Describe STEM career pathway requirements and numbers of completers. **[40 pts]**

Milwee Middle is a whole school pre-engineering magnet, where all students participate in the engineering electives classes. We are also an MYP-IB program. The engineering pathway includes Hamilton Elementary, Milwee Middle and Lyman High. Of the approximately 400 8th graders, each year we have close to 250 students who continue to the engineering, IT, medical, and IB magnet high schools. We also have programs of emphasis in CTE areas, manufacturing, simulation, biomedical, and veterinary programs that our students will choose to attend for high school.

2. School participate and/or organized a STEM outreach or community service project.

Describe STEM outreach or community service project. **[30 pts]**

Milwee Technology Student Association participated in the National Night out at Candyland Park. National Night Out is an annual community-building campaign that promotes police-community partnerships and neighborhood camaraderie to make our neighborhoods safer, more caring places to live. National Night Out enhances the relationship between neighbors and their community. Furthermore, it provides a great opportunity to bring police, fire, local organizations and neighbors together under positive circumstances. Our TSA chapter hosted a table where we interacted with children and taught them how to make paper helicopters. Our students also assisted the rotary club with their booth. This is just one of the many community service events that we assist with each year.

Upload photo(s) of STEM outreach or community service project. **[10 pts]**

5 photos max.

longwood night ... longwood night ...

Add file

3. Two or more teachers/administrators collaborated on an integrative STEM project.

List teachers' names and subject areas, and describe collaborative, integrative STEM project, focusing on the integrative nature of the teaching and learning. **[30 pts]**

The three engineering teachers worked together to have their students use the design process to design and build a car out of paper that would protect an egg as it travels down a 6 foot rain gutter and crashes into a concrete wall. The unit began with some activities from the IIHS car crash unit. We discussed about car crashes and the biology and physics involved in them. We then did some short pre-activities to review Newton's three laws. The unit culminated with students designing and building their cars and then we had a contest between the classes to see which car was the best overall. The students were required to create technical drawings and complete a technical write up with conclusion questions.

Upload photo(s) of collaborative, integrative STEM project. **[10 pts]**

5 photos max.

car3 - Carol Unte... car2 - Carol Unte... car1 - Carol Unte...

Add file

4. School hosted and/or sponsored a family-oriented STEM event.

Describe family-oriented STEM event. **[30 pts]**

Milwee Middle School hosts a magnet night each year. During this event prospective students and their families come to Milwee and get to experience what it is like to attend school at Milwee. They start in the cafeteria and are greeted by students who share about Milwee. They get to tour campus and go into different classrooms and while in each of the classrooms the students will meet current students and be able to do different STEM oriented activities.

Upload photo(s) of family-oriented STEM event. **[10 pts]**

5 photos max.

stem night intro -...

Add file

5. School hosted and/or sponsored a STEM Career Fair or similar event for students.

Describe STEM Career Fair or a similar event. **[30 pts]**

The annual Milwee STEM Family Night and EXPO took place on Thursday, March 27th from 5:30-7:30 p.m. We had the following organizations confirmed and they participated in our event.

Burns and McDonnell
WTS Central Florida
Coach Kelly Live
Royal Consulting Services, Inc.
Radio Scouting
UCF STEM Ambassadors
Altamonte Springs City Library
Altamonte Springs Science Incubator

We also had Mad Science of NE Central Florida and they set up and hosted 3 hands-on stations and provide resources for an additional four activity stations.

There were also several student organizations who hosted booths at the event.

Upload photo(s) of STEM Career Fair or similar event. **[10 pts]**

5 photos max.

Add file

Teacher(s)/administrator(s) presented a STEM-related session at the 2025 ITEEA Annual Conference in St. Louis, MO or a similar National or International Conference. Provide conference title, date of presentation, presentation title, and name(s) of presenter(s). **[20 pts]**

Presented at FETC Orlando January 16, 2025, Building Bridges: Connecting STEM Learning from K-12

Presented at ITEEA St. Louis April 2- April 5, I Recruiting and Retaining Girls in STEM, Building Bridges: Connecting STEM Learning from K-12

Teacher(s)/administrator(s) participated in the STEM Showcase at the 2025 ITEEA Annual Conference in St. Louis, MO. Provide name(s) of presenter(s) and title of presentation. **[20 pts]**

NA

Teacher(s)/administrator(s) presented a session at the ITEEA 2025 Fall Forum or at a similar virtual event. Provide presentation title and name(s) of presenter(s). **[20 pts]**

assisted in facilitating the Secondary Schools Round Table at this years Fall Forum.

