

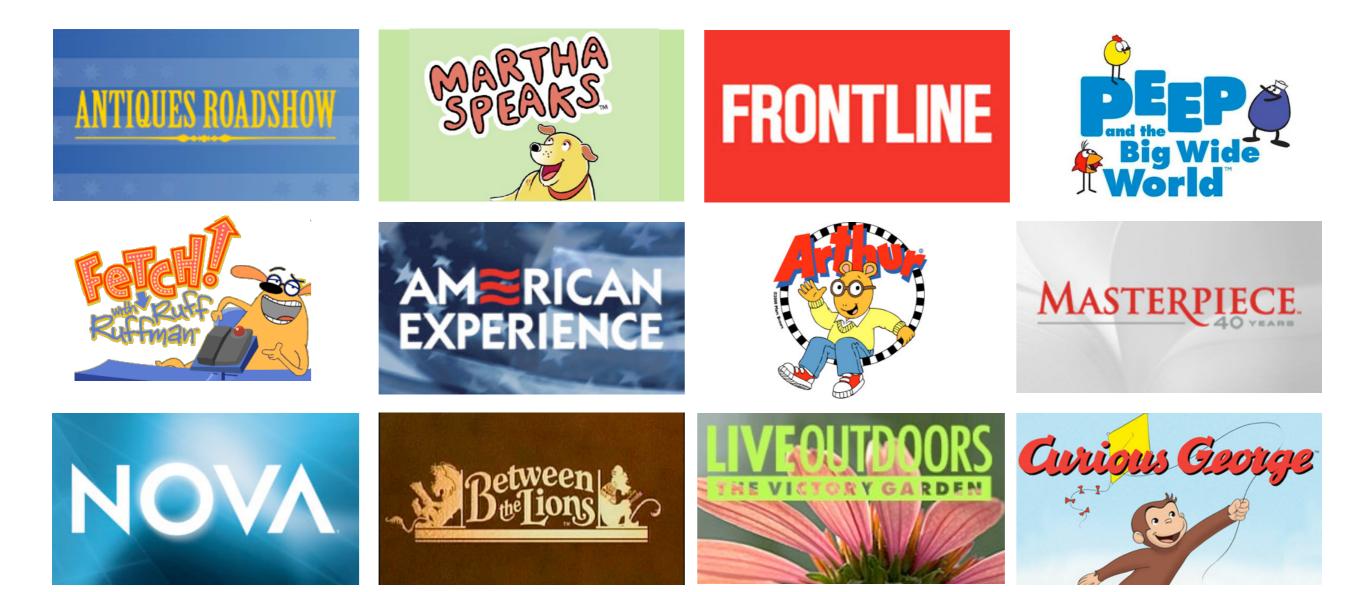
## http://pbskids.org/designsquad/

marisa\_wolsky@wgbh.org Executive Producer

dave@symbolicstudio.com Digital Producer

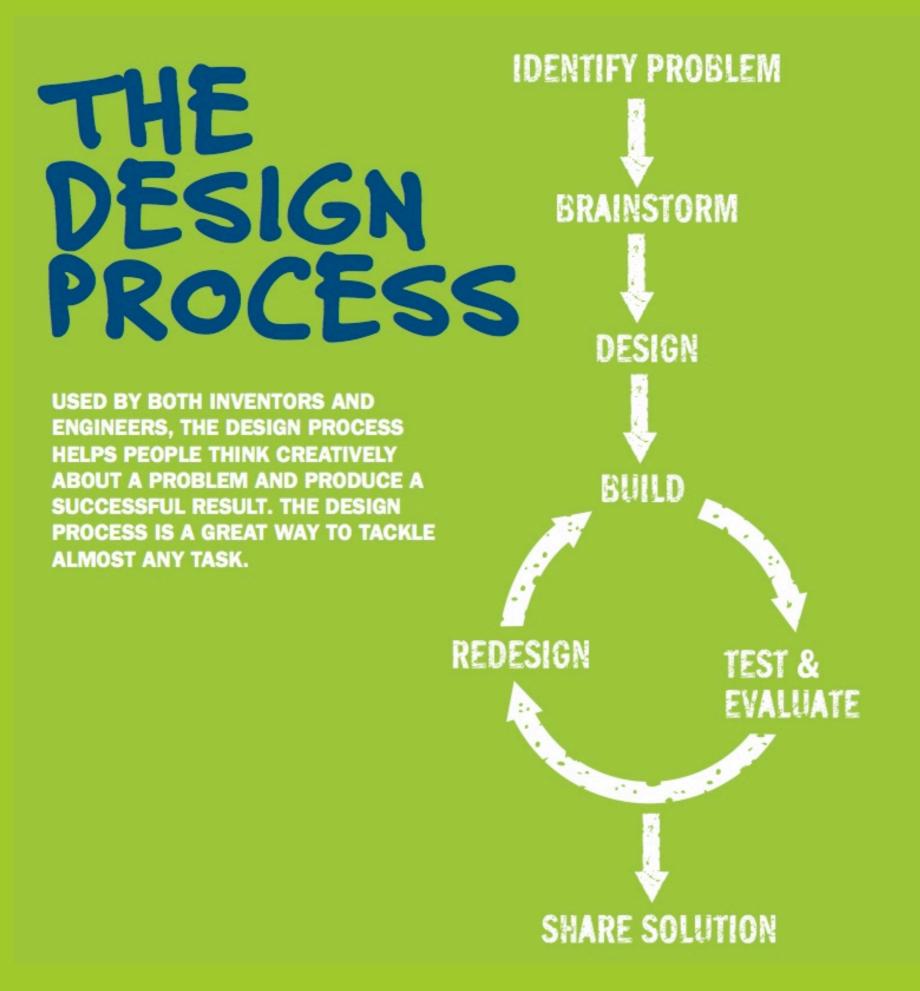












# 1. identify the problem

2. brainstorm 3. design 4. build, test, redesign 5. share

WHY ARE YOU HERE?







OW1-39241-D

Source: http://memory.loc.gov

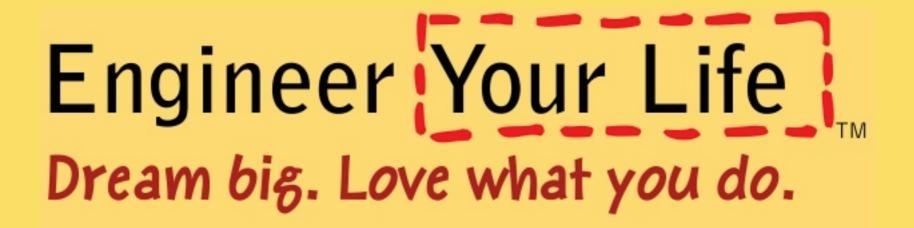
Engineers have led a technological revolution that has improved the quality of our lives, yet children and adults do not understand how the technology they use in their daily lives works. They are also unclear about the engineer's role in society or even what an engineer does.

"I want us all to think about new and creative ways to engage young people in science and engineering ...to be makers of things, not just consumers of things... because our future depends **ON It.''** - President Obama, in his address to the National Academy of Sciences, April 27, 2009





Photo Credit: The National Academy of Sciences. Creative Commons license, Some Rights Reserved. <u>http://www.flickr.com/photos/nationalacademyofsciences/</u> 3484139030/sizes/l/in/set-72157617300994183/



## **Extraordinary Women Engineers Project** AAES, ASCE, and WGBH

- Research conducted 2004-2005
- Four in-person focus groups
- Two online focus groups
- Five online surveys
- 4,506 Total Respondents

Full Report Available at engineeryourlife.org

Engineer Your Life Dream big. Love what you do.

1. Girls (as well as their parents, teachers, and counselors) believe:

- Engineers must be exceptional at both math and science
- Engineering is difficult and challenging

2. It is **the engineering community that is contributing to their limited understanding** of the profession.

Full Report Available at engineeryourlife.org

## Engineer Your Life Dream big. Love what you do.

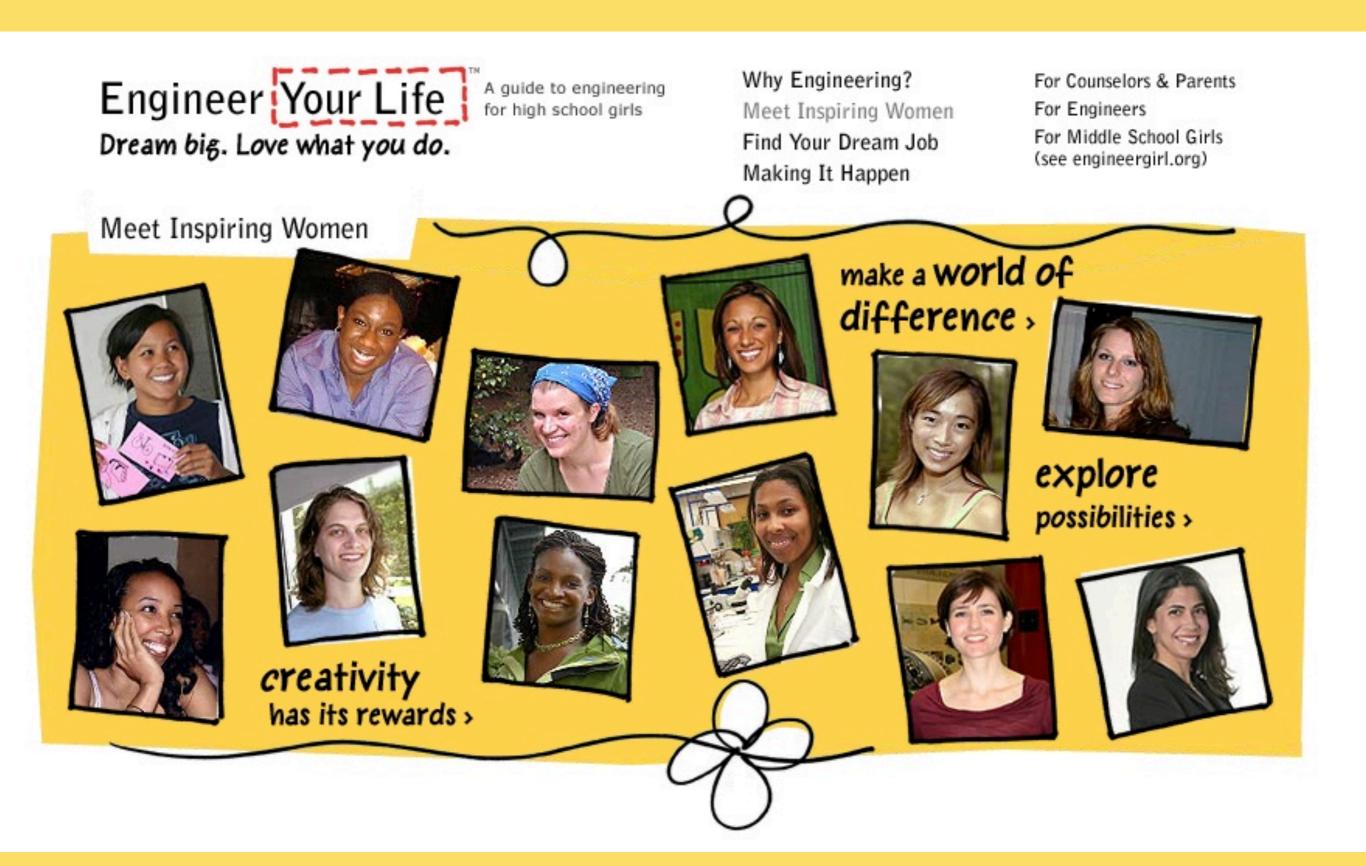
The four messages that tested strongest for EYL were:

#### • Live your life, love what you do.

Engineering will challenge you to turn dreams into realities while giving you the chance to travel, work with inspiring people, and give back to your community.

- Creativity has its rewards. Women engineers are respected, recognized, and financially rewarded for their innovative thinking and creative solutions.
- Make a world of difference. From small villages to big cities, organic farms to mountaintops, deep-sea labs to outer space, women engineers are going where there is the greatest need and making a lasting contribution.
- Explore possibilities. Women engineers often use their skills to go into business, medicine, law, or government. An engineering education will prepare you for many different careers.

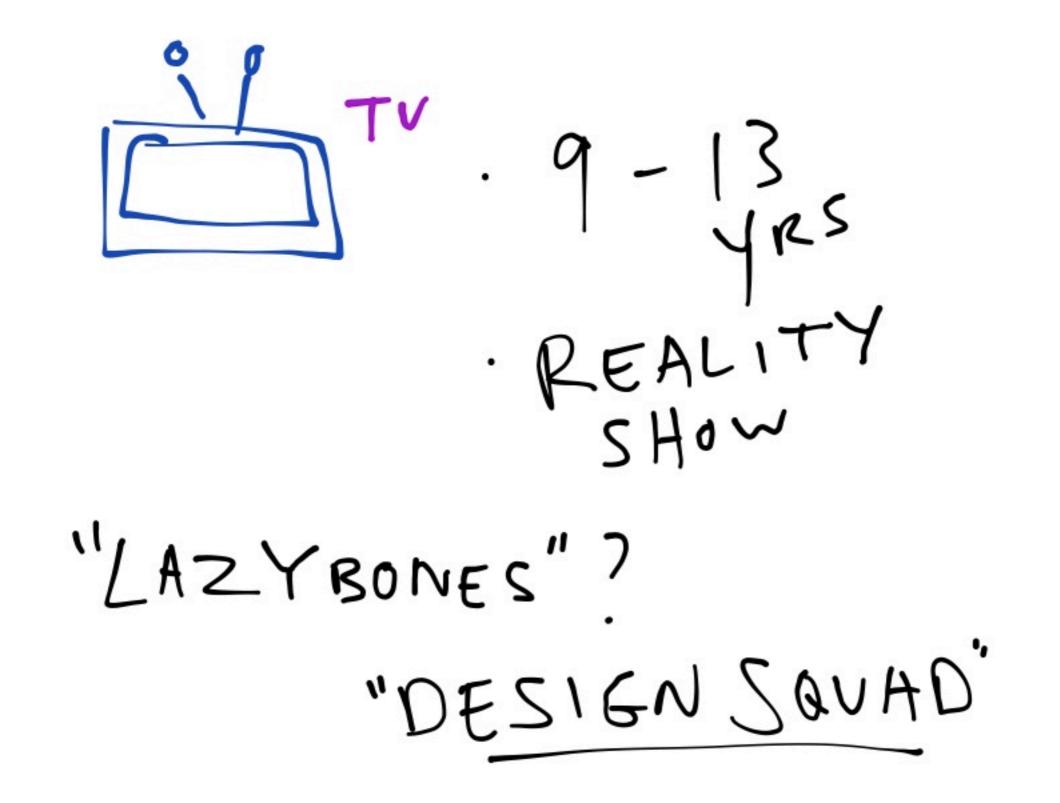
Full Report Available at engineeryourlife.org

