Australia's STEM teachers at all levels, from primary to tertiary, must be equipped to deliver course content with confidence and inspiration, and develop all students to their full potential. Curricula and assessment criteria should prioritise curiosity-driven and problem-based learning of STEM—STEM as it is practised—alongside the subject-specific knowledge that STEM requires.

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SCIENCE, TECHNOLOGY, ENGINEERING AND MATHEMATICS: AUSTRALIA'S FUTURE

SEPTEMBER 2014

Our students?


critical thinkers
communication
authentic learning
global
digitally literate
initiative
interpersonal skills
problem solvers
connected
ICT proficient
innovative
imaginative
collaborative
entrepreneurialism
media literate


Australian Raven
BIRDS OF MOUNT
OUSLEY

Genius Time?

Kids

Syllabus Outcomes?

WORKING MATHEMATICALLY

Students:

- develop understanding and fluency in mathematics through inquiry, exploring and connecting mathematical concepts, choosing and applying problem-solving skills and mathematical techniques, communication and reasoning

Stage 1 outcomes A student:	Stage 2 outcomes A student:	Stage 3 outcomes A student:
describes mathematical situations and methods using everyday and some mathematical language, actions, materials, diagrams and symbols MA1-1WM	uses appropriate terminology to describe, and symbols to represent, mathematical ideas MA2-1WM	describes and represents mathematical situations in a variety of ways using mathematical terminology and some conventions MA3-1WM
uses objects, diagrams and technology to explore mathematical problems MA1-2WM	selects and uses appropriate mental or written strategies, or technology, to solve problems MA2-2WM	selects and applies appropriate problem-solving strategies, including the use of digital technologies, in undertaking investigations MA3-2WM
supports conclusions by explaining or demonstrating how answers were obtained MA1-3WM	checks the accuracy of a statement and explains the reasoning used MA2-3WM	gives a valid reason for supporting one possible solution over another MA3-3WM

Name_____

Mt Ousley PS Genius Hour Rubric Years

Score Levels	Question	Conventions	Presentation	Connections
4	• Is well thought out and supports a clearly defined question • Reflects extensive use of Bloom's Taxonomy	• None or limited spelling, grammatical, or punctuation errors	Presentation captures audience attention • Multiple uses of multimedia though e.g. Prezi, blogs, movies, quizzes, iBooks	• Use of email, Skype and connections with more than one expert
3	• Is well thought out and supports a question • Has a moderate use of Bloom's Taxonomy	• A few (1-4) spelling, grammatical, or punctuation errors	• Presentation is well organized • More than 2 forms of multimedia used	• Use real world connections including Skype and email
2	• Provides some information • Shows some use of Blooms Taxonomy at lower levels • Has no clear goal	• Some spelling, grammatical, or punctuation errors • Low-level use of vocabulary and word choice	• Project has a focus but might stray from it at times • Presentation does not capture audience attention	• Use of Internet and books
1	• Provides weak information • Has significant factual errors or ideas	• Many spelling, grammatical, or punctuation errors • Poor use of vocabulary and word choice	• Content is poorly organized • Presentation has no clear organization	• Use of books only

www.scientistsinschools.edu.au/index.htm

MOPS | Portal | SmugMug | Bell | CLIC | Curric. Supp. | BM Math | IT Support | Nth Coast DET | CNPS | Southern | SpellCity

Scientists in Schools

HOME | GET INVOLVED | CURRENT PARTNERSHIPS | RESOURCES FOR PARTNERS | DOWNLOAD | CONTACT US

Scientists and Mathematicians in Schools also includes

Mathematicians in Schools

Scientists in Schools welcomes you...

Scientists and Mathematicians in Schools is a national program that creates and supports long-term partnerships between primary or secondary school teachers and scientists or mathematicians. Partnerships are flexible to allow for a style and level of involvement that suits each participant. Check out the showcases to see what some partnerships have been doing.

