

National Society of Black Engineers (NSBE)

What is NSBE?

The National Society of Black Engineers (NSBE) is one of the largest student managed organizations in the world. NSBE has over 30,000 members and consists of 3 main demographics: NSBE Professional members, NSBE Collegiate members, and NSBE Jr. members. Founded in 1975, NSBE includes more than 394 College, Pre-College, and Technical Professional/Alumni Chapters in the United States and abroad. NSBE's mission is "to increase the number of culturally responsible Black engineers who excel academically, succeed professionally, and positively impact the community".

What is NSBE JR.?

The Pre-College Initiative (PCI) program is designed to stimulate the interest in science, technology, engineering, and mathematics fields, or STEM. The goal is to encourage students in grades K-12 to attend college and pursue technical degrees. Our PCI program provides activities to help students discover first-hand how engineering and technology relate to the world around them and discover the excitement of academic excellence, leadership, technical development and teamwork.

You can participate in NSBE's PCI programs by becoming a NSBE JR. (Pre-College) Member. NSBE JR. membership is available to all students in grades 3-12. The San Antonio Chapter accepts elementary students as well. National membership dues is \$5 annually and San Antonio Chapter dues is determined by the Chapter membership annually. The membership term is one year from August 1-1 July 31 of the following year. Local dues will be announced at the retreat.



National Society of Black Engineers (NSBE)

NSBE JR. Local Membership Benefits

College Admissions Preparation

Obtain materials to prepare you for the PSAT, SAT, and ACT;

Participate in academic and technical competitions

- Try-Math-A-Lon (T-MAL) and TAME
- Mathcounts and Math Video Competition
- VEX IQ, VEX Robotics, FLL and GEAR (Robotics-based)
- PCI Science Fair
- Kid Zone
- Mahogany Brian Challenge
- Kid Wind
- Future City

Leadership Development

Develop your leadership skills by serving in many chapter and some regional leadership roles;



National Society of Black Engineers (NSBE)

NSBE JR. National Membership Benefits

- Subscription to The Bridge
 - the NSBE magazine that caters to pre-college students. (a \$15 value);
- Discount Registrations for conferences and events
 - Ex: The Annual Convention/PCI Mini Conference held annually in March.
 - Our conferences offer innovative programming designed to expose youth to science, technology, engineering & math (STEM);
- Opportunity to meet other NSBE Jr. student, Collegiate students, and Alumni members
- Opportunities to be mentored and/or tutored by College Students or Technical Professionals currently working in a STEM field
- Scholarships and Awards to NSBE Jr. members in High School
 - Must excel academically
 - Must have an interest in pursuing a career in engineering and related fields



Technical Competitions

- First Lego League (FLL), GEAR Robotics, Jr. FLL
- VEX Robotics (VEX), VEX IQ
- KidWind
- NASCAR Ten80 Racing Competition
- Kid Zone
- ***** Future City



nsbe.org

NSBE First Lego League (FLL)

What is First Lego League?

Challenges Children to Think like Scientists and Engineers!

In the early fall, First Lego League (FLL) releases a "Challenge", based on a real-world scientific issue. A team is formed consisting of two to ten children, between the ages of 9 to 14 and two adult coaches. The "Challenge", that is released, has three parts: *Robot Game, *Project/Presentation, and *Core Values.

The Robot Game

The children build and program a robot. Based on the theme, the robot will need to navigate, capture, transport, or deliver objects on and around the obstacle mat. The time allotted to accomplish as many missions as possible is 2 ½ minutes.

The Project/Presentation

Through the presentation, the team can learn more about the science behind the Challenge theme. The children use their creativity to Design or Modify an existing solution to solve a Real-World situation. The student have the opportunity to explain their Robot Design.

The Core Values

While working on the Robot Game and The Project/Presentation, children are guided by the <u>Core Values</u> which make the competition special. Kids compete but learn to respect their teammates, coaches, and their competitors.

"What we discover is more important than what we win."

During competition Teams are judged on each of the above categories, and have the opportunity to win awards.



NSBE First Lego League — (continued)

Past challenges have been based on topics such as:







By designing Challenges around such topics, children are exposed to Science, Technology, Engineering, and Math principles that come naturally from participating in the program. Team members also learn valuable life and employment skills which will benefit them no matter which career path they choose.

