

PORTLAND JEWISH ACADEMY

Think for Yourself, Work for the World.

לימוד
Study

כבוד
Respect

אחריות
Responsibility

קהילה
Community

הודאה
Appreciation

זהות
Jewish Identity

AMY KATZ HEBREW & JEWISH STUDIES TEACHER

Portland Jewish Academy



MICHAEL HYDE STEAM & MAKER INTEGRATOR

Portland Jewish Academy





Our new makerspace is a specialized classroom for STEAM integration and team teaching.

MISHKAN PRE-TEACHING: (AMY KATZ)

- As part of their Torah curriculum, 4th grade students studied the construction of the mishkan (tabernacle).
- In hevrutah (partners) they examined the text related to: the Tent, Enclosure, Holy Ark, Tabernacle, Table, Menorah, Alter as described in the book of Exodus.
- Each hevrutah studied the materials and purpose for their assigned section of the mishkan. For example, one pair studied the ark, while a different pair studied the alter, etc..
- Each hevrutah built a small model of their component using materials found in the classroom, and shared their learning with the class.

MAKERSPACE PRE-TEACHING

- students participated in safety and behavior agreements for working in the maker space.
- students participated in an “orientation” to the maker space.
- students were taught how to safely move materials across the room.

COLLABORATION: BUILD A MISHKAN

- How can we deepen our connection to the text by making something?
- How can we make a holy space?
- How can we open up the idea of what it means to teach and learn?
- How can we team-teach and collaborate?

MAKER MOVEMENT CONCEPTS IN EDUCATION

- kids learn through experience.
- “making something” generates an experience that can be examined, reflected upon, and shared. We learn when we connect experience and ideas. (constructivism: Piaget)
- kids love to solve problems, discover and investigate, and make connections between their growing range of experiences.
- Creating something meaningful generates problems that will unlock past knowledge and build new knowledge.
(constructionism: Papert)

**DESIGN PROBLEMS,
NOT PROJECTS**



OUR MISHKAN DESIGN CHALLENGE

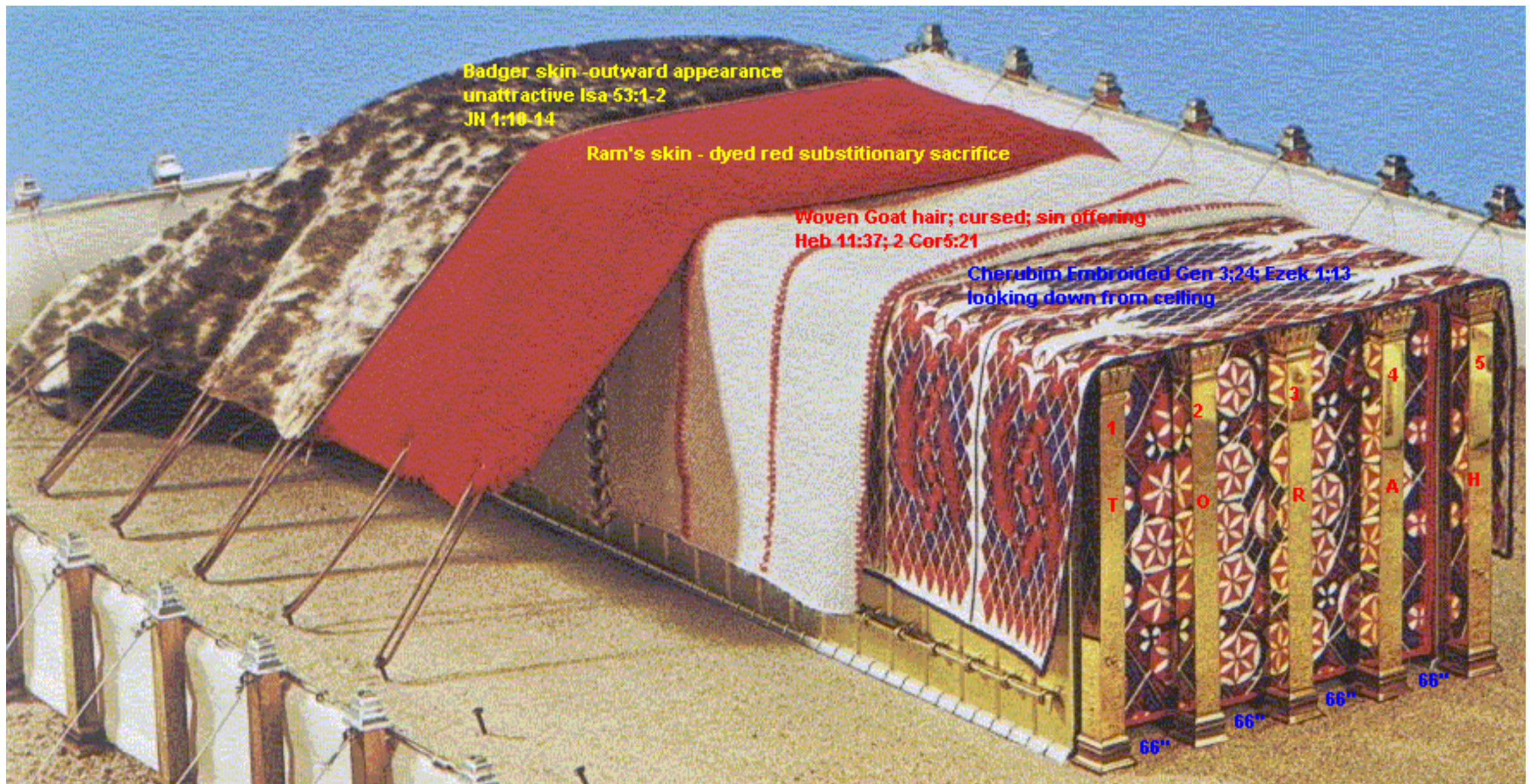
- build a full-size Mishkan in the spirit of a “living room” fort.
- must be temporary.
- limited to specific materials (set out on worktable).
- can only use clamps and tape.
- materials cannot be cut or reduced; everything must be returned in it’s original form.
- must be kosher (contain all the elements of a Mishkan, in the right place).



