



DESIGN SQUAD GLOBAL CLUBS



DESIGN squad[®]
Global



**AN ENGINEERING
AND INVENTION CLUB**

Saranya Sathananthan



Outreach Project Manager
Design Squad Global
WGBH Educational Foundation



Peace Corps Education Volunteer
Nampula, Mozambique (2012-2014)



Master of Science in Bioengineering
Georgia Institute of Technology



Manages engineering outreach to DSG educational partners through cross-promotion and collaboration on events such as conferences, workshops, and trainings for kids, parents, teachers, informal educators, and engineers alike.

AGENDA

- What are DSG clubs? And what do they aim to do?
- Why DSG? The importance behind the movement.
- How does the program work?
- Hands-on activities that provide a global context for engineering
- What are the key resources available to clubs?
- Impact stories and outcomes
- Q&A

Design squad Global CLUBS





Connects kids with their peers from around the world to work together to solve real-world problems



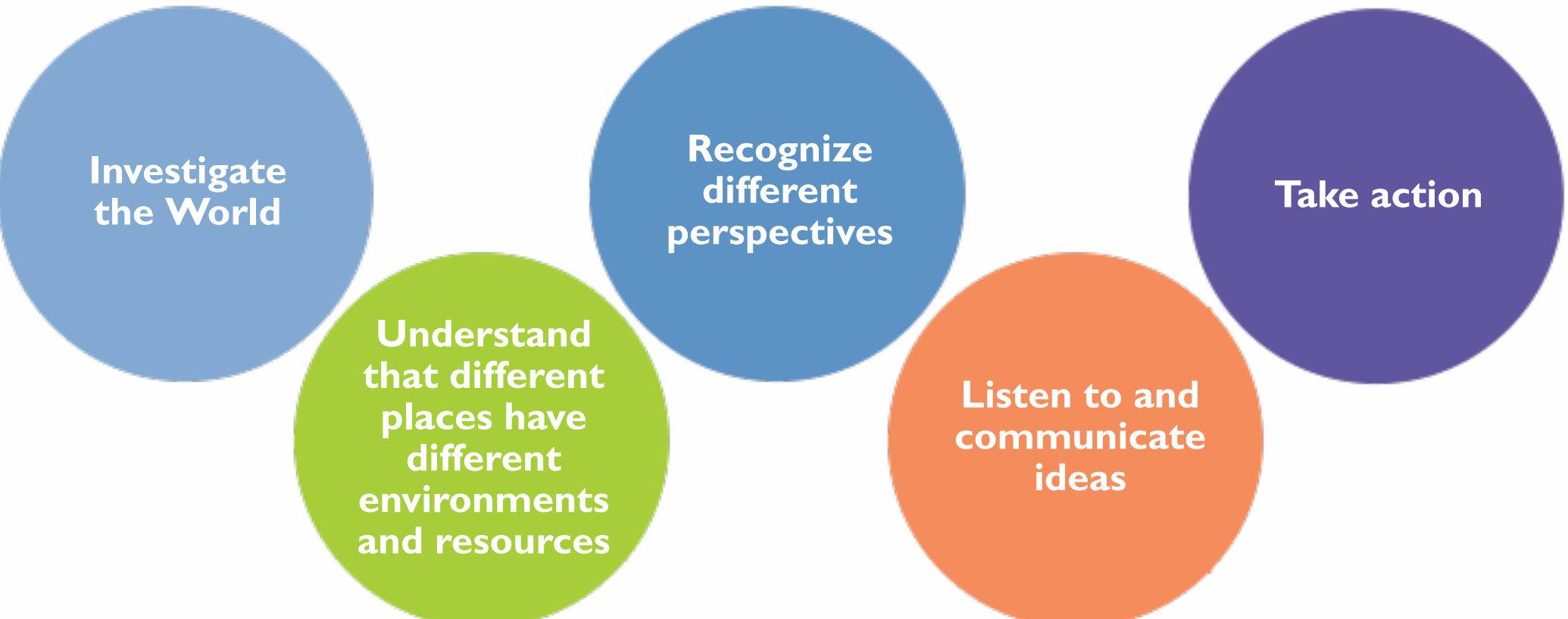
Researches the infrastructure needed to inspire and prepare **young, globally competent engineers**

questions we wanted to answer

1. **To what extent does DSG's model of cross-cultural collaboration build students' understanding of engineering/invention, motivation to participate in engineering/invention activities, and global competencies?**
2. **What are the infrastructures and support needed to inspire and prepare a cohort of young, globally competent engineers in afterschool programs, both in the U.S. and internationally?**
3. **Can the proposed model successfully be implemented in the US and abroad? Can the model effectively help educators and students achieve the desired outcomes?**

What is global competency?

