

Kyky'S Guide to Write It Do It

Introduction

Hey! I'm Kyky and I competed in my first year of SciOly this year and plan on competing next year in eighth grade. This year, I was the writer in the SciOly event of WIDI (write it do it) and the event became one of my favorite events. My partner (builder) and I have really tried to expand on this event and this guide contains tips that worked the best for us this season. This guide is directed more towards Division B- Division C has the same general rules but definitely expect more if you are Div C. Remember that every team functions differently and to adapt these tips to help you succeed.

WIDI Rules and Basics

Like all SciOly events, everything is centered around the rules. It's important to read them all the way through and carefully, to avoid getting tiered or disqualified (DQed) in this event. You can find the 2019 rules on Soinc.org and the rules for WIDI don't change often and stay relatively the same. A large part of the rules is focused on the writer and what the writer can and cannot write. Any diagram/drawing will significantly deduct points from your score. If you draw a subsection of the model as a writer, you will be tiered and drawing a complete diagram/picture of the model will definitely get you disqualified. Remember, you can use any numeral, words, single letters, editing, punctuation, or scientific symbol that fits in the context of your writing. So you *can* say that "the structure is in the shape of an 'A'" but you *can't* say, "the structure looks like A."

Choosing the Writer and Builder

Choosing who will write and who will build is a really important part in WIDI. Both the writer and builder need to have a bond with each other to understand each other on another level. When picking events or being assigned events, make sure that you and your partner get along really well. This year, my partner in WIDI was one of my good friends and we were able to almost read each other's minds. The way my partner and I chose who would be writer/builder was throughout the tryout process. I scored higher on the writing part and I can't build to save my life so I was the writer. Keep in mind, you want to choose someone who has legible handwriting, but is also fast. Keep in mind, the builder should be deft with their hands and able to work with different materials. For example, whenever I attempt to build (see practice methods for why my incapable builder hands attempted to build) I manage to stab myself in the hand while trying to get a skewer through the cup. On the other hand, my partner does it almost effortlessly, further assuring the choice that we made to be writer and builder was a good one. If it's hard to decide easily who's writer/builder, try both roles and you and your partner can then decide based on experience and what feels more natural.

Time Management

The writer gets 25 minutes to write, and the builder gets 20 minutes to build. As a writer, you should not worry about time and as a builder, time isn't too crucial either. If you're the writer, there is no benefit for finishing early. So write as furiously as you can for the whole time even if you think you finished early. There's always *something* that can help make the

WIDI clearer for your partner and you can always look over what you wrote if you finish early. For the builder, you need to work fast, but don't sacrifice accuracy for speed. My partner doesn't always finish building everything I wrote but that's ok as long as what she has built is of high quality. That does not mean I'm encouraging to spend ten minutes working through five steps but both the writer and the doer need to pay extreme attention to detail to make sure whatever is submitted, is accurate. The only place where time will matter is in the event of a tie. In that case, whoever finished the build quickest would place higher. You shouldn't worry too much about this because it rarely happens. However, if the WIDI is a material that many people are comfortable with or something that you and your partner have down, make sure you are pushing it a bit so that you will get the time advantage in the event of a tie. If you're first starting out on WIDI though, it won't make that big of a difference.

Materials

A WIDI can literally be created out of anything. In the rules, it states that a WIDI can be built from, but not limited to, "such items as science materials, inexpensive materials (e.g., straws, push pins, Styrofoam balls, paper cups, Popsicle sticks, etc.) or commercial sets (e.g., K'nex, Tinker Toys, Lego, Lincoln Logs, etc.)."

That "etc." can be a *lot* of things so just be wary and practice, practice, practice to be prepared for anything that will show up at competition. Commercial sets like Legos and K'nex are harder to obtain and buy in large quantities at a cheap price than say office supplies which are cheap and easy to obtain. Most competitions won't want to spend lots of money buying or finding the exact same K'nex piece for every WIDI they have to build at competition. What usually happens is that maybe a small part of the WIDI is composed of commercial sets and the rest made out of something more attainable like stationery.

Tips for the writer

The writer is in charge of setting the scene- if the writer messes up well, let's just say that the builder will have a heck of a time figuring things out. My coach liked to say that the writer was the driver and the builder was in the passenger seat- the writer has the ability to crash the duo in which case it's the passenger's job to try and get the pair out safely. Or you can be a smooth driver and not let your partner crash and burn.