OTHER FACTORS

.....

- there was very little in the space yet, besides scavenged materials and tools from a tool sale.
- with limited materials and a lot of room, we decided on a large-scale design challenge.
- with no consumables budget, I knew I wanted to preserve as many of the materials as possible.



Day One





Design challenges

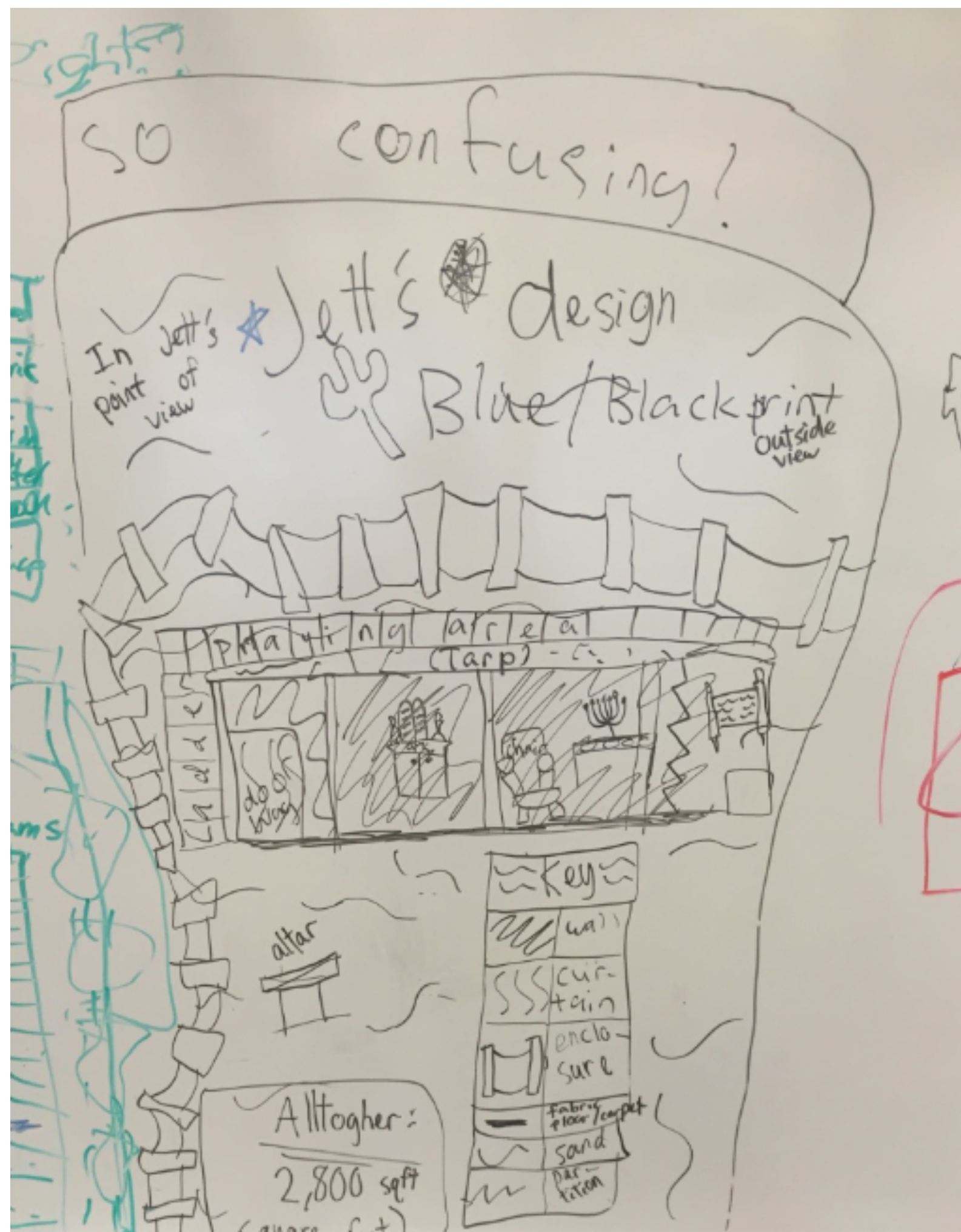
1. Use permanent changes to materials. Everything must be returned to the same way it was found.
2. No nails, screws, hammer, drill, saw, etc.
3. Must be able to fit 3" or 4" grade.

