Endeavor
STEM Teaching Certificate Project

Your Name	Title of Favorite Resource	What is the reason you selected this resource to share?	What grades level is it most appropriate for?	Provide the link to the resource (or attach a file in the next box)		How do YOU use this resource?	May Endeavor share this resource with others and share your enthusiasm about it?	Optionally attach a file here.			
Taylor Lewis	NASA Solar System Exploration	I selected this resource because it is great to use with students at any age. It helps students visualize the solar system and interact with the objects within our solar system. The students can move the objects, click on them for more information and understand where they are in space.	K-12	https://solarsystem.nasa.gov/							
Kaila Hastings	OCEARCH Shark Tracker	I use this site so students can gain an understanding about conservation efforts and methods of species protection. I love all of the features of this site and the simplicity of the program.	11-12	https://www.ocearch.org/tracker/		I use this resource when I teach about sharks and shark conservation. This site allows me to incorporate data integration as well as enforce geography and some physical science. I like that the program discusses the engineering and the technology behind the design of the trackers and the innovative vessel that they use to get the sharks aboard to do all of the research.					
Diana Simpson	Crash Course Chemistry	It has many easy to watch videos that help to explain the course content of Chemistry.	9-10, 11-12	https://www.youtube.com/watch?v=FSyAehMdpyI		This is a series of about 45 videos that I use as introductory and review material. There are so very many tutorials out there, but this is one that I have found is both educational and entertaining.					
Kimberly Bates	teachengineering.org	This is an awesome resource!! It has ready to go engineering design lessons and projects that coordinate directly with the NGSS standards, and they provide great initial engagements to get students interested in the projects. I also love how every activity is connected to a real-world engineering job. It is a great way to get students thinking about careers in engineering!	3-4, 5-6, 7-8, K-12	https://www.teachengineering.org/		I always scan this resource whenever I am beginning a new unit to see if there is a design challenge I can pull in! My students always enjoy them!					
Lucy Blackford	The Physics Aviary	I have used this resource to do a variety of virtual experiments while in pandemic. They range from simple measurement to more advanced Physics. I always start with a measurement unit in my physics class and here they had differentiated activities for using a thermometer, a triple beam balance, or a graduated cylinder. I have also used it for constant motion. Many of my students don't have materials so virtual simulations and experiments are the best. It is very well organized and you can search by AP Physics or Physics first.	7-8, 9-10, 11-12	https://www.thephysicsaviary.com/index.html		My students have a variety of understanding, so it was great to use the triple beam balance simple one for all students and have a more difficult one as an extension.					
Brendan Sutta	PhET Interactive Simulations	PhET has a bunch of great virtual simulations for abstract concepts that are difficult or take a lot of set up to teach. Plus they are all FREE! (Donations help them to create the sims though!)	7-8, 9-10, 11-12, K-12	https://phet.colorado.edu/		The simulations include ones on physics, chemistry, biology, earth science and math. Other teachers also post exploration guides/assignments that they have made to go along with the sims.					
Jacqueline Edelmann Frankstone	The Science Mill	This is a flexible resource with lots of fun, interactive mini-lessons that are great for little kids and still fun and engaging for middle-schoolers. We had great success last year during quarantine with their aquaponics and anemometer activities.	K, 1-2, 3-4, 5-6, 7-8	https://www.sciencemill.org/		I use this resource to incorporate at-home STEM mini=projects that kids get ver engaged with. Materials are easily found at home and the mini-lessons are fun and easy to follow. Their programs allow children to put their own artistic spin on their projects --					
Rachel Taylor	POGILs	Actual "POGILS," or any lesson in this style I really enjoy. It avoids lecture, and the students actually enjoy completing these types of assignments to learn content.	7-8, 9-10, 11-12, If you make your own, then any grade.	https://www.flinnsci.com/pogil-activities-for-life-science---designed-to-support-the-ngss/fb2324/ You can purchase the book, but many are available online.							
