

# READ IT, WRITE IT, BUILD IT: APPLIED LITERACY IN ACTION

2019 Moonshot Summer Institute



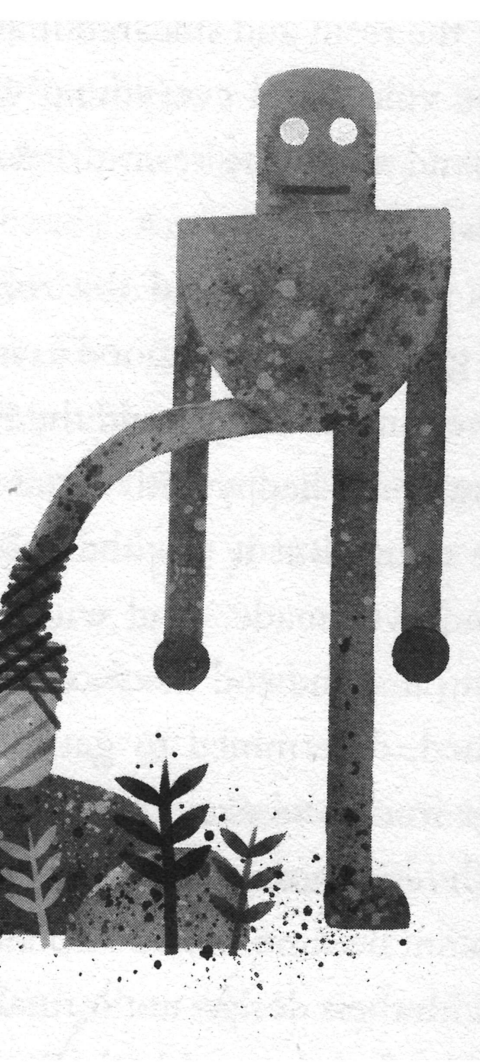
[www.TheLearningAlliance.org](http://www.TheLearningAlliance.org)





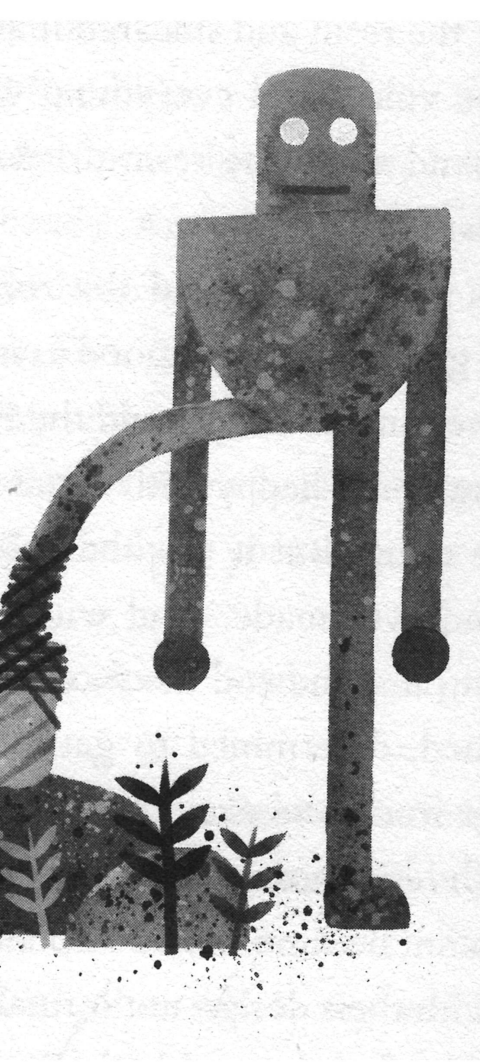
**BUILDING  
COMMUNITY**

# **Unite: Robot Assembly Line**



**BUILDING  
COMMUNITY**

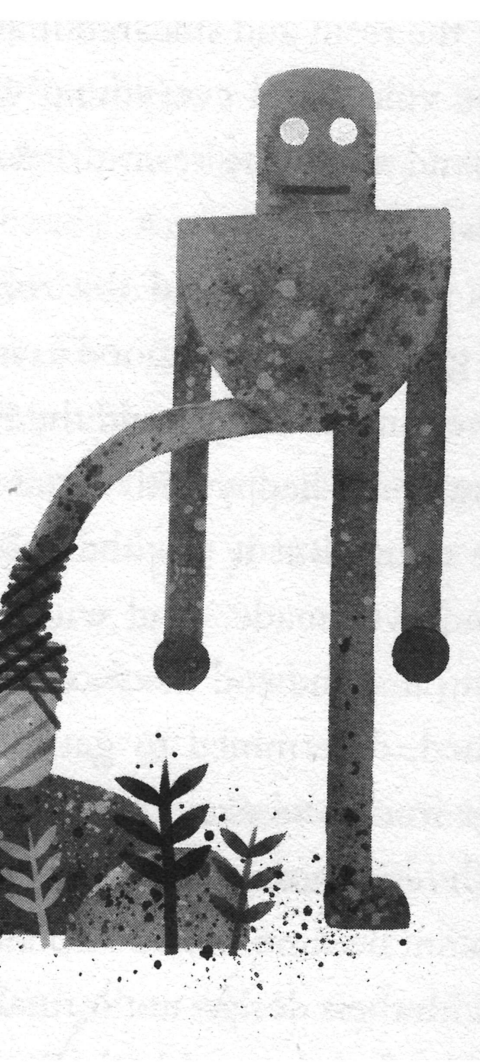
# Disengage Stress: The Gosling



## BUILDING COMMUNITY

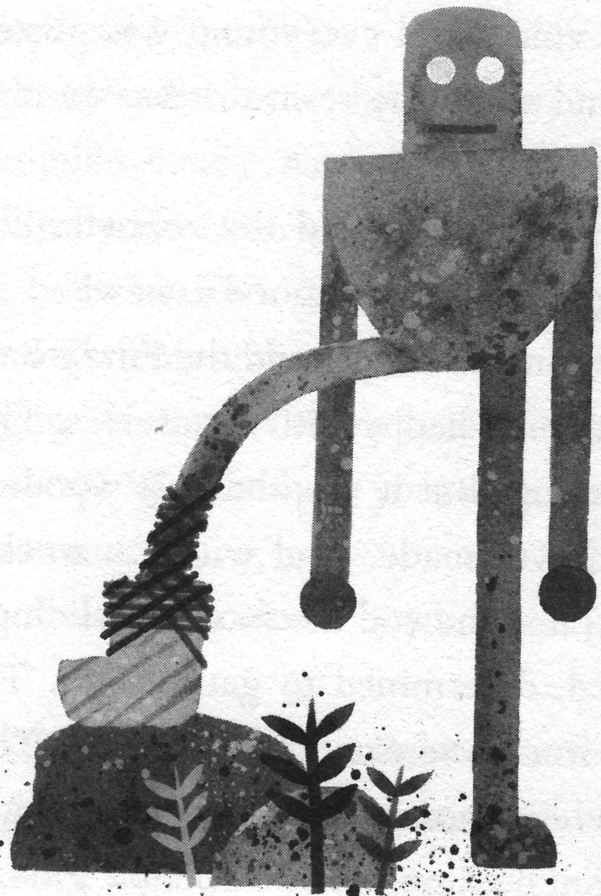
**Connect:**  
**Give an example of  
how your students  
“learn with their  
hands”.**