1. Making models
2. How it runs
3. Explain methods
4. Safety
5. Self-reflection

What will
You make
Today?

ROSE CITY
FUTSAL

Day Two



So Confusing Right?

OP.S.
Tarp over
Top of things!

hi DASS
Point of
view

Greenprint
Green White

bird
eye

key
beam
fabrik
ma
At
all
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In Jett's
point of
view

ladder
beams

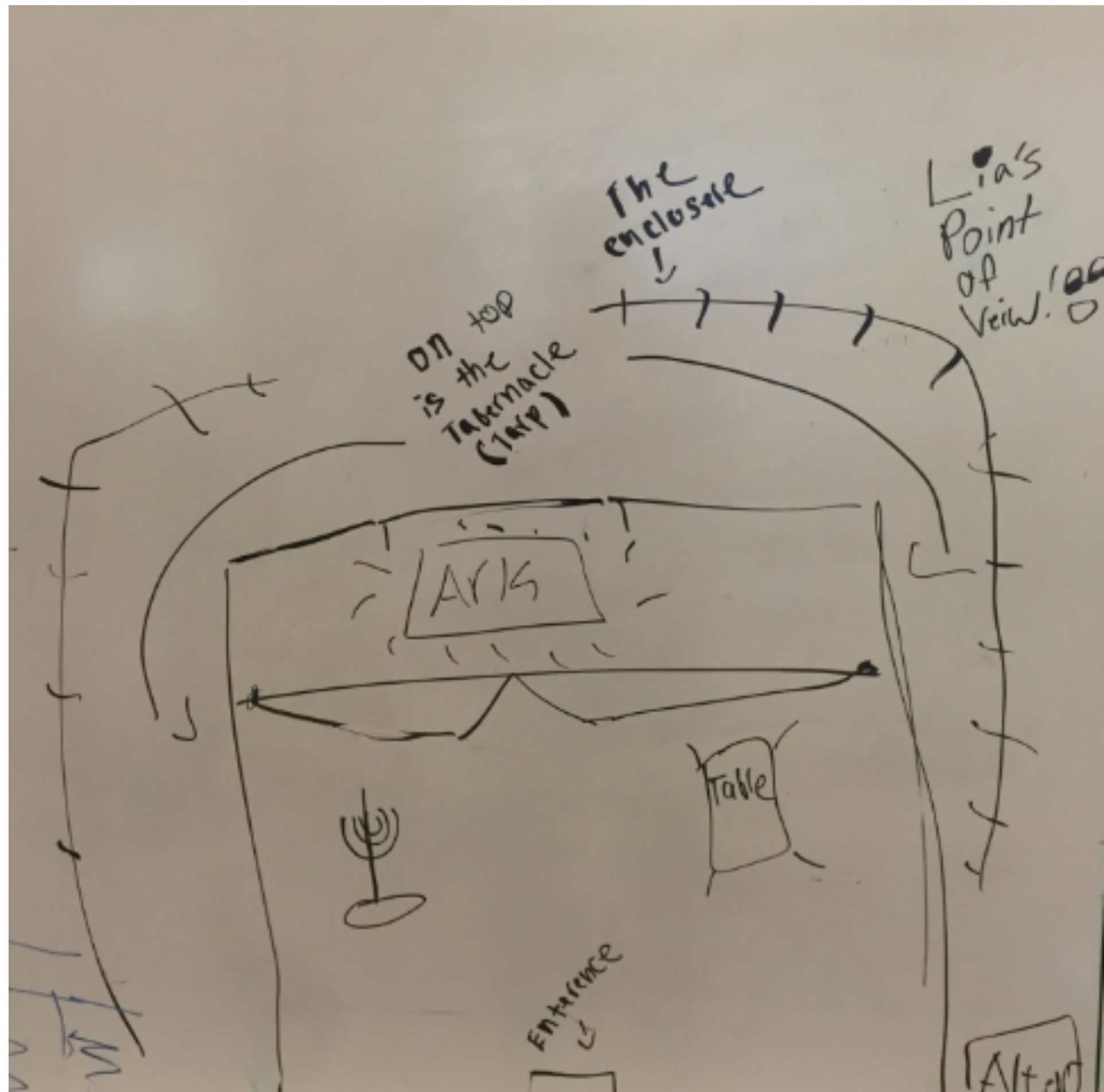
Ark

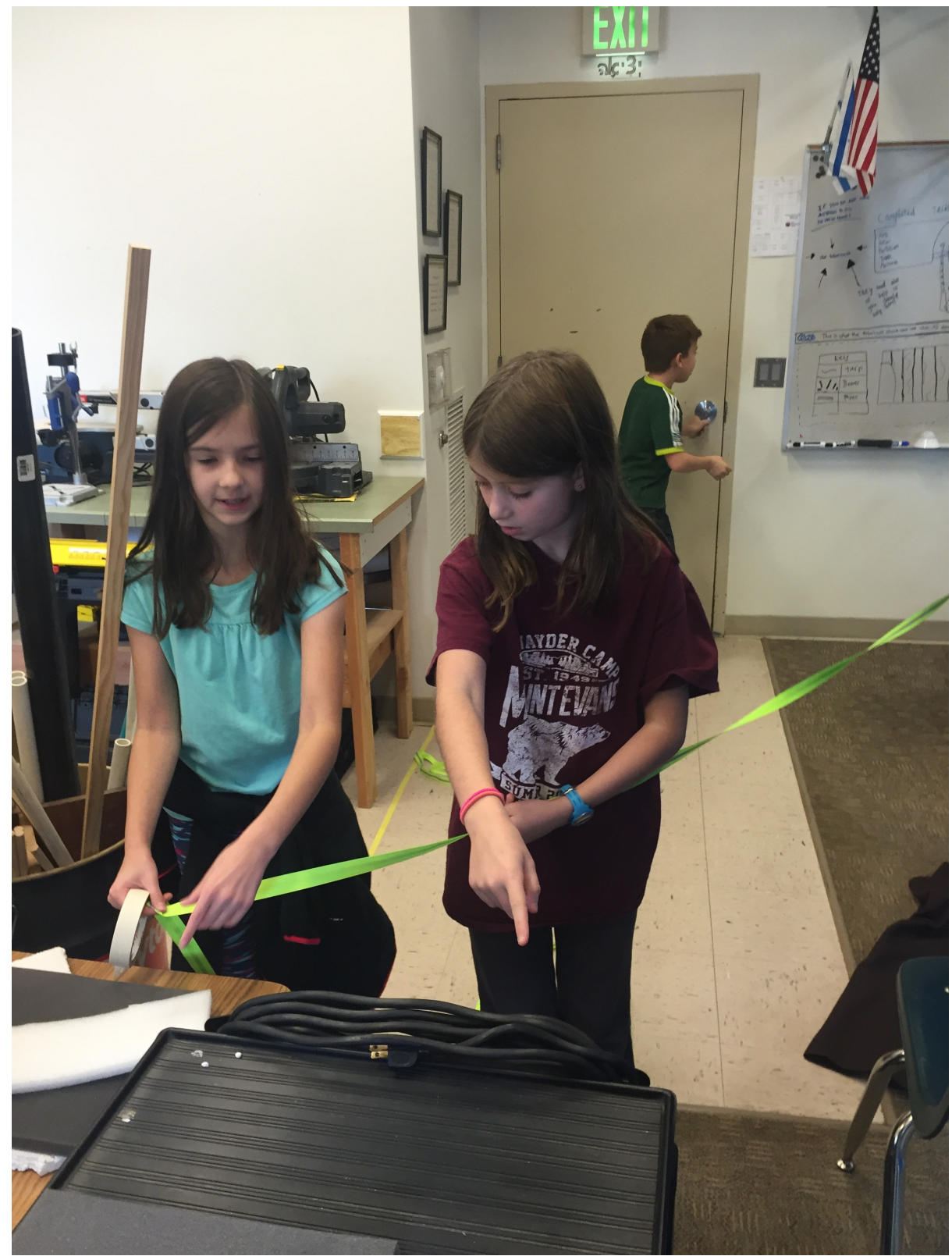