Scientists

Information | Register

Teachers

Information | Register

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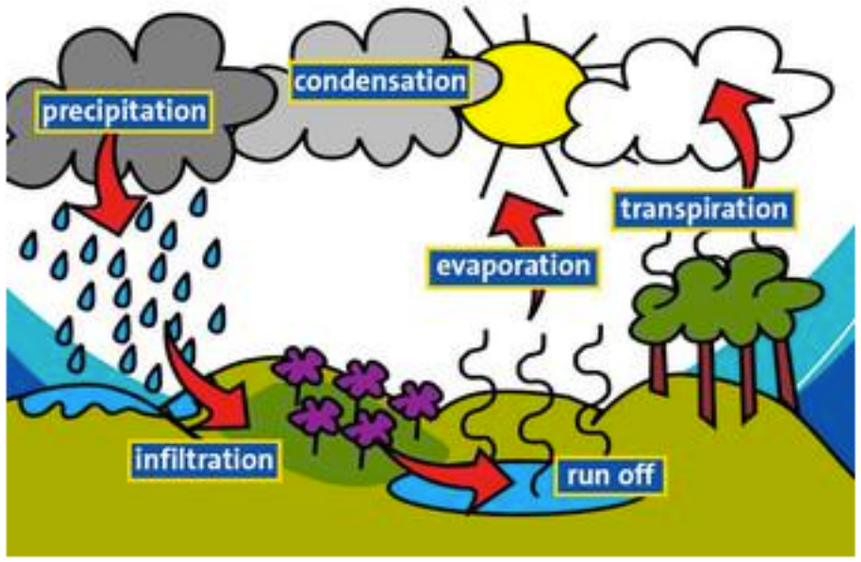
Sydney Water @SydneyWaterNews · Mar 3
@12Fabulous You can play our water cycle game :)
sydneywater.com.au/SW/teachers-st…

View conversation

Sydney Water @SydneyWaterNews · Mar 3
@12Fabulous Water turns into a gas called water vapour and rises invisibly into the air. This is called evaporation. pic.twitter.com/n2bSo3ubMQ



1

Penny favorited your Tweet
Feb 24: In science we learnt about rain. We needed to tes
and we put water in it and tested the six subjects. By Jasl

KD Mops @K1mops · Jun 12
i like football. i like handball. jake

Behind the News @BehindTheNews · Jun 12
@K1mops Hi Jake - so you like handball - did you know it is an olympic sport? Check out our story all about it abc.net.au/btn/story/s317…