**BUILDING  
COMMUNITY**

**Commit**



# Artbots & Makerspaces

## A Moonshot Institute Workshop



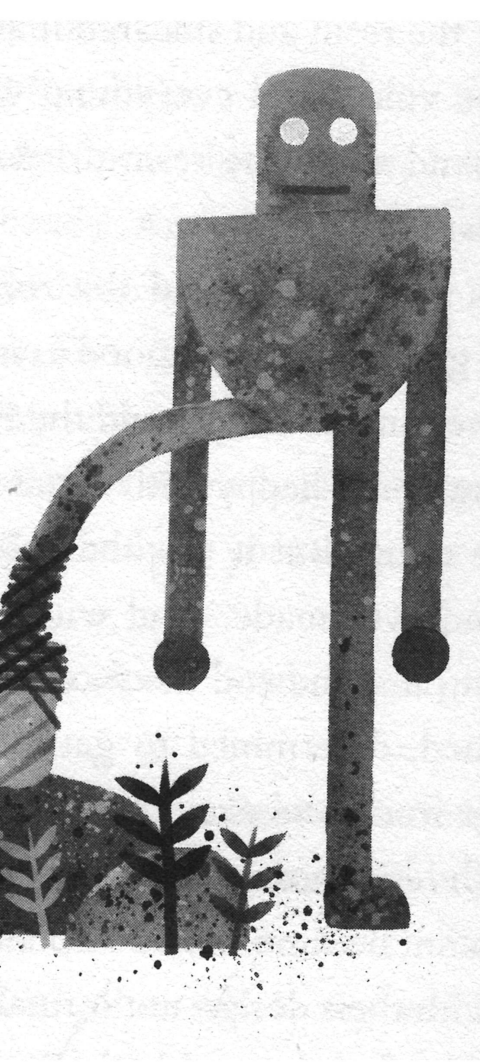


# Learning Goals

connect literacy to **maker-space** experiences  
work through mistakes and practice **iterative processes**

understand **problem-solving** through **creative solutions**

learn **physics/engineering** concepts through **hands-on** learning (circuits)

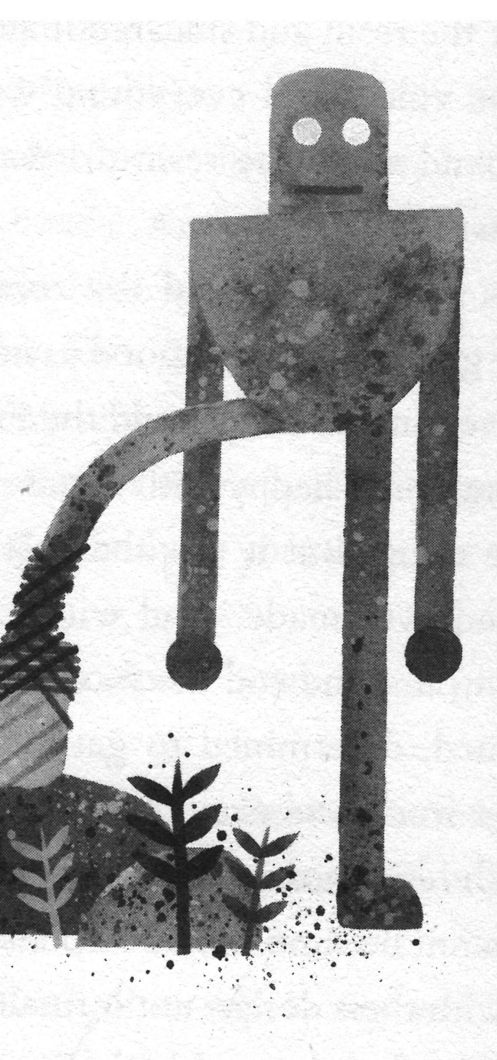


# Essential Questions

**Kids:** How do we work together as a group to design and build something new?


**Teachers:** How do we design purposeful, literacy-based maker spaces?





# Alive Reading

“The New Foot,” p. 150



“The hands are the instruments of  
man’s intelligence.”

*The Absorbent Mind*  
Maria Montessori

A blue-tinted photograph of Jean Piaget, an elderly man with glasses, wearing a suit and tie. He is holding a small object in his hand. The background is a library with bookshelves filled with books. The quote "To understand is to invent." is overlaid in white text.

“To understand is to invent.”

Jean Piaget



A photograph of four children in a maker space, overlaid with a blue tint. From left to right: a girl with blonde hair looking at a laptop, a girl with blonde hair wearing safety goggles and working on a circuit, a boy with blonde hair wearing safety goggles and working on a circuit, and a boy with dark hair wearing safety goggles and using a soldering iron. The table is covered with various electronic components, tools like a soldering iron and pliers, and partially assembled projects. In the background, there are shelves with more components and a 3D printer.

# MAKER SPACES



# **makerspaces.com**

A makerspace is a collaborative work space inside a school, library or separate public/private facility for making, learning, exploring and sharing that uses high tech to no tech tools.



Nation of Makers Conference



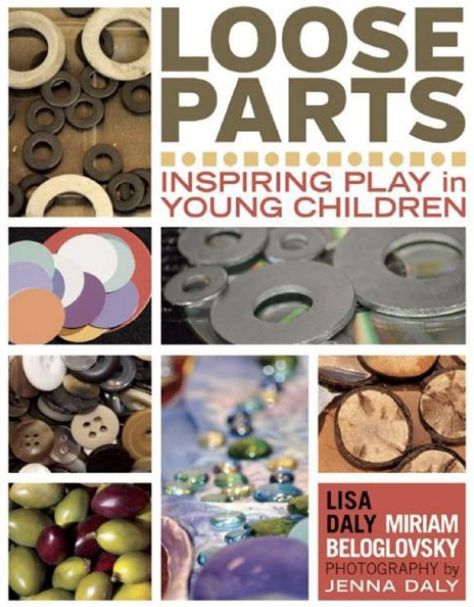
“Making is a way of bringing engineering to young learners. Such concrete experiences provide a meaningful context for understanding abstract science and math concepts.”