Commitment:

- +/- 3-5 hours on weekends
- * Extensive research project required
- Need 3 parent coaches to work on the research project
- ♦ Need 2 parent coaches to work with Head Technical Coach
- Travel to National competition (Spring)



Contact: Malene Lawrence Blznteachr04@aol.com

nsbe.org

Jr. First Lego League (JrFLL)

Jr. FLL - for grades 1st - 3rd, Students must do the following:

- Conduct research on the challenge and present the research on a poster board. Student have to give a short oral presentation on the research.
- Students have to build a 3D model which improves on a technology related to solving the challenge. The model must be able to do at least one thing autonomously.
- Students need to make a spirit poster which highlights the team members and show how much fun they are having!!
- Costumes for their presentation.

Contact: Shawanda Primm nsidemvp@gmail.com



Ten80

Ten80

The Ten80 Student Racing Challenge: is a league in which middle and high school students compete using electric radio controlled (RC) cars. Students create the cars and work together in ways that parallel the arduous preparation of racing teams in the months leading up to each race. Student teams showcase their work and compete both online and in person (locally and nationally).

Competition categories include project management, race engineering, aerodynamic design, alternative energy, creative engineering and graphic design. Teams earn points and gain feedback from remote STEM mentors via the Student Racing Challenge website. Leading teams earn invitations to the Ten80 National Finals hosted in May.

Team Practices last approximately two hours, and are typically held at least once a week. Practices take place most weekends, September-March (with the exception of December). If the team is invited to compete at the Ten80 National Finals, then additional practices will be held in April.

Teams can expect to travel to the NSBE National Conference (as well as the NSBE Regional Conference and the Ten80 National Finals, if applicable).

Parents are needed to help with the following:

- Coaching for racing challenges & Data Driven Project
- **♦**Submissions of paperwork
- Marketing projects and team presentation

Contact: Qena Jennings qena@sbcglobal.net



KidWind

Competition Overview

- Students explore the power of wind by building and testing their own wind turbines.
- Students learn how wind turbines work and how to measure energy output
- Competition is based on the amount of power generated from the wind turbine
- Focus is on the design of the blades (length, shape, pitch, materials, etc.)

Commitment

- 2 hours on weekends
- Step-by-step documentation required (i.e. engineering notebook)
- 1 professional/technical coach (i.e. CPS volunteer)
- 1 parent coach to guide and keep project on track
- Travel to NSBE national conference
- Travel to KidWind National Competition (if applicable)

SAN ANTONIO WINDOLOGISTS

WATERAIS

WATERAIS

WATERAIS

CONCUSIONI

Contact: **Judy Dones** judy.dones@gmail.com

sanantonionsbejr.com nsbe.org

VEX Robotics

What Is VEX?

Vex is a game-based engineering competition. Students design and build a robot utilizing a clawbot kit shown below. Each year an engineering challenge is given to the teams and as they complete tasks, they rack up points. They start with qualifying rounds and then they move to eliminations matches where they continue to illustrate their ability to problem-solve, work as a team, and support a healthy competitive environment.

Teams can expect to travel to the NSBE National Conference to compete for this exciting event.

Vex 2014 - 2015 Competition









NEW COMPETITIONS

VEX IQ - Elementary version of VEX that has a brain similar to FLL. VEX IQ uses it own language.

Future City - Middle School competition

Virtual City Design - 48 pointsTOP

Students design a virtual city using SimCity software and present their city's progress via a slideshow presentation. This simulated design experience teaches students city planning, helps them see the consequences of their decisions, and gives them a chance to explore various layouts and designs for their future city. Due in November or December.

City Essay - 60 pointsTOP

Students write a 1,500-word essay describing the unique attributes of their city. This year's Power of Public Spaces theme challenges teams to design a network of innovative, multi-use public spaces throughout their city that serves the city's diverse population.

SBEET

sanantonionsbejr.com nsbe.org

NEW COMPETITIONS

Future City - Middle School competition

City Model - 70 points

Students build a scale model of a section of their city using recycled materials and including at least one moving part. Due at the Regional Competition. Read more.

City Presentation - 70 points

Students give a 7-minute presentation (followed by a 5–8 minute question and answer period with the judges) discussing features of their future city and their solution to the citywide challenge. Due at the Regional Competition..