11:14 AM - 12 Jun 2014 · Details

Hide conversation

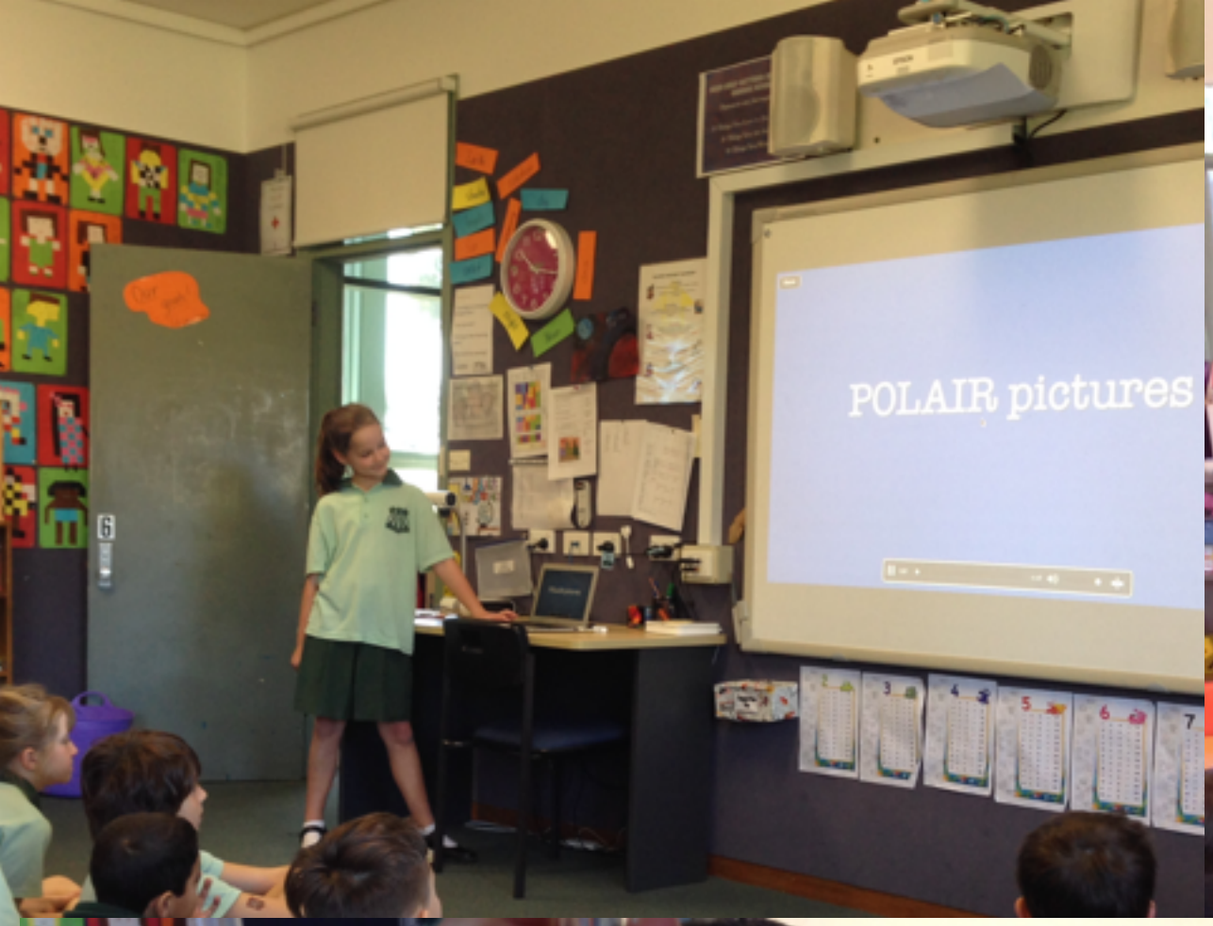
Reply to @BehindTheNews

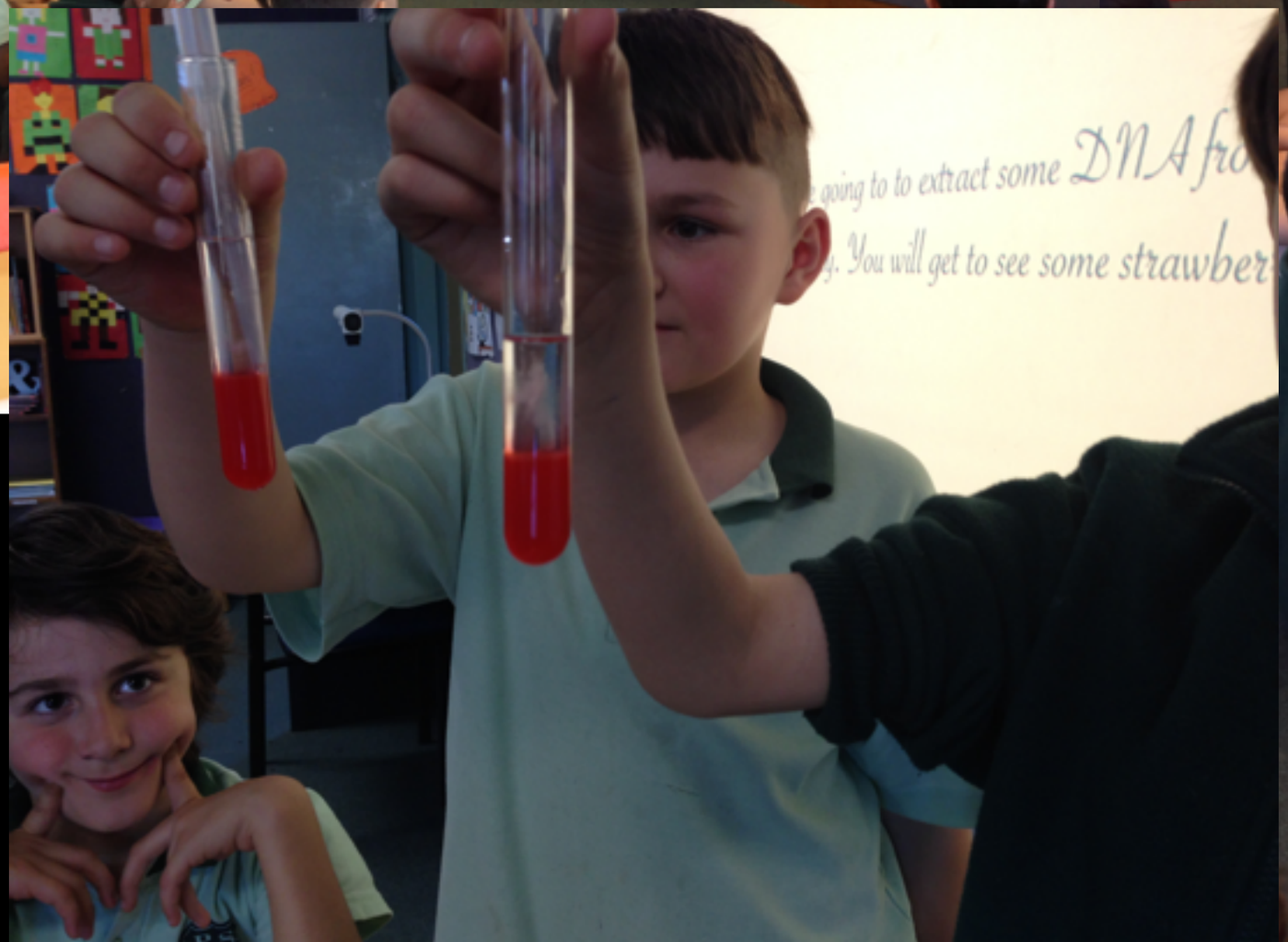
KD Mops @K1mops · Jun 13
@BehindTheNews Thanks for showing us that video! We all want to start playing professional handball now. What are some other unusual sports?

