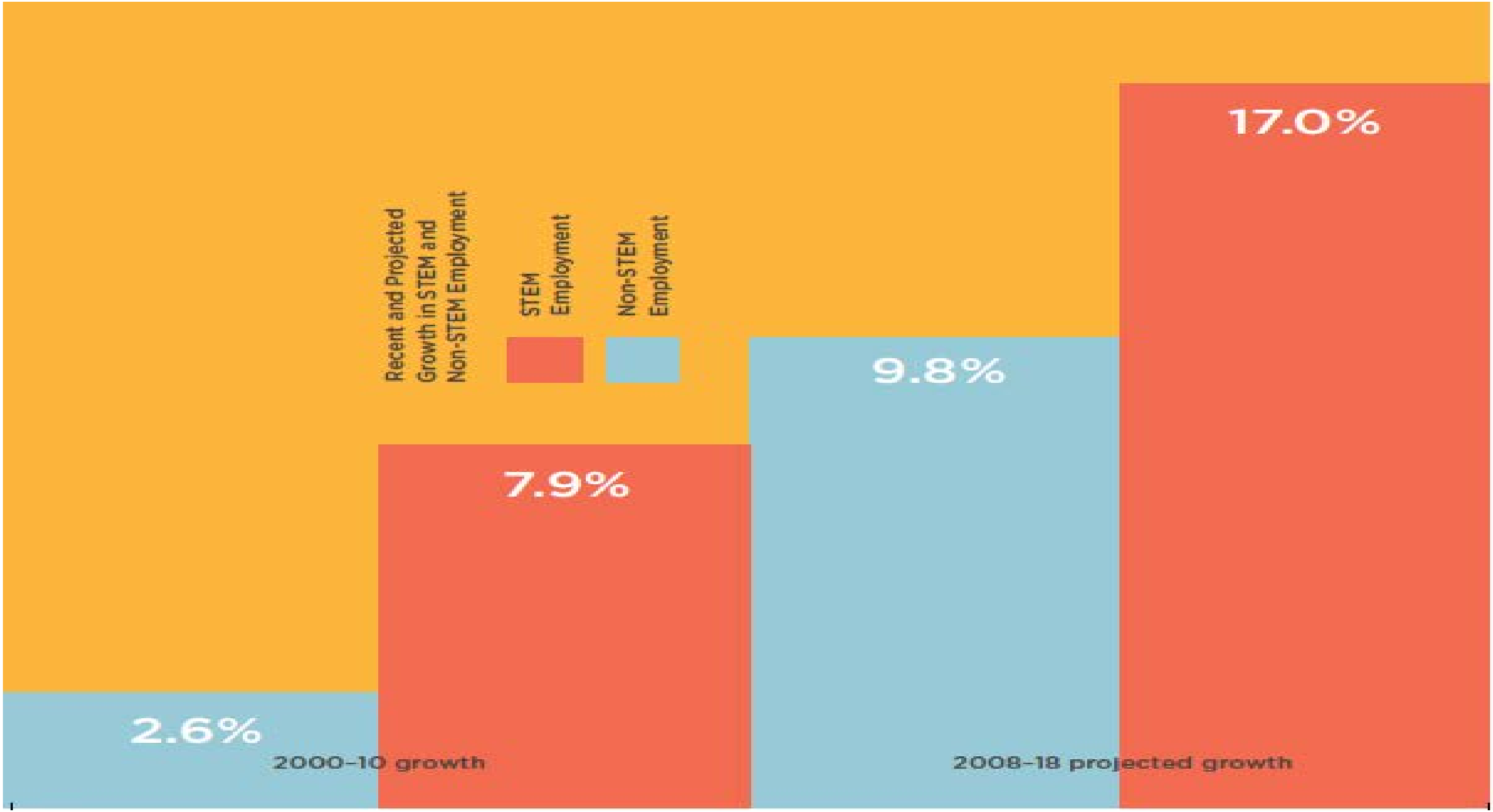

bRiCKS
4 Kidz

STEM SCOUTS®
SCIENCE
TECHNOLOGY
ENGINEERING
MATH

STEM JOBS IN THE U.S. WILL TOP 15 MILLION IN 2018. AT CURRENT GRADUATION RATES, THE SHORTAGE OF PEOPLE WITH STEM SKILLS WILL BE 3 MILLION.


Recent and Projected Growth in STEM and Non-STEM Employment
STEM Employment
Non-STEM Employment
2.6%
7.9%
9.8%
17.0%
2000–10 growth
2008–18 projected growth

What is STEM Scouts?

STEM Scouts is a national pilot program of the Boy Scouts of America (BSA) focused on fun ways for girls and boys using inquiry based learning, grades 3 - 12, to learn more about science, technology, engineering and mathematics (STEM). STEM Scouts instills the values of the Scout Oath and Law and encourages the natural curiosity of young minds as they develop skills in leadership, teamwork, problem solving, and communication. Using hands-on inquiry based activities, field trips, and interaction with STEM professionals, youth expand their knowledge of academic concepts while they have fun and make friends.