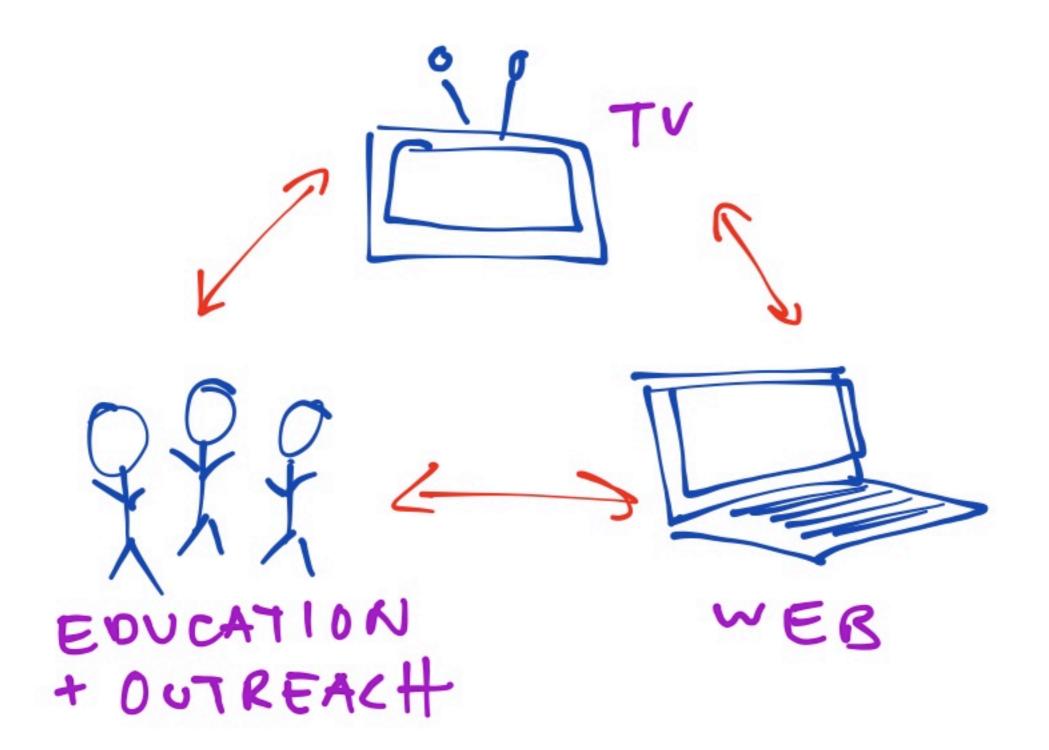


#### engineeryourlife.org

# 1. identify the problem

**Drainstorm** 3. design 4. build, test, redesign 5. share





# 1. identify the problem 2. brainstorm 3. design 4. build, test, redesign 5. share









## Watch an Episode: "The Need for Speed"

http://pbskids.org/designsquad/video/need-speed/

### **Elements of Design Squad:**

- 1. The challenges come from a real world client
- 2. The teams work together, diverse group
- 3. Design process is iterative, showing success and failure
- 4. Team dynamics, working together has challenges
- 5. Animations to explain how the fundamental science concepts apply to solving the problem

6. ProFiles showcase real life engineers with exciting careers



use science and math to solve real problems



### Watch an Animation: Design Squad Nation youtube playlist http://www.youtube.com/playlist?list=PL1FCA18AB7F4F0F96

62 Short Videos on many topics from the science behind pitch and sound, to how electrical circuits work.

## fail fast, succeed sooner



## See the Design Process in Action

## **Online Workshop for Educators:**

http://pbskids.org/designsquad/parentseducators/workshop/ welcome.html

## you're in good company



Eaboratory at northoastorn on voisity, combines both meenal engineering while working on robots that mimic biological anim swimming robot.

Watch | Download

#### Tracy Drain, Flight Systems Engineer

NASA flight systems engineer Tracy Drain explains that her ro spacecraft team was to keep the mission problem-free by trac that nothing could fall through the cracks or be forgotten.

Watch | Download

#### Underwater Robot - Amy Kukulya

An oceanographic engineer at Woods Hole, Amy helps build a shaped robots to map terrain under water.

Watch | Download

#### Victoria Garcia, Aerospace Engineer

NASA aerospace engineer Victoria Garcia describes how she to design living and work spaces for astronauts. She also talk deafness be a barrier in her life.

Watch Download

#### NERF Toys - Amanda Bligh

Hasbro toy engineer, Amanda Bligh, demonstrates how work spend your day designing NERF products.

Watch Download

#### Package Design - Jennifer Chua

Jennifer Chua is a 25-year-old packaging engineer who works San Francisco that specializes in nontoxic, biodegradable pro high-quality products that are both good-looking and good for t

Watch | Download

#### Penguin Habitat - Jennifer Nakayama

Jennifer Nakayama of SeaWorld puts to use her skills as an e engineer to create a cool, new habitat for warm-weather Humb Watch | Download

Racecar - Sarah Grenier

































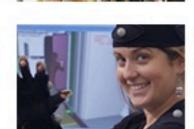
































































## Watch videos of real life engineers who are making a difference:

## **Design Squad Website:**

http://pbskids.org/designsquad/parentseducators/resources/ index.html?type=videoprofile

## **Design Squad YouTube Playlist:**

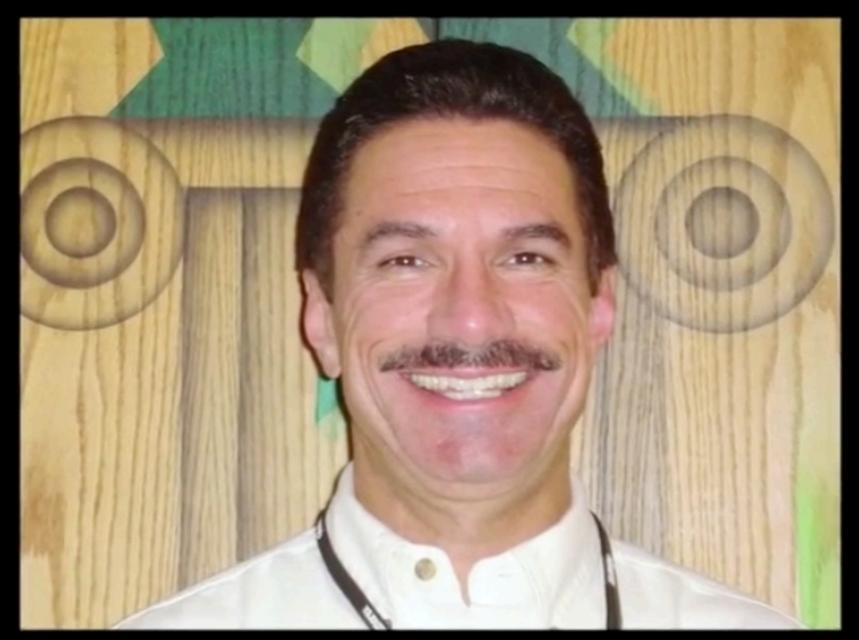
http://www.youtube.com/watch? v=NBamEfLER2M&list=PLD1BCF5848ABE3671



## Parents, Educators and Engineers

#### http://pbskids.org/designsquad/parentseducators/

- 1. Hands-on activities and Guides
- 2. Events
- 3. Trainings and Webinars
- 4. Partner organizations



Interview with Scott Kutz, a teacher who's using Design Squad in his school http://www.wgbh.org/changeyourworld/theTeacher.cfm

#### http://pbskids.org/designsquad/parentseducators/



#### N<sub>squad.</sub> Nation

#### URCES

city Energy

**Machines** /Music /Transportation /Games res ology/Materials

#### 5

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EUS S& CLIENTS HE SHOW HE SITE

### **RESOURCES:** Electricity

Show Only: VIDEO PROFILES ALL ANIMATIONS ACTIVITIES

Parents, Educators & Engin

#### ACTIVITIES

Activities are hands-on challenges that foc use simple materials, allow for multiple solution

#### Dance Pad Mania

Electric Gamebox

Build a dance pad that sounds buzzers and Read more 15 7- CHENTHAM

Download PDFs: Student Handout (English |

## Invent a game with a buzzing target for a k Download PDFs: Student Handout (English |



Electric Highway Build a circuit that connects a battery and types of materials.

Download episode clips: (Switches | Design F

Read more Download PDF: Student Handout (English)

Hidden Alarm Build a circuit to power an alarm so small t Read more | Watch a demo Download PDFs: Student Handout (English |

## JEntit Buildit Buildi Tekki Carter

 $\langle \mathbf{Q} \rangle$ 

Nation

bs.org/designsquadnatic



#### http://pbskids.org/designsquad/parentseducators/

### Parents, Educators & Engineers

### TRAINING

Build your skills and confidence in guiding kids through engineering activities, or in training other adults how to do the same.



#### self-Guided Online Workshop

Gain insight in leading kids in hands-on engineering activities with this self-paced training developed in collaboration with NASA. Read more



#### Training Others

Get resources to teach your colleagues how to lead handson engineering activities with kids. Read more



#### Mission: Solar System Training Video

See all the Mission: Solar System resources in action. Learn how to create a rich, multi-faceted learning experience for kids by using the three videos (the challenge, engineer, and NASA videos) to enhance a hands-on Mission: Solar System engineering design challenge. Watch now

#### Read our blog

For the latest in engineering education

#### Find local engineering events



#### 4-H

Adobe eLearning American Association of Engineering Societies (AAES) American Association of University Women (AAUW) American Society for Engineering Education (ASEE) - Engineering, Go For It! American Society of Civil Engineers (ASCE) American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc. (ASHRAE) American Society of Mechanical Engineers

#### (ASME)

Association of Professional Engineers and Geoscientists of New Brunswick (APEGNB) Association of Science, Technology Centers (ASTC)

Avnet Design BetterLesson Boston Society of Civ Fest



W

Boys & Girls Clubs of America California Girls in STEM Collaborative Project (CalGirlS) (NGCP) California Polytechnic State minutes

California STEM Learni

Cascade Science Center Foundation **Central Texas Engineers Week** CH2M HILL Change the Equation Children's Discovery Museum **Coalition for Science After School** Cogito.org (Johns Hopkins U. Center for Talented Youth) Connect a Million Minds **Creative Discovery Museum** Dell-Winston School Solar Car Challenge Edomodo Edutopia Elon University, Dual Degree Engineering Program **Engineering education Service Center** Engineer In Residence (Professional **Engineers** Ontario)

**EWEEK**—Future Cities FIRST (For Inspiration and Recognition of Science and Technology) Gateway to 21st Century Skills GEMS Girl Scouts of the USA Girls Inc. GoldieBlox Great Lakes Science Center How to Smile Indiana Department of Education Institute of Electrical and Electronics Engineers (The IEEE) Instructables Intel Corporation Intel Computer Clubhouse Network International Technology and Engineering Educators Association (ITEEA) eventionland

## Little Children S Museum

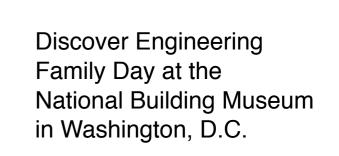
Louisiana State University, College of Engineering Louisiana STEM Girls Collaborative Pro

MAkeSpaceBook MathInMiddleSchool Mid-Atlantic Girls Collaborative Project (MAGiC)(NGCP) Museum of Discovery and Science Museum of Science, Boston MyFixitUpLife NASA National Academy of Engineering (NAE) "Changing the Conversation" National Building Museum National Coalition of Girls Schools National Council of Examiners for Engineering and Surveying (NCEES) National Engineers Week Foundation (EWeek) National Girls Collaborative Project National Society of Black Engineers (NSBE)

(NSPE) New York Hall of Science North Carolina State University Northern Illinois University-STEMFEST Northrop Grumman **Ohio Technology Education Association** POWER.ORG Project Lead the Way **Purdue University** Resource Area for Teaching (RAFT) **Rockwell Collins Rutgers University School of Engineering** Science Buddies SciGirls Seminole Ridge High School (Loxahatchee, FL) Siemens STEM Academy ety of Manufacturing Engineers (SME) 30 So ety or vV ne E tineers (SWE) hl bunt on muchty College Spark Truck Stevens Institute of Technology Swift Optical as Tech University T-STEM Center T nksgiving Point Museum of Ancient Life Children's Museum of Indianpolis The Coalition Science After School The Engineering Center The Lemelson-MIT Program The Maker Mom (Kim Moldofsky) ThinkPort United States Patent and Trademark Office University of Akron, College of Engineering University of Wisconsin - La Crosse University of Wisconsin, Platteville - Women in Engineering, Mathematics, and Science Program University Transportation Center (UTC) at **Cleveland State University** Westlake City Schools Wichita State University, College of Engineering YMCA of the USA

National Society of Professional Engineers





## watch videos play games build projects

PARENTS & EDUCATORS ENGINEERS ABOUT THE SHOW

Find out when DESIGN SQUAD is on in your town.



Corporation

Broadcasting

for Public

assemnt on Th

PROJECTS





NCEES





NOYCE FOUNDATION

Education

NORTHROP GRUMMAN



Foundation







CHALLENGES - SEASON 2

CHALLENGES - SEASON 1

CAST - SEASON 2

DEWEY DEYSI JASON KIM

NICK

TREJONDA

NATE - HOST

CAST - SEASON 1

GAMES

PROFILES & VIDEO

BUILD PROJECTS

ENGINEERS

PARENTS & EDUCATORS

HELP













Family influence: My step-father has had the biggest effect on my being interested in engineering. He and 1 are the "handy men" in the house.

Dream pet: When I get older I want to have a pet monkey.

Favorite recent invention: Cell phones and robots because both provide help for people, families, and communities.

Engineering hero: I am honestly inspired by all black inventors.

What superpower would you like to have? To always be right, and always get my way!

Favorite type of problem to solve: Math problems, and social problems.

