



NATIONAL SOCIETY OF BLACK ENGINEERS

 Think Green! Please do not print unless absolutely necessary

**2014-2015**  
NSBE Junior FIRST® LEGO® League Rule Book

LAST UPDATED

AUG. 2014



Welcome to the 2014-2015 Junior First Lego League Program!

What an exciting year we have in store for the KidZone Program. I am truly excited to be able to impact the lives of students in such a unique way. This year we are excited to present the Junior First Lego League program to our young students. The goal of this program is to ignite the inherent creativity in the young children for engineering and science concepts. .

Each year, Jr. FLL presents a new and exciting challenge. We are so excited to be taking a part in this program. There is always something for the students to learn as a Junior FIRST Lego League team. While exploring the real world themes, teams will learn about simple machines as they build a model made of LEGO elements with a motorized part. They will also learn to present information through a Show ME Poster. Throughout their experience, teams will operate under Jr. FLL's signature set of Core Values and high expectation of the National Society of Black Engineer's Pre-College Initiative Program

I welcome your feedback throughout the upcoming year to better serve the membership and ultimately provide our youth with an amazing opportunity. I would like to conclude with a reminder that Jr. First Lego League is supposed to be a fun learning experience for the participating students. The most important aspect of the program is the coaching and collaboration that takes place. This is what will make a difference in student progress and achievement. Thank you for your participation and dedication to the academic excellence of the participating students.

Morgan German  
*National Professional PCI Chairperson*  
*National Society of Black Engineers Professionals*



***National Society of Black Engineers  
2014-2015 Jr. FIRST LEGO League Program  
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Due to the nature of our programming and the partnerships involved, this rulebook is subject to change at any time. Changes may include but are not limited to rules, implementation, awards criteria/categories and procurements on behalf of the participants. NSBE will remain to be diligent in providing necessary information for our programming and limit any inconveniences that may occur.



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## THE MISSION OF NSBE

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The Mission of NSBE is to increase the number of culturally responsible Black engineers who excel academically, succeed professionally and positively impact the community.

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## THE PURPOSE OF JUNIOR FIRST LEGO LEAGUE

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The purpose of the Junior FIRST Lego League is to increase students in grades K-3<sup>rd</sup>'s interest in Science, Technology, Engineering careers to allow them to excel academically and succeed in High School and college.

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## CONTRIBUTIONS TO JUNIOR FIRST LEGO LEAGUE (Jr. FLL)

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Contributions to Junior FIRST Lego League will help us continue to make this an effective NSBE program available to NSBE K-3<sup>rd</sup> grade students nationwide. NSBE PCI will use contributions for program-wide support to give all participants the opportunity to have access to STEM resources.

### Financial Contributions

To become a Junior FIRST® LEGO® League partner, send your financial contributions to:

National Society of Black Engineers  
ATTN: NSBE-PCI Junior FIRST Lego League Program  
205 Daingerfield Road  
Alexandria, Virginia 22314  
Phone: 703.549.2207

### Volunteers

If you would like to become a Junior FIRST Lego League volunteer, please contact us at [pci@nsbe.org](mailto:pci@nsbe.org).

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## ACKNOWLEDGEMENT - NSBE CONTRIBUTIONS

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Heartfelt gratitude and deepest thanks to the Professional PCI committee.

*Katrina Hill*, WHQ Programs Coordinator  
*Elizabeth Gomez*, Convention Planning Committee Pre-College Initiative Chair  
*Noral Walker*, National Pre-College Initiative Chair



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## INTRODUCTION TO NSBE

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### NSBE

The National Society of Black Engineers (NSBE) was founded in 1975 by six black engineering students at Purdue University nicknamed the Chicago 6. The original aspiration was to establish a student organization to help improve the recruitment and retention of black engineering students. NSBE is now the largest student-managed organization in the United States with more than 25,000 members.

NSBE is comprised of more than 300 chapters on college and university campuses, 75 professional chapters nationwide and 298 NSBE Jr. chapters. These chapters are geographically divided into six regions. The NSBE mission is to increase the number of culturally responsible Black engineers who excel academically, succeed professionally and positively impact the community. For more information on NSBE, please visit [www.nsbe.org](http://www.nsbe.org).

In fulfillment of the NSBE objective to “stimulate and develop student interest in the various engineering disciplines”, the various programs and competitions were created for pre-college students.