Invent To Learn: Making,  
Tinkering, and Engineering  
in the Classroom

60  
MINUTES







# LOOSE PARTS

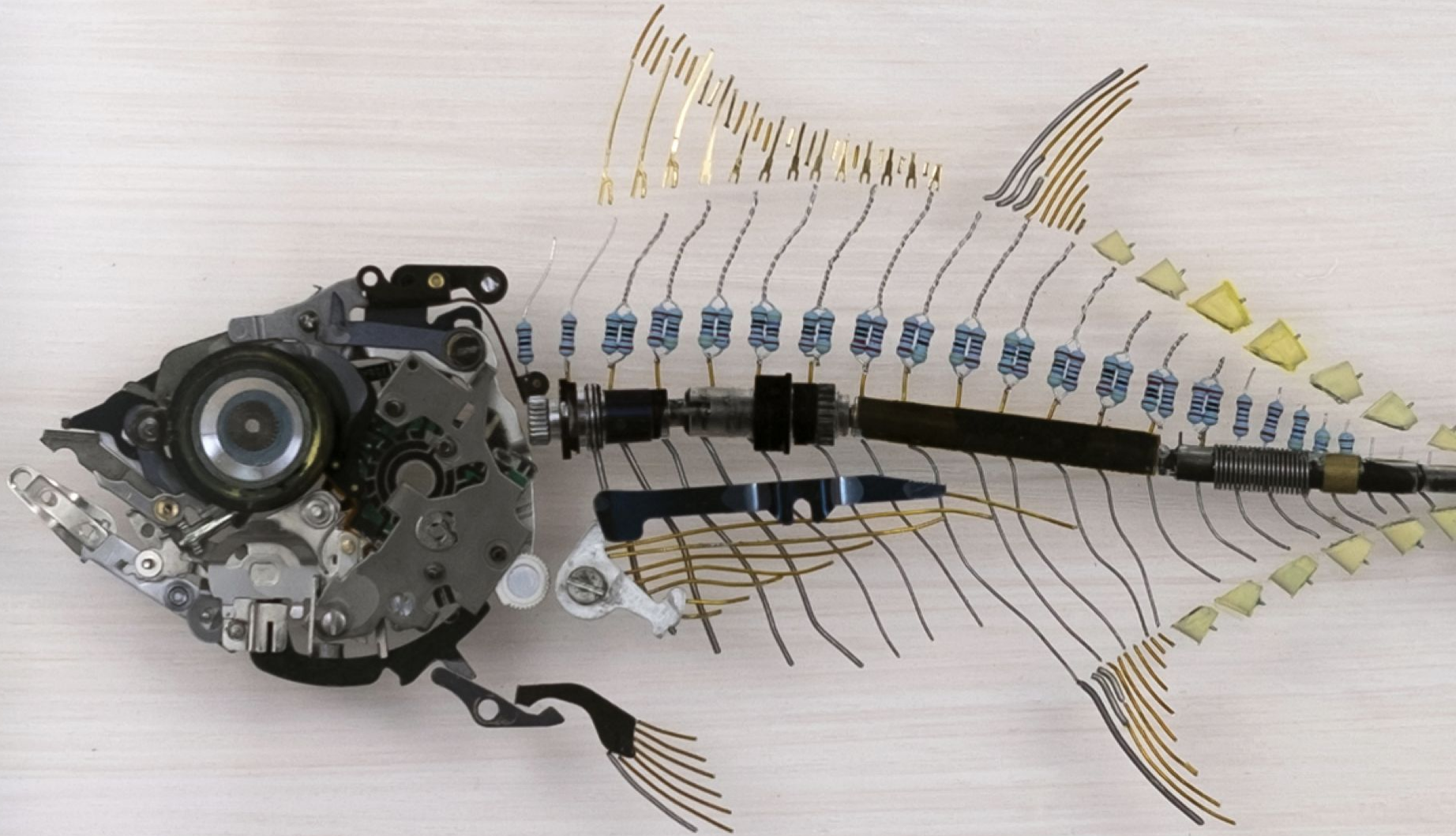
INSPIRING PLAY in YOUNG CHILDREN

LISA DALY MIRIAM BEGLOVSKY  
PHOTOGRAPHY by JENNA DALY

















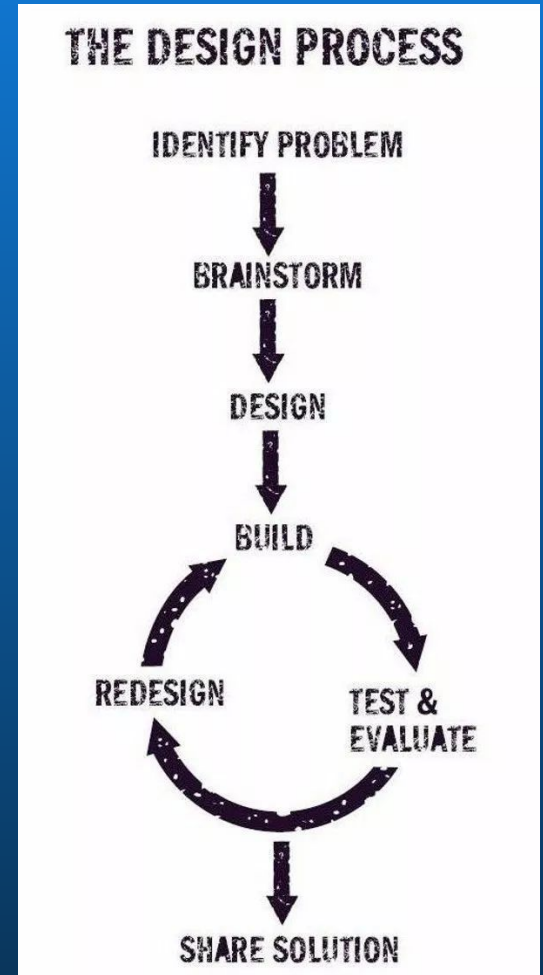




# The Design Process

“So many of the designers that we interview don't know how to make stuff.”

- *Jonathan Ive, Apple's head designer*



The background is a solid blue color. On the left side, there is a faint, stylized illustration of a robot with a rectangular head, two small circular eyes, and a simple body. In the center and right, there are faint, stylized illustrations of evergreen trees. One tree in the center-right has a circular, concentric pattern inside its canopy.

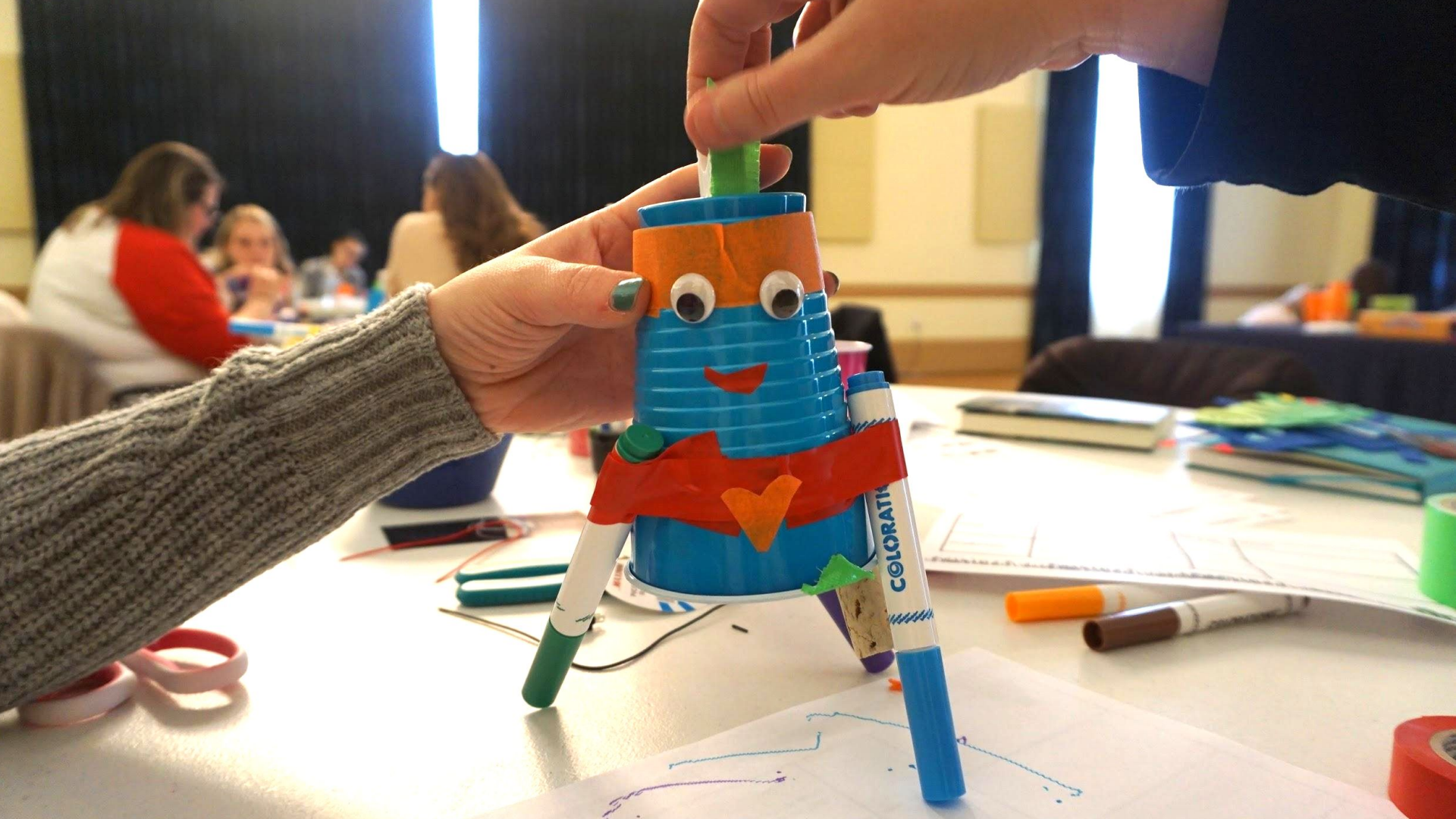
A MAKER SPACE EXPERIENCE

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# ART BOTS - AN INTRODUCTION





















# ArtBot Design Specs

Criteria	Description	Rating 1-7 (low to high)	Notes
<i>Function</i>	The Robot should move in a circular pattern staying on the paper continuously drawing for at least a minute without falling over.		
<i>Form</i>	The robot itself is aesthetically interesting having personality, distinct colors, and a compelling overall design.		
<i>Production</i>	The robot produces a work of art that is a harmonious marriage of color and form.		