The hope is that their growing knowledge will translate into interest in STEM-related careers which are so crucial to our country's future economy.

Mission Statement

The mission of the Boy Scouts of America is to prepare young people to make ethical and moral choices over their lifetimes by instilling in them the values of the Scout Oath and Scout Law.

MTC STEM Mission Statement

To Reach out into our current spheres of influence to cultivate, develop, and expand our network with the intent of planting seeds of good moral character and passion for the STEM sciences by placing the knowledge of the technologies of tomorrow in the hands of our future today.

Vision Statement

The Boy Scouts of America will prepare every eligible youth in America to become a responsible, participating citizen and leader who is guided by the Scout Oath and Law.

How are STEM Labs Structured

The youth are organized into labs which are roughly defined by the school level: elementary school (grades 3-5) known as Junior Labs middle school (grades 6-8) known as Technical Labs, and high school (grades 9-12) known as Research Labs.

STEM Scouts work with lab managers and STEM professionals to do fun, hands-on experiments that teach STEM-related concepts and show how STEM knowledge is used in everyday life and in the professional world.

The labs participate in weekly experiments, have monthly field trips, and use volunteer adult leaders and short-term experienced professional (STEP) volunteers. High school students also have the opportunity to publish their work in a peer-reviewed journal and build a resume for college.

LAB ORGANIZATION

- Labs of about ten – fifteen youth
- Adults - Lab Manager (21+) and Associate Lab Managers (18+)
  - Adults must be 100% YPT trained and renewed each year
- Lab Guide – consultant to Lab Manager
- STEP: Short Term Experienced Professional – helps with a single activity or a lab module (MB Consular)
- Youth - Principal Investigator (PI), Co-Principal Investigator (Co-PI), Program Manager (PM), and Technicians (Techs)
  - Youth led
  - Provides leadership
  - Rotates with each module

Why Inquiry Based Learning Works

Let Scouts Lead

The STEM Scout program has been designed to develop intrinsic motivation for Scouts by presenting them with a question or challenge and then letting them figure out how to approach it themselves. While it can be hard to sit back and let the Scouts figure it out on their own, the reward will be much greater if you do. By approaching the problem or challenge in their own way, Scouts will learn to think critically and creatively and will have much more fun doing so.

Forget About Failure

As the Scouts lead their own projects, they may go down a path that will ultimately lead to less desirable results. However, it is important to let them make these mistakes and then encourage them to think about what went wrong and what they could do differently the next time. By providing a non-threatening environment for Scouts to experiment with their thoughts and ideas, you will be empowering them to take risks and reflect upon what happened which will ultimately lead to a higher level of engagement, ownership, and feeling of success.

Don’t Sweat the Small Stuff

The overall curricular goals of the STEM Scout program are to expose Scouts to a breadth of STEM disciplines while teaching them to think and act like STEM professionals. If the Scouts get off on a tangent or take the project in a different direction than the one that is outlined in the Leader Guide, let them do it. As long as the Scouts are having fun and engaging with STEM disciplines, encourage them to follow their own interests and ideas.

Scout Oath

On my honor I will do my best
To do my duty to God and my country
and to obey the Scout Law;
To help other people at all times;
To keep myself physically strong,
mentally awake, and morally straight.

Scout Law

A Scout is: Trustworthy, Loyal, Helpful, Friendly, Courteous, Kind,
Obedient, Cheerful, Thrifty, Brave, Clean, and
Reverent

Starting a STEM Lab Check List

STEP ONE

Become a STEM Chartered Partner Organization

- Register and fill out the new Lab application
- Complete Chartered Partner Agreement form
- Pay Charter Fee (pays for insurance and all volunteers)

STEP TWO

Build the Team

- Plan and organize the program with proposed Chartered Organization Representative
- Select and recruit quality key leaders:
- Chartered Organization Representative
- Lab Manager
- Assistant Lab Manager
- Schedule training for leaders by STEM Executive:
- Youth Protection Training (YPT) Yearly requirement
- Leader Specific training
- Schedule date with STEM Executive to review and distribute lab manuals

STEP THREE

Recruit and Meet

- Gather materials
- Have recruiting day events or events
- Recruit at least 5 youth per lab
- Host first Lab

How Can We Serve Together

- Assist in Identifying Charter Organizations to sponsor STEM Labs in the international regions that would best benefit form the STEM Scouts program
- Help identify STEM professionals in the community with STEM backgrounds to pair with professionals to train the field staff for deployment into regions identified as STEM target areas
- Assist in the training of identified groups who will train in the US to establish beta test group