Here's some tips to help achieve a smooth write:

- When you come before a WIDI, as the proctor/event supervisor is giving directions, take a look at the WIDI and choose a starting point that makes sense.
- Listen to the proctor's instructions carefully! Usually if they have any clarifications to make, they'll do it in the beginning.
- Ask your proctor any questions in the beginning once they finish with directions. It'll be annoying to the other competitors to interrupt the silence in the middle to ask a question. If the proctor doesn't give you an orientation to look at, you can ask them that. Usually the orientation is how you're looking at it, the way the chair is placed or where they have the station.
- Most of the time you won't be able to touch the model but you are almost always encouraged to move around the model. So even though the orientation is facing you,

if there's something on the back of the WIDI that you missed because you couldn't see it from your angle, that's on you.

- Always look at the WIDI in parts. Say it's a really large Lego structure. Don't look at it piece by piece and get overwhelmed by how much is going on. Instead you might tell your partner to build a few parts separately and then have them put it all together. The rules state that everything that's correct beyond a wrong connection will still give you points for everything that's right. So if you see a paperclip hanging off say a pipe cleaner, you might tell the builder to do that first and then connect the pipe cleaner to the rest of the WIDI later. If you are running short on time, you can tell your partner to throw the pipe cleaner on anywhere which might lose you one point but you'll still have one point for the paperclip being present, and the paperclip attached to the pipe cleaner. Always think of what will get you the most points.
- Number your steps!!! Don't write in a paragraph format - it's harder for the builder to differentiate between lines. Numbering steps is also useful when you need to reference a previous step easily and effortlessly.
- Write fast and neatly! If your partner is spending time trying to decipher your handwriting, you guys have a big problem on your hands. Keep writing! The WIDI might seem easy to describe in under 25 minutes but there is always *more* that you can add. DETAILS, DETAILS, DETAILS!!!
- Please please please do NOT write in full sentences! This isn't English class, the proctors won't care if you use improper grammar, spelling, abbreviations, or texting language. Make it easier on yourselves and don't write what you don't have to. As long as you write in English (please don't use a foreign language unless you want to get DQed), don't write in code, and don't draw diagrams/pictures, you're golden.

Tips for the Builder (written by my amazing partner!!!)

- Be deft with your fingers! Being clumsy won't be much of a help if you're going to knock over the WIDI over and over again as you build.
- Be meticulous! It's best to be accurate over speedy since they'll only use time as a tiebreaker. If you skim over the writing really fast and miss "Skinny" popsicle stick and pick up the large one- that is on you.
- Get familiar with different materials. Proctors tend to build out of materials that are relatively cheap and easy to find (such as styrofoam cups, skewers, magnets, legos, pipe cleaners, etc.), so try to predict what materials could be used and make sure you are comfortable working with them!
- Know your vocab! Be sure to talk with your partner about abbreviations and systems that work for both of you, and review them before a competition. Knowing vocab that your partner will use is crucial to understanding their directions and increasing both of your efficiencies!
- Know how your partner thinks. This can be quite tough to learn, but understanding the writer's thought process can help you if you're stuck on a certain step, and can also increase efficiency in your building. Understanding one another is crucial to this event, so try to spend some time getting to know each other aside from actual

WIDI processes; it can not only help you bond, but also improve your performance in the event!

Types of WIDIS

Even though a WIDI can be literally anything, there are some general types of WIDIS or parts of WIDIS that you will see a lot of.