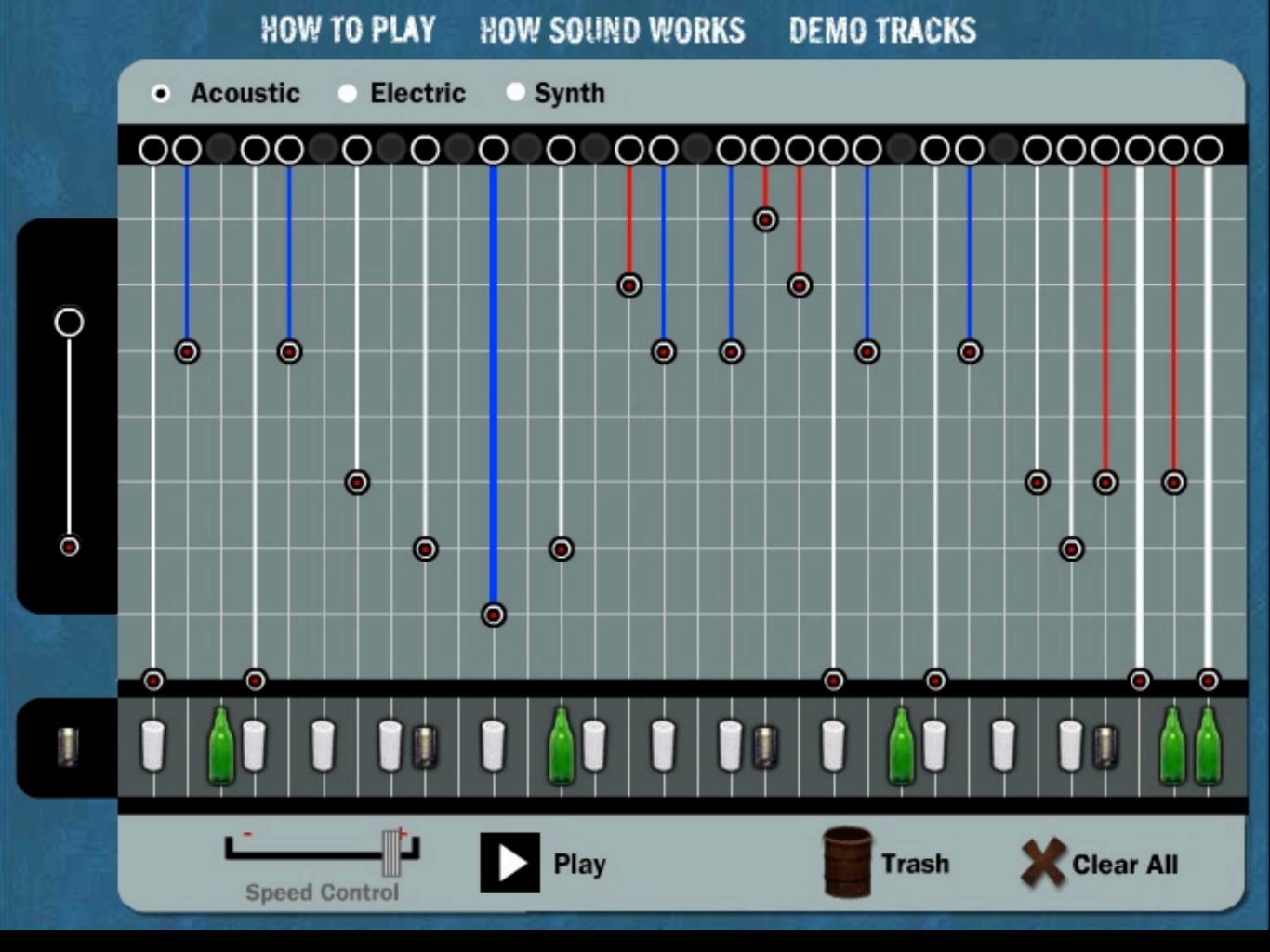
Ideal Design Squad challenge: Create a dummy that can act as a testing subject for different things.



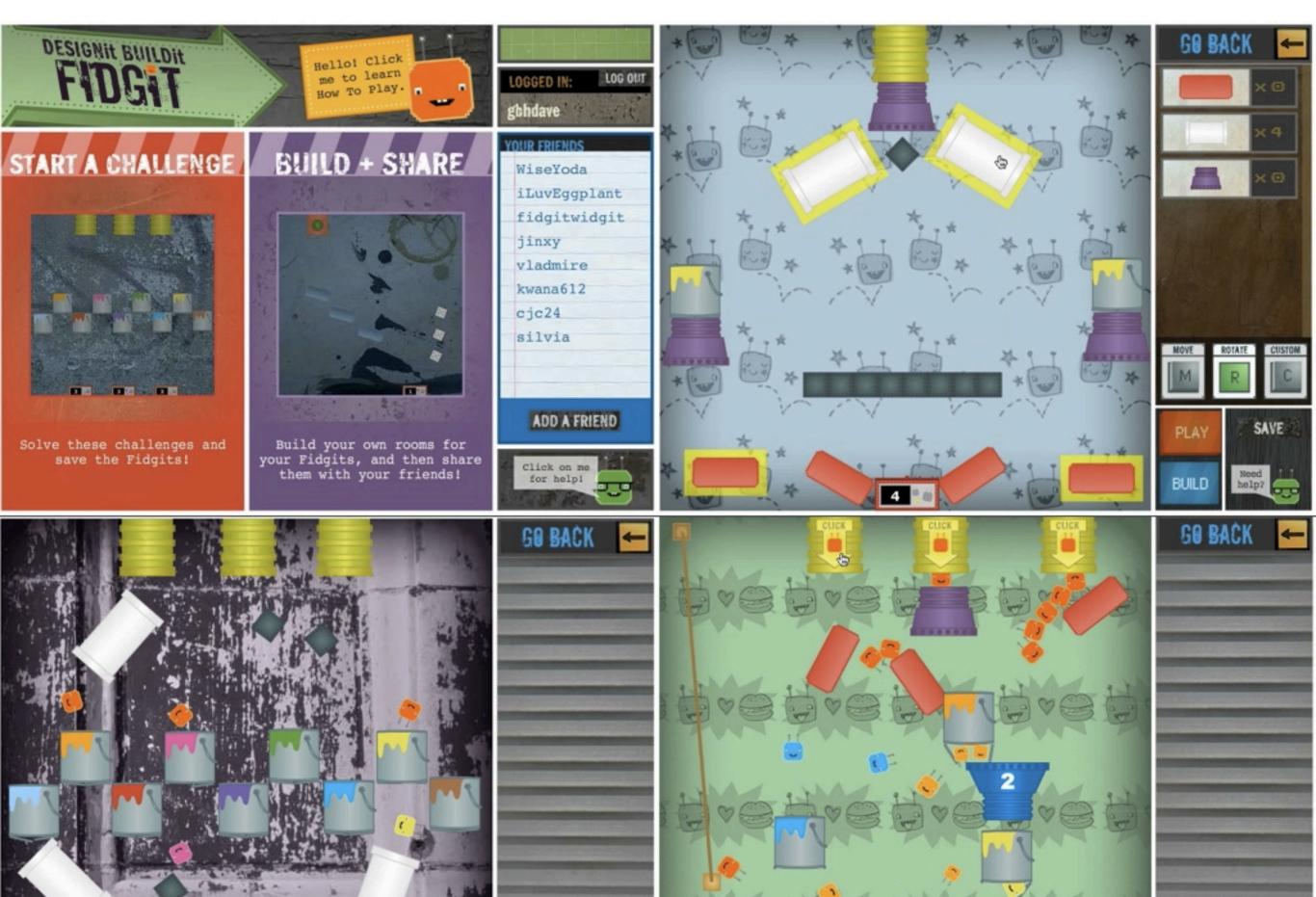
Home | Challenges | Cast | Games | Profiles & Video | Build Projects
Engineers | Parents & Educators | Site Map | Help

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## spoiler alert: kids love games



## http://pbskids.org/designsquad/games/



### So, did we change the world yet?



### Evaluation

# ...Has a significant impact on children's understanding of engineering and attitudes toward engineering.

After watching four episodes of the program, children were significantly more likely to agree with three statements about the work engineers do:

1.engineers help make people's lives better, 2.engineers solve problems that affect real people, and 3.engineers sometimes have to test their work and start over again.

(Goodman Research Group, 2008)





In addition, **children's design process skills improved**, and they demonstrated a good understanding of the science and engineering concepts presented in the programs.

Nearly two-thirds of the children were interested in participating in an engineering afterschool program after viewing, compared to just below one-third prior to viewing.

(Goodman Research Group, 2008)



## Evaluation

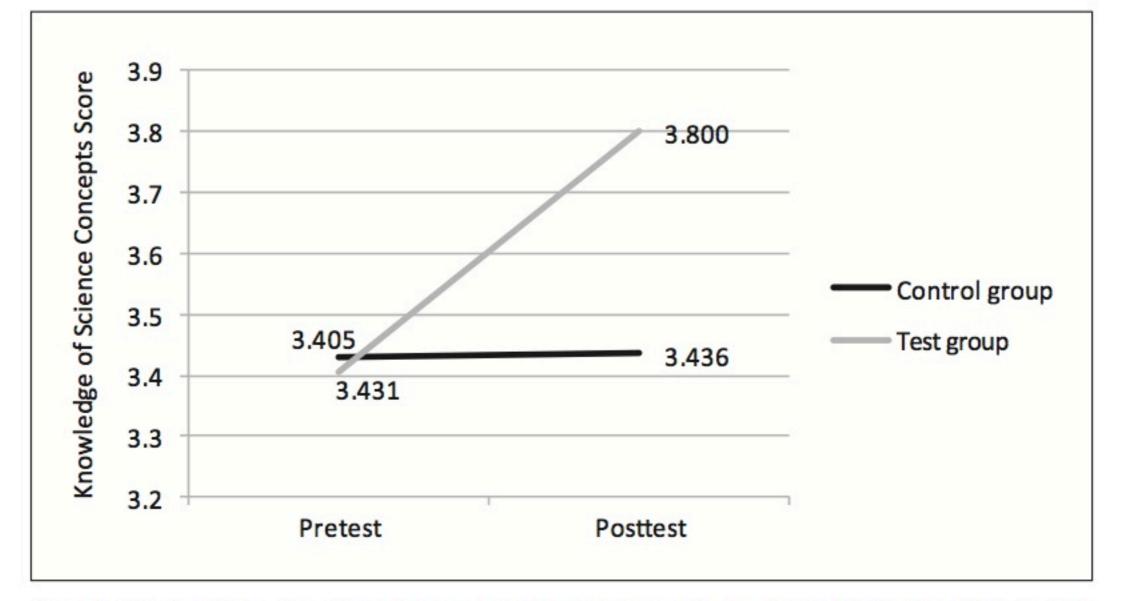
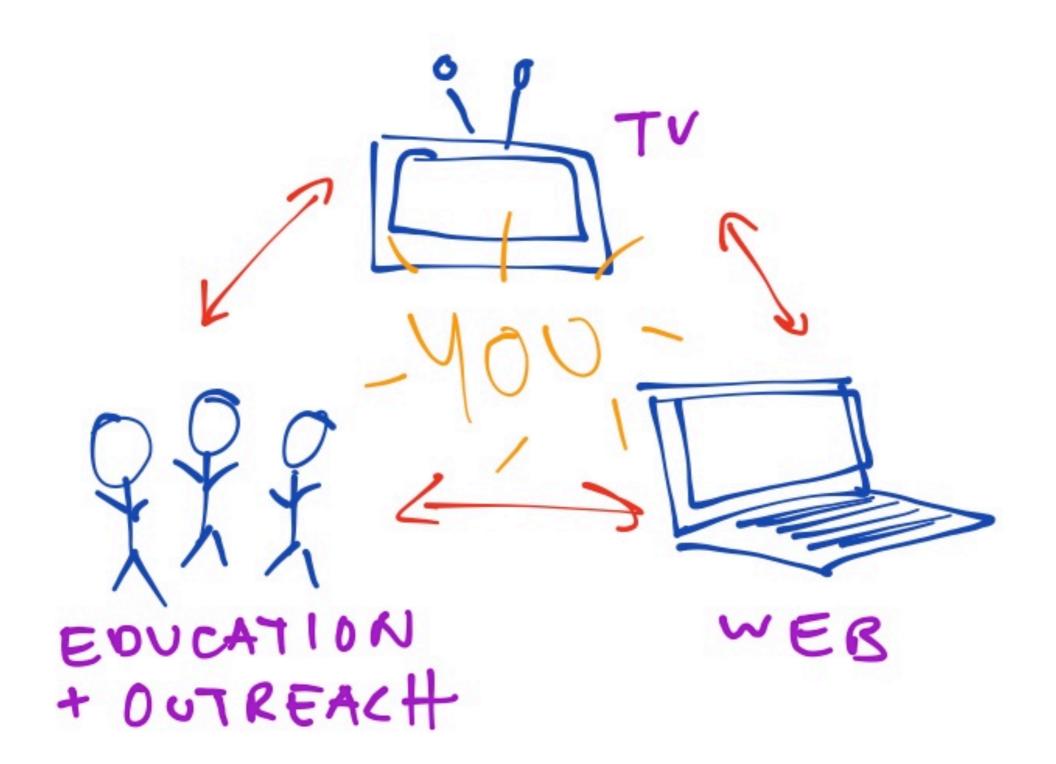


Figure 4 Gains in understanding of key science concepts after students were shown episodes of *Design Squad* in their middle school science classrooms. Source: Adapted from Concord Evaluation Group, 2010.



