

# SCIENCE STORIES

Science in meaningful contexts!

All 5 Stories (in PDF)

\$15 / teacher licence

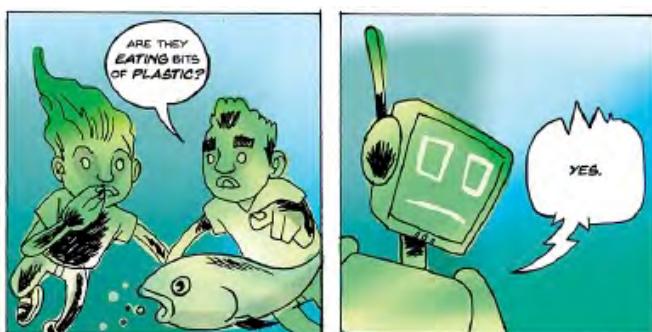
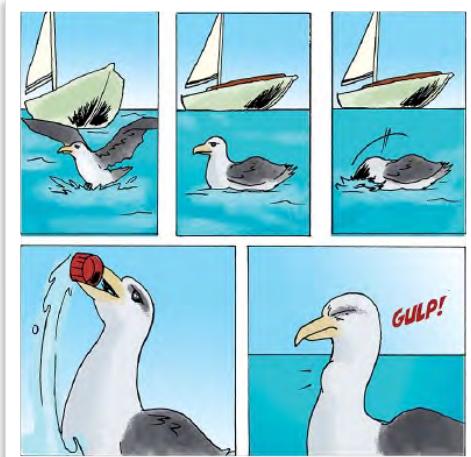
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[LearnX.ca/math](http://LearnX.ca/math)

## THE NEW WORLD Gr. 3 & up

### The Great Pacific Plastic Floating Dump

In this story, 2 children sailing with their robot bump onto the *Great Pacific Plastic Floating Dump*. 21 pages.



## THE NEW WORLD

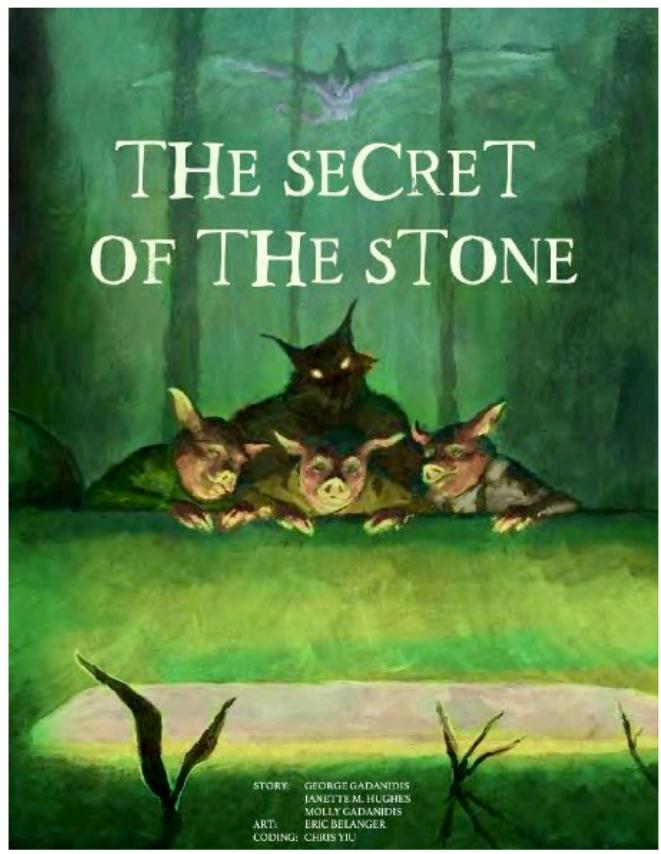


### Raising awareness

*The New World* draws student attention to big ideas of science by eliciting surprise: "There is a floating plastic dump in the ocean that is the size of Quebec?" This realization sets the stage for students exploring, "How did this happen?" and "What can we do to better protect our planet?"