1. You will definitely see some WIDIS that are made of K'nex or Legos or have some parts that are created of those materials.
 - a. To prepare for these, I'd really just review vocabulary with your partner. Each piece has a specific name. For Legos, my partner and I called it by color and dimension (blue 2x2). For K'nex we called the long pieces rods. So really just know what to call each piece and you're good to go.
2. You're bound to come across a coloring/sticker WIDI. Basically, you have to draw or color in certain things or place stickers in certain areas.
 - a. To prepare for these, I'd just say know your colors really well. Make sure you and your partner are on the same page about what the word "dark" means or what the word "light" means. If the writer just says "blue" and you are given a darker blue and a lighter one, which one would be your default blue color? Take these things into consideration in case at competition you get something that is very color specific. (In a practice WIDI my partner and I were given, the coach who made it picked out every blue bead that was available in the school- there were 6 of them, which goes to show color is a huge factor in WIDIS)
3. The good ol' paper/styrofoam cup with things stabbed into/around it will always be a WIDI you know you'll see. Some variants of this will be the paper plate, the can, the bowl, or the plastic bottle. Basically, you'll most *definitely* see WIDIS that have tableware as a center with different things on it/around it/in it.
4. String and knots exist in all kinds of WIDIS. You and your partner will definitely come to expect string in many WIDIS.
 - a. To practice, come up with vocab for different types of knots. That's all I can really say, string is so freeform it's pretty hard to practice with in my opinion.
5. It isn't uncommon to see some origami components to WIDIS. This basically entails any folding of paper.
 - a. To prepare for this, go over some basic origami terms with your partner. In origami, there are mountain folds and valley folds and that's what my partner and I used to describe most situations. However, you can most definitely use something that is easier. These are just some tips, feel free to change however you and your partner see fit.
6. Some common supplies that make frequent appearances are paperclips, rubberbands, tacks/push pins, pipe cleaners, binder clips, skewers, popsicle sticks, index cards, and sticky notes. This might be incorporated with type 3 with the cup or tableware.

Practice/How to Prepare for Competition

PRACTICE, PRACTICE, PRACTICE!!! One of the biggest keys to success is practice! You might be a natural descriptive writer or you might be an insanely incredible builder but you and your partner *need* to be on the same page. You have to be so in sync to the point that the writer can already predict some trip-up spots for the builder and write extra detail to prevent it, and the builder can already sense the writing style of the writer and what that means. It takes a lot of time and work to get to that point. Being really good friends with my partner, we spent a lot of time together so we were able to fit in 3-4 full WIDIS per week. I'd say try to get in 1 full WIDI per week or 1 full WIDI per practice if your team doesn't have frequent practices. However...preparing for competition is more than just doing full WIDIS!

★★★One of the most crucial things you can do to improve the builder/writer connection is to go over vocab. I know it sounds like the most boring thing ever but it will help in the long run. You don't need the full 45 minutes to do a whole WIDI. Sit down with your partner for like 25 minutes with a pack of colored pencils and go over color vocab. Pull out a sparkly pencil and ask whether your partner calls it "glittery, sparkly, or shiny". It's the little things like these that could cost you a point and those points add up. So go over those abbreviations and vocab!★★★