### PCI

The Pre-College Initiative (PCI) Program is the focus of the NSBE effort to promote college, academics, technology, and leadership to pre-college students. Our primary focus is to encourage students in grades 6-12 to develop interest in Science, Technology, Engineering and Mathematics (STEM).

The mission of PCI is to lead the world in enhancing the pre-college students' academic, technical, and leadership skills in order to maximize their success in life. The vision is to establish PCI as an incubator for our youth, where they can be nurtured and guided in their academic careers.

NSBE Chapters support PCI through the multiple programs.

### NSBE Jr.

A vital component of the PCI program is NSBE Jr., which serves as the membership category for pre-college students and institutions that are officially chartered with NSBE. NSBE Jr. members and chapters are at the core of PCI, as they are the primary focus and beneficiaries of PCI programs.

NSBE Jr. focuses on enhancing the education received by African-American and other minority pre-college students, as well as influencing these students to become tomorrow's corporate executives, entrepreneurs, and leaders. In this spirit, NSBE Jr. is the quintessential recruitment, teaching, and preparation device for the NSBE.



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## **INTRODUCTION TO NSBE JR. FLL**

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### **NSBE JR. FLL is not a COMPETITION**

Focused on building an interest in science and engineering in children ages, 6-9 Junior FIRST LEGO League (Jr. FLL) is a hands-on program designed to capture young children's curiosity and direct it toward discovering how science and technology impact the world around them. This program features a real-world challenge, to be explored through research, critical thinking and imagination. Guided by adult coaches and the Jr. FLL Core Values, team members work with LEGO elements and motorized parts to build ideas and concepts and present them for review.

Each yearly Challenge is based on a different theme and has two main parts, the LEGO Model and the Show ME Poster. The culmination of the hard work for our teams is the participation in the showcase event at the NSBE Annual Convention. Volunteer Reviewers at the event interview the teams to learn about their LEGO Model and Show ME poster. All the teams are celebrated and leave with an award.

During the season, the teams will

- Conduct research about the Current Challenge Theme
- Build a LEGO Model based on the Challenge instruction that contains both a simple machine and a motorized part.
- Display their findings on a Show Me poster.
- Utilize NSBE collegiate and Professional members as role models

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## **INTRODUCTION TO NSBE JR. FLL RULE BOOK**

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The NSBE Jr. FLL rule book should be used to guide for coaches/advisors in preparation for teams for the Annual Convention showcase. NSBE Jr. FLL coaches/advisors are encouraged to prepare their teams as early as possible, and use the internet as a valuable tool for resources for the Junior FLL program for preparatory materials.

NSBE Jr. FLL coaching can begin as early as soon as the challenge is released and through March of the next year.



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## NSBE JR. FLL REGISTRATION INFORMATION

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### Team Requirements

Every NSBE Jr. FLL team must:

- Consist of a minimum of two up to a maximum of six participants.
- Be a combination of students in grades Kindergarten through 3<sup>rd</sup> grade.
- **Attending the 41<sup>st</sup> Annual Convention in Anaheim, CA**
- Be participants of an active NSBE Jr. Chapter
- Have a current advisor/coach that is a paid NSBE Professional member
- Completed Application Request before deadline
- Chapter advisor and team coach must participate in the FIRST Youth Protection Program.

NSBE Jr. FLL teams that do not meet all the above criteria will not be allowed to participate in the program year.

### Cost

There is no cost to participate in the NSBE JR. FLL competition. Teams are responsible for raising funds for attendance at the 41<sup>st</sup> Annual Convention in Anaheim, CA.

### Application Procedure

NSBE JR. FLL registration is completed via an application process. Each team interested in participating for the 2014-2015 program year must submit an application to assess the team's ability to be successful participants in the program and to meet all of the team requirements. Completing all of the information in the application is vital to the success of the application committee to be able to assess your team's readiness for participation.

***IMPORTANT NOTE:*** A NSBE Jr. FLL coach can prepare more than one NSBE Jr. FLL team for the Annual Convention showcase.



## CRITICAL 2014-2015 DATES

For quick reference, the following target dates are listed to ensure your participation in the NSBE JR. FLL competition. For further information on the upcoming NSBE conferences, please visit [www.nsbe.org](http://www.nsbe.org).