mirrors

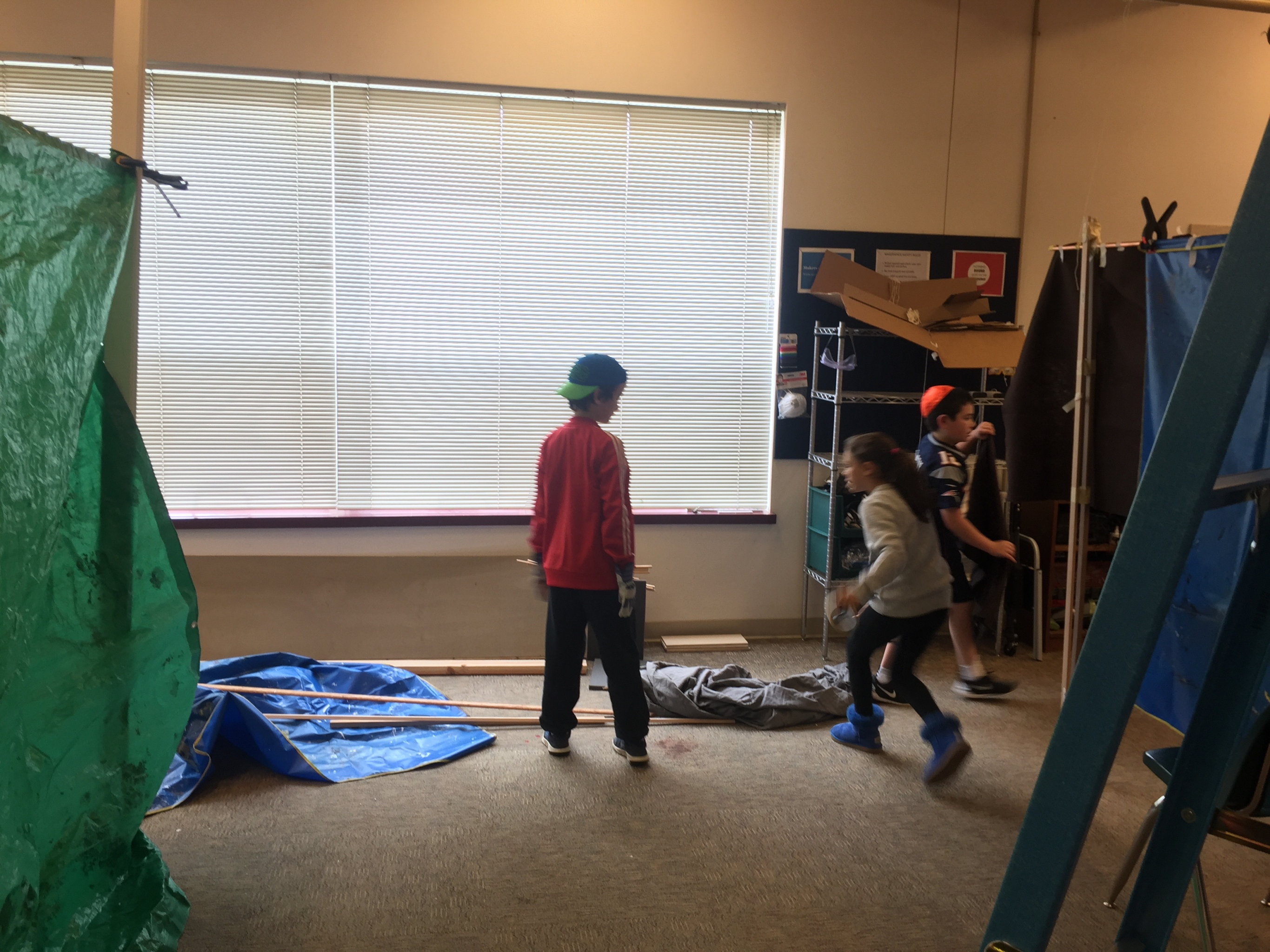
phantom
do of
way

altar

Altogether
2,800 sq









Things that are not done

- ☐ The enclosure
- ☐ The tabernacle

Tasks to complete

- | | |
|---------|-------------------------------------|
| • Table | <input checked="" type="checkbox"/> |
| • Ark | <input checked="" type="checkbox"/> |
| • Altar | <input checked="" type="checkbox"/> |
| • P | |
| • | |

