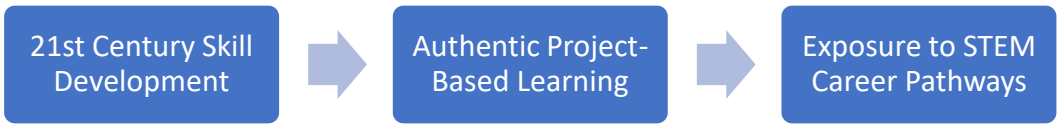
STEM Education *Empowered*

In the rapidly-evolving innovation economy, educators are tasked with preparing students to thrive in a world filled with jobs that often do not yet even exist. An important response to that shifting set of targets is the push to build a stronger emphasis on STEM education. This is driven by the fact that we *do* know that there are *far* more STEM jobs available today than qualified people to fill them, and, even more importantly for today's students, that gap increases exponentially over time.

For students to find future success, they must build translatable skills that apply across a multitude of contexts. Effective communication, successful collaboration, critical analysis, and the ability to apply creativity in solving complex problems are skills that will be required in nearly every future career pathway. Thus, educators must provide students the opportunity to cultivate deep passion and expand their skills while offering broad exposure to a wide range of STEM fields.

In support of this advanced approach to education. Thrively has developed one single, comprehensive program that can guide schools in their work to empower all students to direct their own learning journeys, discover their unique talents for STEM, and develop the skills that will propel their success in any future career. From personalized skill development to STEM career exposure and authentic project-based learning, Thrively offers an array of tools to enable the full spectrum of STEM initiatives.



1. **21st Century Skill Development**. Life in the 21st Century requires unique set of non-academic skills such as flexible thinking, perseverance, and grit. Through exposure to literally thousands of STEM-focused Lessons and Sparks, students can build, reflect on, and practice the very skills that will ensure them future success in whatever path they may choose.

2. **Authentic Project-Based Learning**. Students engage in deeper learning when they are required to apply their understanding in authentic contexts. Thrively's unique project tool facilitates and captures the project-based learning experience in an easy-to-use format. For schools prepared to take this concept to the next level, Thrively offers applied learning projects created in conjunction with Industry Partners.

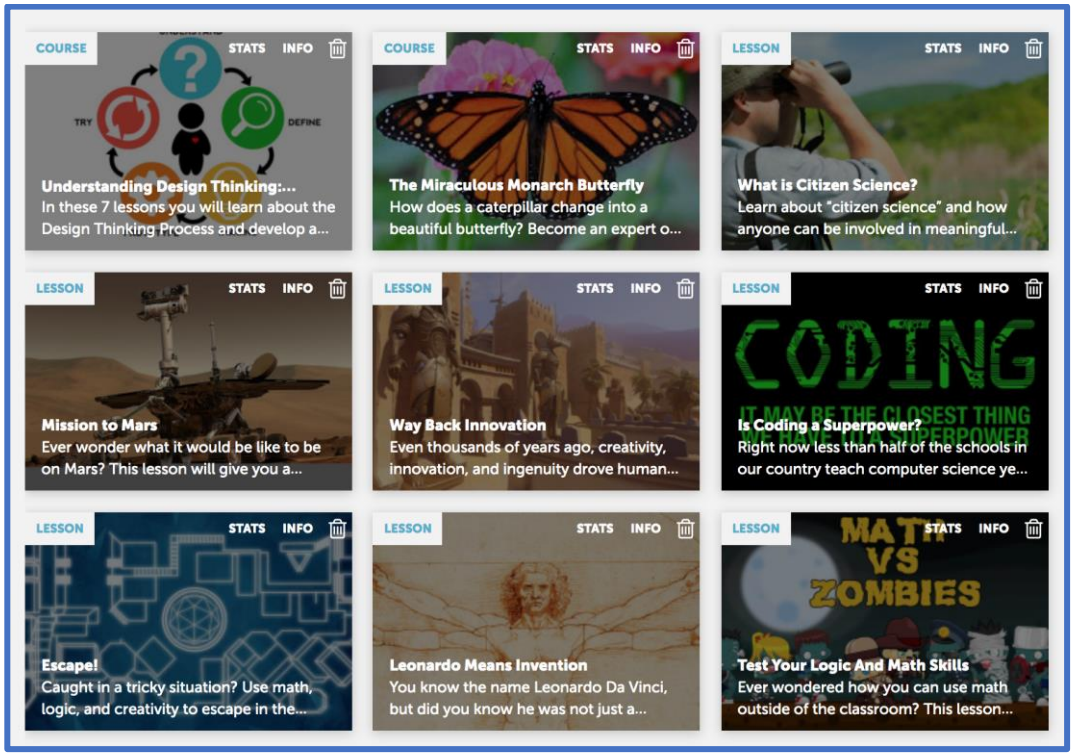
3. **STEM Career Pathways**. Exposure to the right information is crucial when directing students towards STEM careers, so Thrively has curated over 100 STEM Career Pathways and nearly 500 total Pathways with countless “Day in the Life” videos and embedded O*NET data. Careers to consider are personally recommended to students based on their strengths, interests, and aspirations.