# The SECRET of the STONE — Gr. 3 & up



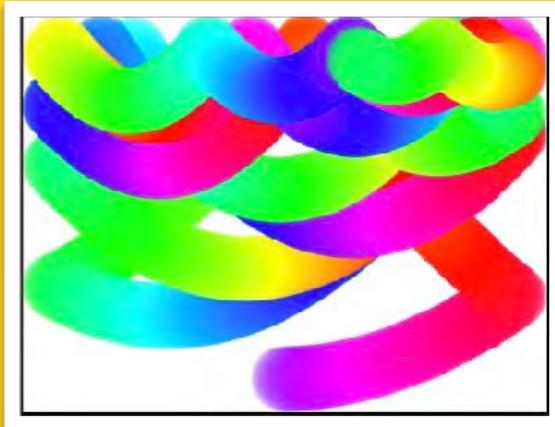
## Science in action

In this fractured fairytale, the 3 Pigs use the science of buoyancy & relative density to help Wolf lift a heavy stone. 18 pages.



## Create science art with code

The story comes with a coding app where students create *science art* based on how relative density and buoyancy affect the motion of objects in various substances.



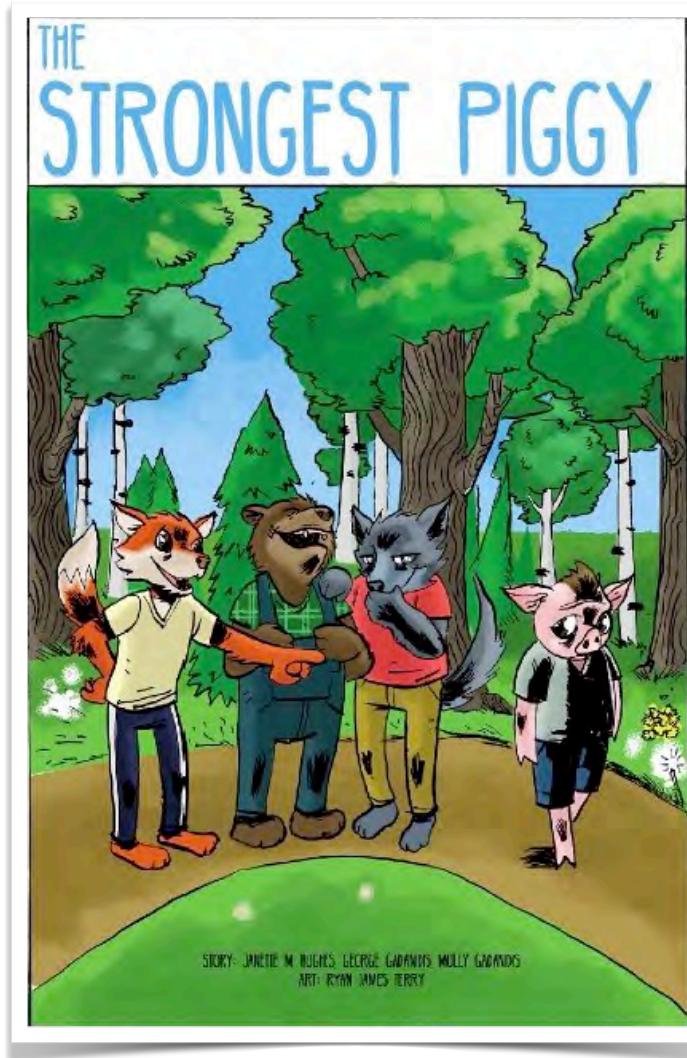
## In a song

We first did such activities over 10 years ago, at a Math + Science Camp for grades 2-4 students. They lifted rocks in and out of water. They used spring scales to measure the weight of masses in and out of water.



As a culminating activity, children wrote songs to celebrate their learning and performed them for their parents. For a number of years, we performed their song *Will it sink or will it float?* at school concerts funded by the Fields Institute. You may listen to this song here: <https://researchideas.ca/jx/mp3/will-it-sink.mp3>

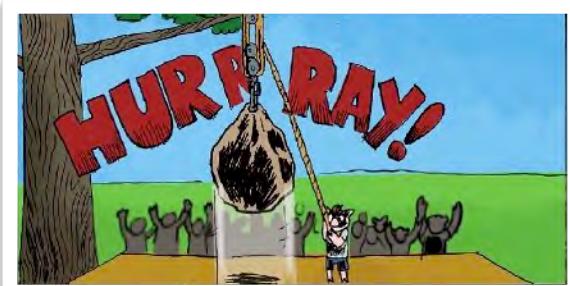
# The STRONGEST PIGGY — Gr. 4 & up



The Third Piggy was not fast nor strong. He could not lift heavy weights like his brother could. He never won races as his sister did.