Behind the News @BehindTheNews · Jun 13
@K1mops I'd say Rabbit Jumping abc.net.au/btn/story/s384… ...and Golf Croquet is pretty unique abc.net.au/btn/story/s396…
pic.twitter.com/UWT6mXyDbQ

Ideas lead to a *quality question*!

Trees - How do trees produce oxygen?
Cakes - How to bake a cake, demonstration.
Sharks - What is the diet of a white shark?
London - What should visitors see?
POLAIR - How does POLAIR help rescue people?
DNA - Why do humans have unique DNA?
Parkinsons Disease - How does it affect the body?


POLAIR pictures


going to to extract some DNA fro
y. You will get to see some strawber

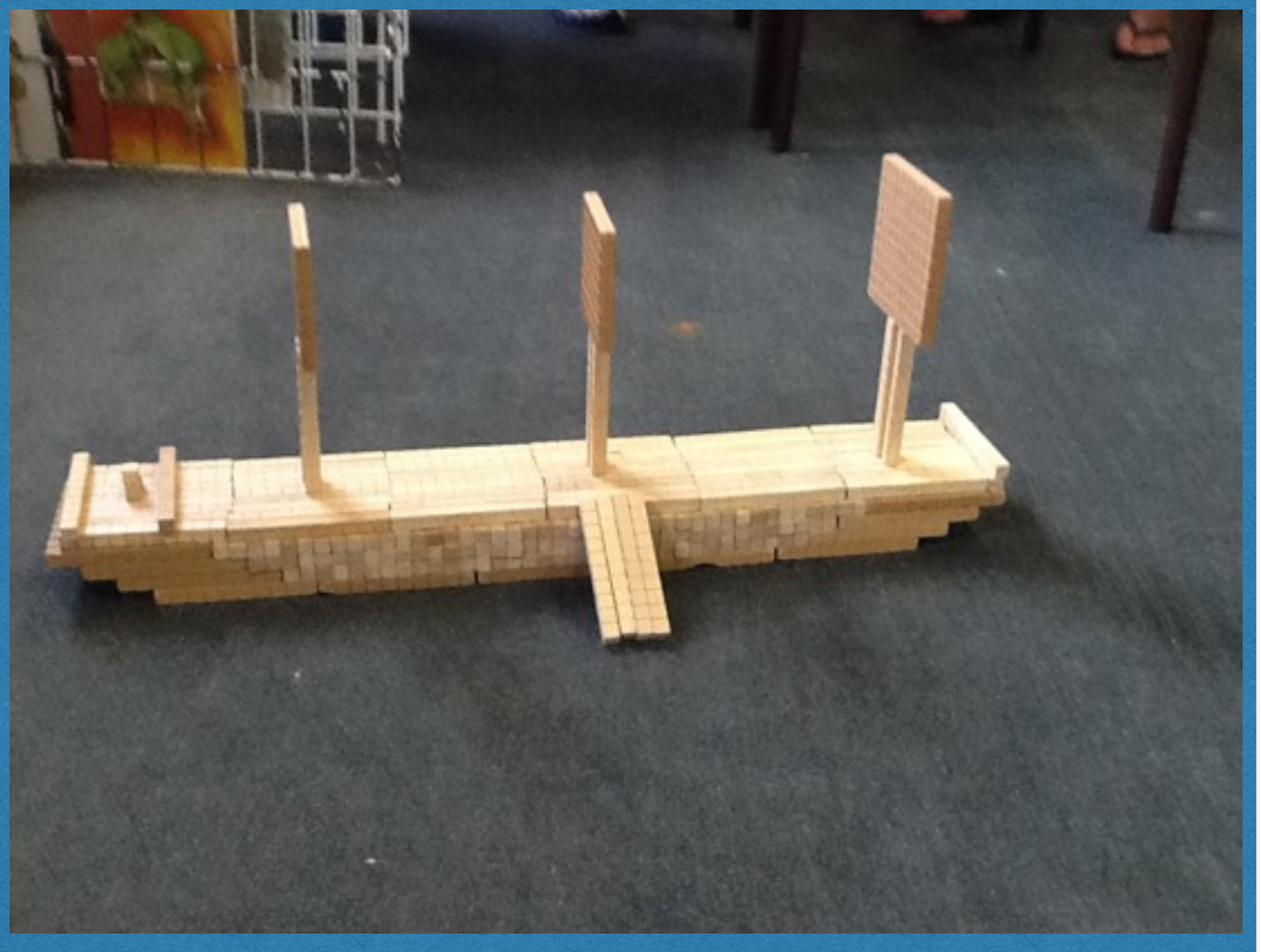
How did they travel?