Thrively’s powerful platform enables the full range of STEM initiatives via a holistic, fully-integrated approach. Educators are supported with *all* of the tools they need to inspire students in STEM and empower them with the skills they need for the future. We are eager to work with passionate educators throughout the nation’s schools in order to collaboratively build the education of the future, now.

Thrively's Comprehensive Program

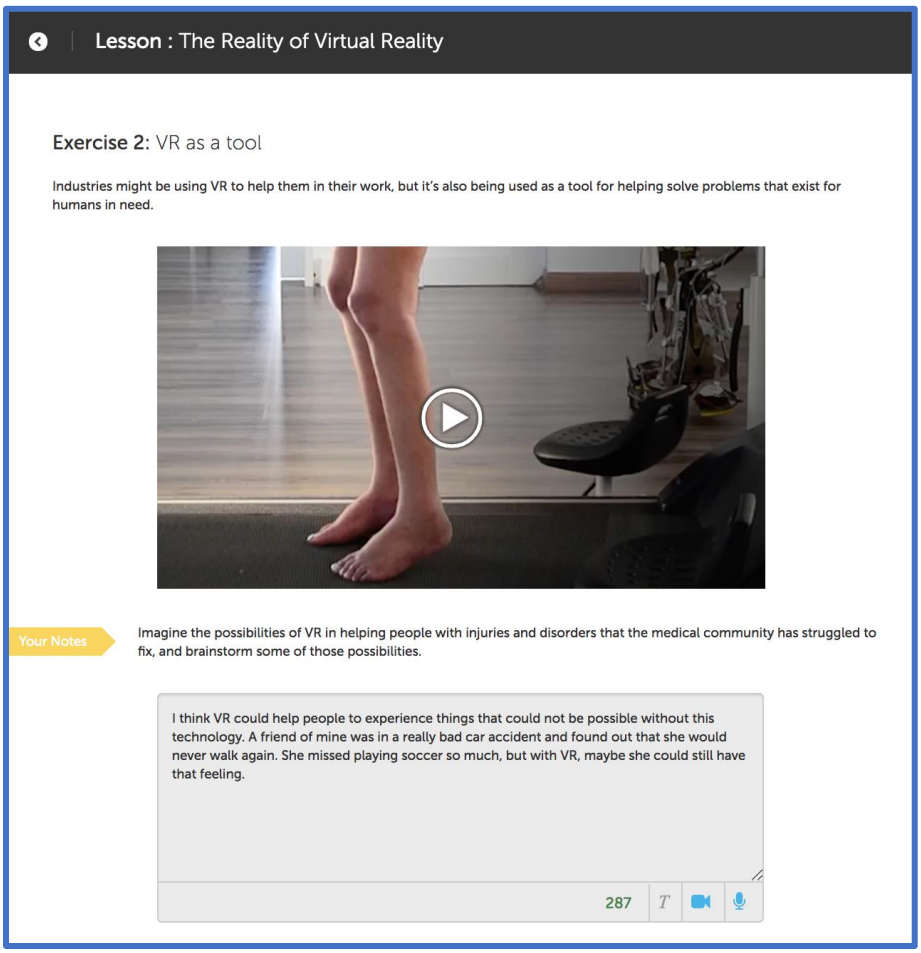
1) Rich STEM Content

Thrively joins forward-thinking educators in the belief that we must provide all students with the skills needed to succeed in the innovation economy. Our rich library of online lessons and courses address design thinking, real-world skills, presentation skills, entrepreneurship, leadership, and much more. Playlists of lessons can be easily assembled from the Thrively library and then pushed to individual classes, grade levels, or entire schools.