Rachel Taylor	POGIL	See previous	7-8, 9-10, 11-12	Here is an example of a "POGIL" I made for my students. https://drive.google.com/file/d/147zV6H55A1AjW5pXZciYLiHvDEXhMW8p/view?usp=sharing							
Dale Goatley	Ignite My Future Curriculum Collection for MS	I wanted to share something in addition to the wonderful resources I have received from Endeavor. I was a former middle school mathematics teacher and this curriculum collection contains lessons (with thoughtful tasks) that are ready to go and accessible for any classroom. Many resources in this collection connect to the concepts I've learned through the Endeavor program computational thinking, engaging phenomena, authentic data collection/analysis, etc. I came across this resource at a Discovery ED/TASA event I attended last February at the University of Cincinnati.	5-6, 7-8, 9-10	https://www.ignitemyfutureinschool.org/resources/curriculum							
Brandi Matthews	Data Nuggets	This website has authentic active data that students interact with to polish their graph analyzing skills.	5-6, 7-8, 9-10, 11-12	http://datanuggets.org/		Data Nuggets is operated by a teacher. She saw a need for authentic, current data analysis in her classroom. The data is updated weekly and has very interesting current events, etc. There are different leveled worksheets for the students for each nugget. If your students are like mine and struggle with graphs, infographics, data tables, this website is great! I like to use it for bellringers.					
Kristen Anderson	NASA	It has tons of lesson plans, activities, worksheets, online resources, etc.	K-12	www.nasa.gov		This website is great for finding lessons that go along with the 5E Lesson Plan. It includes instructors manuals as well as all the paper materials that students will need to complete the lesson. It is great to also give lessons that use graphing calculators.					
Brandi Matthews	Buffalo Case Studies	These are authentic studies for various topics: medical, chemistry, earth science, biology, etc. They offer a problem and students must figure out what is going on.	9-10, 11-12	https://sciencecases.lib.buffalo.edu/		The cost for complete access for teachers is $25, but I feel it is well worth it to have the answer sheets, suggestions for discussion, etc. I like to use these in my BioMed classes and have used one in my Science 3 class.					
Emerson Nunez	Formative Assessment Probes	The reason I have selected this resource is because it can be used as a warm-up, lesson, or a check for understanding. It is a great tool to use at the beginning of a unit to see the misconceptions students have about a particular concept.	K, 1-2, 3-4, 5-6, 7-8, 9-10, 11-12	https://drive.google.com/file/d/1eKnTb0jFQGFgH0F9vmY8DuiziN3rMoY_/view?usp=sharing		BioInteractives: Sorting Finches: https://www.biointeractive.org/classroom-resources/sorting-finch-species					
Madison Staton	NASA Data Literacy Cubes	NASA data cubes are a versatile tool that is useful with many different maps, graphs, and data sets that is able to be differentiated easily.	5-6, 7-8, 9-10, 11-12	https://mynasadata.larc.nasa.gov/data-literacy-cubes-graphs-maps-and-data-tables		I have used this space in my environmental science class -- it was a great tool to get students talking about authentic data and practicing the skills of reading maps and graphs. This tool turns the sometimes boring task of analyzing data, graphs, and maps into a fun, collaborative task that isn't intimidating to students!					
Gabby Blazich	DNA Learning Center	The DNA Learning Center is a teaching lab that hosts field trips and summer camps for middle and high school students. Through their new DNALC Live Program, the DNA Learning Center has posted videos of almost all of the classes that they offer. These videos cover topics such as bacterial transformations, DNA restriction analysis, DNA Fingerprinting, Emzymology, and the Mystery of Anastasia. They have also provided worksheets to go along with each video. The DNALC website also has a library of short genetics animations.	5-6, 7-8, 9-10, 11-12	https://dnalc.cshl.edu/		With hybrid learning and other pandemic regulations, I haven't been able to do many hands on labs with my biology students. I have used many of the lab demos on this website as replacements for the labs that I would do during a regular year. I also used to intern at the DNA Learning Center and I always tell my students about my time working there, so this website makes it very easy to show my students some of the work that I used to do.					
Jalyn Puckett	Tuva Labs	This is such a great resource for analyzing data and creating quick and manipulative data displays. There are also great interactive lessons that students can work through to engage in higher order thinking over real world problems.	3-4, 5-6, 7-8, 9-10, 11-12, K-12, Postsecondary	https://tuvalabs.com/		There are limited things that can be done without purchasing the premium version. However, I have still found plenty of ways to incorporate this in my class with the free version as well.					