Viking longship would be about 30 metres long and 6 metres wide.

How did they travel

What's the width of a Viking longship

Our base 10 Viking longship



+ve

- Good experience for learning
- Finding and sharing information
- Getting interested in new things
- Teaching peers new things
- Getting smarter
- Researching information
- Doing stuff that you enjoy
- Fun making stuff
- Being creative
- Learning how to be creative
- Having fun sharing
- Talking to experts

-ve

- More teacher feedback/ guidence
- Need targets to manage time
- Flexible time/ more time
- More choice in presentation type
- Too hard

Novel Engineering

Inspired by kids and grounded in research, Novel Engineering is an innovative approach to integrate engineering and literacy in elementary and middle school.

Students use classroom literature—stories, novels, and expository texts- as basis for engineering design challenges to:

- Identify engineering problems
- Impose constraints by using details from the text
- Design functional, realistic solutions for characters
- Engage in the Engineering Design Process while reinforcing their literacy skills

Learn more | See Links to Common Core | Upcoming Workshops

Follow

Tinkering K-6

ideas and examples
Mount Ousley Public School

Aus

Australia's STEM teachers at all levels, from primary to tertiary, must be equipped to deliver course content with confidence and inspiration, and develop all students to their full potential. Curricula and assessment criteria should prioritise curiosity-driven and problem-based learning of STEM—STEM as it is practised—alongside the subject-specific knowledge that STEM requires.

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SEPTEMBER 2014

tinkering.exploratorium.edu/projects

LMBR | NSW- AusCuric | MOPS | Portal | SmugMug | IT Support | Curric. Supp. | Til | Bell | resources | Ipad | Speld(SA) | MATH

the tinkering studio™

Experiments with science, art, technology, and delightful ideas.