Sample STEM Lessons

Lessons provide the opportunity for students to explore, build, and deepen skills. Individual Lessons generally last 20-30 minutes and are designed to easily fit into a single class period. Within Lessons, students are presented with engaging multi-media content (short videos, infographics, interactive websites, etc.) followed by journal prompts for reflection. Students apply their learning in a personal context and practice applying new skills and ideas.

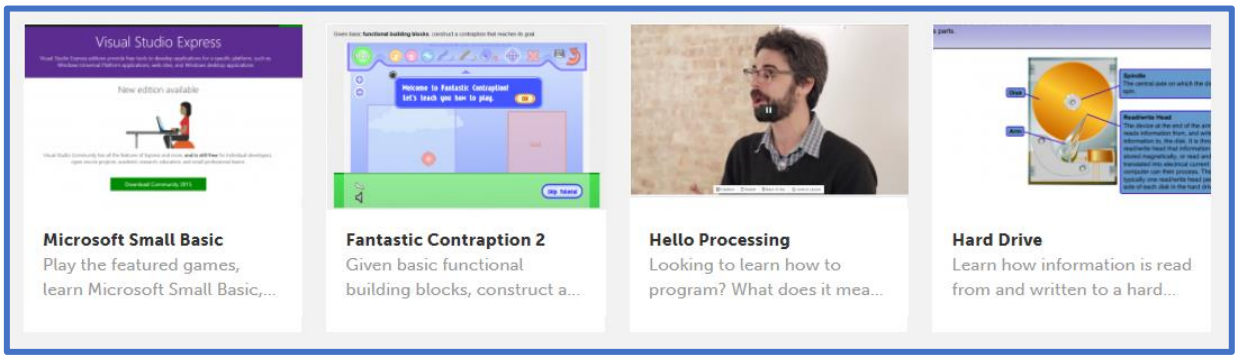


STEM Lesson Detail Page

Thrively's Sparks are a carefully curated collection of engaging on-line resources which offer another opportunity for students to broaden their skills while being exposed to a wide range of STEM content. Students can explore over 3,000 Sparks in STEM and Coding topics alone, many of which open up to additional resources for ever more learning and discovery.

STEM Sparks

Teachers can assign Sparks for students to explore a new topic, learn skills within a specific discipline, or gain exposure to content as a preview of new units of instruction. Alternatively, students can be given the opportunity to discover Sparks on their own, supporting the development of individual passion and intrinsic motivation for learning.