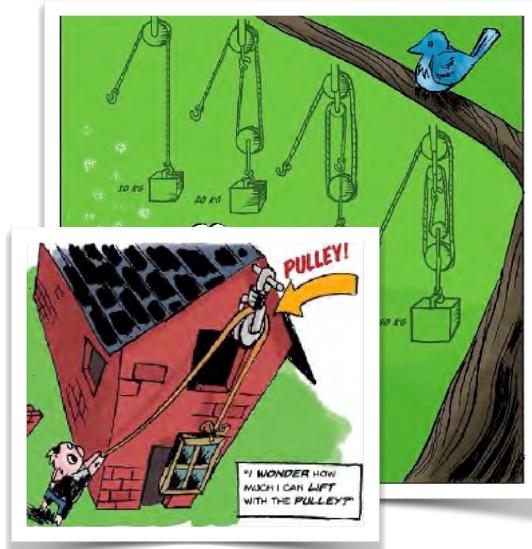


But he used his science knowledge of pulleys and mechanical advantage to win the *Lift twice your weight* contest at the Fair.



## Pulleys & mechanical advantage

How do you design a pulley to lift twice your weight?



## Bullying awareness

This is a story about science and a story about bullying. 20 pages.



Each page of the story has a question to prompt reflection and discussion.

# FIRE — Gr. 4 & up



Fire is a story about the science of friction and about scientific invention. 18 pages.



In autumn, Arda slipped in the creek while carrying her clan's fire horn. It's now winter and the clan is trying to survive without heat.



## Friction force → thermal energy

As you rub your hands together, the work you do through the force of friction creates an energy transfer into thermal energy.



The same is true when rub or two pieces of wood together.

But the clan has an idea!



Each page of the story has a question to prompt reflection and discussion.



# BROKEN SPEAR

 — Gr. 4 & up

## BROKEN SPEAR



STORY: GEORGE GIDANDIS, JINETTE M. HUGHES & MOLLY GIDANDIS  
ART: RYAN JAMES TERRY

This a story about Arda and Orta learning to spearfish. But they keep missing the fish swimming in the river. 20 pages.



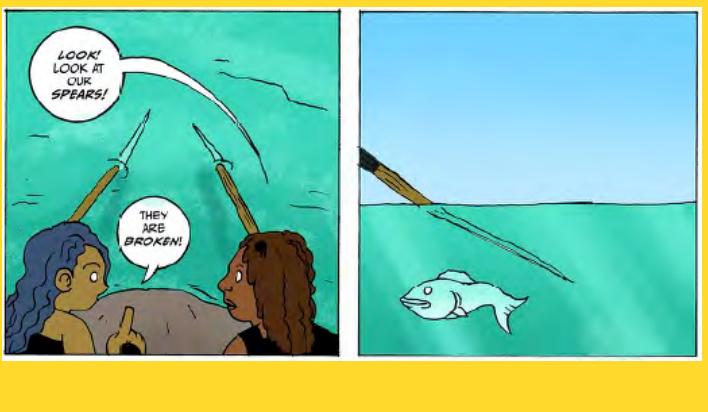
They also notice that their spears appear to be broken in the water. How could that be?

Then Arda remembers sledding in the snow.



### Making sense of refraction

How may Arda and Orta make sense of refraction? What does the *broken spear* have to do with *turning the sled* in the snow.



# ARTIFICIAL INTELLIGENCE STORIES

All 3 AI Stories (in PDF)

\$9 / teacher licence

\$19 / school licence

## AI FARM — Gr. 4 & up

[LearnX.ca/ai](https://LearnX.ca/ai)



What might happen if agbots (agricultural robots) develop Artificial Intelligence? What will be their relationship with humans? What might be the benefits or dangers? Each story page has a question to prompt reflection & discussion. 38 pages.