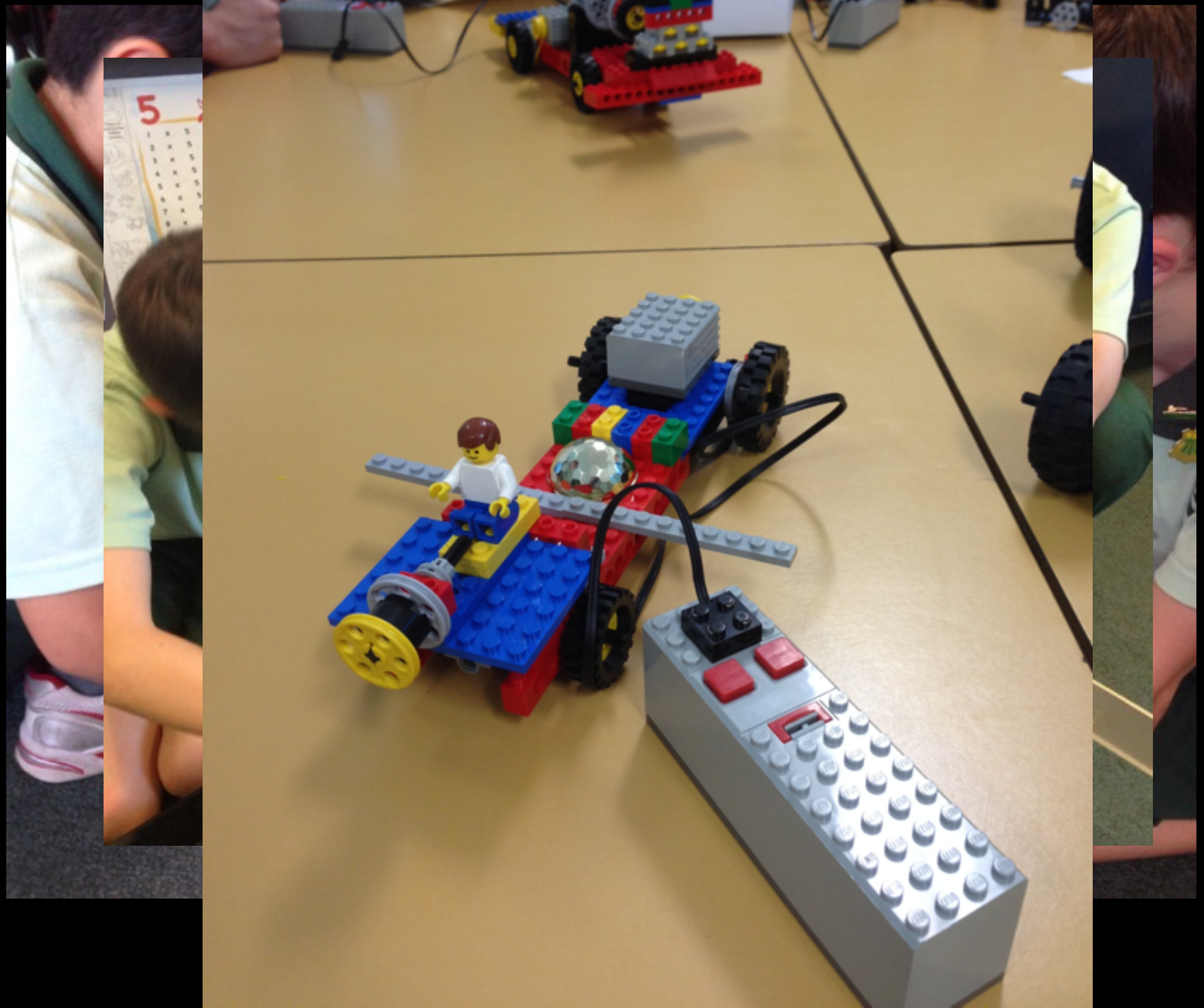
Featured Project

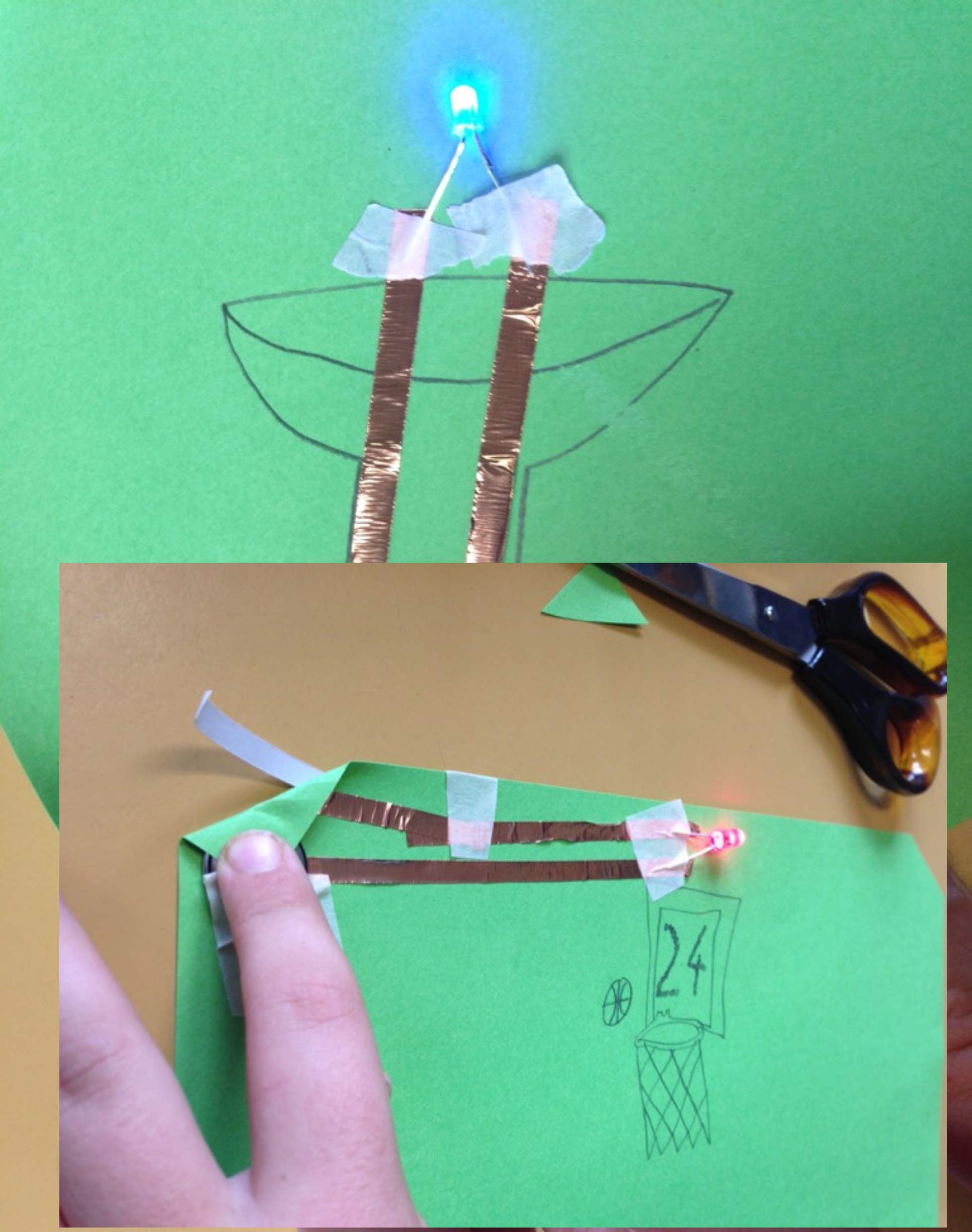
Digital Bling

LEDs, wires, coin-cell batteries and switches electronic components that can be tinkered different ways. There's no better way to get these materials than creating beautiful wear

See all from
- circuits
- hare-brained ideas
- light and shadow

The Tinkering Studio is primarily an R&D laboratory on the floor of the Exploratorium, but whenever possible we try to sha activities, and developing ideas following an "open source" model. Learn how you too can enjoy our activities in your kitch classroom, and community.