1.5



Inviting kids to share their creative engineering ideas



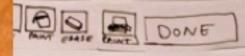
Hangers-On

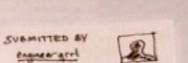
Shard Shalaby (Photos Kare Lace)

These torus of paper, may tring closed its creationant with closes. It is primary to the parall address if its disabilities that consistentians implying our or a strange hanges. For we get to dissolution the parallel parallel and the strange of the Accomparison to the annual measure the Laboration Rack. dissipation by Tonton New Diple, and it tooles the annual of the parallel parallel

#### SKETCH GALLERY



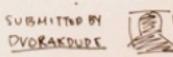






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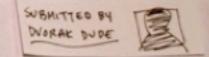




Earing Holder

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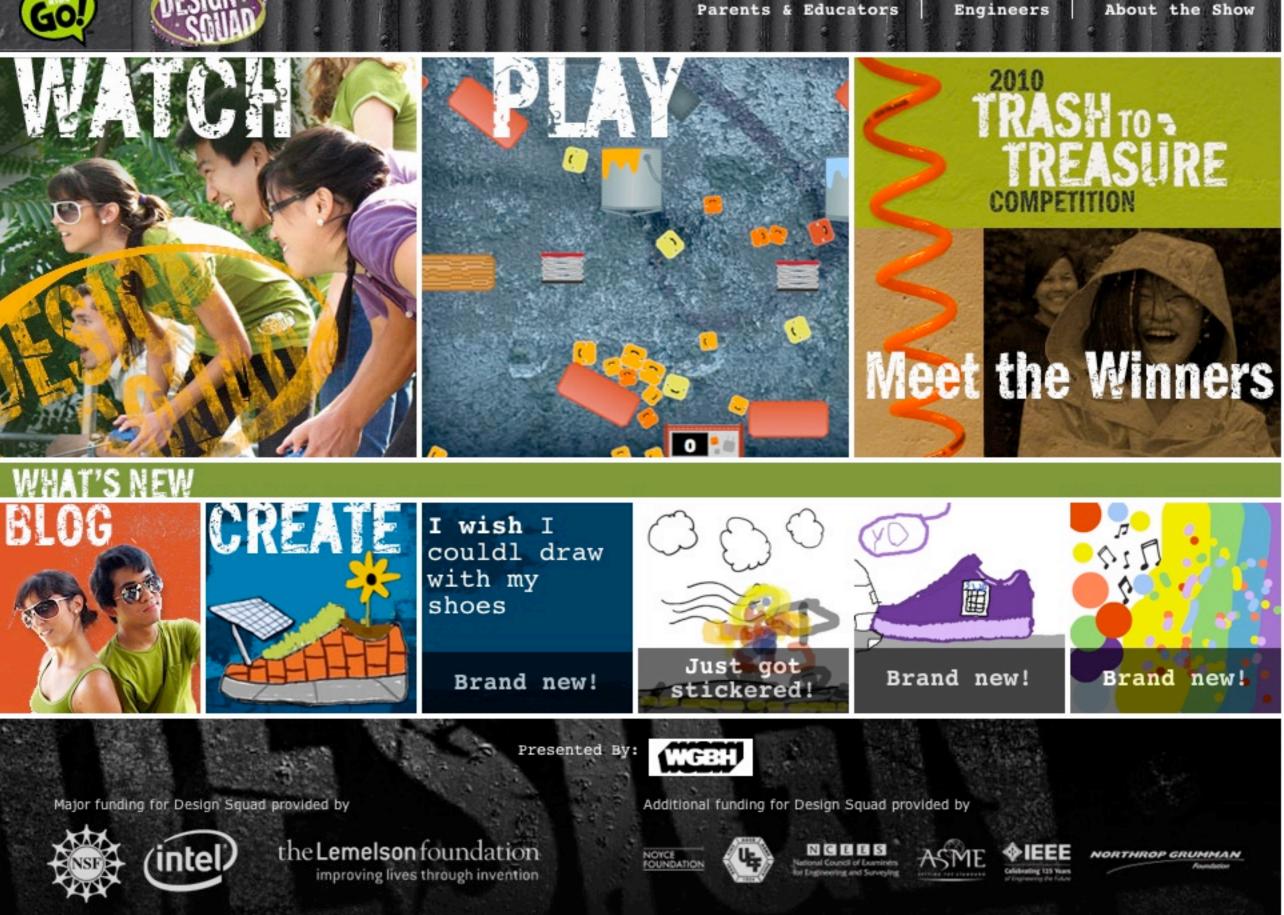


OVORAK OUDE

sent him/herself?

When looking at an illustrator's website what type of ntation do you like?

We did focus groups to see what inspired kids

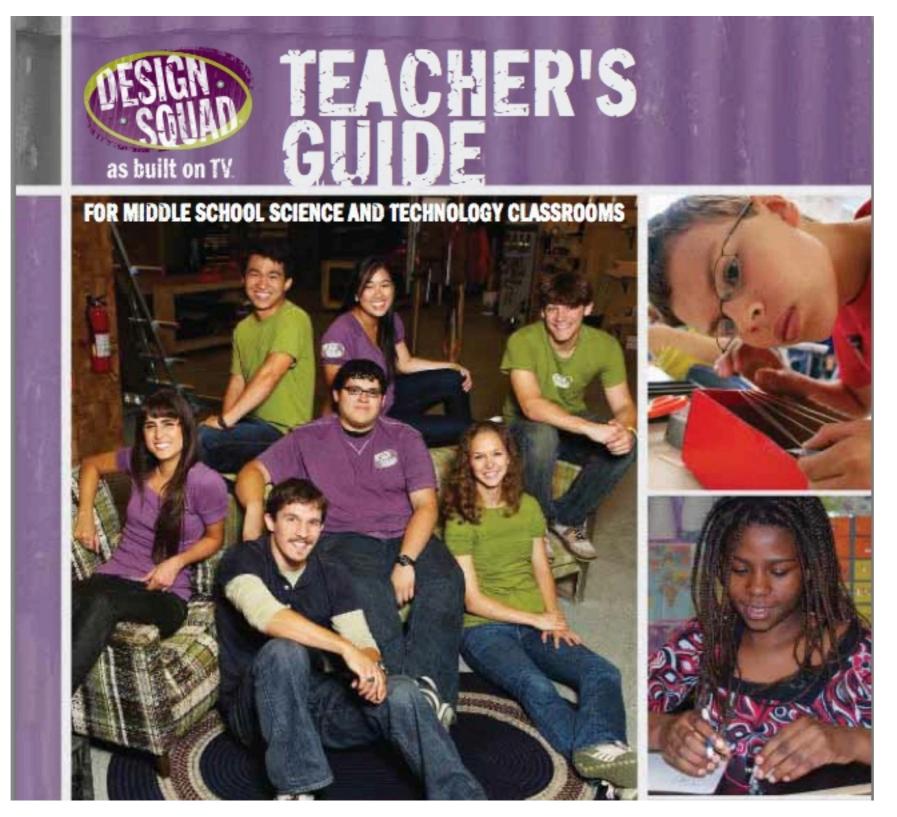


Design Squad Site as re-launched in 2009

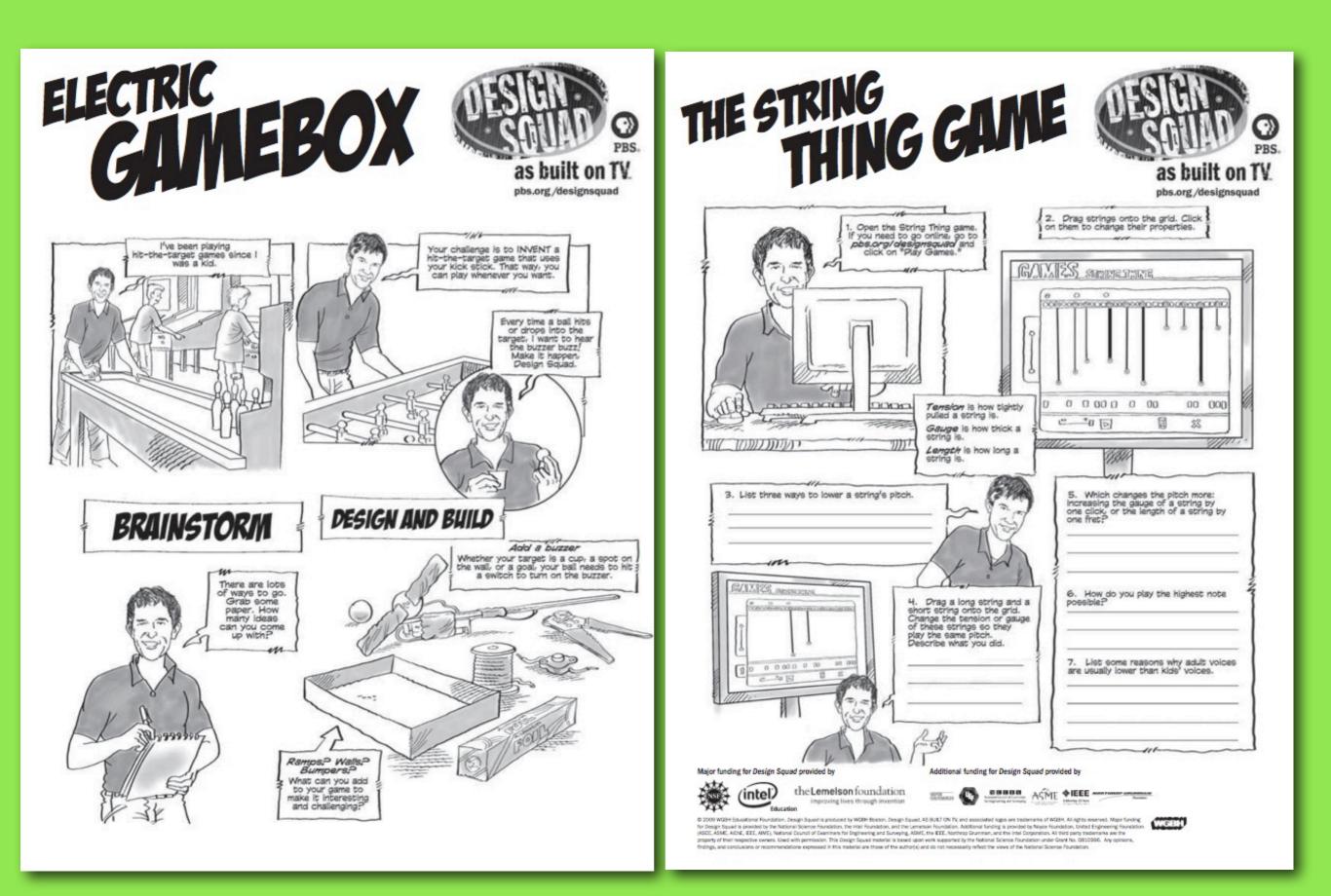




Kids give virtual stickers to each other as encouragement!



<u>http://pbskids.org/designsquad/parentseducators/</u> <u>guides/teachers\_guide.html</u>



1. identify the problem 2. brainstorm 3. design 4. build, test, redesign 5. share



Watch series preview:

http://www.youtube.com/watch?v=xtTowE8NL10









Pool450 says ...

I wish every car was solar powered!



## "Engineering is about making dreams come true

Games

Video

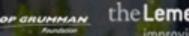


#### Major funding Series funding





NORTHROP GRUMMAN



the Lemelson foundation improving lives through invention



Additional funding

M MOTOROLA OIEEE

Trash 2 Treasure Winners! October 28, 2010 10:04 AM

Watch the gvideo!

Presented by:



Read More

Find another PBS Station

24.115

Blog

6-8 2/2

Meet the Grand Prize winners of the 2010 Trash to Treasure competition! Lilly, MaryAnn and Daniel came to Boston to see

their designs built by Continuum, a design consultancy.

Parents & Educators

🖈 Heroes 🧕 Me

Design Squad Nation is produced by WGBH Boston.

Major funding is provided by the National Science Foundation.

Series funding is provided by the National Aeronautics Space Administration (NASA), Northrop Grumman Foundation, and the Lemelson Foundation. Additional funding is provided by Noyce Foundation, United Engineering Foundation

Play

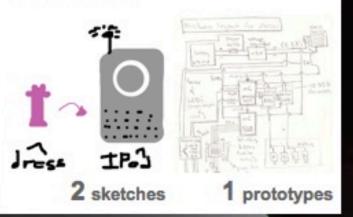
Create

GO

JuanDSN says... I wish I could turn my clothes into something more fun.

DESIGN squad.

Nation



### "Fashion moves, fashion lives... want to be that part

Games



Play

My New Favorite Toy - The Laser Cutter February 22nd, 2011 02:32 PM

Blog

Curious how Eduarda and I created the origami-inspired pattern for our gown? We used one of my favorite new toys -- the Laser Cutter. This machine allows us to create a number of precise cuts in the fraction of the ...

#### Read More

Parents & Educators

A Heroes

R Me





NORTHROP GRUMMAN the Lemelson foundation improving lives through invention



Video

Projects

Ѩ MOTOROLA 🚸 IEEE

Presented By:



Design Squad is not airing this week. Check the TV Schedules for more information.

Design Squad Nation is produced by WGBH Boston.

Create

GO

Ibonkygirl says... I wish to turn trash into something useful!

DESIGN squad.

Nation





13 sketches



Major funding Series funding





NORTHROP GRUMMAN the Lemelson foundation improving lives through invention



Additional funding

 $(\mathcal{A})$ 

MOTOROLA & IEEE

Presented By:



Design Squad is not airing this week. Check the TV Schedules for more information.



Design Squad Nation is produced by WGBH Boston.

# My invention is coming to life. This is amazing "

Games



Video

Projects

**DSN Ep10: Trash to Treasure!** March 30th, 2011 04:09 PM

For the season finale, Design Squad Nation asked kids across the country to recycle, re-use, and re-engineer everyday materials into the next big invention in the 2010 Trash to Treasure contest. Three grand-prize winners visit Boston to work with ...