Completed Tasks

Ark
Altar
Partition
Table
Menorah

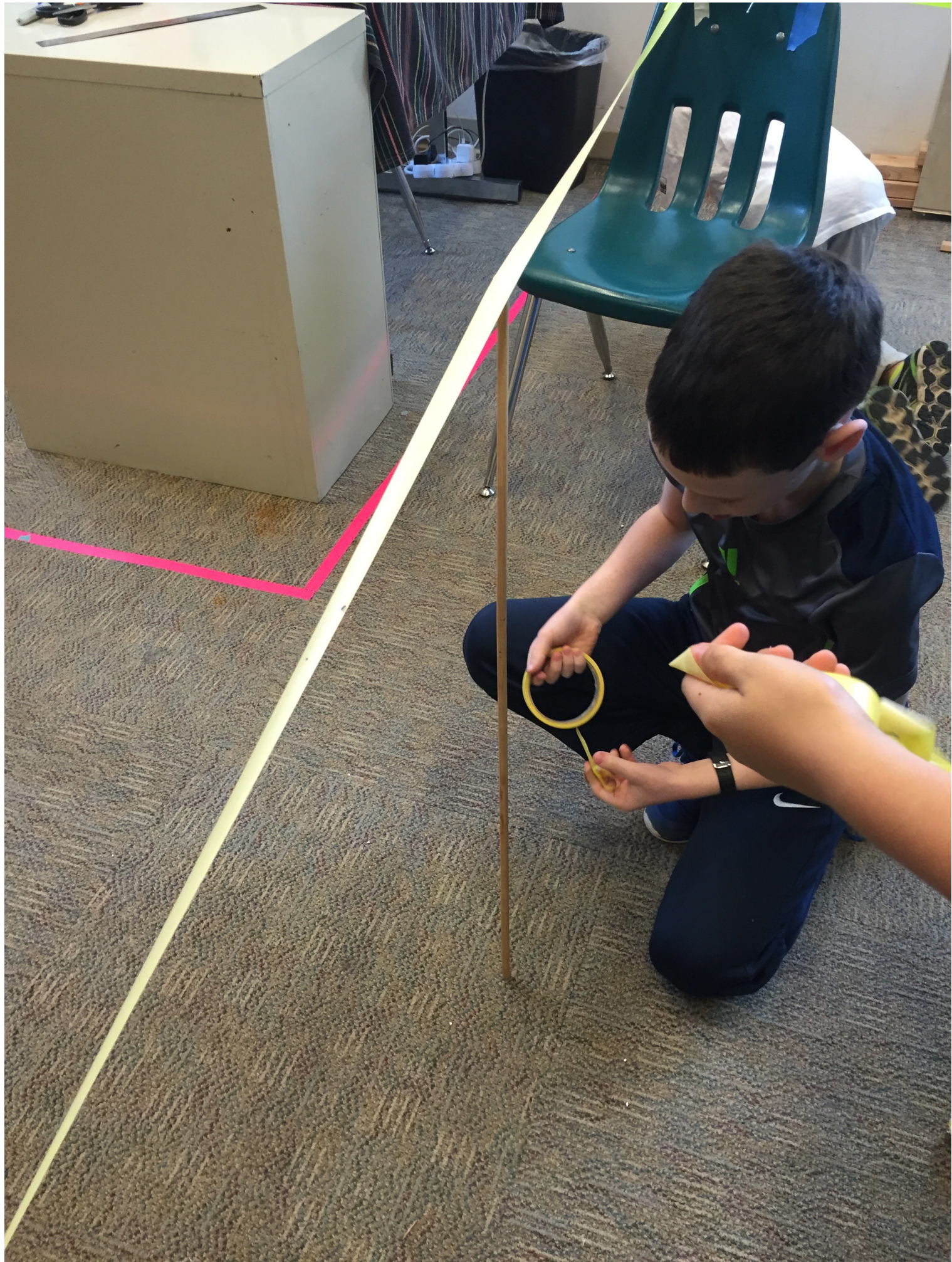
In

all ta

seans

they need alot
of help so
you should
help them!

like when it's done:





Day Three

Completed

Tasks

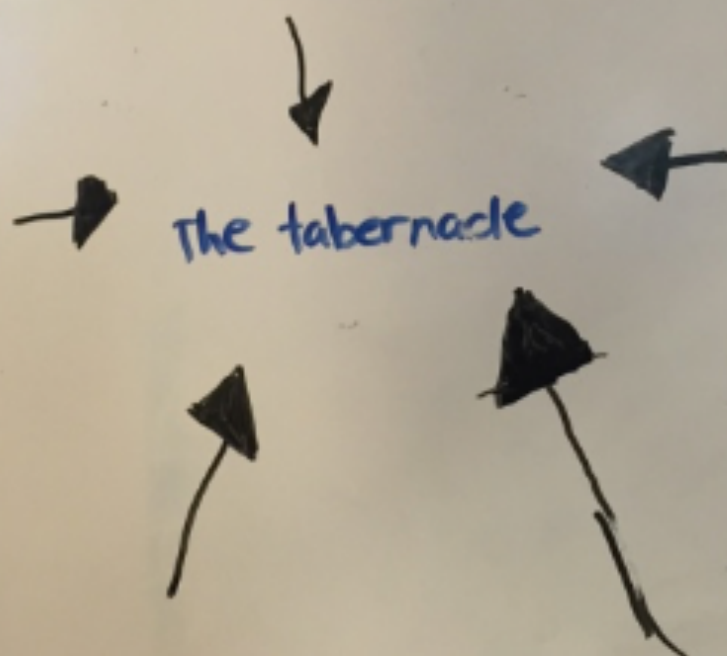
Ark
Altar
Partition
Table
Menorah

In
Hall to
S
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a
n
s

they need alot
of help so
you should
help them!

IF YOU DO NOT HAVE
ANYTHING TO DO,
DO THESE THINGS

Complete



The tabernacle

Ark
Altar
Partition
Table
Menorah

they need alot
of help so
you should
help them!