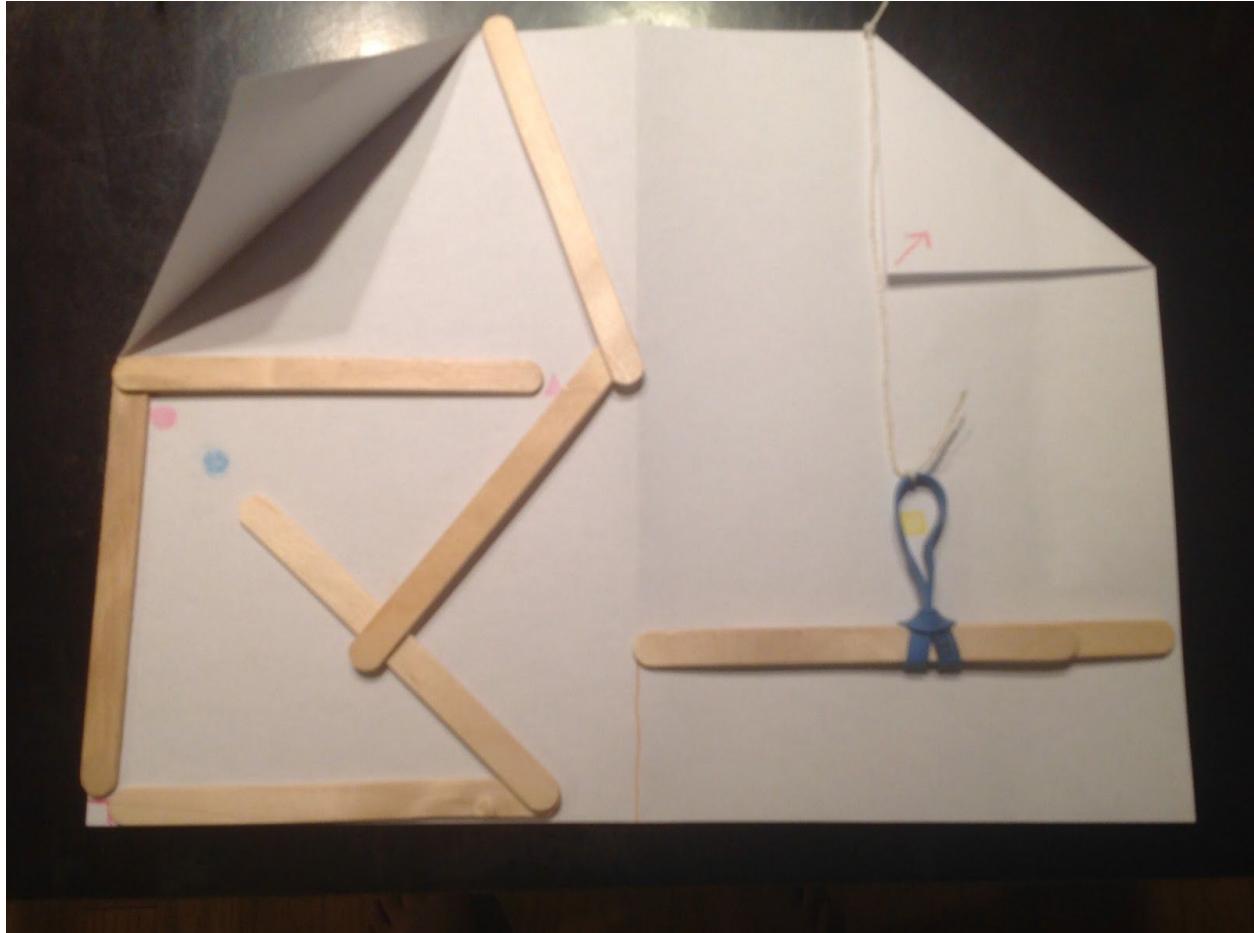
Some common terms used by many teams to describe placement are either the clock or cardinal directions. I'd strongly recommend you and your partner use the clock because you can be more specific with it. Instead of saying in the Northwest quadrant you can specifically say "object points to 11:30". Play around with it, I know of people who have used the 360 degrees to describe their placement of objects.

Every few months, my partner and I will do a swapped WIDI where I become the builder and she becomes the writer. By swapping roles, we can see where the other struggles. So when I become the builder, I can start to see "oh maybe I should specify which way this paperclip faces in my future writing because working with paperclips are hard." The builder becoming the writer can see where exactly in the writing more description can be added. By switching roles, you are able to see where your partner struggles with and by acknowledging it, you are able to improve your part and make the overall event stronger.

Some WIDIS

Now that you have a basic sense of the event, it pays to see what WIDIS might look like.

WIDI #1:



Top ^ ^

Looking at this WIDI, notice the folds, the coloring, and how the popsicle sticks overlap each other. For a competition WIDI, it will most likely be more complicated, but this WIDI is great one to show attention to detail.

WIDI #1 Rubric:

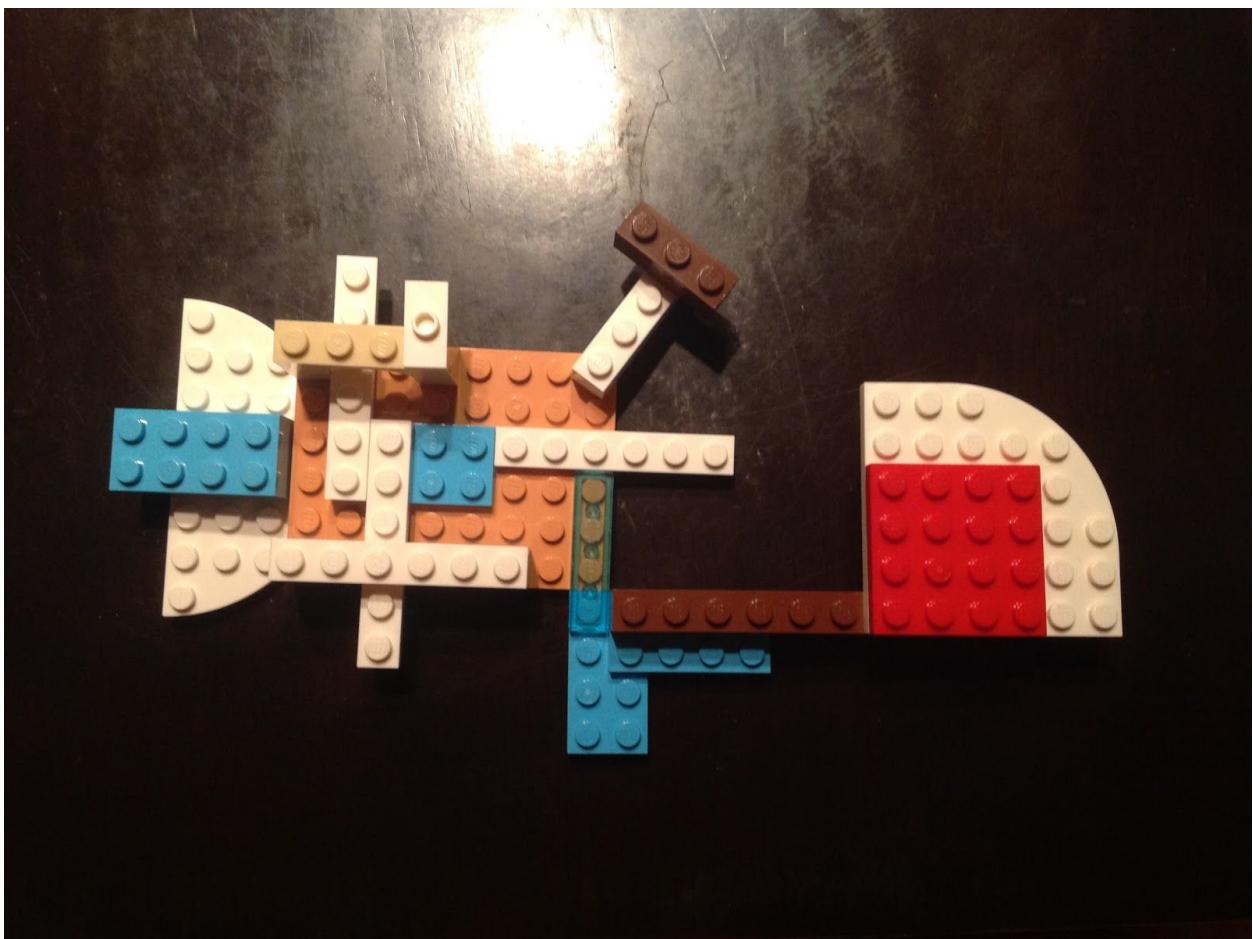
<u>Point?</u>	<u>Description</u>	<u>Point?</u>	<u>Description</u>
<u>-/6</u>	Paper folding		Orange line present in WIDI
	Paper folded in half vertically		Orange line follows middle crease up from bottom about an index knuckle
	Middle crease facing up	<u>-/8</u>	Right half of paper
	Top right corner folded in to a quarter of the right side.		2 sticks overlap each other, left stick on top
	Top left corner folded in		Sticks located next to orange line
	Bottom edge of the top left corner touches popsicle stick		Blue rubber band Slipknot in middle of 2 sticks
	Top left corner sticks up		Loop from band face up
<u>-/14</u>	Coloring		String present in WIDI
	Red arrow on top right corner flap		String tied to band loop
	Red arrow points northeast		String stretches vertically up
	Red right angle present in WIDI		Knot tied in string at top edge of paper
	Red right angle located bottom left corner		
	Yellow Square present in WIDI		
	Yellow Square located inside the blue rubber band loop		
	Pink circle present in WIDI		
	Pink circle located inside the corner of two popsicle sticks		
	Pink triangle present in WIDI		
	Pink triangle located right of horizontal stick, left of Slanted stick		
	Blue circle present in WIDI		
	Blue circle located between pink circle and popsicle stick		

<u> </u> /14	Left half of paper
	1 stick horizontal to the right of red right angle
	^ stick flush with bottom edge
	1 stick vertical above red right angle
	^ stick flush with left edge
	1 stick horizontal
	^ stick's right end covers vertical stick's top end
	1 stick points northwest
	^ Stick overlaps the bottom horizontal stick
	1 stick points northeast
	^ one end overlaps halfway along the northwest stick
	^ one end touches the middle crease
	1 stick pointing up towards 11 o'clock
	^ one end overlaps the northeast stick
	^ one end touches the top edge of paper where the top left crease starts

