

DoD STARBASE: Building a Stronger America

DoD STARBASE is a national science, technology, engineering and mathematics (STEM) program in 60+ locations throughout the U.S that invests in America's youth.

Since 1999, tens of thousands of fifth-graders and hundreds of middle and high-school students in our community have experienced hands-on STEM investigations and projects, leading edge technology and innovative instructional methods through STARBASE Louisiana at Barksdale Air Force Base. Highlights include:

- 25 hours of exemplary instruction
- Rigorous STEM curriculum
- Cutting-edge technology
- Raised student performance
- 21st century skills—critical thinking, creativity, communication, collaboration
- Scientific literacy, problem solving, hands-on inquiry, growth mindset



Sponsored by:

307th Bomb Wing
Air Force Reserve Command

STARBASE Louisiana, Inc., 501c3

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or www.dodstarbase.org

To make donations or learn more about volunteer opportunities
contact STARBASE Louisiana, Inc. 501c3 non profit organization.

All donations are tax deductible.



An Investment in Louisiana's Future



SCIENCE TECHNOLOGY ENGINEERING MATHEMATICS

Goals of STARBASE Louisiana



The STARBASE mission is to raise the interest and improve the knowledge and skills of our students to provide for a highly educated and skilled American workforce to meet the advanced technological requirements of our national security, and maintain our nation's leadership, productivity and competitive edge in the global economy. Our goal is to excite their interest, to help them develop scientific and mathematics literacy, and to encourage them to pursue these fields in their future careers.

- Raise the interest & improve the **knowledge & skills** of at-risk youth in **STEM**
- Provide for a **highly educated, skilled and innovative American workforce**
- Expose students to **military and civilian STEM role models**
- Nurture a **winning network of collaborators** from education, business and military



STARBASE Investigations

Physics

- Newton's Laws
- Fluid Mechanics
- Aerodynamics



Chemistry

- Building Blocks of Matter
- Physical & Chemical Changes
- Atmospheric Properties



Technology

- Innovations: Robotics
- Navigation & Mapping: Imagery Analysis & GPS



Engineering

- Engineering Design
- 3-D Computer-Aided Design



Mathematics Operations and Applications

- Number Relationships
- Measurement
- Geometry
- Data Analysis



2.0 Middle/High School:

- Physics applications
- Engineering Projects
- Prototype manufacturing
- Competition rocketry
- STEM Mentoring

STARBASE 2.0: The Next Phase in STEM Outreach

STARBASE 2.0 is a multi-year, middle/high school immersion in STEM concepts where participants explore what it means to be an engineer. Using scientific reasoning to make design choices on collaborative projects, students experience the entire process from design, manufacture, and test to redesign. A strong mentor presence increases students' interest by helping them make connections between academic concepts and the real world.

- **Investigate** - Conduct experiments in applied physics and engineering projects
- **Innovate** - Use computer-aided design (CAD) software to develop and manufacture projects on 3D printers
- **Collaborate** - Teams work on engineering design projects and have a final competition for prizes.
- **Celebrate** - Acknowledge success, creativity, teamwork, perseverance, and grit at a district-wide celebration and mentor recognition award ceremony