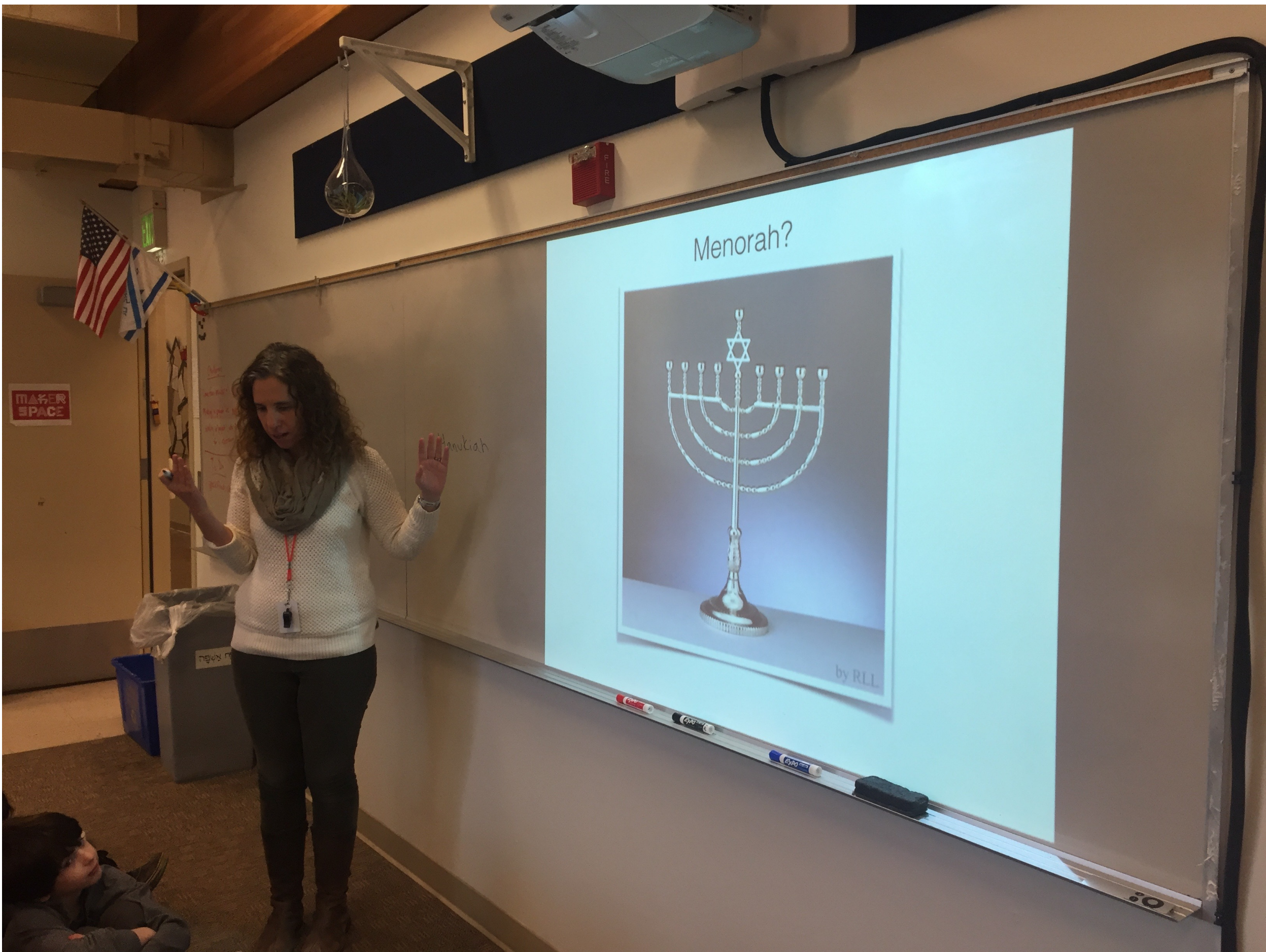






WHAT WE LEARNED

- Design Problems, Not Projects.
- Stop helping and they stop asking for help.
- Let Go of: Process, Outcomes, Control.
- Ask questions, don't give answers.
- Take Time.



Menorah?