Blog

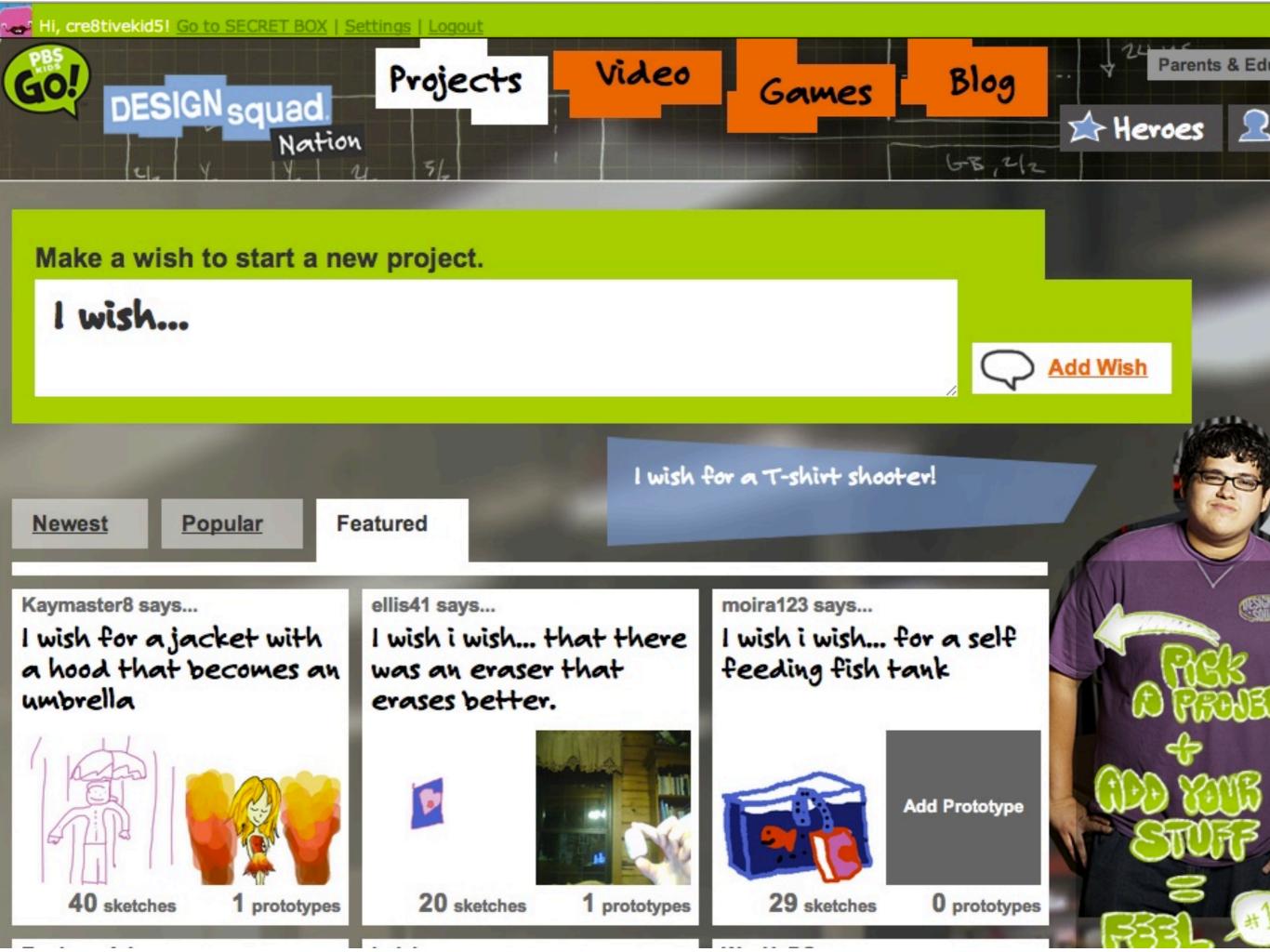
**Read More** 

**Parents & Educators** 

👤 Me

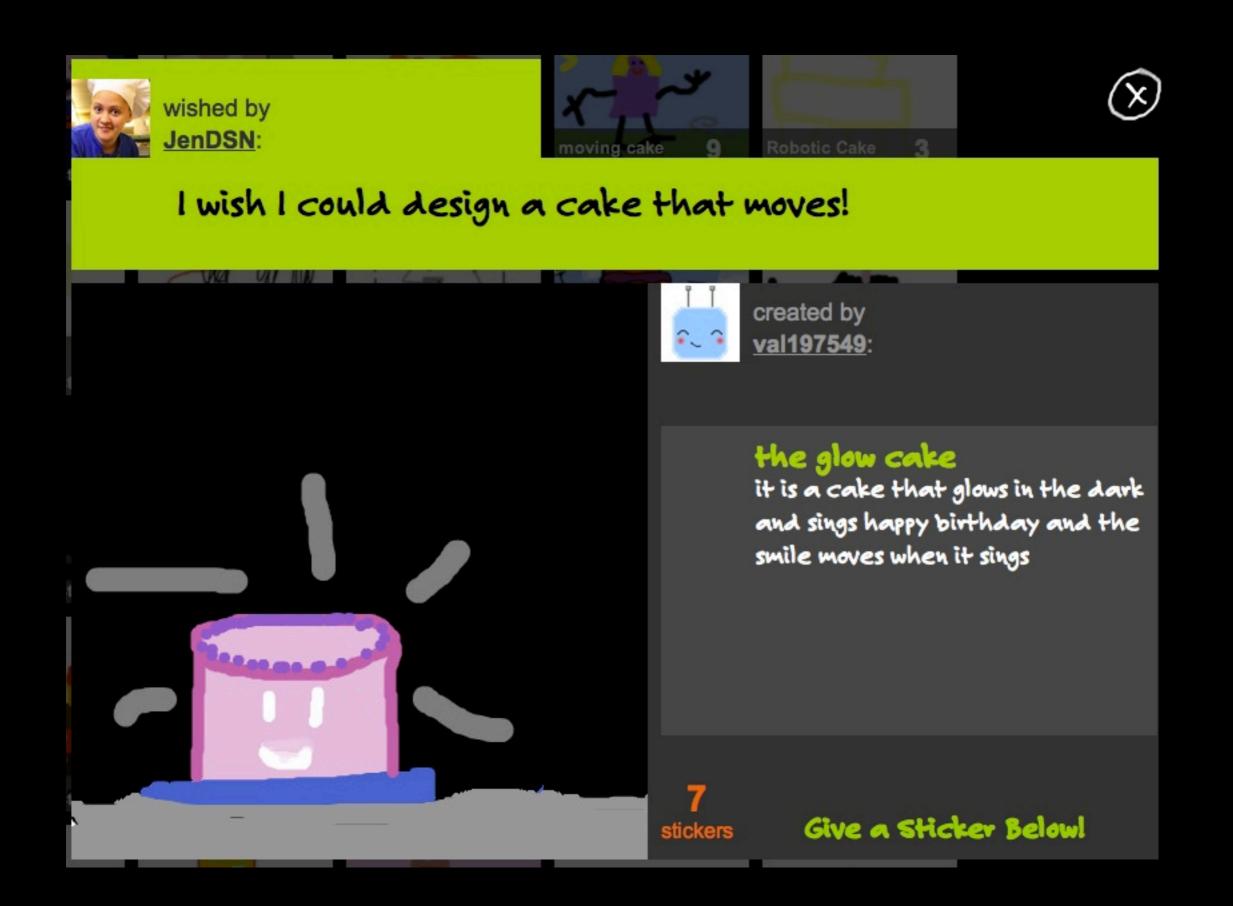
🚖 Heroes 📗

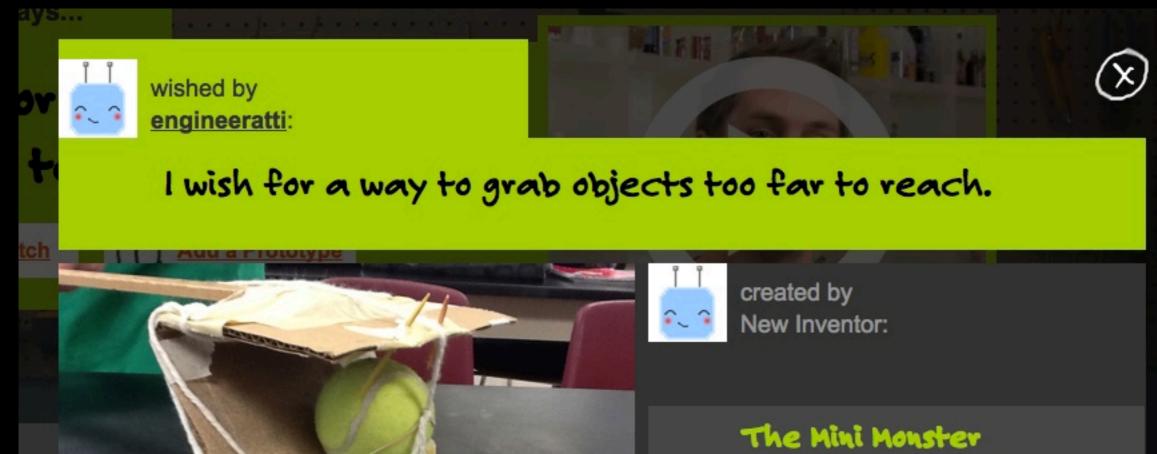












We built our machine out of cardboard, string, tooth picks, tape and a yard stick. With our machine we picked up a water, tennis ball, a cup, cotton ball. The string opened and closed the mouth and the tooth picks picked up tools.

stickers



wished by EngineerAdam:





### I wish for a hidden alarm for my stuff!

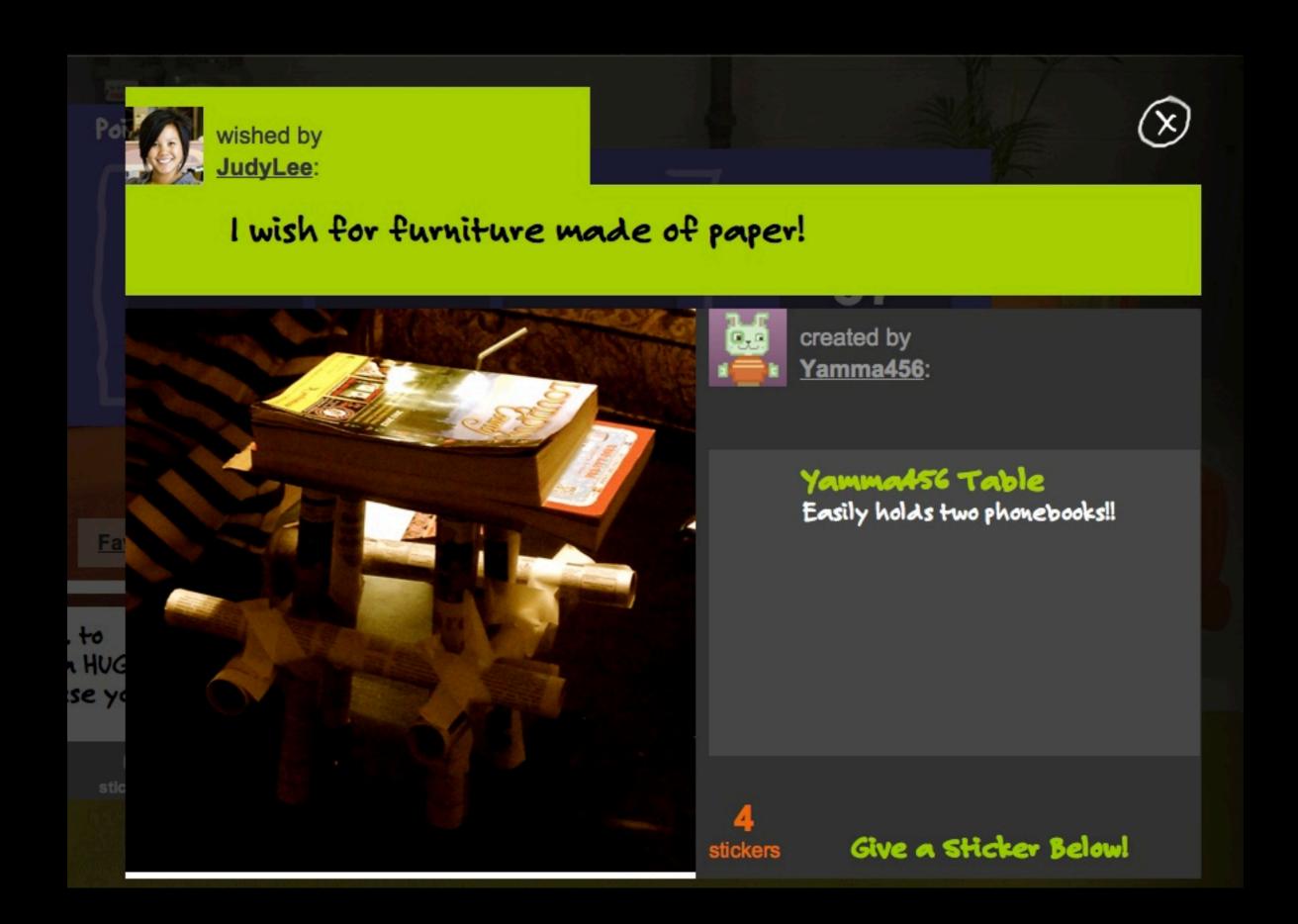


created by princess4720:

#### diary alarm

this is a diary alarm. it waches your diary so nobody will look in it, lets just say to keep little or big brothers or sisters away. and if i does see somebody trying to look in your diary it sounds a alarm. thanks for looking.

3 stickers

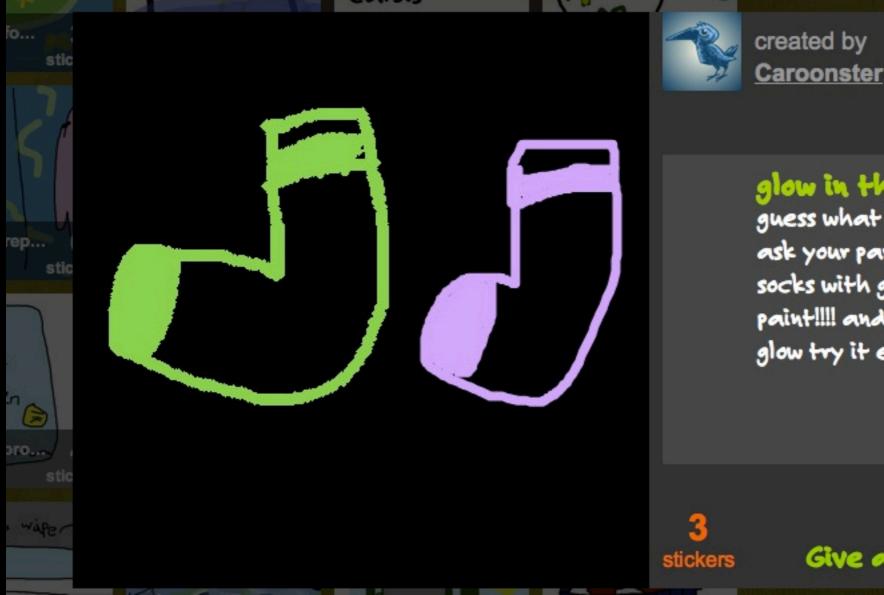




#### wished by porQpinz:



### I wish I had colorful light-up socks!



### Caroonster:

#### glow in the dark socks

guess what you can do this, just ask your parents to paint your socks with glow-in-the-dark paint!!!! and i did it its cool. Now glow try it every-1!!

Give a Sticker Below!



wished by rmb13:



I wish there was a way to feed my cat when I'm not in the room.



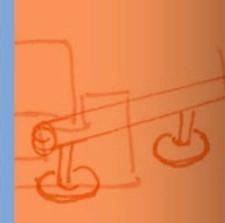




#### The BUILD BIG Contest

Design Squad Nation challenged you to choose an activity from the DSN Web site, form a team, and build your own super-big version. Then take a video of your working design and upload it to YouTube.

We were impressed by the number of amazing BIG projects we received! Every team did outstanding work. Our judges looked at every entry carefully before selecting our finalists, runners up and grand prize winner. Congratulations!





#### Grand Prize Winner

String Thing by Paul, Kalin and Robert

"Together, my group and I took the Design Squad project String Thing and took it to the next level. The original String Thing is virtual game, but we brought it out and made it in REAL LIFE, BIG! The lineup is made from nine separate sections with nine strings on each section. Strings are made from rubber bands, which are attached to "sound boxes." The boxes are each handmade from plywood and serve to amplify the sound of the rubber band being strummed (like a guitar). Each string is tuned to a different note based on where markers are placed to hold the string down. It is played by a player running down the length of the boxes. In the video, our lineup is set up to play the classic piece "Jesu, Joy of Man's Desiring" by J.S. Bach, but is totally customizable afterwards (by moving the markers on the strings)."

