# **Interactive LEGO Workshops Demo**

METADATA, TECHNICAL COMMUNICATION, STANDARDS

Zac Painter (zwp@stanford.edu) CCLI 2019 Annual Meeting

# **Inspiration & Background**

Original author/purpose (or at least, where I got it from):

Sarah McCord, Librarian at MCPHS University

Teaching First-Year Pharmacy students about metadata concepts

Modified purpose:

Teaching Engineering students about technical standards and communication

(ABET accreditation increasingly emphasizing standards literature for student learning outcomes in new rubric)

(National Academies of Science, Engineering, Medicine, stressing in 2018 report that research was not enough; broad technical literacy was essential)

# **Modifications I Made**

Read a standard before class (I use an ASTM standard for baseball bat velocity, which is very short, for underclassmen. I have a martini standard for learners of legal drinking age). After class I usually reference whatever standards we might have, and then let students know where to find them.

I give students a realistic, pre-made object from LEGO themselves (a whale, racecar, house, tractor, etc.). This is similar to a common design which makes the object easier to conceptualize, but perhaps more complex and time-consuming to make.

I have students jumble their pieces up, and give them fake pieces. This simulates the incomplete information and false outcomes they have in a product design phase.

# Some Reflections & Contact Info

Success rates generally low (more time generally means more success), but I find students enjoy the experience and do think about the concepts a little deeper.

I've taught this with underclassmen and upperclassmen; I could see it in technical communication and writing classes in addition to things like engineering or pharmacy/chemistry.

These slides were created after the presentation and I didn't use them when I demonstrated it, but I would be very happy to talk to anyone curious about this lesson, or education strategies in general! (zwp@stanford.edu)



### **The Basic Instructions**

https://stanford.box.com/s/s3f4sj32nynummkfbmm2b11j0d0gkk6u

#### **An Inspirational Standard**

https://stanford.box.com/s/ly1w9m1t9nt8vmdue0s3s09uyxh500sg