



FAB LAB EL PASO

Fall 2021 – Spring 2022 Virtual Field Trips

Unlock your students' creativity with our specially designed virtual field trips (VFTs) for the 2021-2022 School Year. VFTs are available for **Grades 3-12**, with content and exercises differentiated for Grade Levels 3-5, 6-8, 9-12. Bookings are available **Tuesdays to Fridays**. Sessions and prices are per student unless noted otherwise.

As an added bonus this year, material kits will be included at no additional charge for some topics.



SY 2021-2022 Topics

A. Circuits + Electronics

Dr. Gadget

B. 3D Modeling + Printing

Desk Buddies

C. Virtual Reality + Augmented Reality

360 School

D. Architecture + Sustainability

Making Spaces

E. Design, Engineering, + Prototyping

*Maker Classroom Set**

*includes Maker Material Kit for 25 students plus access to online learning content

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Dr. Gadget

Topic: Electronics / Circuits

Grades: 3-5, 6-8

Description:

From heart rate monitors to pacemakers to A.I. prosthetics, electronic medical devices are an integral part of improving the quality of human life. Medical professionals use electronics to diagnose and treat patients, prepare for surgical procedures, and maintain health records. After learning the basics of circuits and coding, students will investigate how creative gameplay can be used for training in the medical industry and create their very own board game in the style of Operation!

Included: Interactive game materials kit for each student



Desk Buddies

Topic: 3D Modeling / 3D Printing

Grades: 3-5, 6-8

Description:

Join the 3D printing community to develop new technical skills, harness your creativity, and share your designs with the world! 3D printing allows us to fix things that are broken and produce items we use every day while keeping e-waste out of landfills and making us more conscientious consumers. Students will learn how to innovate, prototype, and develop new products by investigating a problem within their workspace and design a custom, functional Desk Buddy as a solution!

Included: 3D print of each student's design



360 School

Topic: Augmented Reality / Virtual Reality

Grades: 3-5, 6-8, 9-12

Description:

Since the pandemic forced many places to close their doors to the public, institutions and businesses have created virtual tours and other interactive ways to allow people to stay connected. This not only allows us to experience places beyond our reach, but has the potential to ease the carbon footprint and other negative aspects of overtourism. After students interact with Fab Lab El Paso's own virtual tour, they will learn how they can create a tour of their campus to highlight the programs, spaces, and achievements that make their school unique!

Included: VR viewer for each student



Making Spaces

Topic: Architecture

Grades: 6-8, 9-12

Description:

Did you know public spaces can improve community health by encouraging rest, sparking engagement, and promoting opportunities for play? Living in the Sun City gives us a unique opportunity to create public spaces that harness green energy and address climate concerns year round. Using the architectural drawing software SketchUp, students will design a public space or piece of public furniture for their school that implements sustainable design strategies tailored to our region and benefits their campus community.

Included: Drafting kit for each student



What Will You Fab?

Topic: Engineering / Prototyping

Grades: 3-5, 6-8, 9-12

*Flexible Learning Module with Classroom Kit and Self-Paced Online Lessons

Description:

Fab Labs and makerspaces supply the tools and materials needed for people to push the boundaries of their imagination and turn their ideas into reality—even remotely! Our new Online Learning Platform (OLP) featuring guided lessons on the engineering design process makes prototyping easy. Using the additional resources in the Maker Material kit, students will be challenged with project-based design opportunities and produce creative product solutions. Soon, your students will be asking, “What can we fab?!”

Included: Access to OLP with 4 prototyping lessons and Maker Material Kit for 25 students



Fee Schedule

Half Day	9A to 11A OR 12P to 2P	\$25 per student
Full Day	9A to 2P	\$40 per student

OR

Maker Classroom Set

\$500 per class (≈ 25 students)

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