Team Responsibility And Events	Target Timeframe (No later than)												
NSBE Jr. FLL Team Application	Final submission deadline is <b>Friday, Sept. 12, 2014 by 11: 59 PM (EST)</b> . Complete your chapter's form early for priority consideration. An application does not guarantee your chapter's participation.												
NSBE Jr. FLL access to 2014 Challenge	Teams will receive login information to the online delivery system on a rolling basis as their application is accepted, and a formal invitation for participation is received. <b>The NSBE Jr. FLL Challenge is not released until September by FIRST.</b>												
NSBE Jr. FLL Team Training	Held throughout most of the school year, September 2014 – April 2015												
Fall Regional Conferences	<p>Depending on how many applications and registrations are received, a workshop might be conducted at Fall Regional Conference to give more tips in regards to the Jr. FIRST Lego League programming year.</p> <table border="1" data-bbox="467 1226 1419 1728"> <tbody> <tr> <td data-bbox="467 1226 987 1304">Grand Hyatt Tampa Bay, Tampa, FL, – R3</td> <td data-bbox="987 1226 1419 1304"><b>October 31 - November 2</b></td> </tr> <tr> <td data-bbox="467 1304 987 1381">Hilton Cincinnati Netherland Plaza, Cincinnati, OH, – R4</td> <td data-bbox="987 1304 1419 1381"><b>November 14-16</b></td> </tr> <tr> <td data-bbox="467 1381 987 1459">Crowne Plaza Baton Rouge, Baton Rouge, LA – R5</td> <td data-bbox="987 1381 1419 1459"><b>November 14-16</b></td> </tr> <tr> <td data-bbox="467 1459 987 1537">DoubleTree Pittsburgh, Pittsburgh, PA – R2</td> <td data-bbox="987 1459 1419 1537"><b>November 15-16</b></td> </tr> <tr> <td data-bbox="467 1537 987 1614">Hyatt Regency San Francisco Airport, Burlingame, CA, – R6</td> <td data-bbox="987 1537 1419 1614"><b>November 21-24</b></td> </tr> <tr> <td data-bbox="467 1614 987 1728">Hyatt Regency Long Island at Wind Watch Golf Club, Hauppauge, NY– R1</td> <td data-bbox="987 1614 1419 1728"><b>November 20-24th</b></td> </tr> </tbody> </table>	Grand Hyatt Tampa Bay, Tampa, FL, – R3	<b>October 31 - November 2</b>	Hilton Cincinnati Netherland Plaza, Cincinnati, OH, – R4	<b>November 14-16</b>	Crowne Plaza Baton Rouge, Baton Rouge, LA – R5	<b>November 14-16</b>	DoubleTree Pittsburgh, Pittsburgh, PA – R2	<b>November 15-16</b>	Hyatt Regency San Francisco Airport, Burlingame, CA, – R6	<b>November 21-24</b>	Hyatt Regency Long Island at Wind Watch Golf Club, Hauppauge, NY– R1	<b>November 20-24th</b>
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National Showcase	<b>Held at the NSBE National Conference, Anaheim, CA March 25, 2014 – March 29, 2015</b>												



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## **NSBE JR. FLL OVERVIEW**

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Every year, Junior FIRST LEGO League works with experts in the field to create a Challenge that relates to an important real world issue. The end result of the design process is a Challenge with two defined parts – The **Show Me Poster** and the **Model**.

### Show Me Poster

The Show ME Poster requires teams to illustrate their research and team journey. It provides an opportunity for them to share with what they studied, what they learned, and to show information about the team and each team member.

Teams:

- Create a Show ME Poster using a flat poster board or tri-fold presentation board.
- Use words, drawings, photos, and small objects to tell about what they have learned during the Challenge research.
- Show where they hunted for answers and describe the people they spoke with on their journey.
- Describe their Model and simple machine.
- Tell about the team itself.

### Model

The Model gets teams moving! Teams build a representation of what they are researching, based off the Challenge, and incorporate simple machines and movement into their creation.

Teams:

- Create a Model that fits with a 15" x 15" footprint.
- Design a Model made of LEGO® parts. Typically, a team of six will use 400 to 1,000 LEGO parts during the season.
- Must have at least one motorized piece on the Model.
- Create a simple machine using LEGO ramps, levers, pulleys, gears, wheels, and axles, screws, or wedges and incorporates this into their model.

**SPECIFIC INFORMATION WILL BE AVAILABLE ONCE THE CHALLENGE IS RELEASED!**



## CORE VALUES

We ask that everyone associated with Jr. FLL team understand and honor these Core Values.

- We are a team.
- We do the work. Our coaches and mentors help us learn, but we find the answers ourselves.
- We share our experiences and discoveries with others.
- We are helpful, kind and show respect when we work, play, and share. We call this Gracious Professionalism®
- We are all winners.
- We have fun.