### Watch winning competition entries

http://www.youtube.com/playlist?list=PL92A533770D7F109E

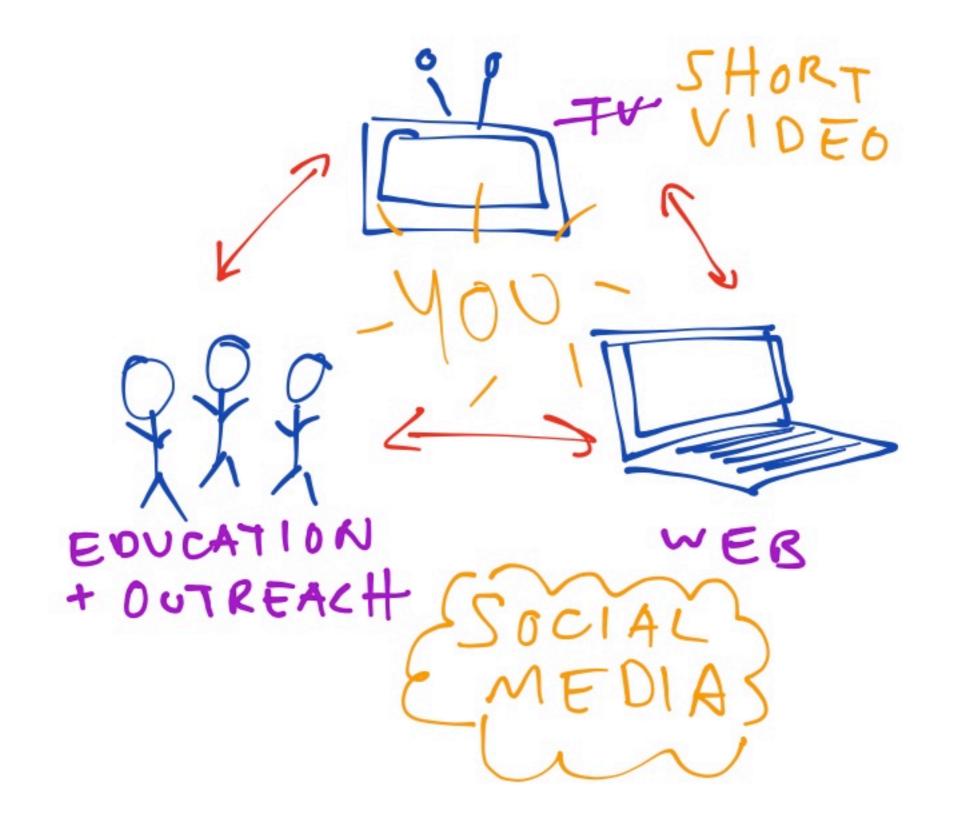
1. identify the problem 2. brainstorm 3. design 4. build, test, redesign 5. share AGAIN



# Orcom It, Boild It, Live It,







### Talking to Kids! Some notes from our many focus groups...

#### Have you ever built anything?

Hockey stick, with wood stick and blade, customized it
Angry Bird out of paper and sticks. Threw it at stuff
Snowman (LOTS of kids said this)
LEGOS (about half the class)

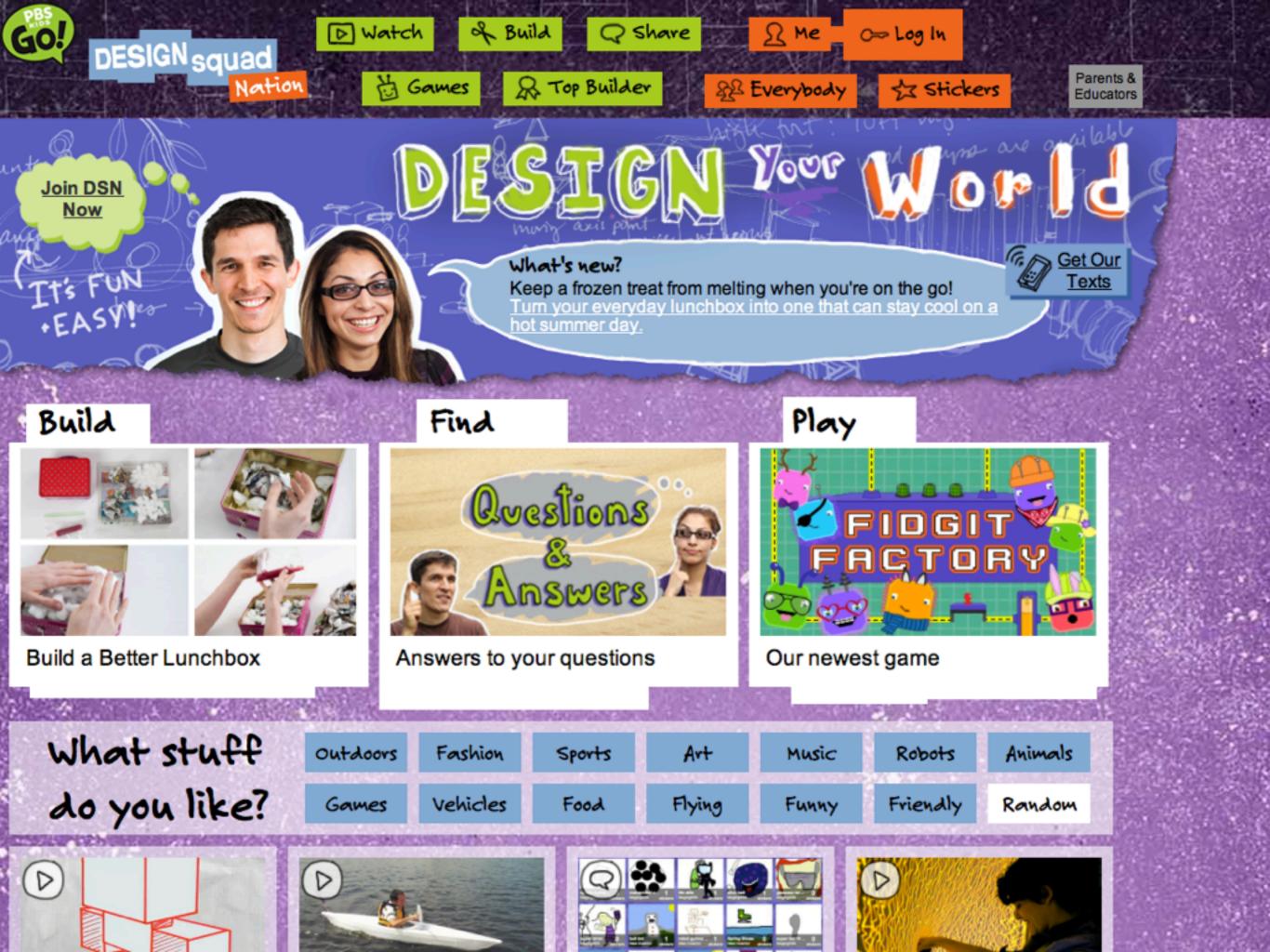
- Volcano (EVERYONE!)
- •Light house (was a class project). Liked it because it was fun & used materials at home

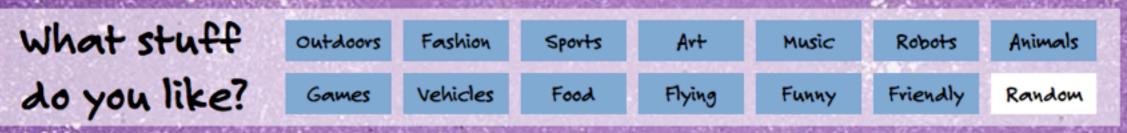
•A red sweater

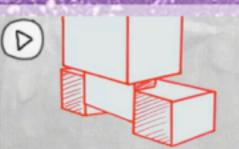
#### What do you want to build?

•Snowdog, but don't know how

- •Instructions are boring because you have to read them
- •LEGO apple
- •Homework machine
- •Jack o'lantern
- •Half said they want to decorate things
- •Xmas light remote







How Do Joints Work? When you build things out of wood, like furniture and roofs, how do you connect the pie...



PVC Kayak It's sink or swim time! In this episode, a master kayak builder challenges the Design S...



Join the Team There's still time to join our super sporty Team Challenge!



Wall of Sound This instrument lets you hear -and see -- music in a whole new way!



Build a Better Lunchbox

Turn your everyday lunchbox into one that can stay cool on a hot summer day.



Better Lunchbox Keep a frozen treat from melting when you're on the go!



How to Make a Better Lunch Watch as Nate shares his tips for engineering a better lunch!



SECON." The Hore Lone Uner Index pairs and adea 1 Julio south Pily a backteriske link my band at Suity against the Inse has 17 BERTS 60 HOLE "Uner inse These ree made at a conflicted to solarity and angle link them they deat built at all feed

Safer Swim Swim practice would be a lot more comfy with this design from DS Newbie agtrose!



Why Do Boats Float? We received this question from "anonymous!@" who asked us: "Why do boats float?"



**Cardboard Furniture** 

Sit back and relax as the Design Squad teams create furniture out of recycled cardboard



Fresh Idea DS Newbie zendaya924 would use balloon power to deliver

fresh food Nice!



Waterfall Swing Set Just in time for summer: a new way to play! This swing set rains down as you ride, than



Fashion

Friendly

Art

Food

Games

TOP BUILDE Poster Coaste

A۱۱

Animals



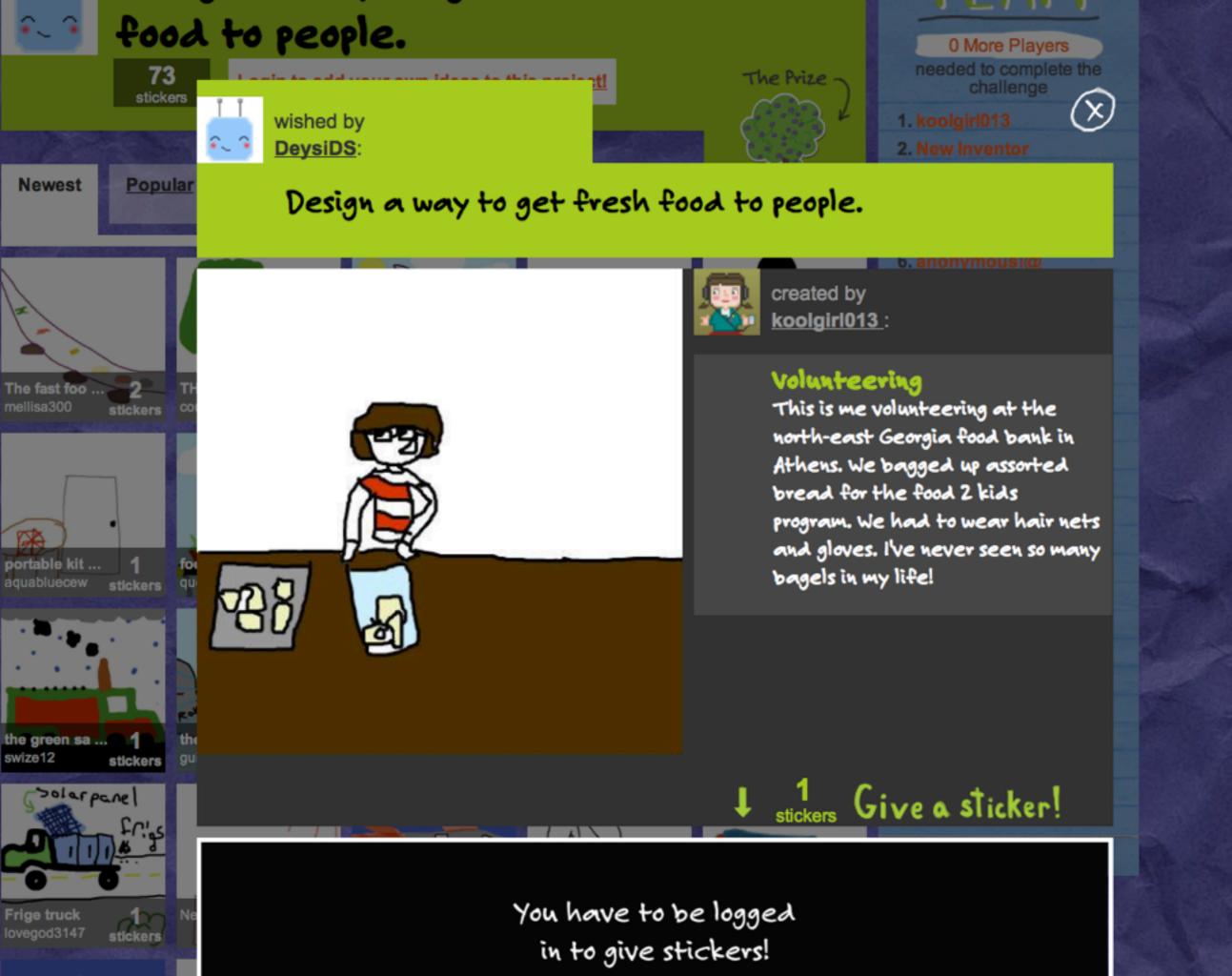
#### Vacuum Hockey

Start an air hockey tournament in your own living room! Score big when you build an air hockey table out of a repurposed vacuum.