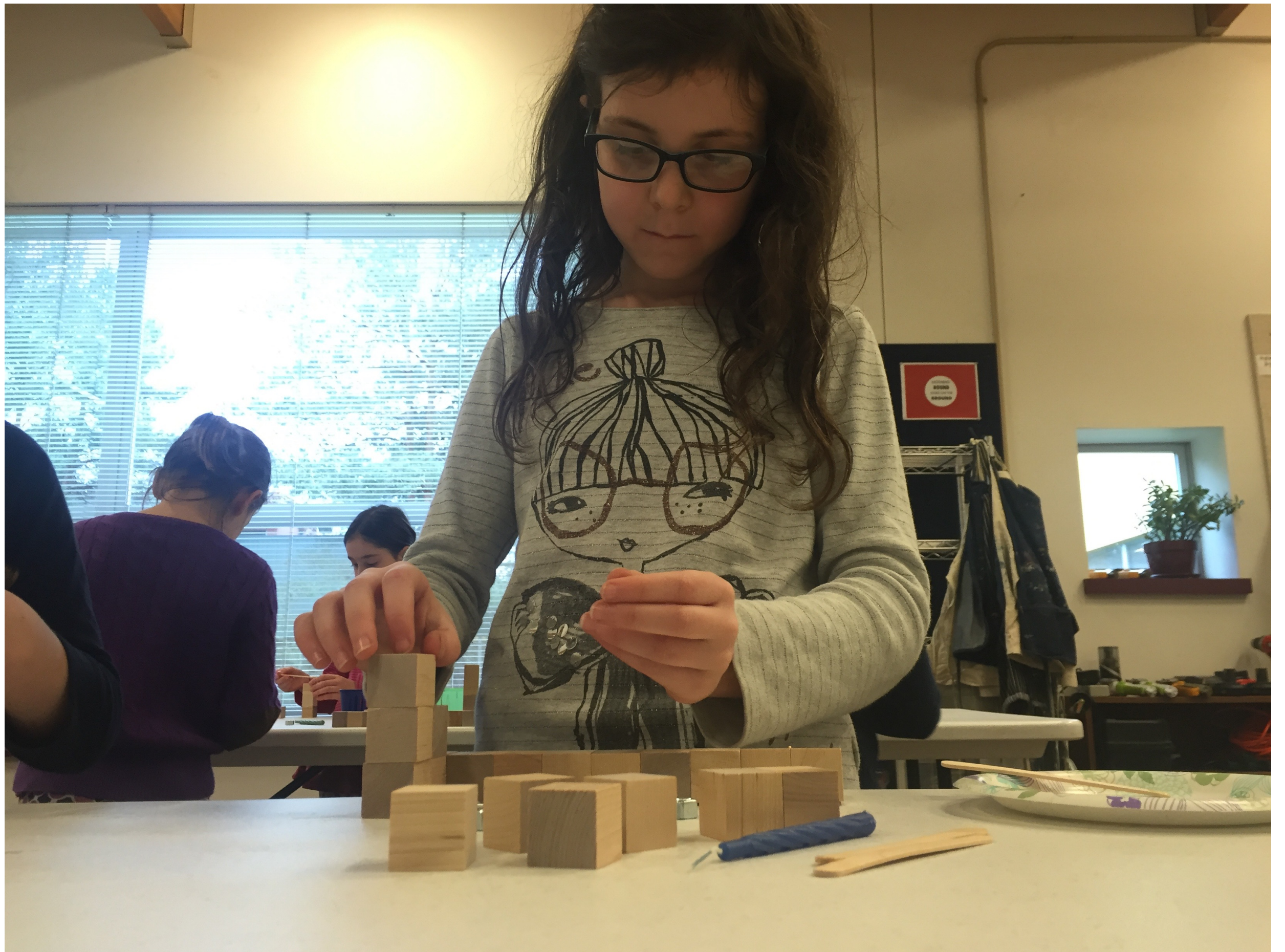


by RLL

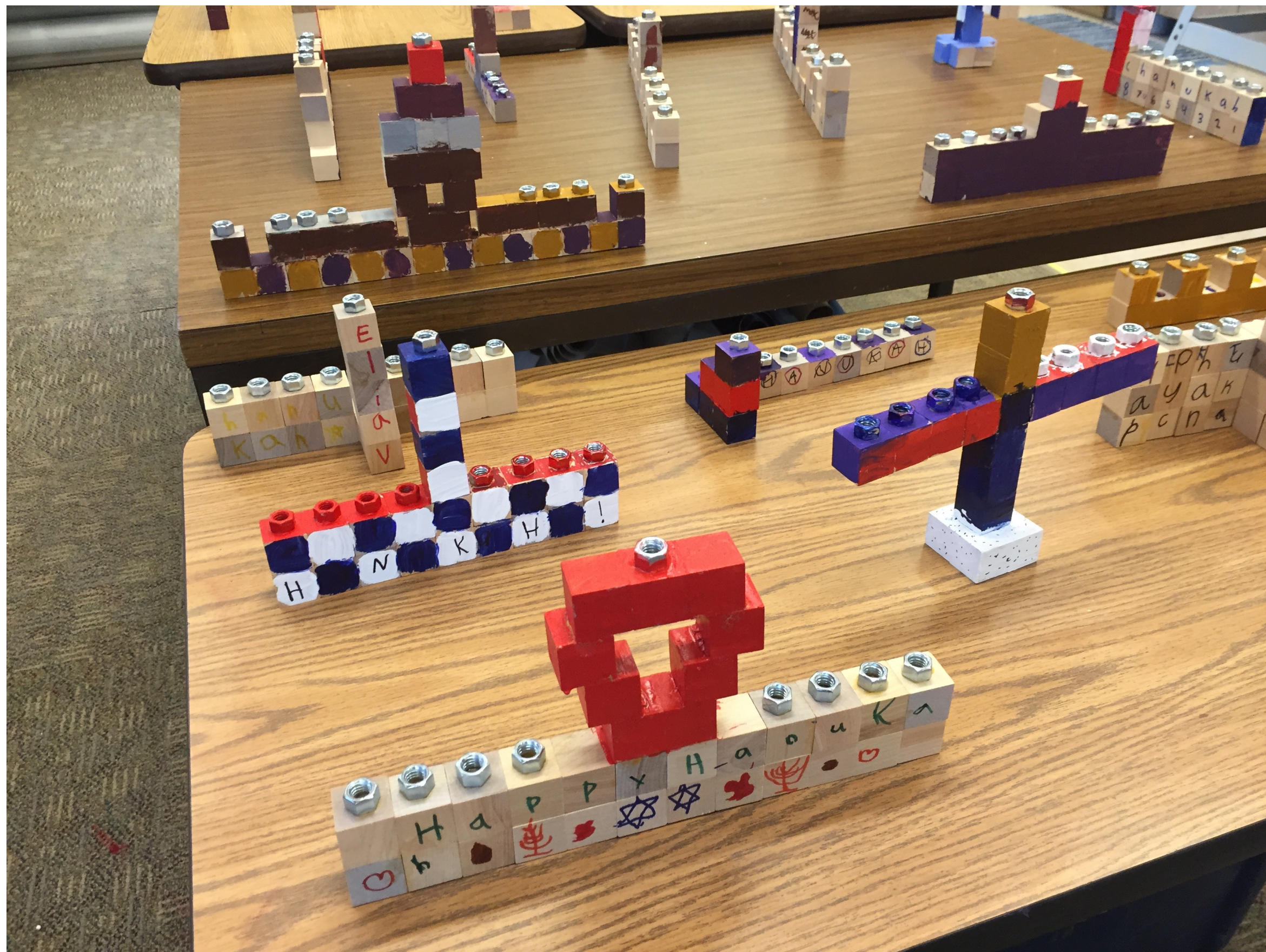
MAKER
SPACE

Hanukiah









Amy Katz

Hebrew & Jewish Studies

Portland Jewish Academy

akatz@pjaproud.org

Michael Hyde

Steam and Maker Integrator

Portland Jewish Academy

Tinkercamp.org

[@edtechteaching](#)

mhyde@pjaproud.net

michael@tinkercamp.org