Teacher(s)/administrator(s) published an article or manuscript in a peer-reviewed journal in the past three years. Provide complete citation, article URL, or other publication identifier. **[20 pts]**

NA

School news or event was publicized on ITEEA's News webpage or in ITEEA's *STEM Connections* newsletter. Provide date and title of post and description of publicized news or event. **[20 pts]**

Milwee students won the Global Design Challenge and they were congratulated in the ITEEA News Release and it was posted on the ITEEA News webpage

Milwee also won STEM School of Excellence and was featured in an ITEEA News Release and on the ITEEA's news webpage.

School had an active Career and Technical Student Organizations (CTSO) chapter, e.g., Technology Student Association (TSA) or Skills USA. Provide CTSO name, chapter advisor name, and chapter number (or another identifier). **[20 pts]**

Milwee has a TSA chapter for our CTSO

Students participated in a Career and Technical Student Organization (CTSO), e.g., Technology Student Association (TSA) or Skills USA, competition or event. Provide CTSO name, chapter advisor name, and name and date of competition or event. **[20 pts]**

Milwee has a TSA chapter for our CTSO, our chapter # is 1574,

Milwee attended Florida Leadership convention – October 24-26

Regional competition the first Saturday - December 7

State TSA - February, 22-25

National TSA in June 27 – July 1.

School had an active honor society chapter, e.g., National STEM Honor Society (NSTEM). Provide honor society organization, chapter advisor name and chapter number. **[20 pts]**

BETA club # JFL0103

Teacher(s) participated in an ITEEA STEM CTL™ professional learning byDesign event e.g. virtual workshop, microbadge, asynchronous training, or summer workshop. Provide teacher name and date and title of event. **[20 pts]**

NA

School adopted safety protocols – a standard operating procedure for the STEM lab that may include a safety manual, safety rules, HAZMAT sheets, procedures should an accident occur – for your STEM classroom or lab and post it in your classroom and/or on your school's website. Upload a copy of your safety protocol document(s). **[20 pts]**

Safety Contract2...

Add file

School offered at least one Engineering byDesign™ (EbD) course. List teacher's name(s) and course(s) taught. **[20 pts]**

NA

Describe how your Technology, Engineering, and STEM curriculum addresses each of the eight Standards from ITEEA's *Standards of Technological and Engineering Literacy (STEL)*. [10 pts each]

a. The Nature and Characteristics of Technology and Engineering

Students in Milwee's Engineering classes talk about technology and the different characeristics of technology and how those items have changed over time. The students then complete a STEM/technology investigation project. Once they do their research they create a presentation and share it with their classmates.

b. Core Concepts of Technology and Engineering

The students in all Milwee's Engineering electives learn about the stages of the design process and how to use the Engineering Design Process to work together to effectively solve an engineering problem. This process allows them to easily work in teams to solve a problem no matter what class they are taking.

c. Integration of Knowledge, Technologies, and Practices

The students in Milwee engineering courses teach the students to take the knowledge they have gained in their classes and use the technologies and practices that they have learned to solve the real world problems they are given to work on in class.

d. Impacts of Technology

Students complete assignments on technology and how it has impacted society. One of the assignments is to watch the TED talk "Are Athletes Really Getting Stronger, Better, Faster" by David Epstein and then they research and have a debate to decide if it is athletes that are better or the equipment they are using them making them better.

e. Influence of Society of Technological Development

When teaching the students about this topic we rely on the resources from PBS Learning Media to help with this topic.

f. History of Technology

students are taught about the different types of technology and then they choose one of their favorite technologies and create a presentation for kindergarten students that teaches the history of the chosen technology.

g. Design in Technology and Engineering

Students in Milwee's Engineering classes learn to create the different types of Engineering drawings, how to create to scale designs and how to 3-D model their designs once they have created those working drawings. The students will use these items to have models of their solutions.

h. Applying, Maintaining, and Assessing Technological Products and Systems

One of the projects the students complete in our Design and modeling class is to create a character using their sketching skills. (after they learn about the Teenage Mutant Ninja Turtles) They will use their drawing skills to then create a 2-D creation of their character. Finally, they will create an avatar of their character with 3-D modeling software.

School has active ITEEA Group School Membership and/or at least one teacher/administrator has an active individual ITEEA Professional membership at the time of application. For group school membership, provide the school's name and for individual memberships, provide member name(s). **[20 pts]**

Milwee Middle School has a school membership

Video Submission

Develop and submit a video that showcases your school as a STEM School of Excellence candidate. Sample videos are available on the STEM School or Excellence webpage and may include: interviews with your Principal, Teacher, and/or Students discussing your program; showcase of projects from school; and/or a recording from a STEM event you hosted. **[30 pts]**

Add file

Pay Application Fee *

Prior to submission, you must request an invoice for or pay the STEM School of Excellence application fee (ITEEA members: $195.00; Non-ITEEA members: $295.00) .

Enter your 4-digit order number below.