

When you are planning to major in a STEM field, the extracurriculars you choose can be just as important as the grades you earn in school. These activities are a way to show what you care about, what you have learned outside of the classroom, and how you might grow in your future career. Picking the right activities can also make college applications stand out. Different STEM majors connect best with different kinds of experiences, so here is a guide to some of the best extracurriculars for each area.

Biology and Life Sciences

If you are thinking about biology, pre-med, or other life sciences, the best extracurriculars are the ones that bring you closer to real-world science. Volunteering at hospitals, shadowing doctors, or helping at blood drives gives you experience with patient care. On the science side, working in a biology or genetics lab, even as a high school volunteer, can help you understand how research is done. Science fairs and programs like the Intel Science and Engineering Fair (ISEF) are also great ways to test your ideas. Environmental groups, wildlife rescue programs, or marine conservation projects also give valuable experience for students who want to go into ecology or environmental biology.

Chemistry

For chemistry majors, the lab is the heart of learning. Joining a school chemistry club or competing in the U.S. National Chemistry Olympiad builds problem-solving skills and shows serious interest. Internships or research programs at local universities can give you early exposure to chemical experiments and equipment. Even smaller projects, like testing water quality for a local community or experimenting with safe chemistry at home, show curiosity and creativity. If you enjoy applied chemistry, volunteering with environmental groups that study pollution or waste management can also tie your passion to real-life impact.

Physics and Engineering

Physics and engineering students are builders and problem-solvers. Joining a robotics club, entering design competitions, or taking part in engineering challenges like FIRST Robotics or Science Olympiad is a great start. These activities give hands-on experience with design, mechanics, and teamwork. Internships at engineering companies, or volunteering with local groups that build houses, bridges, or solar systems, help apply classroom learning to real projects. Physics students might enjoy astronomy clubs or telescope groups, while engineering students might enjoy building prototypes, coding hardware, or working on community technology projects.

Computer Science and Mathematics

For computer science, coding is the key skill, so hackathons, coding clubs, and personal projects matter a lot. Building your own app or website shows initiative. Contributing to open-source projects shows collaboration and technical ability. Internships at software companies or volunteering to design a website for a nonprofit are also great ways to practice

skills while helping others. For math, math competitions like AMC or Math Olympiad build critical thinking, while tutoring others in math shows leadership. Research opportunities in math, even small ones, can show you are ready for advanced work.

Environmental Science and Earth Science

Students drawn to environmental science or geology often care deeply about the planet. The best activities are the ones that show action. Volunteering at a recycling center, working on community gardens, or helping with local clean-up events connects you to environmental issues. Internships with government agencies, research groups, or nonprofits that study sustainability also help. Students interested in geology or earth science can volunteer at natural history museums, join rock and mineral clubs, or take part in field research programs. These experiences show both passion and real-world involvement.

General Advice Across STEM

No matter the field, extracurriculars that show curiosity, responsibility, and leadership are the most powerful. Colleges and future employers want to see more than good grades. They want to see students who take their interests beyond the classroom. It is also important to pick activities that feel meaningful, not just ones that look good on paper. A small project you really care about can matter more than a big competition you did not enjoy. Passion, effort, and growth stand out the most.