http://pbskids.org/designsquad/video/vacuum-hockey/

















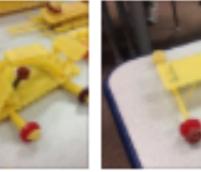


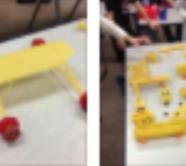






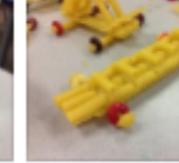








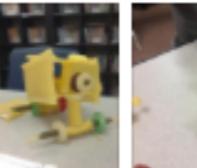






















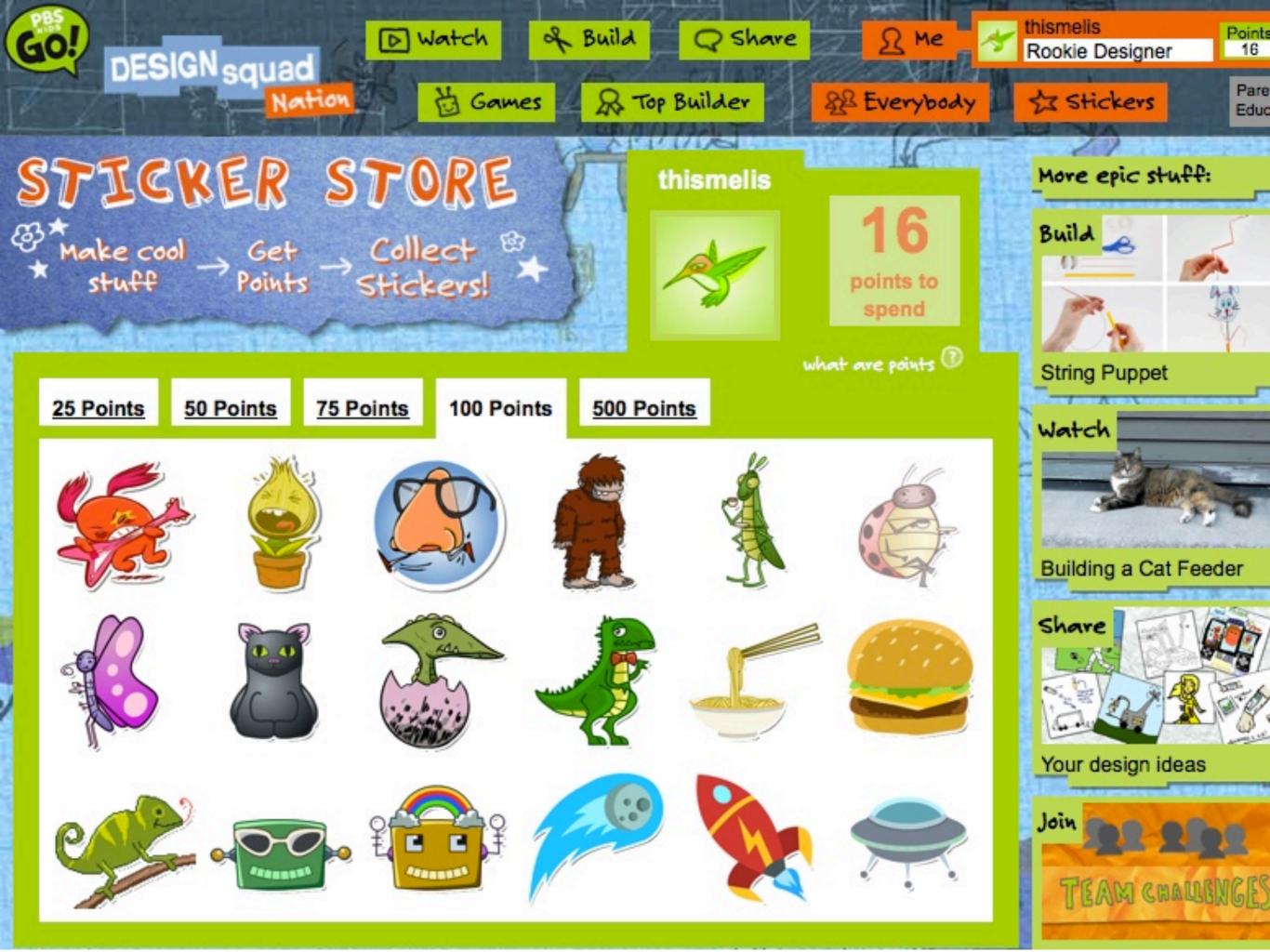








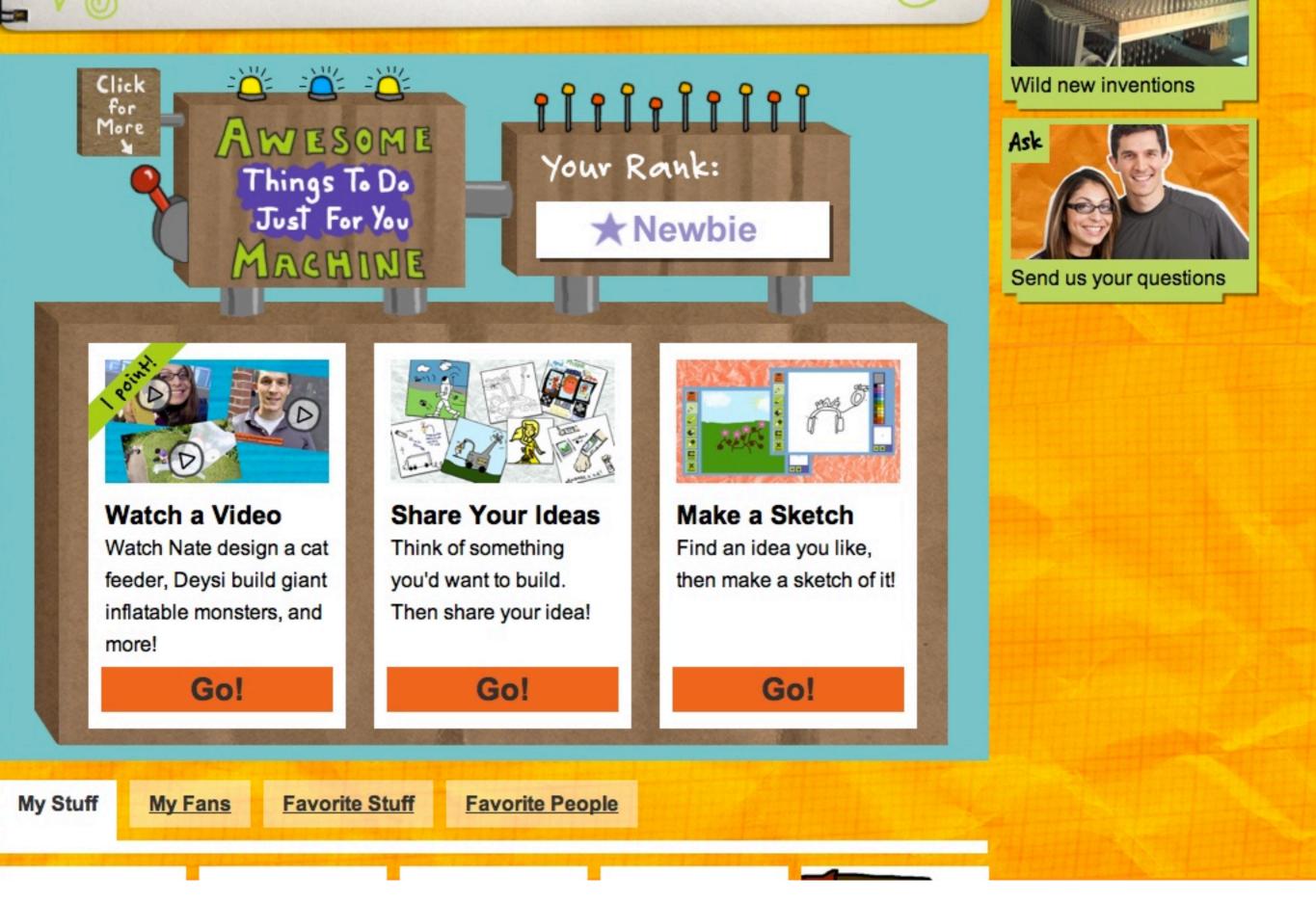










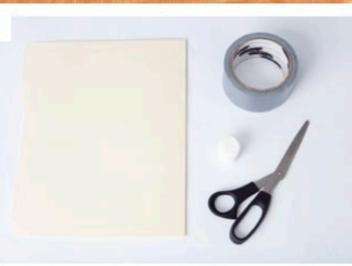


Level Up: Pathways through the content





#### Instructions



Here's what you need to make your Marshmallow Blaster:

- o 1 manila file folder (or thick paper, such as cardstock)
- 1 fresh large marshmallow
- o Tape

CC

· Scissors (optional)

Cut the tape ahead of time

#### More epic stuff:



Take the Challenge



Add onto designs

Build 💪

2

1



http://pbskids.org/designsquad/games/fidgit\_factory/

























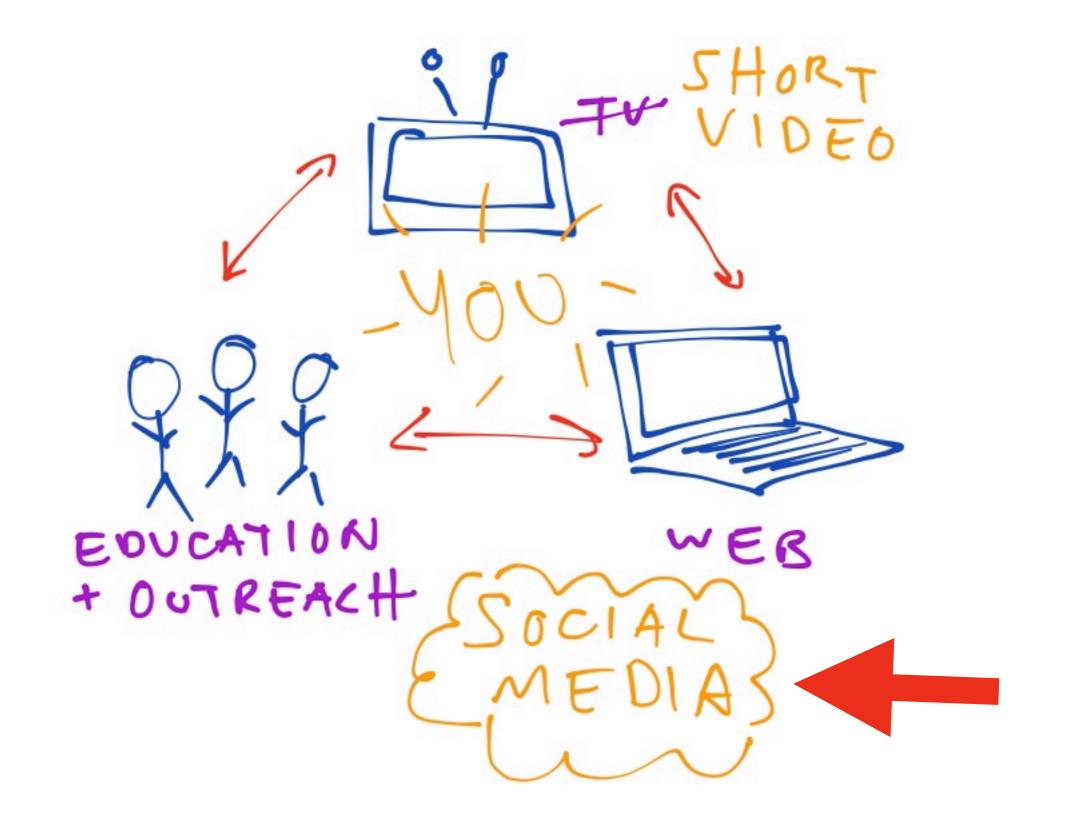


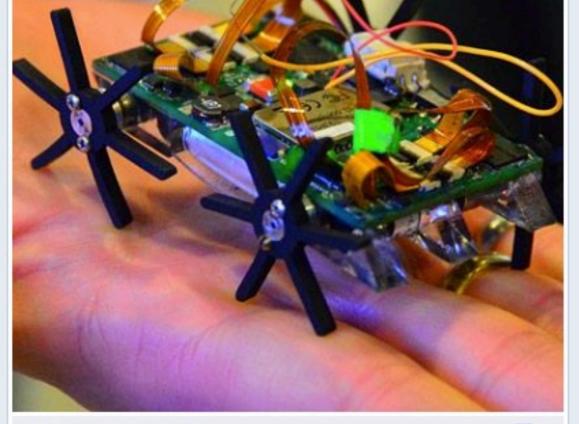






# 1. identify the problem 2. brainstorm 3. design 4. build, test, redesign 5. share





Like · Comment · Share

1

Arun Prasath, Kris Odahowski, Serafin Blis and 4 others like this.



Design Squad

It's a fight to the finish! Blast armed balloons across the room and compete to be the last balloon standing. On your mark, get set, joust! http://ow.ly/m2VBK





Like · Comment · Share

Mark Tribue likes this.

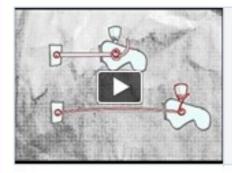


**Quentin Israelsen MAKE A SEASON 4** June 18 at 7:44am



Design Squad shared a link. June 17 创

This Design Squad Nation animation shows how the frequency at which a string vibrates-its pitch-is affected by its length, tension, and gauge. http://youtu.be/6A3brp3vYAo



#### DSN Animations: How do Musical Strings Work?

This Design Squad Nation animation shows how the frequency at which a string vibrates-its pitch-is affected by its length, tension, and gauge. For

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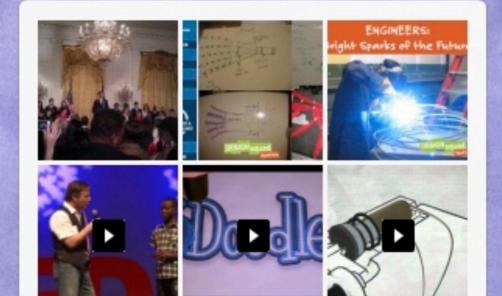
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Design Squad Nation         ØDesignSquad         Mard-winning PBS series dedicated to getting kids excited about engineering. We inspire kids to Dream it. Build it. Live it.         EVERYWHERE! • pbskids.org/designsquad						
<b>2,441</b> TWEETS	967 FOLLOWING	1,307 FOLLOWERS	9	Follow		
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DESIGN squad	Join the team! The	tion @DesignSquad ere's still time to join of more: ow.ly/mczLn #	our super sporty Team STEM	23m		
DESIGN squad	Why do boats floa	tion @DesignSquad t? See how you can float! ow.ly/mczxV #	use Archimedes' prind STEM	5h ciple to		

Design Squad Nation @DesignSquad

## http://www.youtube.com/user/DesignSquadNation



#### **Design Squad Nation**







### Tour Design Squad's New Website: Q&A with Nate

342 views 9 months ago

Do you like sports, fashion or music? Or just being creative? Learn more about our fun projects, video and games and join Design Squad today!