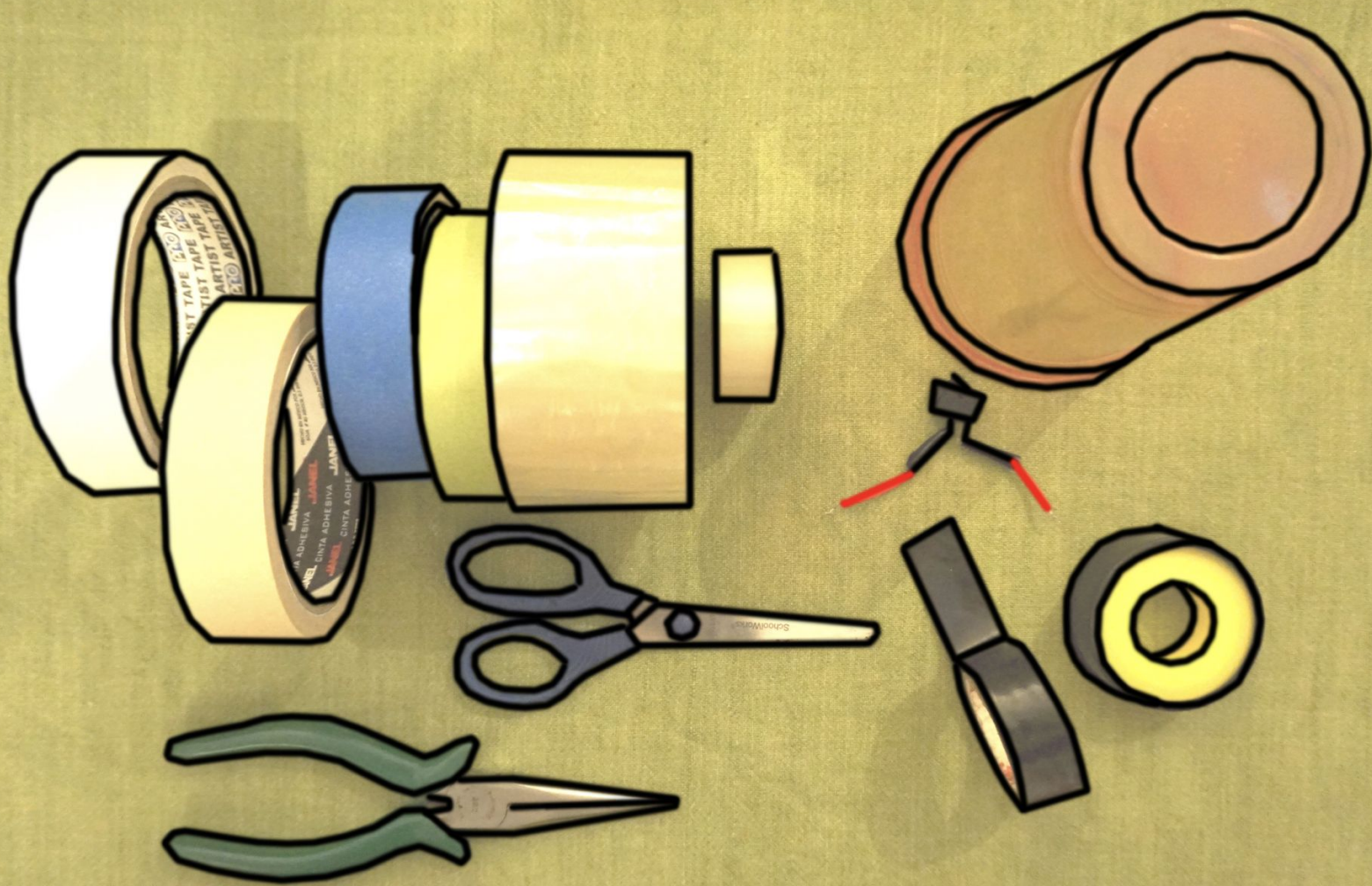




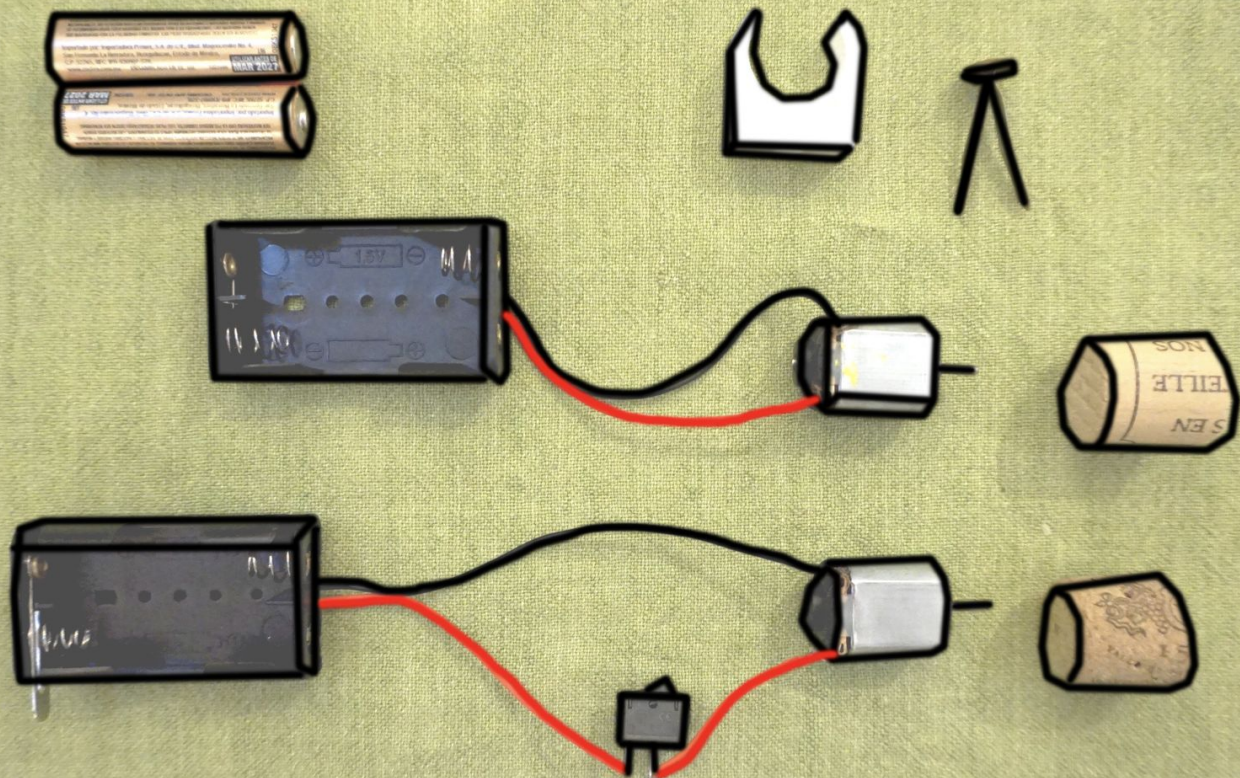














## Design Thinking Reflection



+ *What worked...*

- *What could be improved...*

? *Questions...*

! *Ideas...*



Design Thinking Reflection

Criteria

Function

Description

The robot should move in a circular motion and be able to turn at least 90 degrees without falling over.

The robot should be aesthetically pleasing and have a unique design.

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# Character Development Guide



1. *What is your name?*

2. *Where do you live?*

3. *What are your hopes?*

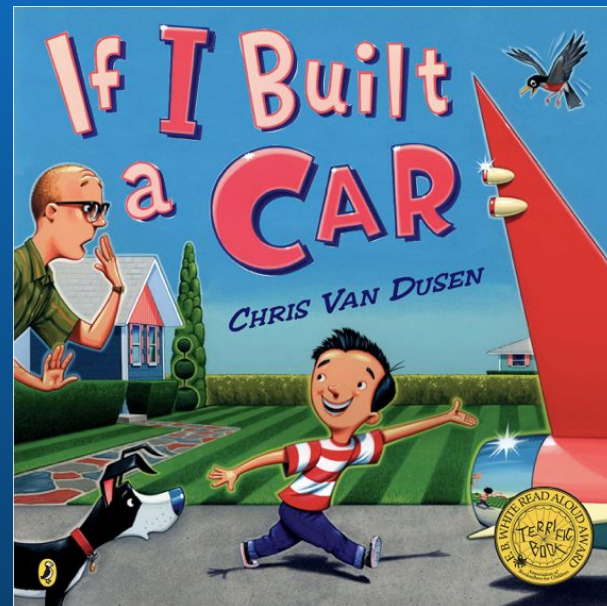
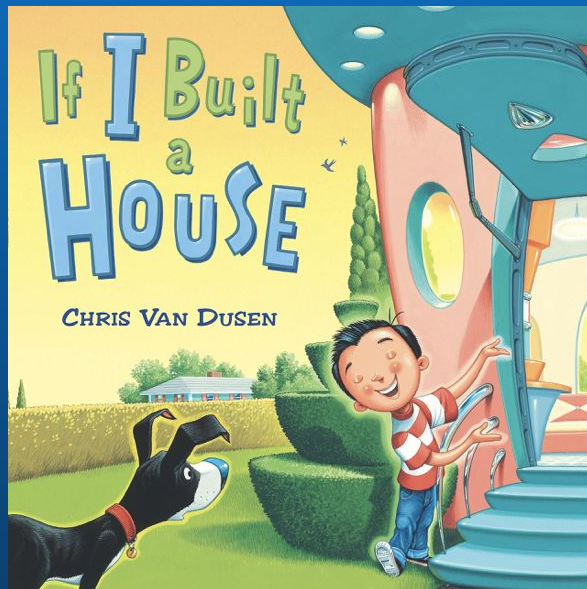
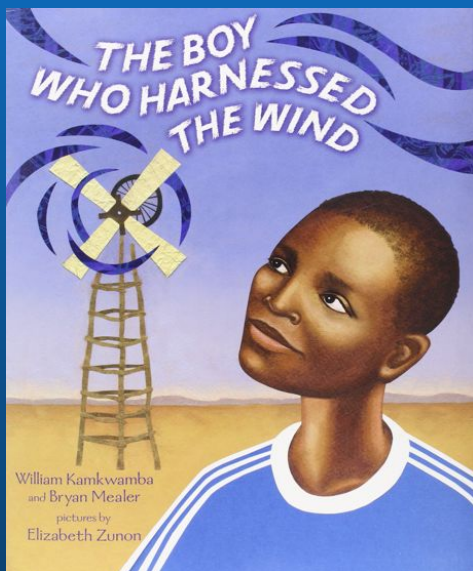
4. *What are your fears?*

