ITEST SURVEY

2023 Data Snapshot

ITEST (Innovative Technology Experiences for Students and Teachers) is an applied research and development program with goals to advance the equitable and inclusive integration of technology in the learning and teaching of science, technology, engineering, or mathematics (STEM) and information and communication technologies (ICT) workforce education for students in pre-kindergarten through high school.

ITEST by the numbers

$48M
ITEST FUNDING

In fiscal year 2023, ITEST received $48 million in funding, and funded 28 new awards for 18 ITEST projects.

221
ITEST PROJECTS

In fiscal year 2023, 221 projects were fully or partially funded by the ITEST program.

1.6M+
STUDENTS

ITEST serves students through both formal and informal STEM learning experiences. ITEST projects have served more than 1.6 million students.

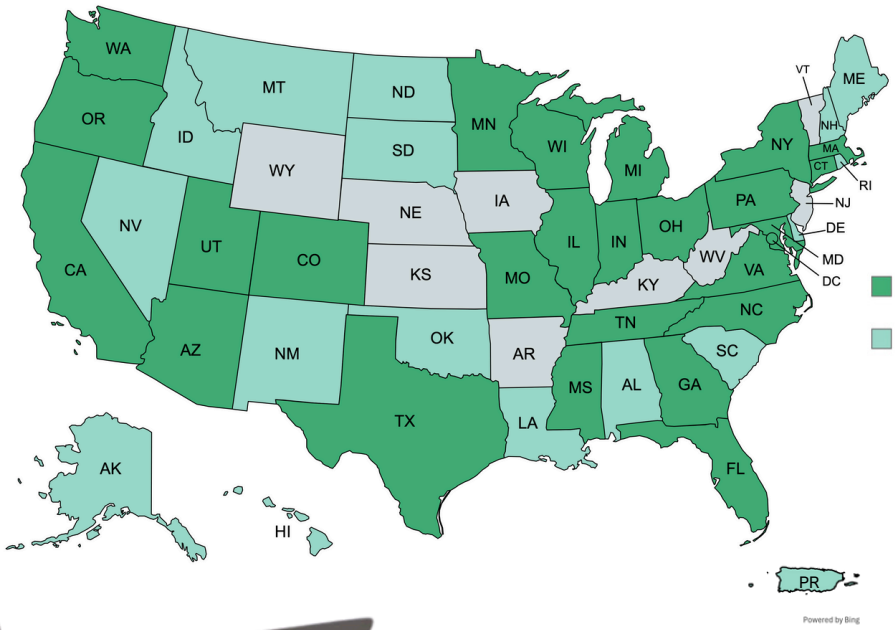
65K+
EDUCATORS

Educators are key to the success of any ITEST project. ITEST projects have served more than 65,000 educators.

30K+
PARENTS/ CAREGIVERS

ITEST projects have served 30,000+ parents and caregivers, who support at-home learning.

ITEST projects engage youth, educators, and parents and caregivers in both formal and informal learning environments in communities across the U.S. and in U.S. territories.



Active ITEST Awards by U.S. state/ U.S. territory and EPSCoR jurisdiction[1,2]

- U.S. states/U.S. territories with active ITEST awards
- ESPCoR jurisdictions with active ITEST awards

Did you know? ITEST funding is provided by revenue from the H-1B visa program, which permits overseas workers to fill vacant U.S. engineering, science, or mathematics positions.

1 ITEST awards that are active as of July 2024

2 EPSCoR is the Established Program to Stimulate Competitive Research at NSF. EPSCoR jurisdictions in U.S. states: AL, AK, AR, DE, HI, ID, IA, KS, KY, LA, ME, MS, MT, NE, NV, NH, NM, ND, OK, RI, SC, SD, VT, WV, WY. EPSCoR jurisdictions in U.S. territories: Guam (GU), Puerto Rico (PR), U.S. Virgin Islands (VI). For more information, see https://new.nsf.gov/funding/initiatives/epscor