The ability to communicate and collaborate with people around the globe who have different cultures, perspectives, and concerns.



The diagram consists of five overlapping circles arranged in a circular pattern. The circles are colored: light blue, green, blue, orange, and dark purple. Each circle contains a component of global competency. The circles overlap in a way that creates a central area where all five components intersect.

**Investigate
the World**

**Understand
that different
places have
different
environments
and resources**

**Recognize
different
perspectives**

**Listen to and
communicate
ideas**

Take action

DSG PILOT 2015-2016



YMCA –
PIETERMARITZBURG, SA



Boys and Girls Club – Soweto, sa



Promise Neighborhoods –
Indianola, MS



YMCA – twin CITIES,
MINN

WHAT ARE THE BASICS OF RUNNING A CLUB?

- **Program Length:** Choose between a 6-week or 12-week program
- **Session Length:** Weekly 60-minute sessions
- **Ages:** 10-13
- **Size of Club:** 9-12 members is ideal
- **Attendance:** Regular attendance required
- **Languages:** Basic English proficiency for leaders and participants
- **Technical Requirements:** Reliable Internet access and a device for taking photos and/or videos
- **Supplies:** Inexpensive materials for hands-on engineering activities
- **Partner Club Matches:** Sign up to run a club and be paired with a partner club from another country. Run your clubs during the same time period, doing the same session during each week. Then share your



CELEBRATING ENGINEERING, CROSS-CULTURAL UNDERSTANDING, AND HAVING FUN!



“When they’re doing Design Squad Global, the space is so fun, it’s so refreshing, it’s so exciting that their talent comes out. And you, as a club leader, once you see that one person has a talent in [engineering], you then can easily guide them into realizing that you can actually do this as a livelihood. Something that you enjoy, something that you’re good at, and now all you have to do is get the education in it.”

**– Kitty Moepang, DSG Club Leader –
Boys and Girls Club of South Africa, Soweto**

Connecting kids ages 10–13 in out-of-school-time programs around the world

In Design Squad Global (DSG) clubs, kids explore engineering through fun-packed, high energy, hands-on activities, such as designing and building an emergency shelter or a structure that can withstand an earthquake. Through DSG, kids also get a special opportunity: the chance to work alongside a partner club from another country. Partner clubs share their experiences by exchanging design ideas, photos, and videos. Along the way, they develop their global competency by learning more about each other’s cultures, communities, and lives.



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MAJOR FUNDING



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“We shared interests, answered cultural questions, and taught each other greetings in other languages. The kids on both ends were ecstatic. My kids were very surprised that they were more similar than different. Kids in South Africa also wore Nikes, watched *Empire*, and *Nickelodeon*.”

—Michelle Reason, DSG Club Leader —
P.S. Vernum Middle School; Avenel, New York

Inspiring the next generation of engineers

Few middle school children can say what engineering is or what an engineer does. Belonging to a DSG club changes all that. By working on real-world engineering projects that are meaningful and socially relevant to communities around the world, kids begin to see themselves as young engineers with the power to make a difference. By introducing kids to the field at a young age, educators help unleash a new generation into the STEM pipeline. Through DSG, kids see engineering as a dynamic career path and an achievable goal. And whether kids ultimately pursue a STEM profession or another career, the club helps them build confidence and develop resourcefulness.



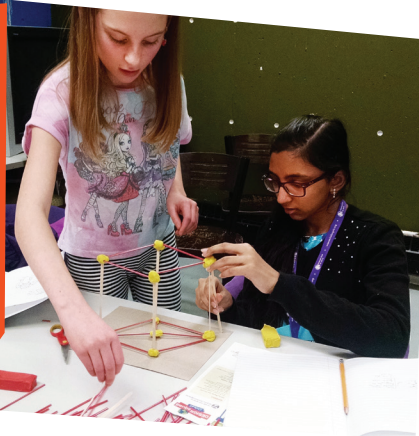
Start Your Own Club!

Visit DSG at:
pbskids.org/designsquad/global

An online DSG Club Guide and training includes everything an educator needs to run the club and collaborate with an international partner. For more information, contact Saranya Sathananthan at WGBH: saranya_sathananthan@wgbh.org

Kids will learn...