5. *Who is your family?*

6. *Who is your most important being?*

7. *What is your secret power?*

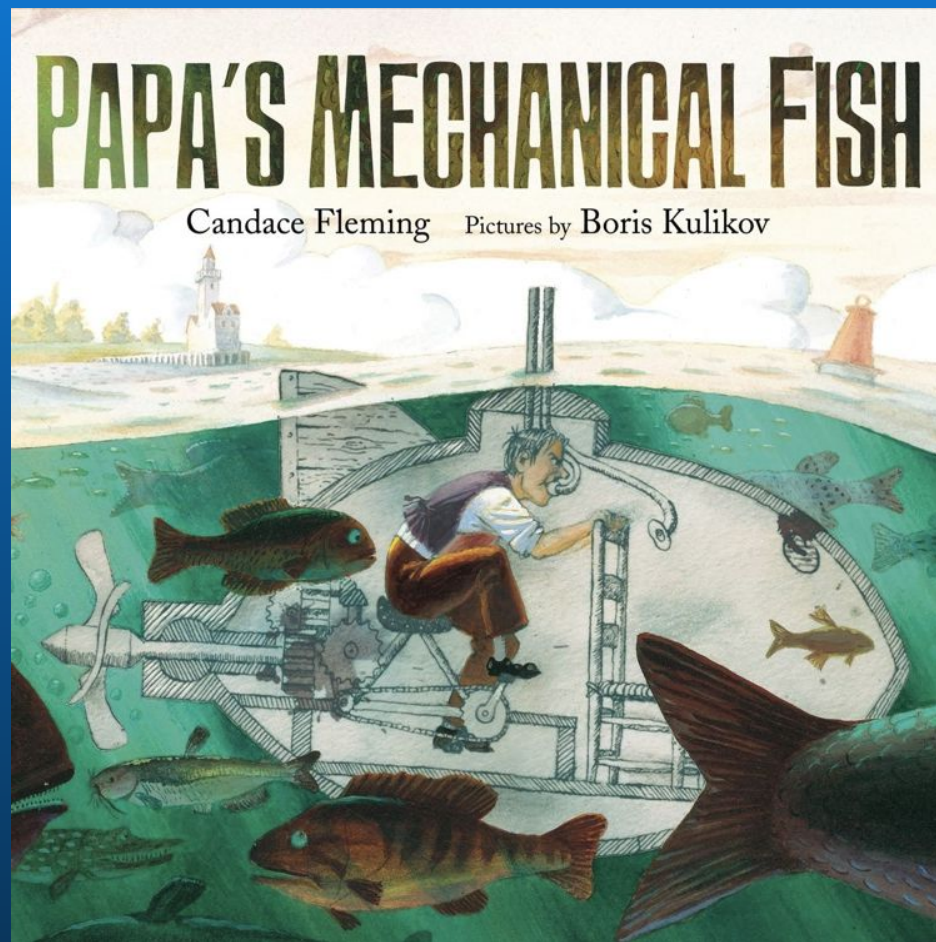
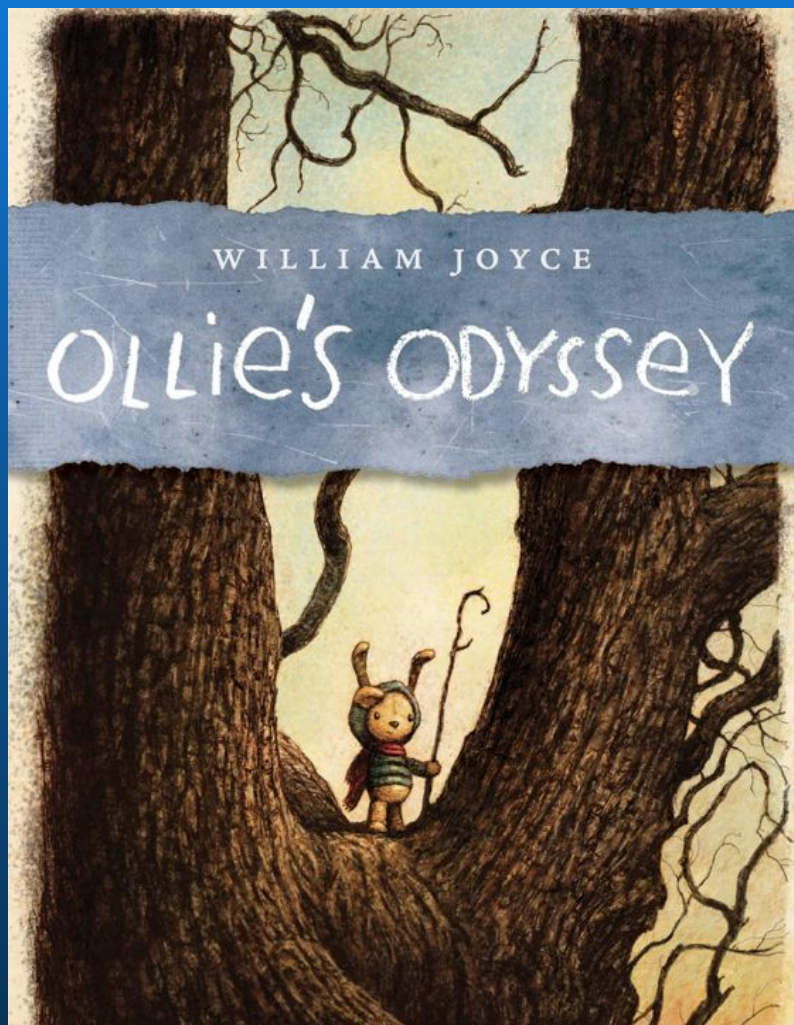