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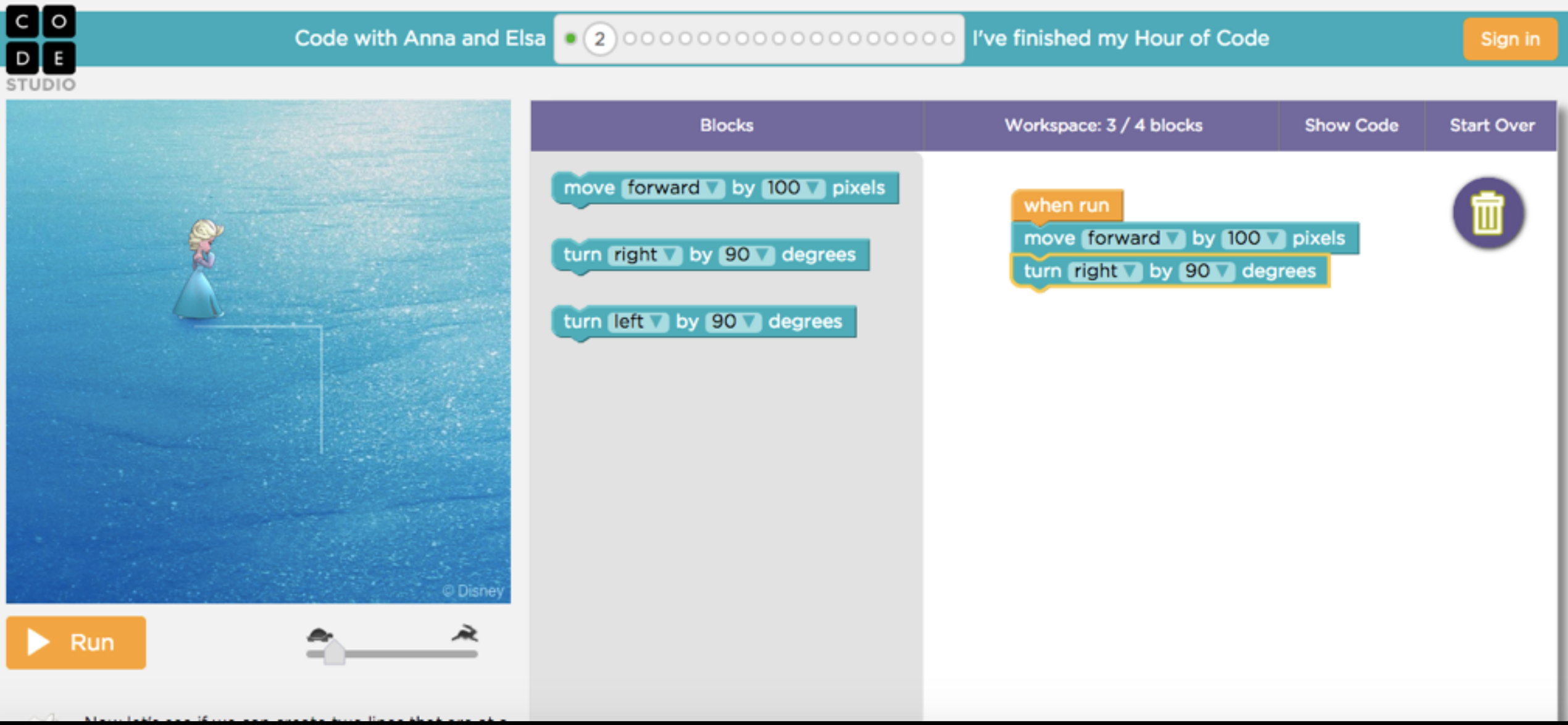
www.code.org


C O
D E
STUDIO
Code with Anna and Elsa
2
I've finished my Hour of Code
Sign in
Blocks
Workspace: 3 / 4 blocks
Show Code
Start Over
move forward by 100 pixels
turn right by 90 degrees
turn left by 90 degrees
when run
move forward by 100 pixels
turn right by 90 degrees
© Disney
Run

HIGH TECH ELEMENTARY

The Hive

Unorthodox Teaching

Design & Brainstorming

Room 153

Don't worry about
making mistakes. Making
things out of mistakes, that's
CREATIVITY!

reflection2015 - TodaysMe | Student Teams - Flat Conn | Let's free education and st | Apply in 2016 | Winston Ch

https://www.churchilltrust.com.au/application-proces Close to-apply/

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REWARDING AUSTRALIANS STRIVING FOR EXCELLENCE

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Quicklinks

- Fellowship Information
- Fellowship Selection Process
- Frequently Asked Questions

APPLY IN 2016

Applications open Sunday 28 February and close 11.59pm AEST Saturday 30 April 2016

A Churchill Fellowship offers ordinary Australians the opportunity to travel to the far edges of the globe to conduct valuable research in their field and bring back knowledge, experience, ideas and innovation for the betterment of their industry and Australia.

More than 100 Fellowships are to be awarded in 2016 worth more than $20,000 each.

ARE YOU LOOKING TO APPLY?

Learn about the application process and our most frequently asked

Mount Ousley Public School

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