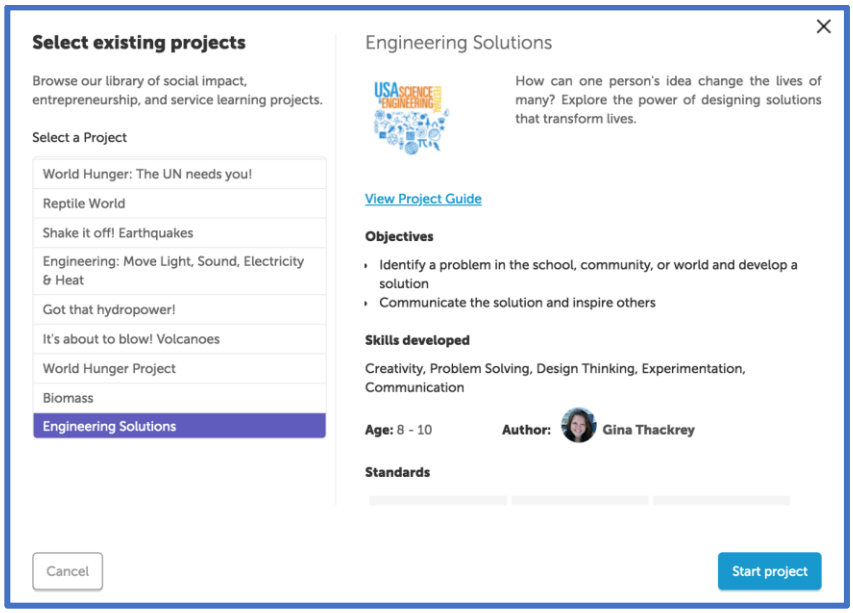


Coding Sparks

2) Authentic Project-Based Learning

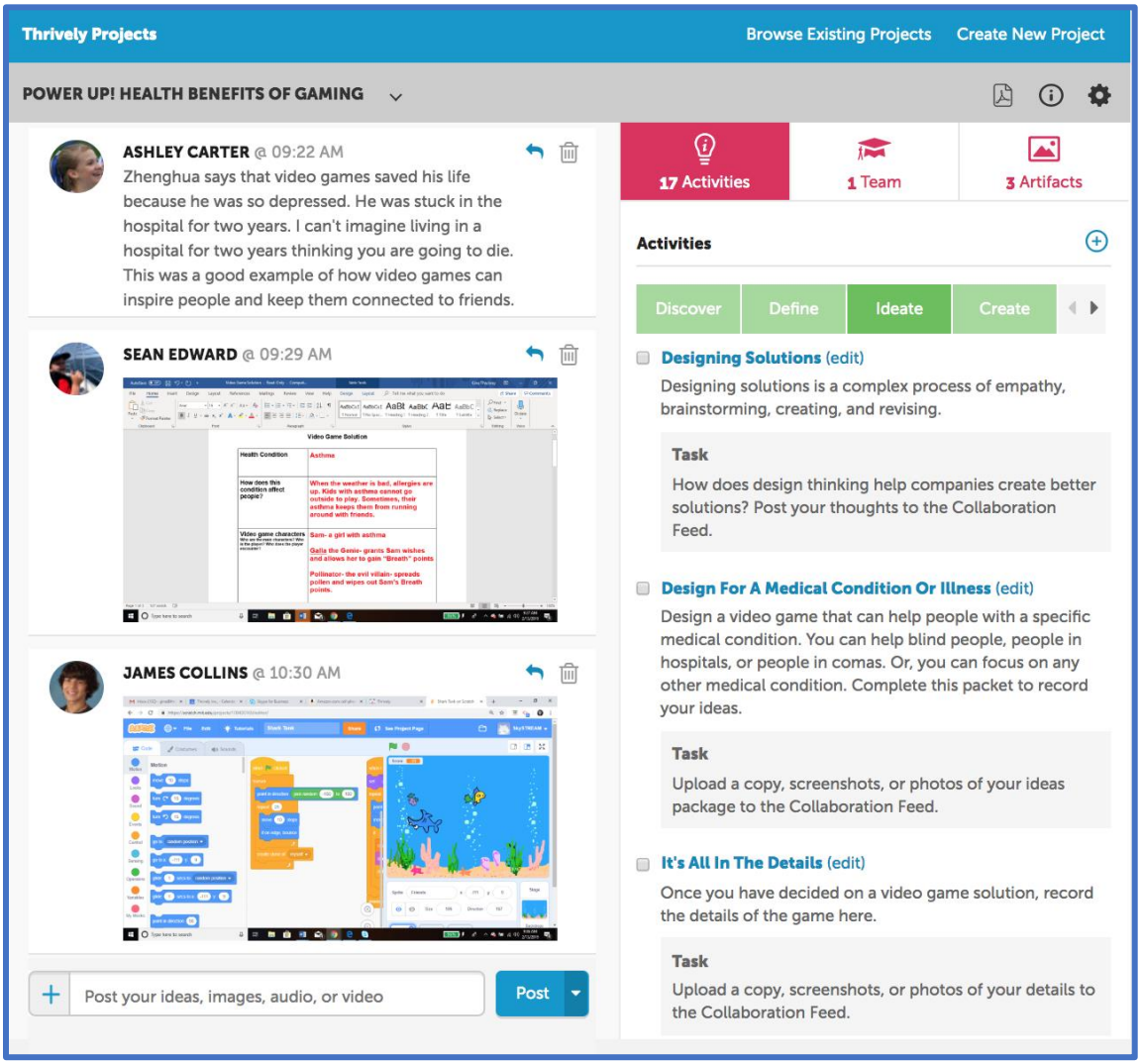
Project-based learning engages students to apply their knowledge and understanding of complex questions, topics, and problems and to develop innovative solutions for authentic issues utilizing the tools, technologies, and techniques employed in the real world.