- **CREATIVE PROBLEM SOLVING.** Kids are called upon to use their imaginations and analytical skills through open-ended, hands-on engineering challenges.
- **THE DESIGN PROCESS.** Kids learn to use a series of tried-and-true steps to think through and work out a problem.
- **SCIENCE AND ENGINEERING CONCEPTS IN CONTEXT.** Kids discover science and engineering concepts first-hand, through their own iterative design process.
- **GLOBAL COMPETENCY.** Kids explore our interconnected world and learn how to communicate and collaborate with people who have different perspectives, cultures, and backgrounds.
- **TEAMWORK, LISTENING, AND SHARING.** Kids understand the importance of teamwork and develop an openness to new ideas, ways of thinking, and unfamiliar situations.
- **MAKING A DIFFERENCE!** Kids experience engineering and invention as powerful tools for change.



Project Team:

DSG is produced and managed by WGBH Educational Foundation, a premier public broadcaster in the US, and FHI 360, a nonprofit human development organization working in 70 countries.

STARTING A DSG CLUB



WHAT IS DSG?

Hands-On Engineering: In Design Squad Global clubs, kids explore engineering through creative, fun-packed, high-energy activities.

The Design Process: Kids learn to use a series of tried-and-true steps to think through and work out a problem.

Partnership: They also have a special opportunity: the chance to work alongside a partner club from another country.

Global Competency: Kids learn more about their partner's cultures, communities, and lives, deepening their awareness and interest in the wider world.



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WHAT ARE THE BASICS OF RUNNING A CLUB?

Program Length: Choose between a 6-week or 12-week program

Session Length: Weekly 60-minute sessions (or longer, if possible)

Ages: 10–13 (can be adjusted for other ages)

Size of Club: 9–12 members is ideal

Attendance: Regular attendance required (not a drop-in club)

Language: Basic English proficiency needed for leaders and participants

Technical Requirements: Reliable Internet access and a device for taking photos and/or videos

Supplies: Inexpensive materials for hands-on engineering activities



HOW DO I PARTNER WITH ANOTHER CLUB?



Partner Club Matches: You'll be paired with a partner club from another country and will run your club during the same time period—you will do the same sessions during each week.

Communication between Clubs: Partner clubs share their experiences and get to know each other through “partner exchanges”—emails, documents, scans, photos, and videos.

WHAT DOES IT TAKE TO BE A CLUB LEADER?



Qualifications and Background

No teaching background or familiarity with engineering needed—all you need is dedication and a passion for unleashing the potential of young people!

Resources for Leaders: The *DSG Club Guide* and the interactive *DSG Leader Training* include everything you need to run a club and work with an international partner.

A Co-Leader: Having a co-leader or assistant is highly recommended.

A Time Commitment

Preparation: About 60 minutes per week

Leading the Session: 60 minutes per session, plus a 30-minute setup

Partner Exchanges: 30 minutes after half the sessions

INTERESTED IN LEADING A CLUB?

Here's how it works:

- 1 **Sign up.**
- 2 Get **matched** with a club from another country.
- 3 Take the ***DSG Leader Training***.
- 4 Review the ***DSG Club Guide***.
- 5 **Get to know** your partner club leader.
- 6 **Recruit** club members.
- 7 **Lead** your club!



TWO CLUBS TO CHOOSE FROM

The 6-week club is great if you're new to engineering or are limited on time.

The 12-week club is ideal for seasoned educators who have the time to offer kids more in-depth project-based activities. It also offers a more extensive cross-cultural experience.

6-WEEK CLUB



Four Engineering and Invention Activities

Introduce kids to engineering, invention, and the design process.



Three Partner Exchanges

Partner clubs share information about themselves, their countries, and their engineering activities.



Final Party!

Each partner club celebrates the last session with a party and watches videos or looks at photos of their partner club's engineering projects.

12-WEEK CLUB



PART 1

Four Engineering and Invention Activities

Introduce kids to engineering, invention, and the design process (sessions 1–5).



PART 2

Partner Project

In teams, kids create their own original engineering projects (sessions 6–12). Partner clubs collaborate by sharing design ideas and giving each other feedback.



Six Partner Exchanges

Partner clubs share information about themselves, their countries, and their engineering activities.



Final Party!

Each partner club celebrates the last session with a party and watches videos or looks at photos of their partner club's engineering projects.



SIGN UP!

VISIT DSG AT:

pbskids.org/designsquad/global

Have questions? Need more information?

Contact Saranya Sathananthan at WGBH: saranya_sathananthan@wgbh.org