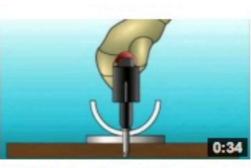
For more Design Squad Nation, go to http://pbskids.org/designsquad

#### Playlists





DSN Animation: What is Sewing? 95,093 views | 2 years ago



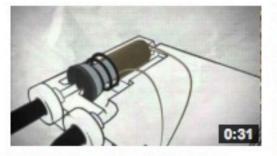
DSN Animations: What is a Pop Rivet? 90,276 views | 2 years ago



DSN Animation: How do ball bearings work? 83,549 views | 2 years ago



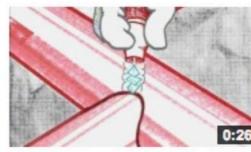
DSN: How to build your own skateboard 65,828 views | 2 years ago



DSN Animation: What is a Solenoid Valve? 51,103 views | 2 years ago



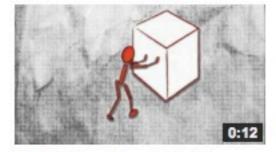
DSN: Learning how to weld 37,871 views | 2 years ago



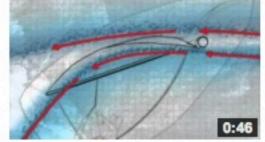
DSN Animations: What Is Tig Welding? 36,367 views | 2 years ago



4-Wheel Ballon Car | Design Squad 25,637 views | 9 months ago



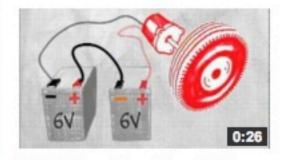
DSN Animation: What is Torque? 22,132 views | 2 years ago



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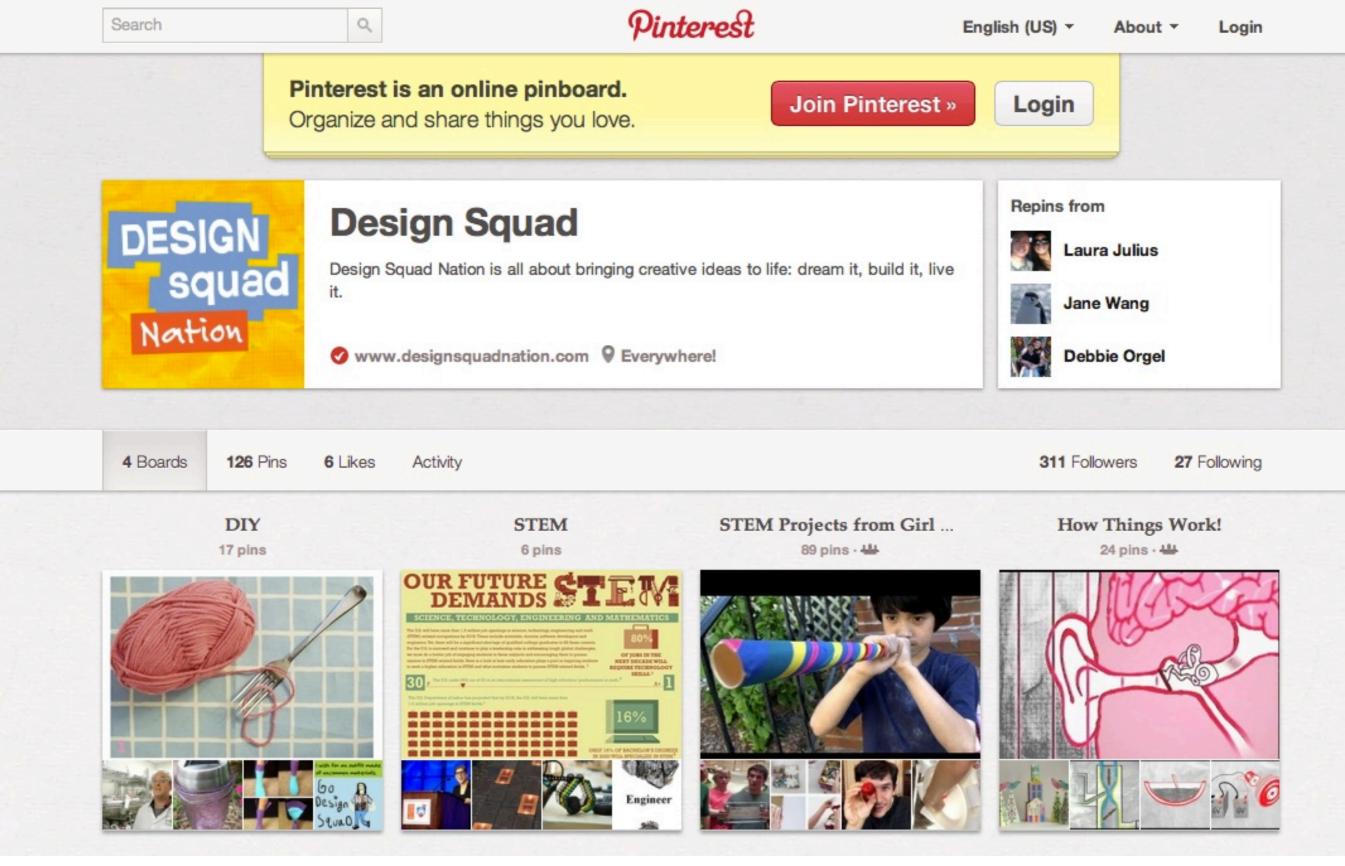


DSN Animation: What Is Sound? 14,818 views | 2 years ago



DSN Animation: How Wiring Batteries in Series Works 13,454 views | 2 years ago

YouTube - Most Viewed Design Squad videos



## http://pinterest.com/designsquad



## Weekly Social Media Toolkit

\*IMAGE SHARE\* <u>click here</u> or <u>http://ow.ly/m7cGo</u>

Facebook <u>click here</u> or <u>http://ow.ly/m7cGo</u> Twitter <u>click here</u> or <u>https://twitter.com/DesignSquad/status/346590992473915392</u> Pinterest <u>click here</u> or <u>http://pinterest.com/pin/251005379204594193/</u>

FACEBOOK:

\*\*\*Keep a frozen treat from melting when you're on the go with this [tag fan page @Design Squad] DIY project! Turn your everyday lunchbox into one that can stay cool on a hot summer day. <u>http://ow.ly/IT4G1</u> (include attached image: betterlunchbox)

\*\*\*How do Musical Strings Work? This [tag fan page @Design Squad] animation shows how the frequency at which a string vibrates—its pitch—is affected by its length, tension, and gauge. <u>http://youtu.be/6A3brp3vYAo</u> (include attached image: musical strings)

\*\*\*It's sink of swim time! In this [tag fan page @Design Squad] episode, a master kayak builder challenges teams to create their own lightweight ten-foot-long kayaks made of non-traditional materials! <u>http://ow.ly/</u> <u>m7dAn</u> (include attached image: kayak)

TWITTER:

\*\*\*Keep a frozen treat from melting w/ this @DesignSquad DIY! Turn your lunchbox into one that can stay cool this summer <a href="http://ww.ly/IT4G1">http://ww.ly/IT4G1</a>

\*\*\*How do Musical Strings Work? Watch this @DesignSquad animation to find out: <u>http://ow.ly/m2WCo</u> #STEM

\*\*\*It's sink of swim time! In this @DesignSquad episode, teams build lightweight boats made of non-traditional materials <u>http://ow.ly/m7dAn</u>

#### A few questions sent in by kids through the website...

aria12309908; how does a car work. djjp75: Is there any way you can make a person fly on earth winx104: I have a lot of stamps and I don't have a place to keep them.Can you give some ways to repurpose everyday objects to hold stamps or other things? anonymous!@: do you think time travel will ever be invented anonymous!@: whats in a comperter anonymous!@: how does a car work high333: How do T.Vs work. anonymous!@: how do you make a airplane have a aircraft carier beanka40: how does a microwave work and what is the things i should use to make my own ice cream? JUSTFORFUN: How to make a plane? ddad206; how does a meddle detecture work? pare23456383: how do you make stickers? anonymous!@: how do you make a paper airplane have a paper aircraft career. anonymous!@: How can you make a scooter. nathaly904: My mom and I have always wondered how do air planes really fly .How do they really fly? mmmm669: how is a pen made dophin235: how do doorbells work? nasa1212624: how do robots work? anonymous!@: how does a blender work? dalmatian: how does a clock work? and can I make one my self? laia40: how do you keep a straw down in a glass anonymous!@: Does air conditioning use water?

## The Story of **CAPTAINUNDER651**

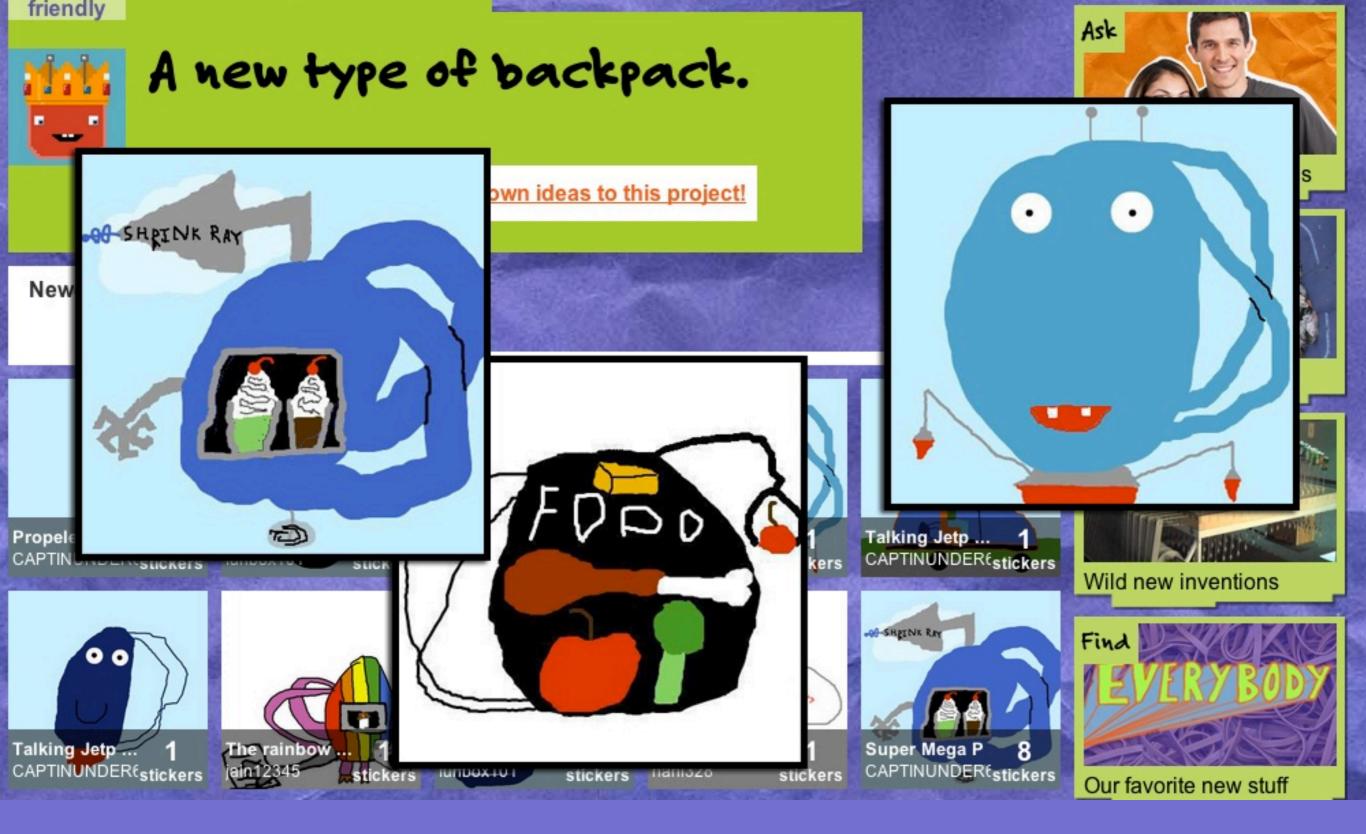


CAPTINUNDER651 has received the highest rank on the DSN website: Phenom. He became an active member in August of 2012. He has earned almost 4000 points for contributing to the community, and has used those points to purchase 71 stickers from the Sticker Store. He has contributed 41 project ideas and 113 designs. He has used these stickers 443 times on his favorite ideas and designs, and has received 411 stickers from other players.



CAPTINUNDER651 has participated in 10 team challenges.

He submitted 6 sketches to the Team Challenge "Design a backpack that does something extra."



After the team challenge closed, he created his own project idea titled "A new type of backpack," and submitted 12 more sketches.

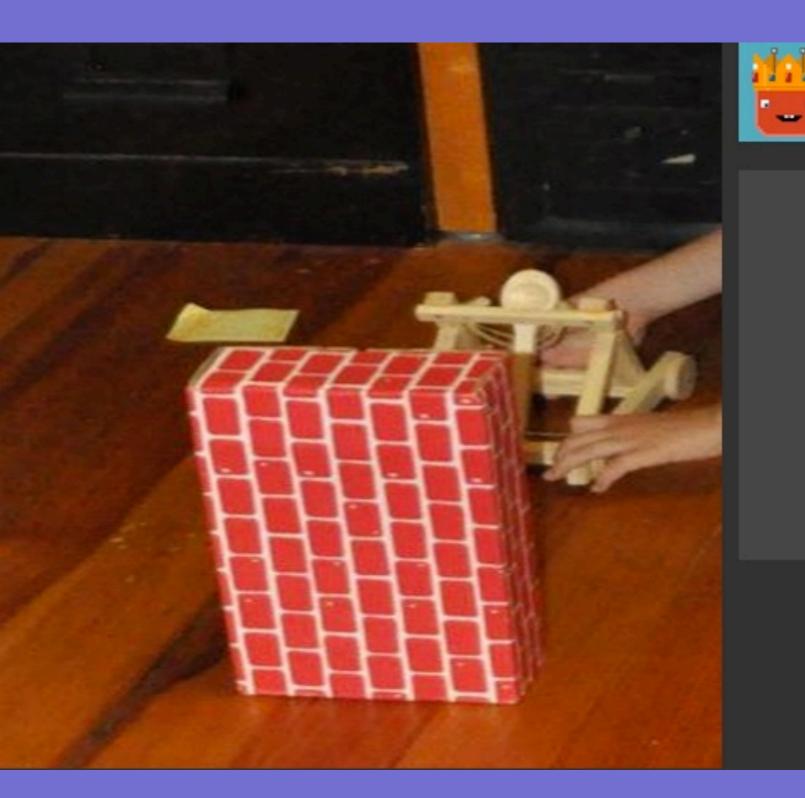
CAPTINUNDER651 also added a sketch called "Telapack" to an idea "a backpack that you can call your friends on" by user isjj



One of CAPTINUNDER651's sketches, the "Musicpack," was re-sketched by another player: pieabc123, who used the Sketch on Sketch feature to add headphones to CAPTINUNDER651's original design.

Another player, funbox101, also added to the "Musicpack," making it a boombox.

CAPTINUNDER651 showed his appreciation by giving funbox101's design a sticker.





#### A catapult

You pull back on the catapult, making potential energy, and then when you let go it turns into kinetic energy, and the catapult has wheels to roll it around.

CAPTINUNDER651 has sent in 3 photos to Design Squad of prototypes he has built, including this catapult.



CAPTINUNDER651 has also beat levels 1-4 of the new Fidgit Factory game and received bonus stickers for all 4 of those levels for getting up to a higher score.



## Dream it. Build it. Live it. pbs.org/designsquadnation

**MAJOR FUNDING** 

**PROJECT FUNDING** 

**ADDITIONAL FUNDING** 











marisa\_wolsky@wgbh.org dave@symbolicstudio.com