Rosalita Santiago	Next Generation Science Storylines	It is a great resources for any educator that is new to NGSS and using anchoring events.	K-12	https://www.nextgenstorylines.org/what-are-storylines		It is great guide for any educator new to the profession or new to using anchoring events in their lessons.					
Jennifer Davis	Teachengineering.org	It has given me the jumping off point to integrate more engineering into my classroom. It's the inspiration, even if I modify or pull in other resources - it has been my starting place.	K-12	https://www.teachengineering.org/		I usually pull from many different resources. As I have started implementing more STEM, I've used Kessler Science, NEED Energy, PBS Design Squad, and Discovery Education Engineering Case Studies.					
Jennifer Davis	ChemMatters Magazine from ACS	It provides literacy opportunities and often takes products of today and investigates the science behind them. It focuses on careers in all areas of STEM as they work together.	7-8, 9-10, 11-12	https://www.acs.org/content/acs/en/education/resources/highschool/chemmatters.html							
Kurtis Wright	National Aeronautics and Space Administration Goddard Institute for Space Studies	I am doing a prject in my class where students are going to have to look up the weather patterns to determine the best type of material to use in an area when installing a roof.	9-10	https://data.giss.nasa.gov/stormtracks/							
Amanda N	Data Nuggets	I love this resource in being able to have data to use in classes if I want to be able to manipulate it quickly with students.	9-10, 11-12	http://datanuggets.org/							
Kara Anderson	NASA's BEST	I love the pre-made engineering activities that are there and ready to use. I like that it follows the engineering design process, too. There is a section for elementary, middle school, and high school.	K-12	https://www.nasa.gov/audience/foreducators/best/index.html							
Catherine L Hughes	NASA	It has resources for all levels and contents in one place. I can quickly find videos, photos, or full lesson plans to make real world connections for my students.	K-12	https://www.nasa.gov/education/resources							

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Tara Wright	NASA Global Climate Change- Vital Signs of the Planet	This is a resource that I used for a lesson plan I created in one of my previous Endeavor courses. I really like this NASA resource because it provides so much rich data that can be used to teach mathematics. I think that using this resource particularly in the mathematics classroom as I would gives real meaning to the numbers that the students are analyzing and allows them to connect science and predict life impacting implications of the trends of the data.	9-10, 11-12	https://climate.nasa.gov/							
Shannon Childress Poort	nasa.gov	ideas and lessons for K-12.	9-10	https://www.nasa.gov/stem/foreducators/k-12/index.html		These activities are very content related and are fun for the students.					
David Perry	Hour of Code	This is a great resource to introduce students to coding. It has very good tutorials.	K-12, College	https://hourofcode.com/us/learn		I have used this resource in a undergrad math methods, science methods and technology course to introduce block coding.					
Michelle Ming	www.nearpod.com	You can create open-ended questions in it. They have great math and science resources including STEM and NASA videos.	1-2, 3-4, 5-6, 7-8, 9-10, 11-12	www.nearpod.com							
Rosalita Santiago	Next Generation Science Storylines	It is a great resource for educators new to NGSS	K-12	https://www.nextgenstorylines.org/							
Rosalita Santiago	NASA eClips	Great video/short educational segments	K-12	https://www.nasa.gov/audience/foreducators/nasaeclips/index.html							
Michelle Ming	My Path by Astronaut Victor Glover	He is very motivational. This video is focused on Middle and High School students.	5-6, 7-8, 9-10, 11-12	https://youtu.be/i1F4YPJc1qc							
Kalla Hastings	Gizmos	This is a great way to demonstrate particular phenomena and or have students complete simulations on their own	9-10, 11-12	https://www.explorelearning.com/		My school just purchased this for the year and they provided us with a great PD on how to use this site and all of it's resources					
Rosalita Santiago	Microsoft MakeCode for microbit	Microbit simulator, it is great for Hour of Code and for remote instruction	K-12	https://makecode.microbit.org/#		There are many different free self-paced tutorials and projects students can complete on their own.					