Project Plan - 10 points

Students work with their team to complete a project plan to help them stay organized and focused with the Future City project. Due one week before the Regional Competition. C

Contact: Devethia Thompson

dnt1@prodigy.net



sanantonionsbejr.com nsbe.org

Academic Competitions

Try-Math-A-Long (TMAL)/TAME

♦ Mathcounts/TAME

Mahogany Brain Challenge

Kid Zone

Try-Math-A-Long (TMAL)

Try-Math-A-Lon is a tutoring program meant to foster good study habits for minority students, help prepare them for standardized test exams such as the ACT and SAT, and promote competition and good sportsmanship. TMAL 'JEPARDY' style competitions are held at Regional and National Conferences between a maximum of 6 qualifying teams composed of high school students from NSBE Jr. Chapters. The overall purpose of the competition is to help groom TMAL team members for success in STEM courses and prepare them for standardized SAT/ACT testing.

TMAL Goals TMAL aims to:

- Develop a positive attitude for students towards academic excellence
- **♦** Develop a positive attitude towards self
- Stimulate enthusiasm about engineering and science
- *Utilize NSBE collegiate and professional members as role models

NSBE Team Levels:

- ♦9th-10th Grade Lower division
- **♦11**th 12th Grade Upper division

Team Eligibility and Requirements:

- Consist of four members and a mandatory alternate
- A combination of students in grades 9-10th grade for lower division, and 11th-12th grade for upper division
- ♦11th 12th grade must have ACT / SAT scores this year
- ***TMAL** teams can consist of students from the same grade levels! (i.e. 4 Seniors or 4 Sophomores).
- **♦Be paid NSBE Jr. Members**
- Have a current advisor/coach that is a paid NSBE professional member
- Submission of ACT, SAT, or PSAT Testing score reports to WHQ
- Current Transcripts are submitted to WHQ

Practice Requirements:

- Weekly as competition date nears
- ❖Individual SAT/ACT review to build skills

Contacts:

Jeanine Martin <u>ilbmartinava@hotmail.com</u>





nsbe.org



NSBE MATHCOUNTS

The MATHCOUNTS Competition Series

A fun and challenging math program designed to help middle school students increase their academic and professional opportunities by building math skills, promoting logical thinking and sharpening analytical abilities. A circuit of exams is given to students at NSBE's Fall Regional Conferences. The first-place winners from each region compete at NSBE's Annual Convention. More than a competition, MATHCOUNTS involves students and teachers in yearlong coaching sessions and helps students at all levels improve their critical-thinking and problem-solving skills.

Contact: Lisa Davis Lad2564@aol.com



Students pick a math problem from the Mathcounts Handbook and write and produce a short video explaining how to do the math problem.

http://videochallenge.mathcounts.org/videos/dilemma



Mahogany Brain Challenge

Mahogany Brain Challenge

- **A Black History competition which exposes youth to the historical experiences and contributions made by African-Americans.**
- **♦** Students between the grades of 2nd − 8th are eligible to participate.
- Family involvement in the form of coaching, aids everyone in gaining a better understanding the role African Americans played in forming this country.
- Competitors are given study guides as a reference, and the goal is not only to win with a team of four, but also to gain more knowledge of African American history to remember and share with others all year long.
- Alpha Tau Omega Chapter of Alpha Kappa Alpha Sorority, Incorporated sponsors an Annual Mahogany Brain Challenge in San Antonio each February.
- The Mahogany brain Challenge competition affords NSBE Jr. (elementary and middle school) an opportunity to participate.
- Study materials are issued in the fall, and teams meet once a week on Sundays.

Parents are needed to assist with the following:

- Ask test questions
- Keep score sheets
- Motivate your child to study

Contact: Stephanie Hall Stephanie.hall@valero.com



Kids Zone

Kids Zone

The purpose of the Kid Zone is to cultivate students in grades K-5th interest in Science, Technology, and Engineering and facilitate an opportunity for them to excel academically.

- Kid Zone is divided into two sections: Grades K-2 and grades 3-5.
- Teams consist of three five members.
- Academic Tech Bowl Competition (Quiz Bowl) is predominately a mathematics competition in the style of the television game show jeopardy, where quick thinking and problem solving skills are tested. Black inventor and scientist knowledge is also quizzed in this event.

The Quiz Bowl question categories are:

- Earth Science
- Life Science
- Physical Science
- Mathematics
- Basic Engineering
- Black Scientist and Inventors



Competition occurs twice a year: once in San Antonio and once in Houston. Teams meet once every two weeks and once a week as competition time nears.