In support of deeper learning, Thrively has developed a full library of projects that help to structure and implement project-based learning in STEM topics.



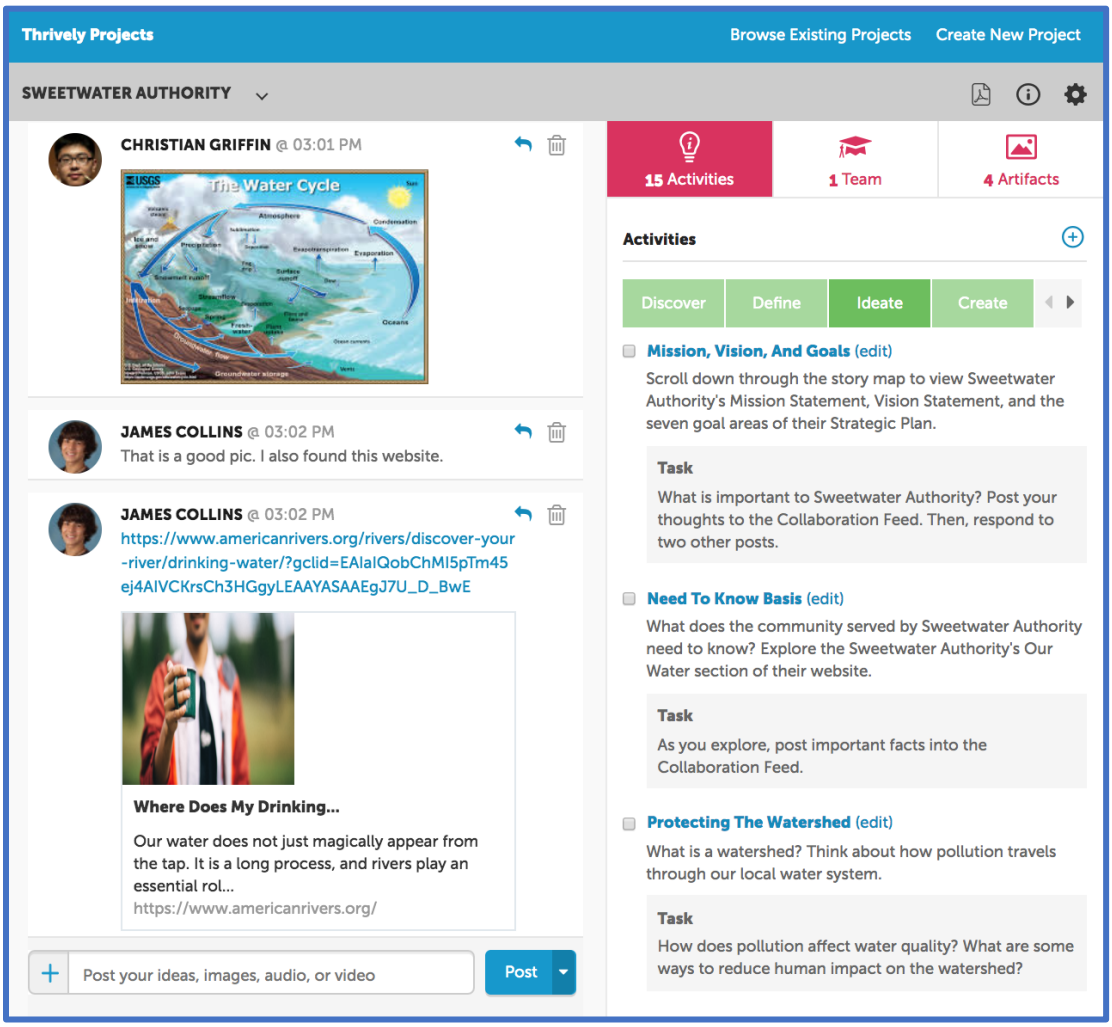
Project Library

Thrively's Project Tool supports a rich, collaborative environment as students are led through discovery, content and skill building, critical analysis, and innovation. To aid in the facilitation of projects, each Activity comes with extensive directions, rubrics, and resources (documents, website links, videos, slideshows, etc.).