Total: /42

Tiebreaker: _____

WIDI #2:



^ ^ top



^ ^ front



^ ^ back



^ ^ materials

WIDI #2 Rubric:

<u>Point?</u>	<u>Description</u>
-/2	<ul style="list-style-type: none"> - Light brown 8x6 present in WIDI - Positioned horizontally
-/4	<ul style="list-style-type: none"> - Translucent blue 1x4 present in WIDI - Positioned vertically - Flush against right side of light brown 8x6 - One peg hangs over bottom edge
-/4	<ul style="list-style-type: none"> - Blue 2x4 present in WIDI - Vertically positioned - Connected to translucent blue 1x4 - Top left peg connected with translucent blue
-/5	<ul style="list-style-type: none"> - Blue 2x4 present in WIDI - Positioned horizontally - Connected to blue 2x4 mentioned in previous row - Connected to top right of previous piece - 3 peg spaces hang over left edge
-/4	<ul style="list-style-type: none"> - Brown 1x12x2 (2 being the height) present in WIDI - Positioned horizontally - Connected to blue 2x4 (previous row) - Top edge and left edge flush with blue 2x4
-/4	<ul style="list-style-type: none"> - White piece with 3 right angles and one curve present in WIDI - Positioned so curve is in the top right corner - Connected to brown 1x12x2 - Bottom and right edges flush with brown 1x12x2
-/3	<ul style="list-style-type: none"> - Red 4x4 present in WIDI - Connected to white piece with 3 right angles and a curve - Flush with bottom and left edges
-/4	<ul style="list-style-type: none"> - Blue 1x6 present in WIDI - Positioned horizontally - Connected to light brown 8x6 - Flush with bottom and left edges
-/5	<ul style="list-style-type: none"> - White 1x6 present in WIDI - Positioned horizontally - Connected to light brown 8x6 - Located right above translucent blue 1x4 - 3 pegs hang off of right edge
-/4	<ul style="list-style-type: none"> - Blue 2x4 present in WIDI - Positioned horizontally - Connected to light brown 8x6 - In the center vertically of light brown piece, next to white 1x6

__/4	<ul style="list-style-type: none"> - White 1x6 present in WIDI - Positioned vertically - Connected to blue 2x4 (See row above) - Left and bottom edges flush
__/4	<ul style="list-style-type: none"> - White 1x6 present in WIDI - Positioned vertically - Connected to blue 2x4 (See two rows above) - Top edge flush with blue top edge, left edge flush with white 1x6 from row above
__/3	<ul style="list-style-type: none"> - White 1x6 arch present in WIDI - Positioned horizontally - Connected to blue 1x6
__/4	<ul style="list-style-type: none"> - Brown 1x4 arch present in WIDI - Positioned horizontally - Connected to light brown 8x6 - Flush with top and left edges
__/4	<ul style="list-style-type: none"> - White 1x2 with one jump peg present in WIDI - Positioned vertically - Connected to brown 1x4 arch - Right and bottom edges flush
__/4	<ul style="list-style-type: none"> - White 1x4x2 present in WIDI - Positioned So end is Northeast to Southwest - Connected to light brown 8x6 - 3 pegs hang off northeast side
__/4	<ul style="list-style-type: none"> - Brown 1x3x2 present in WIDI - Connected to white 1x4x2 - Ends flush - One peg hangs off each side of white piece
__/3	<ul style="list-style-type: none"> - White semicircle present in WIDI - Connected to bottom of light brown 8x6 - Flat side facing west, connected by first row
__/4	<ul style="list-style-type: none"> - blue 2x4x2 present in WIDI - Positioned horizontally - Connected to white semicircle - One peg hangs off left edge