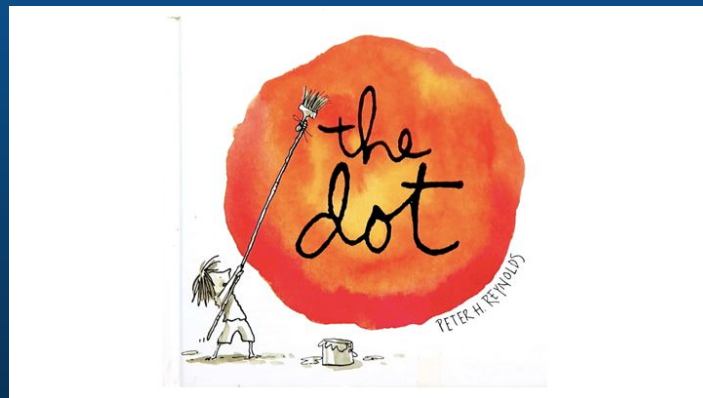
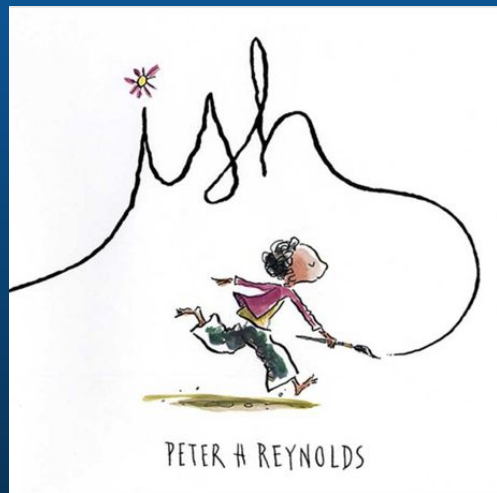
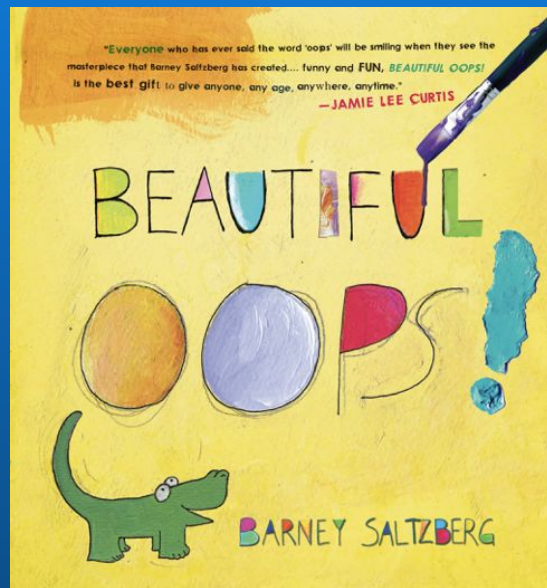
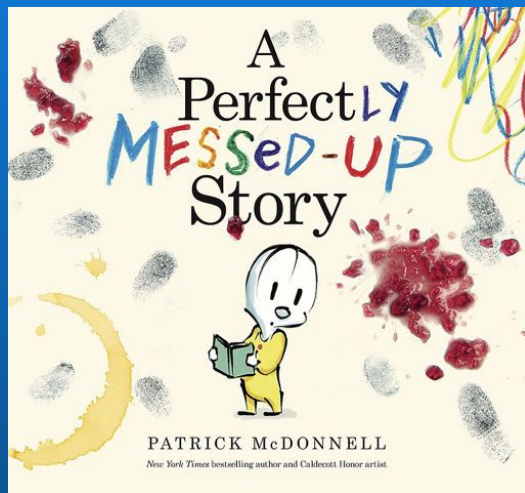
# The Lost Thing

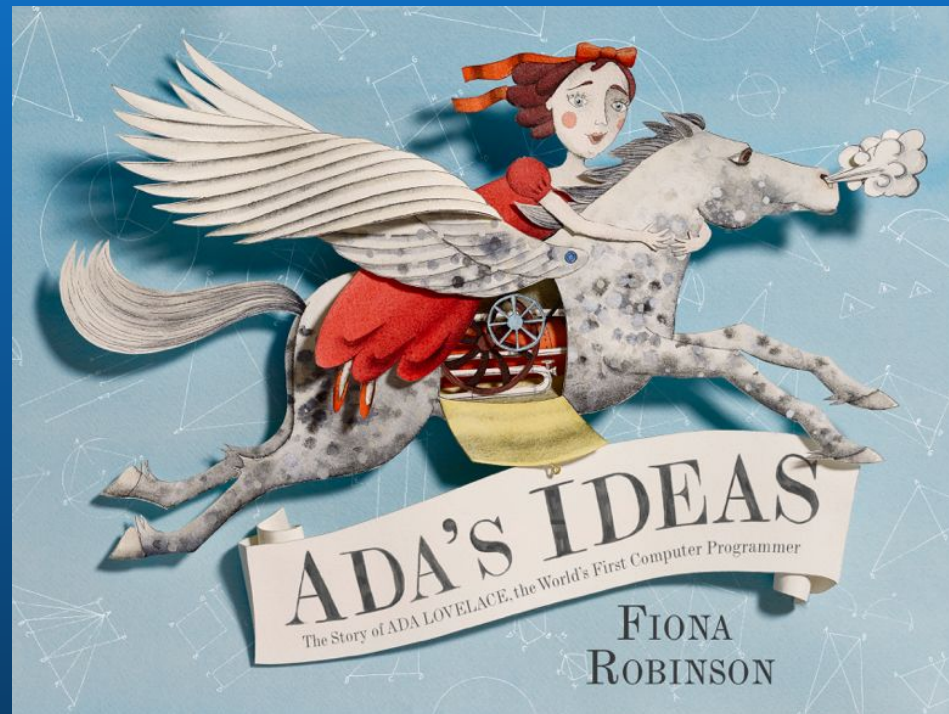
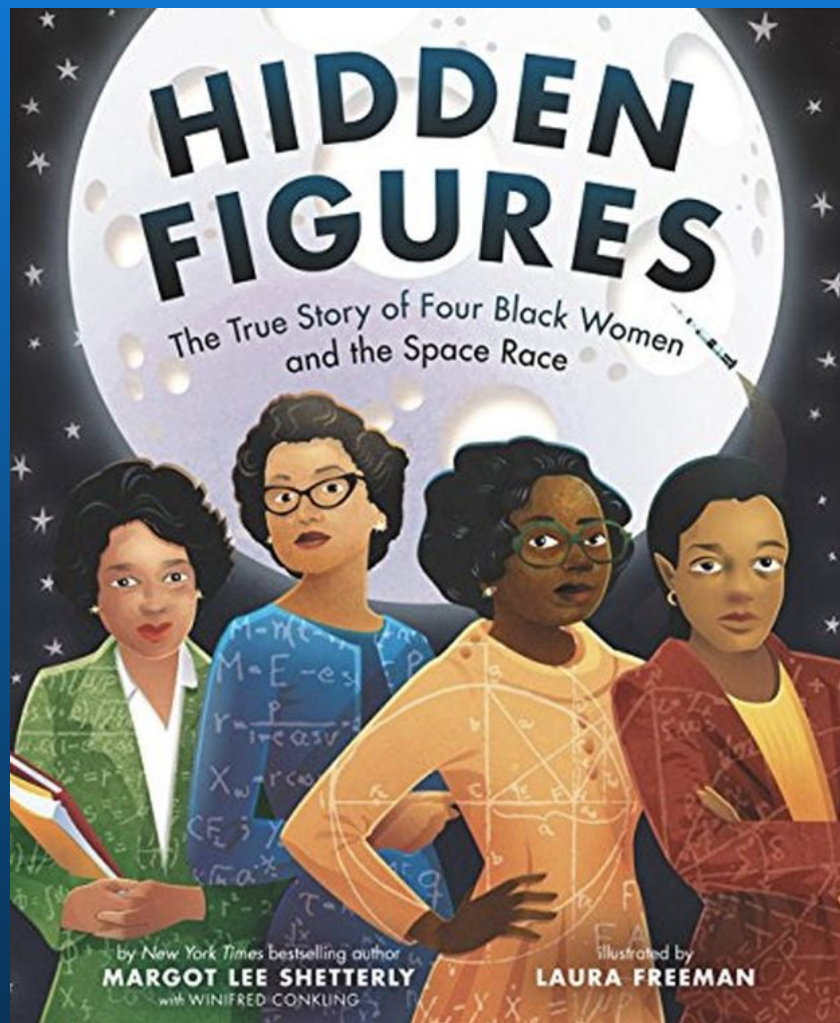