Video Game Design Project

For those schools ready to take STEM and project-based learning to the next level, Thrively also works with local business communities around developing real-world case studies for the students to solve via the Project Tool. This is an incredibly powerful mode of education, as students can connect with local businesses and develop work skills via projects that have real-world application and meaning.



Water Utility Project

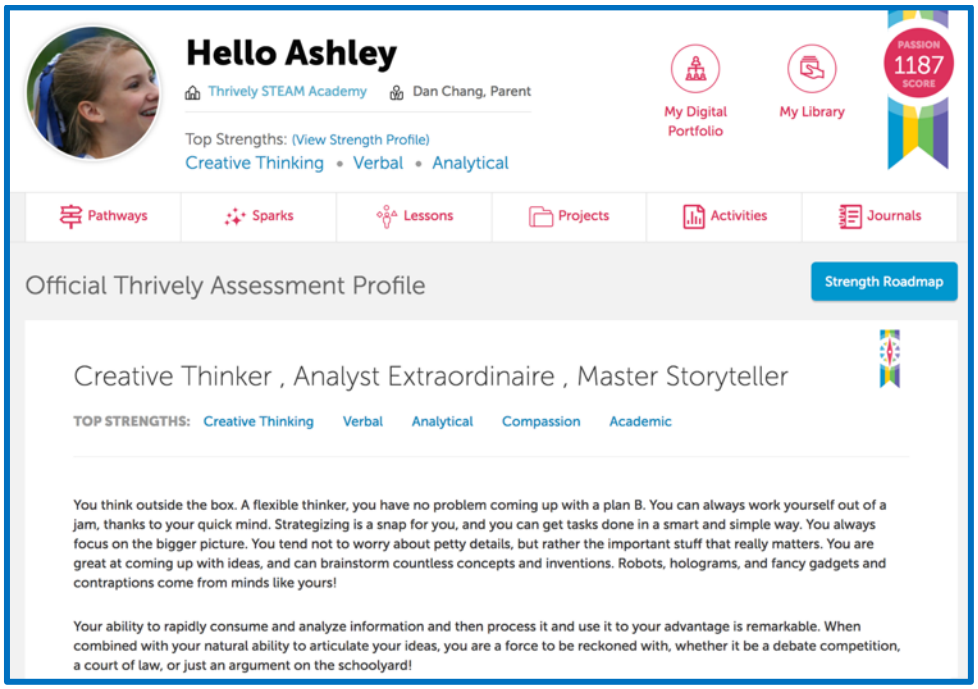
For example, in collaboration with an industry partner in Southern California, Thrively created a project that allows students to tour the inside of a local water treatment facility and water testing laboratory in order to explore the work done at a public utility provider.

Students learn all about the process of cleaning, storing, and delivering safe drinking water within a major metropolitan area. After reviewing the utility's strategic plan, students develop marketing materials for a new communication campaign that heightens public awareness. At the conclusion of the project, utility executives receive proposals and select quality pieces for actual implementation in the company's campaign.