Ariadne Prior-Grosch	NYTimes' What's Going On in This Graph?	The NY Times has published an incredibly diverse collection of graphs, charts, and maps on relevant, timely topics relevant for many different STEM and humanities classes. The graphs can be used to generate conversations, help students generate questions, analyze scales, make claims and support them with evidence.	9-10, 11-12	https://www.nytimes.com/column/whats-going-on-in-this-graph							
Brandi Matthews	Turner's Graph of the Week	This teacher takes meaningful, current graphs that she finds in the newspapers around the US and creates questions to help students understand the data. The graphs/tables/data are interesting! Ex. US face mask usage, probability of high school students competing in the NCAA, etc. The data is interesting to the students	7-8, 9-10, 11-12	https://www.turnersgraphoftheweek.com/gow-archive.html		I like to use these as bellringers as I find one that correlates with what we are learning in class.					
Tracey Pierscinski	Exploration of the Sun!	It's a great time to be the Sun! We have gotten closer to it than ever before and we are listening and watching new information and data come in! It's a hot topic right now.	k=12	https://solarsystem.nasa.gov/solar-system/sun/overview/		Parker sun Probe introduction leading to building a VLF to record the Sun's signals of CME's.					
Lori B Chaney	youcubed.org	There are so many different resourced all in this one site. I like the tasks and data talk resources.	K-12	https://www.youcubed.org/							
Diane Zeligman	Teaching Stem in the Preschool Classroom by Lange, Brenneman and Mano	It is a great foundational book to teach STEM to this age group	PK	https://www.nsta.org/science-and-children/science-and-chi		for reference and rationale					
Wendy Hueter	TKSST The Kids Should See This	I selected this resource because it was introduced to me during my Meth	K-12	https://thekidshouldseethis.com/		I use this website to introduce a lesson as a phenomena, to get the students engaged in what we will be learning about. The video helps start conversations about the topic we are focusing on. I use the videos in the Engage stage of the 5E lesson plan.					
Kira Peasley	STEMonstrations	I really like the NASA STEMonstrations videos. They are perfect for middl	5-6, 7-8	https://www.nasa.gov/stemonstrations		I show the Newton's Laws of motion videos during my forces & motion unit, and the potential/kinetic energy video during my energy unit. It gets the students talking about how the motion of objects in space is different than on Earth.					
Viviana Nielsen	www.teachengineering.com	Many hands-on/engineering activities with good Science background	K-12	https://www.teachengineering.org/		When trying to find an engineering Project that fits to my Science Unit	The methods for the engineering projects are not super well written so you have to try the activity and tweak it until it's ready to use with your students.				
Emily McAfee	NASA Data Cubes	I chose data cubes because through this program we have seen why autl	5-6, 7-8, 9-10, 11-	https://mynasadata.larc.nasa.gov/data-literacy-cubes-grap		I use this resource to spark conversations about the data we are looking at as a class to spark discussions and get students to externalize their thinking!					
Sarah Hardin	Concord Consortium	This is a great way to utilize models, interpret charts and graphs, and dev	11-12	https://concord.org/		I use this resource in my advanced science classes (Earth Science, Advanced Biology) for several units including climate change and tectonic plates.					
Kayla Spurgeon	Access Mars with Google	I love using this resource in my Mars Rover - Physics Unit, it provided rea	7-8, 9-10, 11-12	https://accessmars.withgoogle.com/		I use this as the engaging hook to my Mars Rover - Physics unit! The starting data to guide students engineering design process.					
Blakeley Hollinsworth	Infiniscope	Very well put together, interactive lessons that are easy for students and t	5-6, 7-8, 9-10, 11-	https://infiniscope.org/		I use this as a way to introduce material that I am unfamiliar with.					
Eliana Arias-Dotson	Hard to pick one but I enjoy JPL, TeachEngineering and MyNASAData	all these sources are easy to implement, align with NGSS and many of st	K-12	This is a collection of links I enjoy		I have used most of the JPL resources doing enrichment for my daughter and her friends,	The document includes over 15 links to different websites that may help. I add to it as I find new ones.	Yes. Please share within I	https://drive.google.com/open?id=1VKiNpj5-ovsDbzsVj4QrN5-tEKsUA0R6		
Jerry Zupan	Science News for Students	Great resource for up to date articles on science but in very small chunks	7-8, 9-10, 11-12	https://www.sciencenewsforstudents.org/		Spring board for application of what we are learning in class or as a DO Now with 1-2 questions to get their ideas/take on the article.		Yes. Please share this resource and my use of it with anyone who engages with Endeavor. I think others will benefit.			