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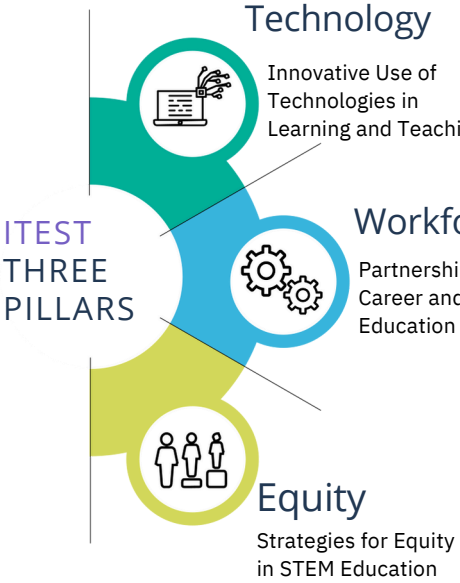
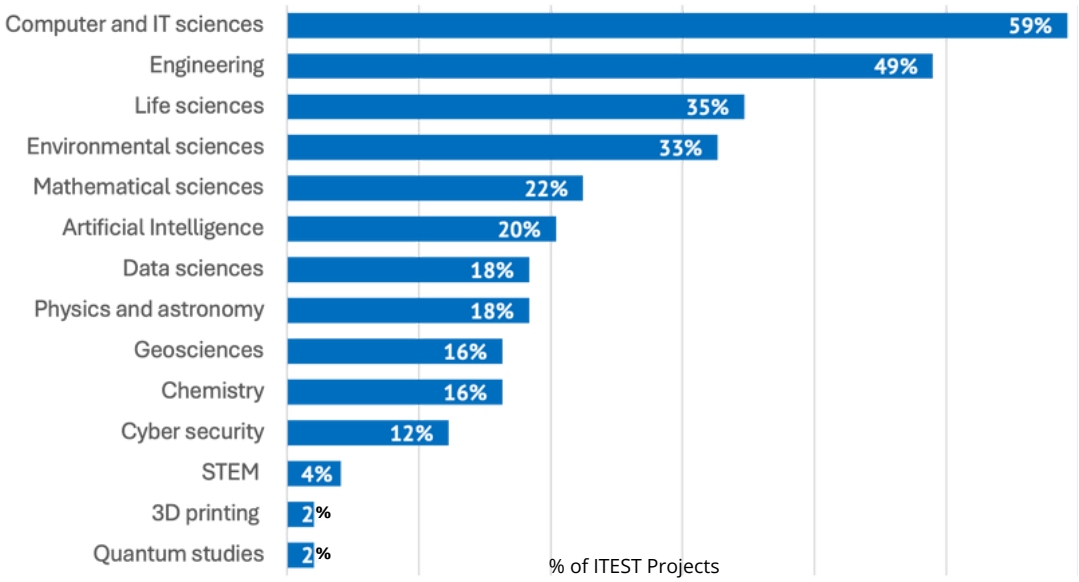


STEM Disciplines

The ITEST program's objective is to support all students' acquisition of foundational preparation in STEM disciplines and Information and Computer Technology (ICT) career fields.

STEM Disciplinary/ICT Career Focus of ITEST Projects[3]



53% of survey respondents (n=26) report their ITEST R&D focuses on one or more **emerging areas of STEM**[4]

ITEST youth and educators engage in **technology-rich activites** and career-based learning experiences.

- Visualization/3D modeling
- Game development
- Simulations & augmented reality
- Geospatial technologies
- Robotics & wearable technologies
- Energy monitoring devices
- Mobile air quality detection systems
- Data mining & machine learning

Strategic Partnerships

ITEST projects establish and sustain **strategic partnerships** to provide youth with greater access to high-quality pre-K-12 STEM learning experiences.

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ITEST Projects' **Community Partners** include museums and museum educators, libraries and librarians, science centers, afterschool programs, summer camps, and non-profit organizations.

3 Data sources for this Snapshot include the NSF.gov Awards Database and data from the Management Information System (MIS) annual survey, administered in June 2023 (N=50 projects).
4 Emerging areas of STEM include artificial intelligence, computational thinking, cybersecurity, data sciences, environmental science, quantum computing, and 3D printing.

Broadening Participation

In 2023, **30 projects** reported their ITEST research and development directly served **3,692 youth from underrepresented or underserved groups**, including:

- youth who identify as females
- African Americans/Blacks
- Hispanic Americans
- American Indians and Alaska Natives
- Native Hawaiians and Pacific Islanders
- English learners
- youth with disabilities
- students from low-income families

ITEST grantees report **51%** of the youth directly served by their ITEST projects are from **racial and ethnic minority groups who are underrepresented in STEM fields.** *Collectively, these groups comprised 30% of the total U.S. workforce, yet only 24% of the STEM workforce in 2021.*[5]

ITEST grantees report **51%** of the youth directly served by their ITEST projects identify as **female**. *Although women represented 48% of the total U.S. workforce, they comprised only 35% of the STEM workforce in 2021.*[5]

Impact & Dissemination

ITEST projects study the **impact** of their work on **youth** in the following areas:

- Engagement or interest in STEM
- Awareness, knowledge, or understanding of STEM
- Attitude toward STEM
- Skills based on STEM
- Behavior related to STEM

From September 2020 to August 2021, ITEST projects (n=38) presented their work in a total of **97 conference presentations** at 50 different international, national, and regional/state conferences. ITEST projects (n=21) also published their work in **50+ publications**!

[5] National Center for Science and Engineering Statistics (NCSES). (2023). Diversity and STEM: Women, minorities, and persons with disabilities. (Report No. NSF 23-315). https://ncses.nsf.gov/pubs/nsf23315/report