**Using Story to Inspire STEM Opportunities In Your Classroom**



A Workshop Presented by Nadine Keyworth and Jon Fast

A digital copy of this can be found using the QR Code

All resources can be found there.

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**Some of the Featured Activities and Resources in Order**

1. **Some Great STEM Movie Ideas**

How we use Movie Clips:

* Create a reflective STEM journal – where students discuss thoughts, ideas, inspiration Use to support learning in the classroom
* Use to show diverse voices and stories in STEM
* [**https://www.youtube.com/watch?v=d8qOr8oJvVI&list=PL8TjVyuBdsCmq71oQj-\_I776KbpmYagkY&index=3**](https://www.youtube.com/watch?v=d8qOr8oJvVI&list=PL8TjVyuBdsCmq71oQj-_I776KbpmYagkY&index=3)
* [**https://www.cyclesoflearning.com/blog/my-15-favorite-movie-clips-to-use-as-science-curiosity-sparks**](https://www.cyclesoflearning.com/blog/my-15-favorite-movie-clips-to-use-as-science-curiosity-sparks)
1. **World’s Toughest Race -** [**https://www.youtube.com/watch?v=NhYqctr5sBQ**](https://www.youtube.com/watch?v=NhYqctr5sBQ)
2. **Whoosh! by Chris Barton**

Great Video about Lonnie Johnson: <https://www.youtube.com/watch?v=-1zAO1WkG58>

New Story Video Link about Lonnie Johnson:

<https://www.cbsnews.com/video/making-a-big-splash-with-the-super-soaker/#x>

**Paper Rockets** Connecting Nasa, his childhood and ultimate design opportunity.– Great video from NASAJPL Edu <https://www.youtube.com/watch?v=aTd2f59TSVo>

Hydraulics: <https://www.youtube.com/watch?v=BFw899OaD0s>

**Handouts:** Perseverance Chart

 Hydraulics Planning Sheet

 Poppers

1. The Boy Who Harnessed the Wind By William Kamkwamba
* There is a full novel and a Netflix video about this as well!
* Themes of Innovation, Energy, Imagination, Perseverance (connect with theme in Whoosh)
* Excellent book to include in a unit on Electricity and Energy Sources
* Pinwheel Design Challenge

Extend Further: Build a Windmill!! / Extend and do a watermill as well

1. **Someone Builds the Dream – Lisa Wheeler and Loren Long**
	* Investigate STEM Careers it takes to build a new building or bridge in your city.
	* Breakdown objects to their natural resources (tie to Science).
	* Doing as JigSaw helps with the collaborative learning process.
	* The Story of a Building is not just who it is being built for, but also who it takes to make it happen and how they collaborate and work together.
	* Build Bridges, Paper Roller Coasters, Elevator Challenge

**Handouts: Breaking Down Objects – Blank and PDF filled in**

 **Elevator Challenge**

1. **Creating STEM Opportunities Through Literature**
* Great way to create cross-curricular opportunities.
* Use Book Clips – Inspire, respond, reflect similar to movie clips.
* Inspire build opportunities to solve problems.
* Create Literature Circles with Diverse Voices and STEM role models.
* Classroom Read Aloud and School Wide Read Aloud to inspire community.

**Some of our Favourite STEM / Design Novels**

* + The Science of Unbreakable Things by Tae Keller – Tie to Egg Drop Challenge
	+ Spin the Golden Light Bulb – Jackie Yeager
	+ *Violet and the Pie of Life by Debra Green*
	+ *Clues to the Universe – Christina Li*
	+ Project Mulberry – Linda Sue Park
	+ Solving for M – Jenifer Swendr.
	+ Emmy in the Key of Code – Aimee Lucido
	+ Wild Robot – Peter Brown
	+ SO VERY MANY MORE!!!

Like the classics – City of Ember, Hatchet, Charlie and the Chocolate Factory

**HANDOUTS: Build a Boat Challenge**

 **Character Wallet**

1. **If You Come to Earth By Sophie Blackwell & Dear Earth . . . From Your Friend in Room 5
By Erin Dealy Illustrated by Luisa Uribe**

[**https://www.youtube.com/watch?v=ejHlI16VQdo**](https://www.youtube.com/watch?v=ejHlI16VQdo)

[**https://www.youtube.com/watch?v=DCaoStYIQwo**](https://www.youtube.com/watch?v=DCaoStYIQwo)

1. **Uma Charts Her House – Reif Larsen and Ben Gibson**

Fantastic to spark a wide variety of Science and Math lessons