3) STEM Career Exposure

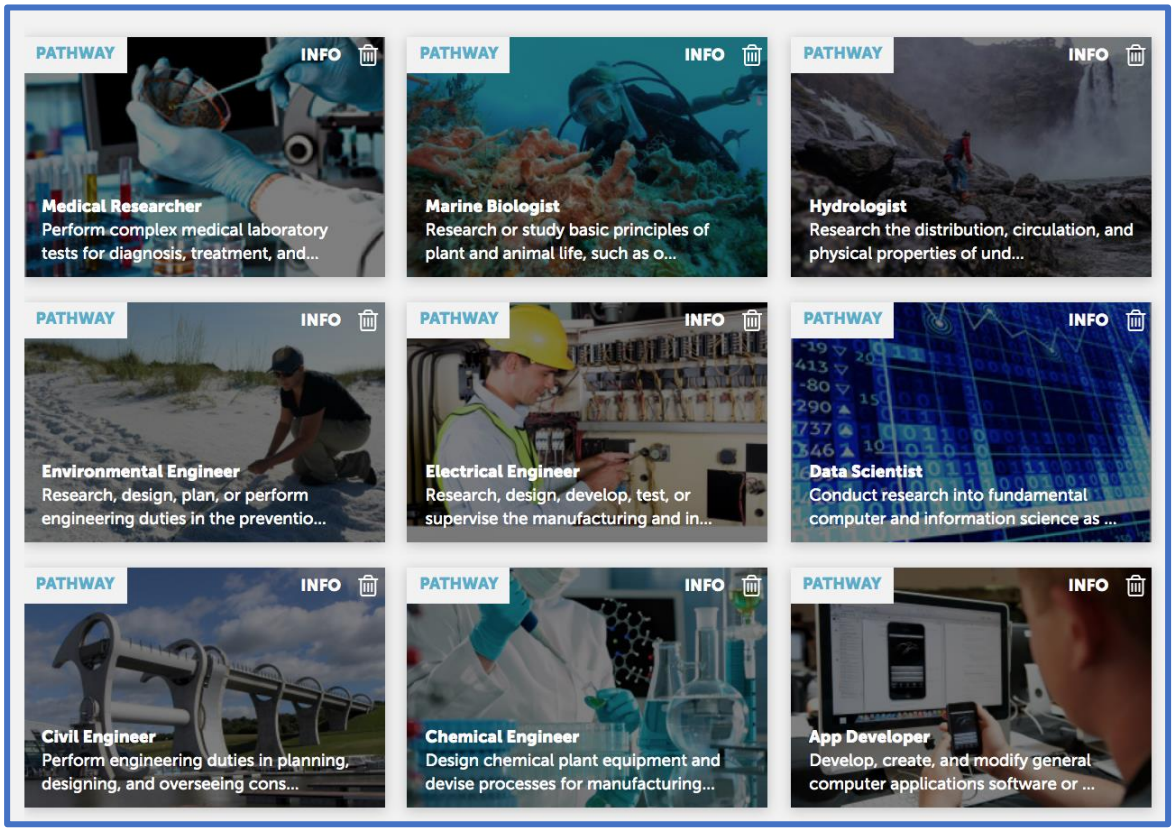
We know that simple exposure to future career pathways is an essential part of getting students to focus their attention on key STEM fields. Only once students have a better understanding of all that is possible can they then work on preparing themselves for a career in STEM.

Thrively takes a unique approach to this type of career exposure, as we believe the critical first step is actually developing a rich understanding of each student's strengths. Thrively's industry-first Strengths Assessment, designed for adolescents by leading pediatric neuropsychologists, engages students around their strengths, interests, and aspirations. After a short, 30-minute Assessment, each student (and parent) is presented with a thorough Strengths Profile, which can guide the student's career education moving forward.