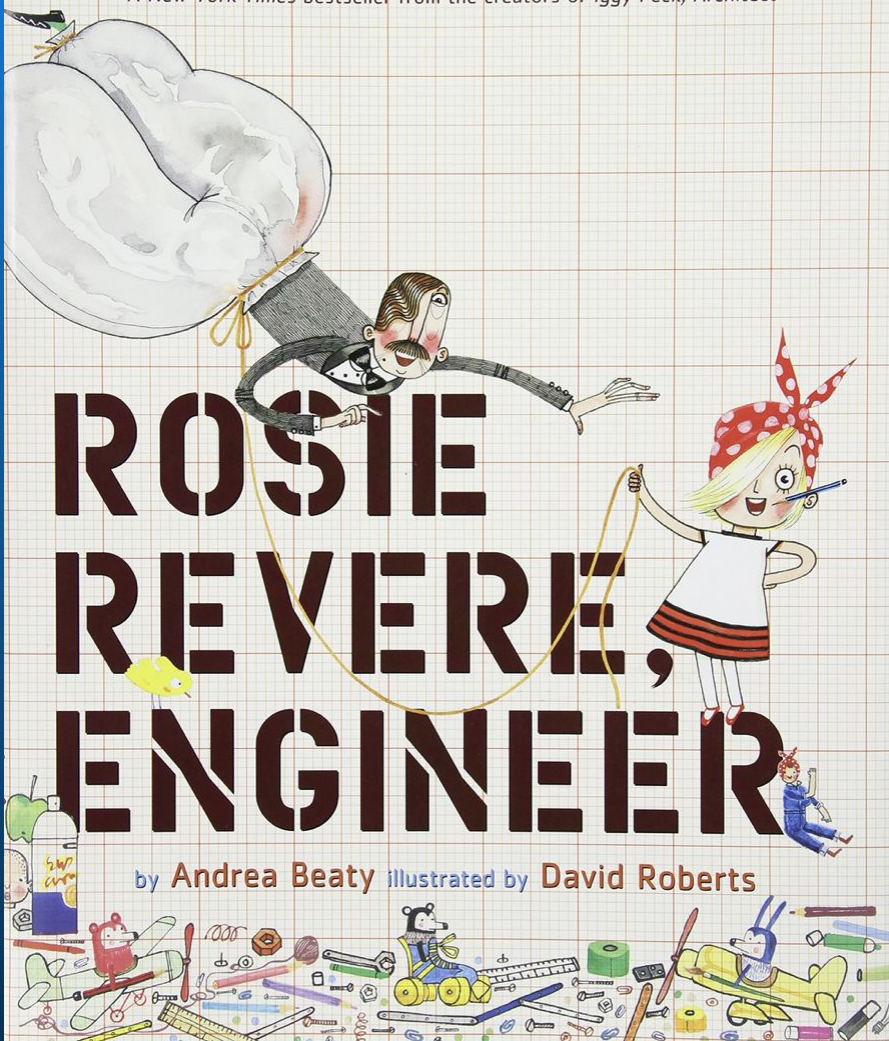




A New York Times bestseller from the creators of Iggy Peck, Architect

# ROSIE REVERE, ENGINEER

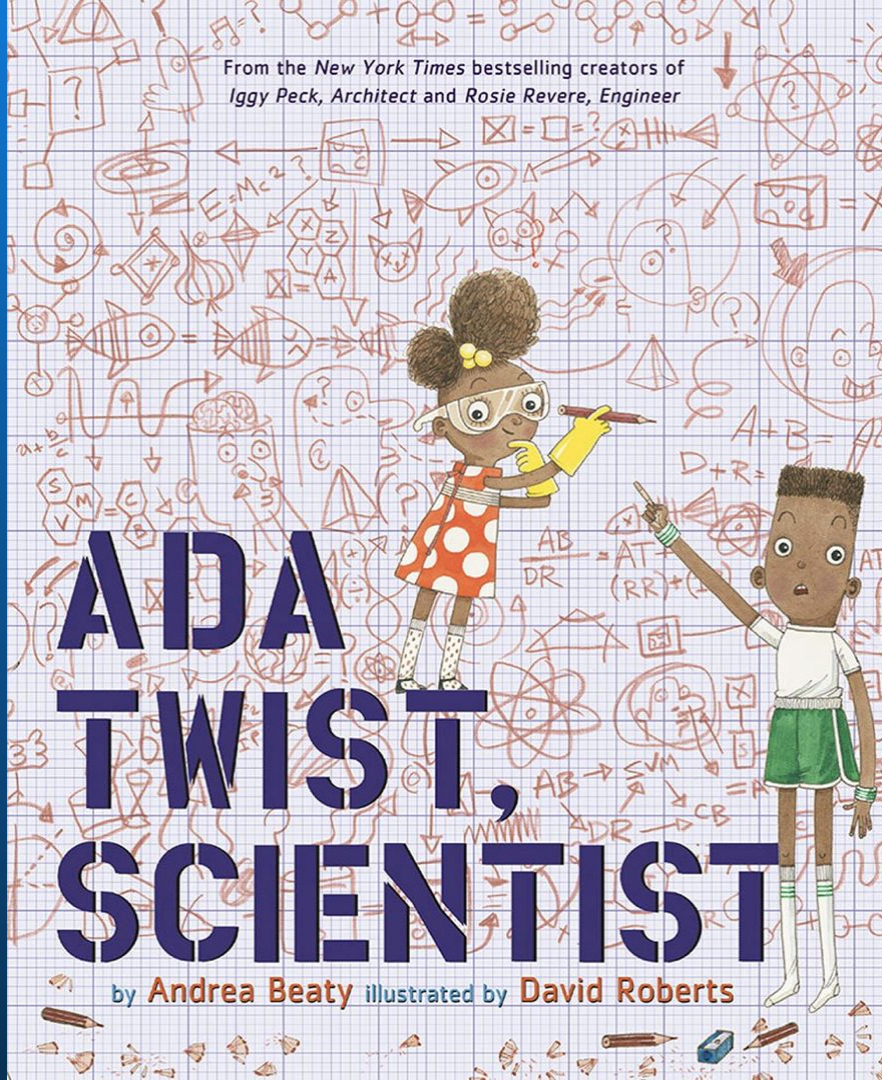
by Andrea Beaty illustrated by David Roberts



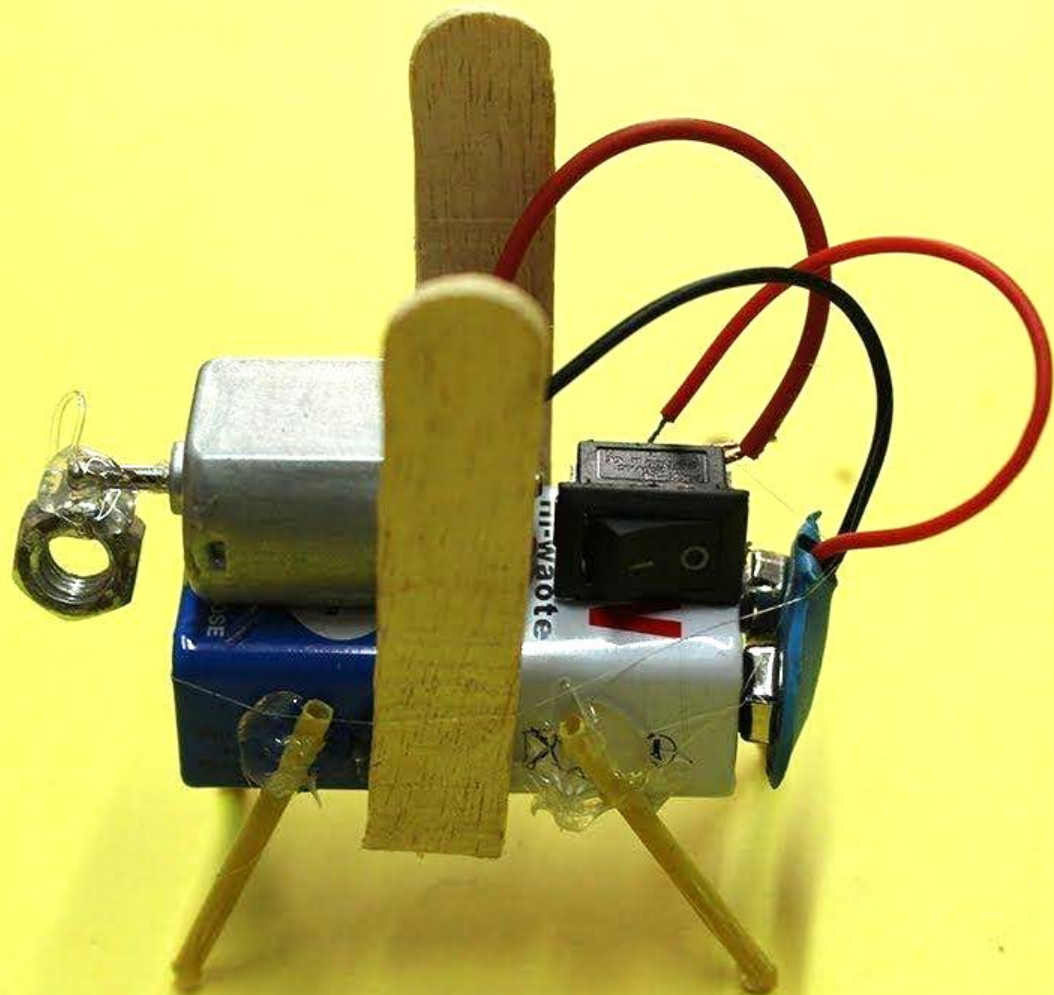
From the New York Times bestselling creators of  
Iggy Peck, Architect and Rosie Revere, Engineer