Total: __/73

Tiebreaker: _____

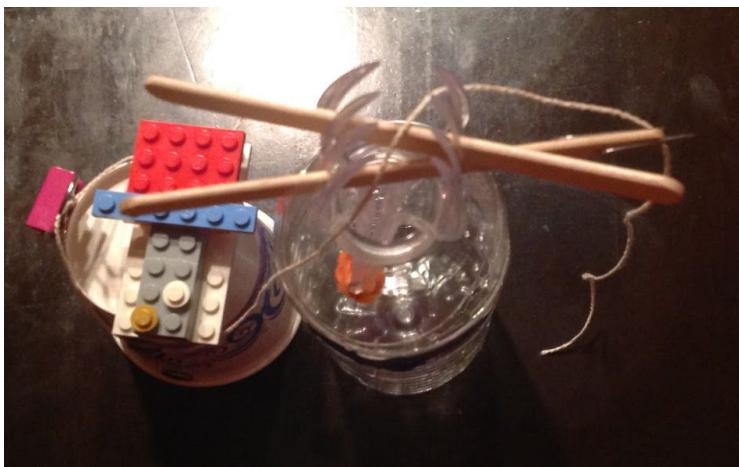
WIDI #3:



^ ^ front



^ ^ back



^ ^ top



^ ^ left



^ ^ materials

WIDI #3 Rubric:

<u>Point?</u>	<u>Description</u>
__/2	<ul style="list-style-type: none"> - Cup present in WIDI - Turned upside down
__/3	<ul style="list-style-type: none"> - water bottle present in WIDI - Placed on right of cup - Barcode facing 4 o'clock
__/3	<ul style="list-style-type: none"> - Purple rubberband present in WIDI - Wrapped around cup once - above the blue design
__/4	<ul style="list-style-type: none"> - Two forks present in WIDI - Rubber banded together by orange rubber band - Prongs facing in to each other - Placed into top of water bottle
__/4	<ul style="list-style-type: none"> - Popsicle stick present in WIDI - Placed through first prong (closest to you) on left fork - Placed through middle prong on right fork - Same amount of excess stick on both sides
__/3	<ul style="list-style-type: none"> - Paperclip present in WIDI - Clipped to the right end of the popsicle stick (previous row) - Second biggest loop facing outwards, not fully pushed in
__/4	<ul style="list-style-type: none"> - Popsicle stick present in WIDI - Placed through last prong on left fork - Placed through middle prong on right fork - Same amount of excess stick on both sides
__/18	<ul style="list-style-type: none"> - White 4x8 present in WIDI - Positioned vertically - Gray 2x8 present in WIDI - Positioned vertically - Connected to white 4x8 - Top and bottom edge flush - Red 4x4 present in WIDI - Connected to gray 2x8 - Top edge flush with gray piece - Blue 1x4 present in WIDI - Connected to gray 2x8 - Top edge flush with bottom edge of red 4x4 - Gold dot present in WIDI - Connected to gray 2x8 - Positioned on bottom left corner - white dot present in WIDI - Connected to gray 2x8 - Positioned up and to the right of gold dot

__/2	<ul style="list-style-type: none"> - Lego Structure placed on top of cup - Right edge flush with right edge of cup
__/2	<ul style="list-style-type: none"> - Metal thumbtack present in WIDI - Pushed through front center of purple rubberband
__/2	<ul style="list-style-type: none"> - Metal thumbtack present in WIDI - Pushed through front center at the bottom (in line with previous row)
__/3	<ul style="list-style-type: none"> - Popsicle stick present in WIDI - Positioned vertically tall - Placed under rubber band on the left side of cup
__/3	<ul style="list-style-type: none"> - Pink binder clip present in WIDI - Clipped to top of popsicle stick (see last row) - Right prong sticks up, left prong clipped down to stick
__/2	<ul style="list-style-type: none"> - Yellow pushpin present in WIDI - Pushed above purple rubber band on the back of WIDI centered
__/6	<ul style="list-style-type: none"> - String present in WIDI - One end tied around yellow pushpin - Looped through right prong of pink binder clip - Pulled back in between two forks - Pulled through the loop that is stuck out on the paperclip - Touches the table at other end

Total: __/61

Tiebreaker: _____

That pretty much wraps up the basics of WIDI! I really hope you enjoy your time on the event WIDI. It really is a classic SciOly event that'll probably stick around for a long time. I wish you the best of luck competing in WIDI!

If you have any questions, you can always shoot me a PM through SciOly, although I don't check them very often. I'm reachable by email at yangster39@gmail.com as well.

Good luck with WIDI and hope you enjoy this event as much as I did!!!