentations.

TEACHING ENGINEERING IN NEW YORK

<https://gpb.pbslearningmedia.org/collection/teaching-engineering-in-new-york/>

A collection of resources that shows real-world applications of engineering concepts and practices. These media-rich resources and accompanying support materials cover disciplinary core ideas from ecosystems to energy.

DIY ACTIVITIES + APPLICATIONS

ZOOM

<https://gpb.pbslearningmedia.org/collection/zoom/>

Using a multidisciplinary, content-based format, these resources teach children how to take an active approach to learning—to ask questions, create, experiment, and have fun!

SESAME STREET: SCIENCE

<https://gpb.pbslearningmedia.org/collection/sesame-street-science/>

This collection is designed to engage preschoolers in everyday learning by teaching core skills in Math, Literacy, STEM, and Social and Emotional Development. Here you'll find hundreds of videos, games, and printable materials to help you to excite even the youngest learners.

WHAT'S SO COOL ABOUT MANUFACTURING?

<https://gpb.pbslearningmedia.org/shared/2161259/4831870/#.X61zvJNKhYI>

WQED has teamed up with Catalyst Connection to use these videos to create lesson plans for educators surrounding manufacturing. There are twelve lesson plans with the following subjects: Art, Engineering, English, History, Math, and Science.

PHYSICS GIRL

<https://gpb.pbslearningmedia.org/collection/do-it-yourself-demonstrations/>

In this series from PBS Digital Studios, Dianna shows us how the physical world works by using everyday experiments and questions to demonstrate basic (and sometimes, dangerously complex) scientific ideas.

DESIGN SQUAD NATION

https://gpb.pbslearningmedia.org/collection/design-squad/?topic_id=1441&utm_source=lmnews&utm_medium=email&utm_campaign=mktg_2016

Use these resources to help your students gain a stronger understanding of the design process and the connection between engineering and the things we use in everyday life.

SCIENCE U

<https://gpb.pbslearningmedia.org/collection/science-u/#.XoeaeTJKjzh>

Each hands-on Science-U experiment includes an overview video, a student handout, and a teacher's guide.

CURIOUS GEORGE STEM

<https://gpb.pbslearningmedia.org/collection/curiousgeorge/>

This collection is a great way to help young children understand science, technology, engineering, and math (STEM) concepts, such as measuring, building, and simple machines.

FULL-TIME KID

https://gpb.pbslearningmedia.org/collection/full-time-kid/?utm_source=email&utm_medium=&utm_content=&utm_campaign=#.XpnGjDJKiLl

From DIY science experiments to playground games, spunky eight-year-old Mya Reyes shares her tips, tricks and all-around knowledge so you too can have what it takes to be a full-time kid.

ENGINEERING YOUR FUTURE

<https://gpb.pbslearningmedia.org/collection/http.www.engineeringyourfuture.org/>

Find out what engineers do, what it takes to become an engineer, and why engineers love their jobs. You'll find career-related tips so you can prepare yourself now for high school and college studies in engineering.

DESIGN THINKING

NOVA: THE DESIGN PROCESS

<https://gpb.pbslearningmedia.org/collection/from-idea-to-solution-the-design-process/>

This collection is built around "design thinking" and is intended to help educators and learners explore the invention of real, practical solutions to some of the world's most pressing problems.

SCIGIRLS

<https://gpb.pbslearningmedia.org/collection/engineer-and-invent/>

Each half-hour episode highlights the processes of science and engineering, following a different group of middle school girls who design, with the help of scientist mentors, their own inquiry-based investigations on a variety of topics.

ENGINEERING IS...

https://gpb.pbslearningmedia.org/collection/engineering_is/

Explore a collection of media resources for middle- and high-school students that focuses on scientists and engineers working together across disciplines at the intersection of engineering and science.

BUILDING BIG

<https://gpb.pbslearningmedia.org/collection/building-big/>

Learn about engineering, architecture, and the science behind bridges, domes, tunnels and more structures in this series, *Building Big*.

ENGINEERING FOR GOOD

<https://gpb.pbslearningmedia.org/collection/engineering-for-good/>

This NGSS-aligned unit is a three-week, project-based learning unit for middle school science classrooms focused on developing solutions for negative impacts of plastics on the environment.

Corporate-Sponsored Curriculum

FUTURE U

<https://www.boeingfutureu.com/>

Inspire and equip the next generation of STEM professionals in aerospace with hands-on learning experiences to help students in grades 6–12 from Boeing.

SIEMENS STEM DAY

<http://www.siemensstemday.com/>

A beloved K-12 STEM program that offers an extensive library of free, standards-aligned activities that bring science, technology, engineering, and math to life inside and outside the classroom.

INNOVATION GENERATION

<https://www.innovation-gen.com/>

This exploration ignites, engages, and empowers the makers in your classroom with digital resources created to cultivate collaboration, problem-solving and STEAM skillsets in your students through real-world explorations.

MANUFACTURE YOUR FUTURE

<https://www.manufactureyourfuture.com/>

Arconic Foundation and Howmet Aerospace Foundation, have partnered to provide 3rd-12th grade educators, administrators, school counselors, and families with materials to cultivate the next generation of manufacturing leaders and innovators.

IGNITE MY FUTURE

<https://www.ignitemyfutureinschool.org/resources/curriculum>

Provides middle school educators with standards-aligned, transdisciplinary resources designed to effectively engage classrooms with the foundations of computational thinking across core subject areas.

SCIENCE FAIR CENTRAL

<https://sciencefaircentral.com/>

Help STEAM-power classrooms and homes across the country as students prepare for the careers of tomorrow with tools and projects to take them to the next level.