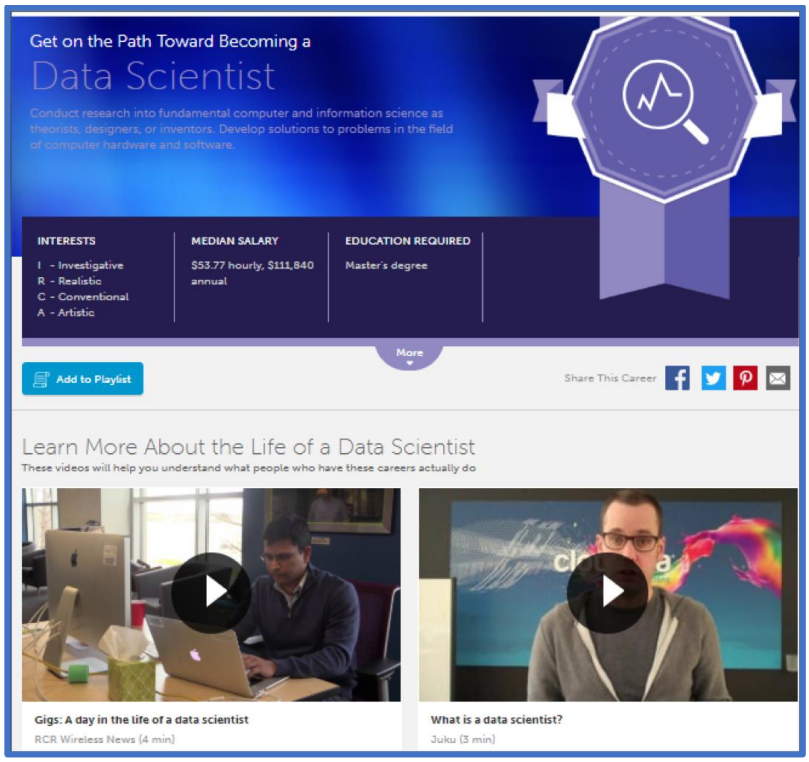
Thrively Strengths Profile

Building from the Strengths Profiles, students are able create a vision for their future by exploring career Pathways *directly aligned* to their strengths and interests. Students can browse careers that they self-identify as potential aspirations, or they can follow the recommendations made by Thrively's Pathways engine. Thrively's Career Pathways has thousands of day-in-the-life videos curated around 500 career Pathways from entry level to those requiring advanced training or degrees.

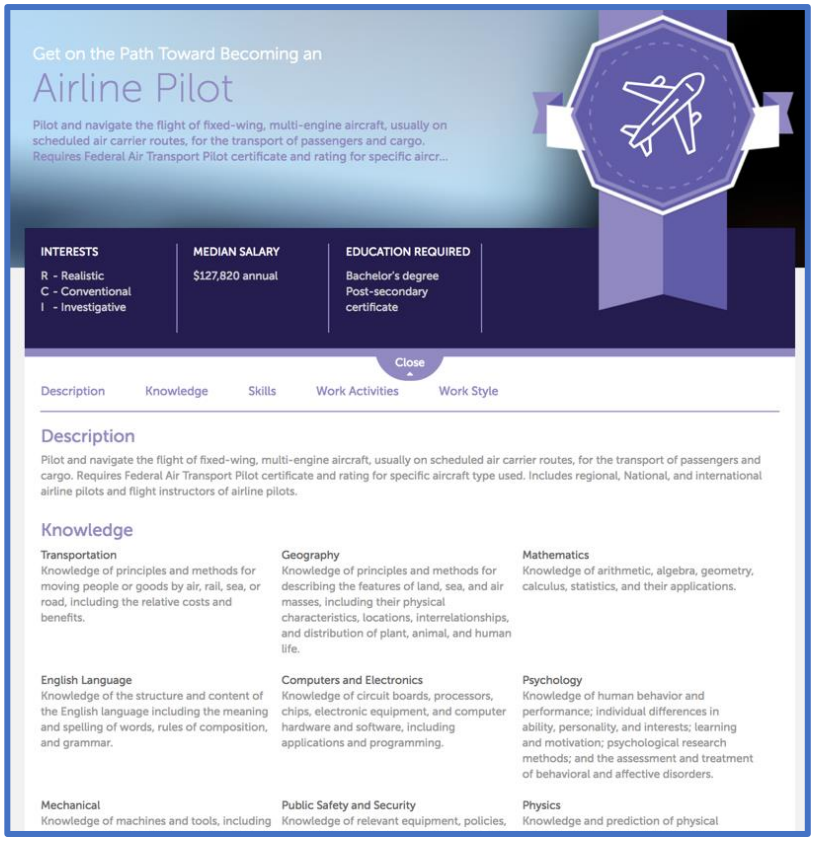


STEM Pathways

Exposing students to potential careers that align with their own strengths allows them to actively pursue their interests and focus on their passion. Perhaps most importantly, the Pathways tool connects the work they are doing in their classes with the career paths that require such skills (i.e. calculus and engineering).



Day in the Life Videos



*O*NET Data Integrated*