

EMS ISD Distance Learning: May 4 – May 15, 2020

High School Science Enrichment Choice Board

Instructions: Select 1 or 2 activities each week

<p>Biology BioGeo Cycles – Microorganisms & Flow of Matter Environmental Change and Disruptions</p>	<p>Chemistry pH and pH Calculation Ideal Gases/Laws</p>	<p>Physics Emission spectra Mass-energy equivalence – fission & fusion</p>
<p>Environmental Systems Non-renewable - nuclear Renewable Sources/Point and Nonpoint pollution</p>	<p>IPC Valence electrons – chemical changes Energy changes & chemical reactions (endo-exo)</p>	<p>Astronomy Space Exploration: Robotic v. Nonrobotic Space Explore: ground tech & astronomical data</p>
<p>Aquatic Science Conservation and Management Human impact on Aquatic Environments</p>	<p>Introduction to Robotics Forces & Distances: Mechanism - Gears Materials Science – Communication Mechanisms</p>	<p>PAP Computer Science Conditionals Loops</p>
<p>Mars Exploration Go on a virtual field trip to Mars. Via Single Sign On, access Discovery Education and search for “<i>Generation Beyond: Mars Exploration Virtual Field Trip.</i>” Choose a segment of interest to you that connects with your topic of study this week. Create an infographic about your topic, include which segment you watched and why it is important to understand.</p>	<p>Explore Livecams Choose a Livecam or video from TPWD of interest to you that connects with your topic this week. Take or draw 4 - 6 pictures of your observations, write a caption for each picture. Livecam https://explore.org/livecams Texas Parks and Wildlife Department, You Tube Channel https://www.youtube.com/user/TexasParksWildlife</p>	<p>National Oceanic and Atmospheric Administration and NASA STEM @ Home Using the NOAA or NASA websites, create a public service announcement to inform your community about this week’s topic. PSA can be created on paper or digitally. https://www.noaa.gov/education/resource-collections https://www.nasa.gov/stem-at-home-for-students-9-12.html</p>
<p>Engineering Use the design process to solve a problem. Identify a problem as you learn about your topic this week. Sketch a plan or flow chart to solve the problem using the following design process steps: 1) identify the problem; 2) brainstorm; 3) design; 4) build, test, evaluate, and redesign; and 5) share solutions.</p>	<p>Using Models Create a model about this week’s topic. Be sure to label your model and identify the limitations it might have. Your model can be created with household materials or digitally.</p>	<p>Extension Explore the following sites to extend your learning. Amaze Your Brain – Perot Museum Ology – American Museum of Natural History iNaturalist – National Geographic and CAS Exploratorium - Explore</p>
<p>Resources:</p>	<p>Recommended Resources Single Sign On: Discovery Education, Legends of Learning, STEMscopes Optional Online Resources: Khan Academy www.khanacademy.org PhET Interactive Simulations: https://phet.colorado.edu/ National Geographic: www.nationalgeographic.com Smithsonian Learning Lab https://learninglab.si.edu/</p>	