Parent volunteers are needed to assist with the following:

- Run the Quiz Bowl
- Answer technical questions in math and science (earth science, physical science and engineering)

Contact: Shawanda Primm nsidemvp@gmail.com



Parent Participation for NSBE Jr.

Parent participation is vital to the success of the San Antonio Citywide NSBE JR. Chapter. There are many opportunities to get involved: **DEVETHIA THOMPSON**

Administrative:

- ♦ Need several parents to take over Devehia Thompson's administrative duties
 - 1. New introduction to NSBE for new parents
 - 2. NBE Membership and Registration Issues
 - 3. NSBE Conference Registration
 - 4. Planning for Conference (Hotels and Logistics)
 - Competition practice weekly scheduling
 - 6. Weekly newsletter of announcement and more good news!

Competition Coaching:

- ❖Technical Coaches (must be NSBE member)
- *Parent Coaches for projects, presentations and paperwork requirements
- Coach recruitment

Competition Team Parent/Liaison:

Compile team rosters and phone contact list

Fundraising:

- Researching and applying for corporate grants
- Researching and applying for corporate sponsorships
- Coordinate student fundraising activities



NSBE 2016-2017 Calendar

| 2016 | 2017 |
|--|---|
| August NSBE Regional Leadership Conference San Antonio chapter retreat | January · Chapter Meeting · Competition practice resumes · Duke TIP SAT math review |
| September · Chapter meeting · Competition practice begins · 9/30 – deadline to pay local/national dues & submit transcripts | February · Chapter meeting · Competition practice · Mahogany Brain Challenge Competition |
| October Chapter meeting Competition practice | March · Chapter Meeting – Student Officer elections · National Conference & Competition · Kid Zone Spring competition · Local FLL competition |
| November Chapter meeting NSBE Fall Regional Conference Kid Zone Fall competition | April · National Competitions for FLL, Ten80 and VEX Robotics (if applicable) |
| December · Minimal Competition practice · Duke TIP SAT math review begins | May · Chapter meeting – Senior and sponsor recognition |

Duke TIP SAT math review begins recognition
 sanantonionsbejr.com

San Antonio City Wide NSBE Jr. Chapter Code of Conduct, Constitution and Bylaws

Purpose of the Code

The primary concerns of the National Society of Black Engineers and the San Antonio City Wide Junior Chapter (collectively referred to as NSBE) are our mission and our members. NSBE is dedicated to the academic, professional, and cultural development of our students. It seeks to achieve these goals through sound academic and professional programming and through regulations and policies governing conduct that encourages independence, maturity and respect for the rights and viewpoints of others.

Conduct at NSBE-sponsored events is expected to be in accordance with this Member Code of Conduct (hereafter referred to as "the Code"). The Society reserves the right to impose disciplinary sanctions or take other appropriate action when conduct is not in accordance with the Code.

This Code is in effect for chapter, regional and national Society activities.

Preamble to the Constitution and By-Laws

The National Society of Black Engineers (NSBE) is a 501(C)(3) non-profit association that is owned and managed by its members. The organization is dedicated to the academic and professional success of African-American engineering students and professionals. NSBE offers its members leadership training, professional development, mentoring opportunities, career placement services and more. NSBE is comprised of 242 collegiate, 70 professional and 82 pre-college active chapters nationwide and overseas. These chapters are geographically divided into six regions. NSBE is governed by an executive board of college students and engineering professionals and is operated by a professional staff in our World Headquarters located in Alexandria, VA. NSBE as a national student and professional based organization, does hereby dedicate itself to develop intensive programs for increasing interest in technical fields such as science, engineering, and math among pre-college students. Through its NSBE Jr. chapters, NSBE aims to help pre-college students explore opportunities in the technical industry. This program also strives to encourage more African American students to attend college and pursue technical degrees. Members of this organization are encouraged to participate in programs that encourage academic excellence, leadership development, and personal growth.