# ADA TWIST, SCIENTIST

by Andrea Beaty illustrated by David Roberts

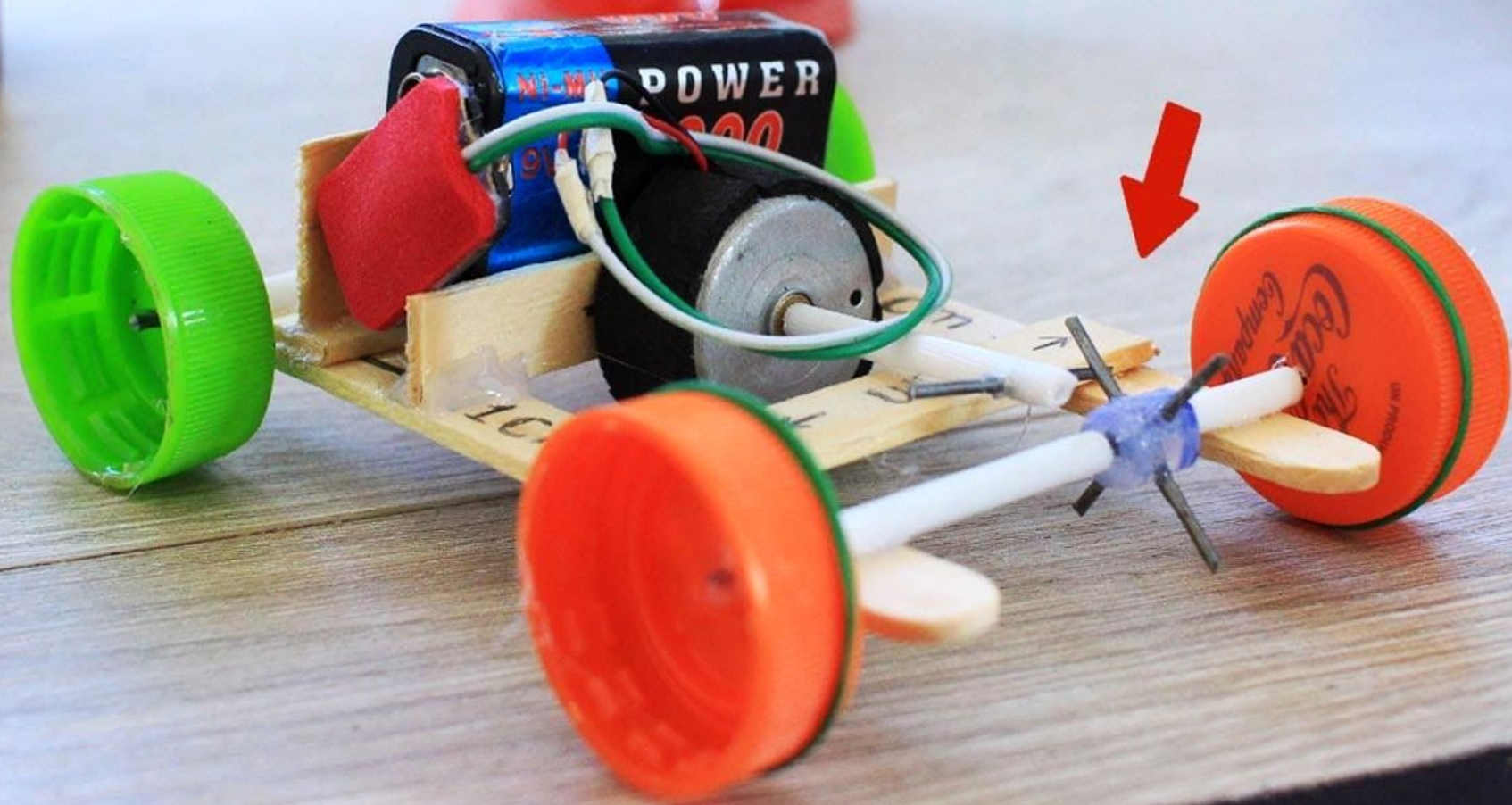




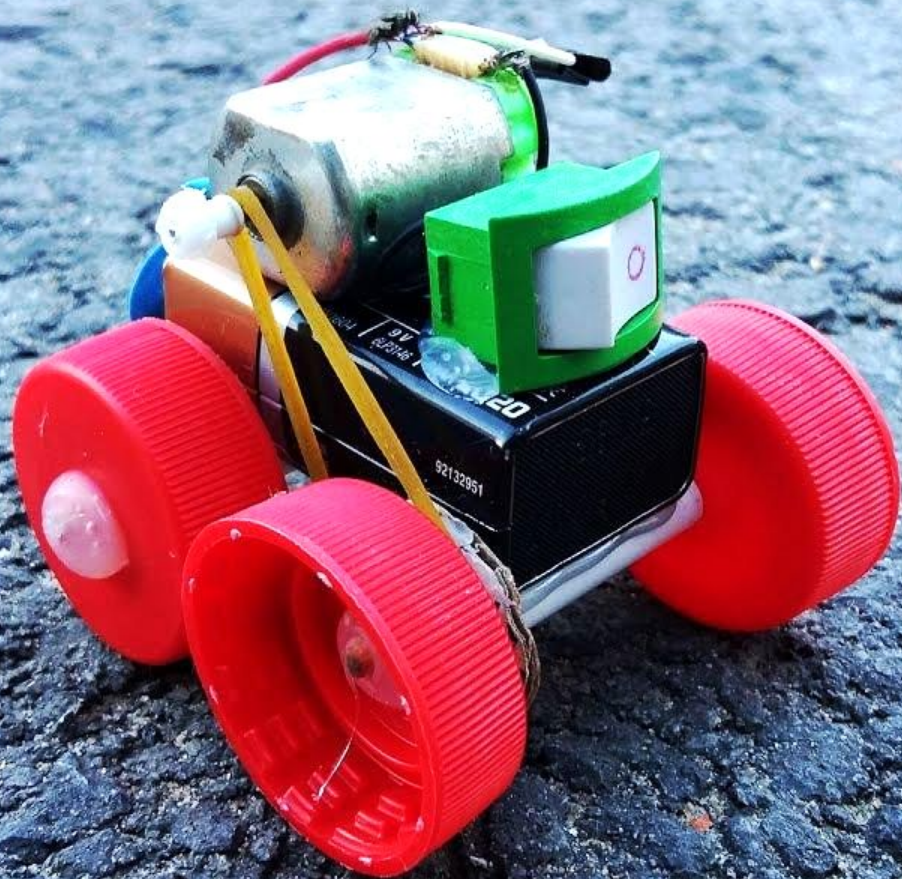














# Top Tips for Literacy Makerspaces



# Top Tips for Literacy Makerspaces

1. Be ok with the design process. Encourage mistakes & perseverance. Culture of kindness & collaboration.
2. Organized place for supplies
3. Plan for time
4. Be supportive, but get out of the way
5. Have clear goals in mind - post and be specific for students. Intentional literacy skill connections.
6. Train & model use of tools with developmental appropriateness in mind
7. TAPE. Lots of tape.





**Lunch 12:00-12:45**

SHARE YOUR  
LEARNING

#Shareyourlearning

@TLA\_Moonshot @MoonshotMoment

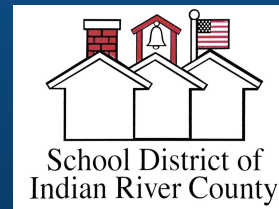
#MoonshotinAction

#MoonshotInstitute



# The Language of Animals

## A Moonshot Institute Workshop





# Essential Question

*How can we learn to communicate?*





# Learning Goals

Apply a previously learned strategy

Experience a complete literacy lesson

Incorporate technology with purpose



**BUILDING  
COMMUNITY**

# Impulse Circle



ENTERING  
TEXT

# Jibberish





## COMPREHENDING TEXT

# Alive Reading

\*add soundscape with Keezy



# Warm & Cool Feedback







# Tomorrow

AM: Putting it all together

PM: Culminating exhibition