### The adventures of Ozzie

Ozzie is a security drone that becomes a humanoid – a human-looking machine. Can humanoids think? Can they feel?



## Comes with a coding app

Bring Boolean logic to life with code

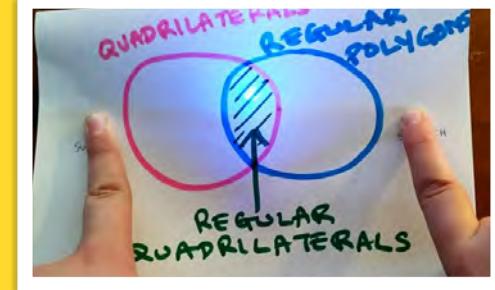
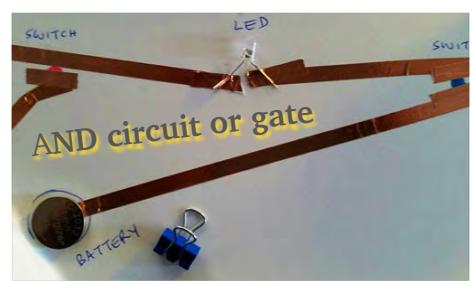
Boolean logic helps AI make decisions. Create math patterns on a grid using code and Boolean logic.

4	5	6	7	8	9	10
14	15	16	17	18	19	20
24	25	26	27	28	29	30
34	35	36	37	38	39	40
44	45	46	47	48	49	50
54	55	56	57	58	59	60
64	65	66	67	68	69	70
74	75	76	77	78	79	80
84	85	86	87	88	89	90
94	95	96	97	98	99	100

Logic  
Loops  
Math  
Variables  
Grid  
Effects  
Puzzle

```
reset grid
set animation speed to [fast -]
set [number v] to [1]
repeat [100] times
  do
    if [number = m]
      do
        create [blue] Gork
      else
        set [number v] back
    change [number v] by [1]
```

With hands-on activities.



## MEEHANEETO — Gr. 4 & up

A wall has separated the Eleuseeto from the Meehaneeto for many, many centuries. But the Meehanneeto are back! With 2 pages of reflection & discussion questions. 68 pages.

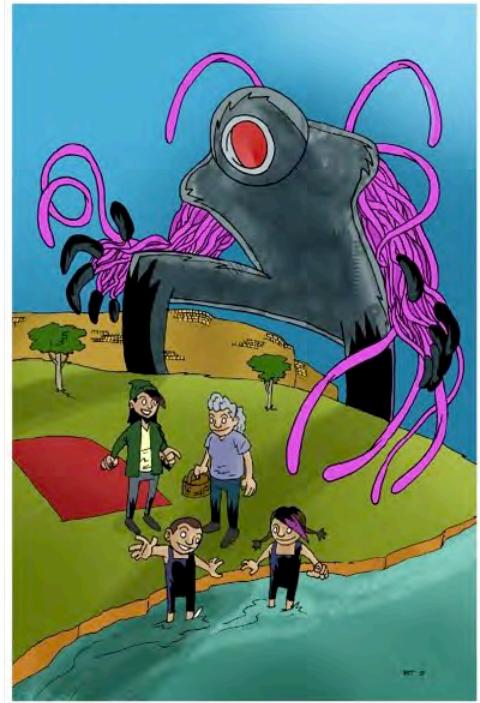
### Review:

*"Meehaneeto is a graphic novel that creatively investigates the transformation of a society after the re-introduction of technology and artificial intelligence. The learning resources at the end of the story prompt readers to consider how their data is currently being collected and for what purposes and how data collection relates to issues of privacy, ethics and democracy."*



## MEEHANEETO

STORY: JANETTE M. HUGHES & GEORGE GADANIS  
ART: RYAN JAMES TERRY



## BECOMING HUMAN — Gr. 4 & up

This graphic story is the sequel to *Meehaneeto*. It raises issues of privacy in today's digital world.

Read about 3 bots that learned how to be human and why they created an app to protect our privacy.

## BECOMING HUMAN

STORY BY GEORGE GADANIS & JANETTE M. HUGHES | ART BY TONY SMEREK



The ending will surprise you!

34 pages.