Samantha Todres	Phet Interactive Labs	This source was great for online Physics labs last year! It does a great jot	9-10, 11-12	https://phet.colorado.edu/		I used this resource by creating a lab around the simulation to help students discover different phenomena		Yes. Please share this resource and my use of it with anyone who engages with Endeavor. I think others will benefit.			
Jamie Sheehan	NASA at Home	NASA at Home is host to numerous different resources, it's a "one stop sl	3-4, 5-6, 7-8	https://www.nasa.gov/nasa-at-home-virtual-tours-and-augt		I use NASA at Home to engage students and provide supplemental learning. There are things students can do at home and include their families. We take virtual tours. Sometimes I will use a podcast and do a share out. Students can explore NASA e-books during down time. There are so many possibilities.		Yes. Please share this resource and my use of it with anyone who engages with Endeavor. I think others will benefit.			

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Lauren Loprinzo	NGSS Phenomena	Good resource for interesting pictures and GIFS to capture students atter	7-8	https://www.ngssphenomena.com/	I use this resource for anchoring phenomena activities. I put one of the GIFs up on the board, and it gets the students asking questions and discussing what's going on. It helps students make connections between real world situations and the concepts being taught in class		Yes. Please share this resource and my use of it with anyone who engages with Endeavor. I think others will benefit.				
Gabe VanCappellen	Tinker Cad	This is an excellent resource for students to learn how to create figures th	3-4, 5-6, 7-8	https://www.tinkercad.com/	Use this resource to introduce CAD Drawing on the middle school level. Could work well in elementary sch		Yes. Please share this resource and my use of it with anyone who engages with Endeavor. I think others will benefit.				
Brandy New	Data Literacy Cubes	Data Literacy is an area for growth in my many of the schools I service. TI	3-4, 5-6, 7-8, 9-10,	https://mynasadata.larc.nasa.gov/data-literacy-cubes-grap	This resource is great for groups or pairs to use for analyzing data deeply. It can also help teahcers to write		Yes. Please share this resource and my use of it with anyone who engages with Endeavor. I think others will benefit.				
Amanda Patterson	Design Squad show/Videos	I love how each episode shows failures and redesign of building challengi	3-4, 5-6, 7-8, 9-10	https://pbskids.org/designsquad/	to introduce design model		Yes. Please share this resource and my use of it with anyone who engages with Endeavor. I think others will benefit.				
k	test	test	PK	test	test		Yes. Please share this resource and my use of it with anyone who engages with Endeavor. I think others will benefit.				
Heather Bowlds	Space Math @ NASA	On this website, there are a plethora of math activities, problems, data rel	3-4, 5-6, 7-8, 9-10,	https://spacemath.gsfc.nasa.gov/	I have used these activities with lessons on percentages, data analysis, measurement, scientific notation, a		Yes. Please share this resource and my use of it with anyone who engages with Endeavor. I think others will benefit.				
Laura Hagedorn	The Wonder of Science	Great resource for phenomenons, resources, videos, and assessments.	K-12	https://thewonderofscience.com/	I use the resource for phenomena and assessments.		Yes. Please share this resource and my use of it with anyone who engages with Endeavor. I think others will benefit.				
Joelle Massari	rch.org/tracker/	OCearch is an organization that uses satellite positioning tags to track an In my fourth grade classroom last year, the students each selected a shar	K, 1-2, 3-4, 5-6, 7-	rch.org/tracker/	I used in conjunction with a research project that aligned with life science standards.		Yes. Please share this resource and my use of it with anyone who engages with Endeavor. I think others will benefit.				
Dallas Carnahan	https://www.keslerscience.com/	Kesler Science offers hundreds of engaging, editable lessons and activities for 4t	4th - 8th grade	https://www.keslerscience.com/	Tons of differentiated materials with tons of options for digital and in-person use.		Yes please share this resource and my use of it with anyone who engages with Endeavor. I think others will benefit.				