The entire Chapter Code of Conduct, Constitution and Bylaws can be found on the NSBE website



2015-2016 NSBE JR. San Antonio Chapter Administration

Officers:

- President Kenneth Hardeman
- Vice President Christian Butler
- Secretary Caiya Wiltshire
- Treasurer Julian Hudspeth
- Financial Secretary Miles Slater
- Membership Chair Haven Primm
- Parliamentarian Jada Young*
- Editor Lauren Dones*
- Historian Quenton Stokes*
- Middle School Representatives -Sydney James*, Breanna Hutchinson*, A.J. Hardeman*, and Curtis Lawrence, III*

(*Appointed)

Committee Chairpersons:

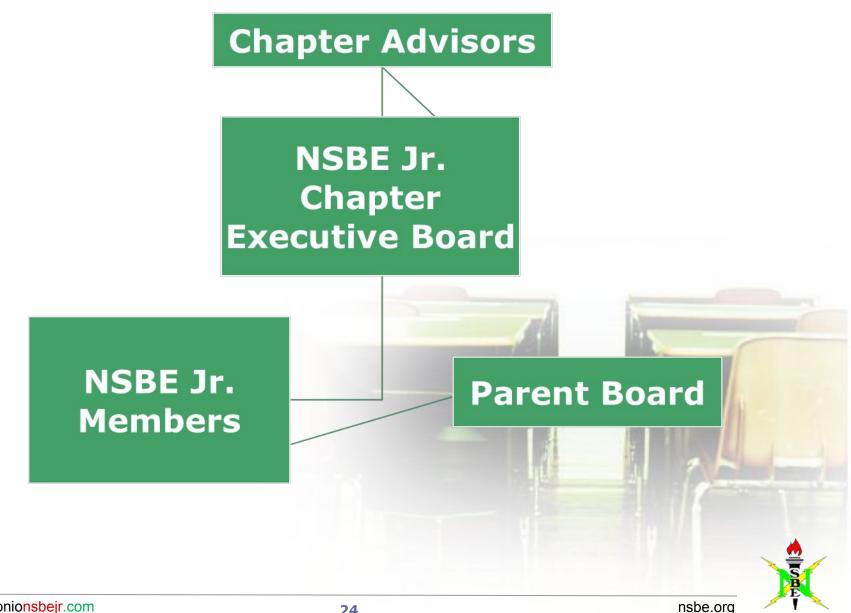
- Programs Jason Dones
- Logistics Malia Ellis-Beverly
- Finance Chinedu Okoro
- Publicity –
- Courtesy Evan Orlandi

Advisors:

- Karl Thompson
- Devethia Thompson dnt1@prodigy.net



Chapter Organizational Chart



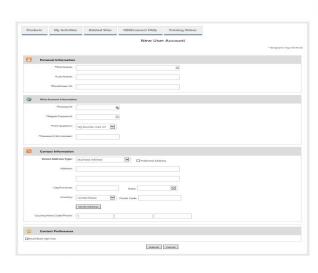
Instructions for Registering to Become a National Member of NSBE

These instructions are for students who have never been members (and therefore do not have a NSBE account online).

- 1. Go to www.nsbe.org.
- 2. On the top right of the main screen click the "Join NSBE" link.



3. On the next screen provide your contact information and click "Submit" when completed. This is the email address that NSBE uses to contact you and the mailing address NSBE uses to send you the NSBE magazine. (Use parent and not student email)



Instructions for Registering (continued)

4. Continue through the screens.

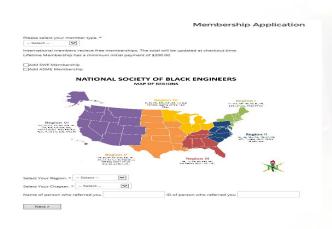
| | Membership Application |
|--|------------------------|
| Please help us identify you better. | |
| Primary racial / ethnic identiy * - Select - | |
| Gender Identiy * | |
| ○Male ○Female ○Prefer not to identify | |
| Birthday * MM/DD/YYYY | |
| Residency Status * - Select - | |
| Next > | |

5. Continue through the screens.

Be sure to select the Member Type: NSBE Jr. Membership \$5

Be sure to select our Region: Region 5

Be Sure to select our Chapter: SAN ANTONIO CITY WIDE NSBE JR.



Instructions to register (continued)

6. Continue through the screens. Select the NSBE Bridge Subscription



7. The next page should show a total of \$5 national dues.

8.



nsbe.org

Instructions to register (continued)

9. The next screen shows a confirmation of your registration. A confirmation email will also be sent to you. Please save this email for it contains your login information. Save the Customer Number for that is Membership Number.



Use the "Login information" above to log into your online NSBE account at www.nsbe.org.



- Password is your Member Number

10. Login and explore the site.

