



Science, Technology,
Engineering, Arts, & Math
(STEAM)
Educational Garden



STEAM Education Garden

- A STEAM Education Garden is a physical, learning environment designed to spark the creativity and curiosity in people of all ages as they interact in a friendly environment that encourages exploration.
- It provides a hands-on, fun, versatile, learning environment.

Goals

- To provide outdoor educational workspaces for students of all ages and abilities
- To provide educators a physical location, educational apparatus, and tools to teach STEAM based curriculum
- To build and develop a STEAM Educational Garden area to support and encourage student's continuing interest in science, technology, engineering, math, and the arts.
- To provide a fun, versatile, leaning environment that will empower students to learn topics in the fields of earth and life sciences, alternative energy, water and soil conservation and sustainability.

STEAM Garden

- **Science:** A living laboratory to explore the world of earth and life sciences. Provides opportunity to conduct experiments and watch life cycles unfold before their eyes. Students will study plants and insects, learn nutrition skills, observe the effects of weather, and learn about more advanced science topics.
- **Technology:** Weather and soil tools often used in gardens are a great way to discuss technology with older kids. You can also discuss machines and technology used in larger gardens or in farming. This includes the use of computers and the internet. We would like our garden to be filled with basic and complex technology.



STEAM Garden

- **Engineering:** Building and planting a garden is great engineering and design practice. Best location of plants, considering the amount of sunlight, proper drainage, and other important factors that affect how gardens grow. Students utilize the space and resources around them to create, test and improve upon designs. Collaboration with the colleges and schools will allow for demonstrations as well as exploration.
- **Mathematics:** From counting through calculating volume, area and mass; gardens provide student the opportunity to work hands on with their curriculum and apply their knowledge to real world problems.



STEAM Garden

- **Arts:** The humanities are closely related to STEM and are strongly influenced by nature. What better way to enhance your STEM projects than with writing, visual arts, music, dance, theater, and media! Music can stimulate growth in plants, plants can stimulate creative thought, movement, and design. Plus, the arts can add to the whimsicalness and aesthetics of the garden while inspiring the engineering of new designs.



Gardening's Benefits for Individuals with Autism and other Disabilities

Many individuals with autism and other disabilities are calmer and not as anxiety-ridden in the garden space

Individuals come into the garden and explore the space on their own terms while offering something for everyone

Gardens engage the senses without being over stimulating

Individuals can explore different colors, textures, smells, and sounds in a calming, natural setting

Gardening provides opportunities for individual to hone gross and fine motor skills

There are many opportunities for positive social interaction and teamwork

Efficient and low maintenance...

- Watering system will be installed by volunteers from the Cochise Master Gardener's Association.
- Maintenance of the system will be part of the education with oversight from volunteers (Master Gardeners, 4-H, RAIN, etc.)
- Teachers, clubs, and groups with projects and ideas to share will be encouraged to sign up for monthly demonstrations/ explorations.
- Cochise College will build our structures and properly wire them to ensure they will meet our needs.
- Maintenance of grounds (vegetation) will be part of the curriculum and will have oversight from volunteers (Master Gardeners, 4-H, RAIN, etc.)



Our Collaborative Team