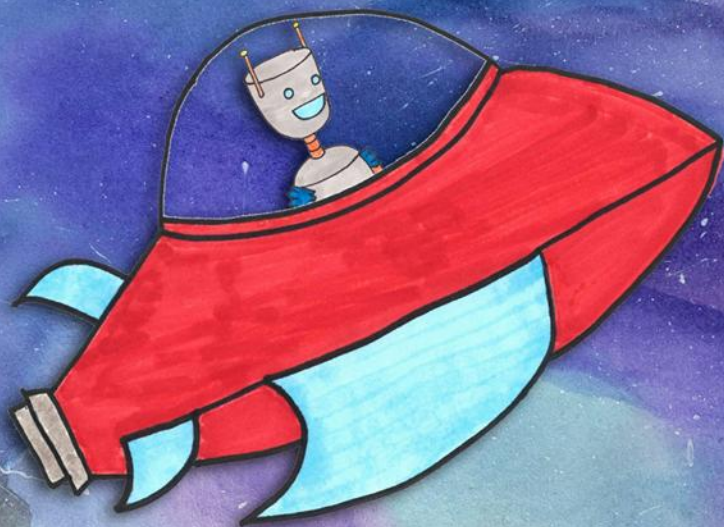




The Riley Robot Book Project



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The Riley Robot Book Project

FRC Team 568 Nerds of the North

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Riley Robot

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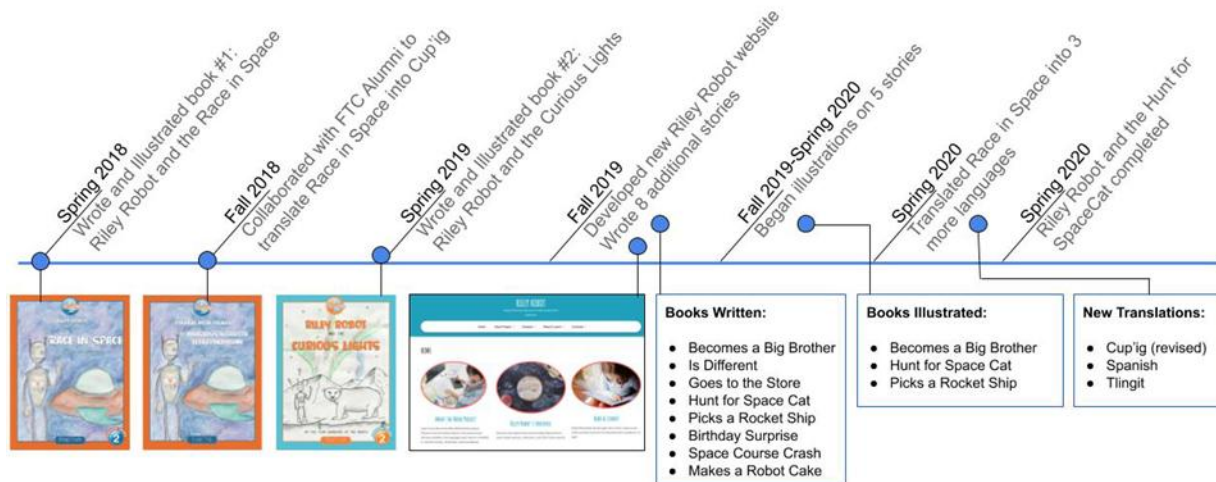


Project Summary

The Riley Robot Book Project was launched in the 2018 season, with *Riley Robot and the Race in Space*. The team hoped this literacy initiative exposes students interested in engineering to these values along with increased reading proficiency.

Since then, the team has completed two more books: *Riley Robot and the Curious Lights* and *Riley Robot and the Hunt for SpaceCat*. There are nine other Riley Robot stories written, with three currently being illustrated and the rest in draft form awaiting feedback. The Riley Robot books focus on three themes: math, science, and social lessons.

Timeline of the Riley Robot Book Project



Goals

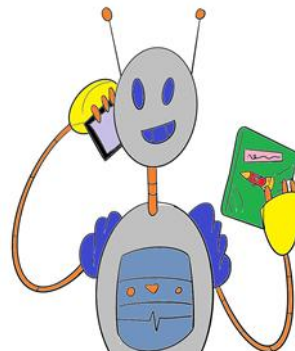
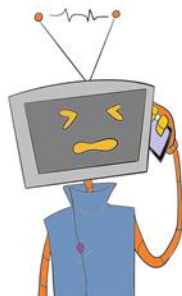
- Encourage literacy through STEM and robotics story themes
- Teach social lessons and FIRST core values
- Encourage literacy in youth's first language by making Riley books available in multiple languages

According to UAA, illiteracy is a common barrier to college-bound students, and Alaska has consistently ranked as the nation's lowest in 4th grade literacy. Alaska has an 11% illiteracy rate, and FRC 568 believes they can help fix this problem.

The team also learned that Alaska's 20 Native Languages are endangered and forecasted to go extinct by the end of the 21st century. By translating the Riley Robot books into Alaska Native Languages, the team hopes children will be excited to speak and read in these languages. *Riley Robot and the Race in Space* has been translated into Cup'ig and Tlingit, and the team has made connections with collaborators interested in translating the Riley Robot books into Yupik and Athabascan.

It's also important to FRC 568 that encouraging STEM does not present as a contradiction to traditional cultural values and languages. In Hoonah, students collaborated with elders to approve translations and create new words in the Tlingit language for STEM concepts such as "robot."

Finally, FRC 568's home base of Anchorage proudly claims the nation's top three most diverse national census tracts and is called home by speakers of over 100 languages. The Anchorage school district has seen an increase of 20% in English Language Learners in the past 10 years. So our team asked ourselves—why stop with Alaska Native language translations? Team member Brian Cuevas currently lives in Yucatan, Mexico, and participates remotely as a programmer. This year, Brian translated *Riley Robot and the Race in Space*, *Riley Robot and the Hunt for SpaceCat*, and *Riley Robot and the Curious Lights* into Spanish.




Book Themes and Formatting

Covers

Social Lessons	Math	Science
		
Indicated by orange cover	Indicated by dark blue cover	Indicated by light blue cover

Front Matter

Riley Robot and the Hunt for SpaceCat



Written by:
Lawson Skaling
Seamus Roggeck

Illustrated by:
Brianna Andrew
Ian Beck
Ezra Brink
Nora Darnison
Laura Gordon
Madison Heckart
Taylor Heckart
Sophia Lee
Emily Massel
Vicki Nechodomu
Wade Roach
Lawson Skaling

Translated by:
Brian Cuvela

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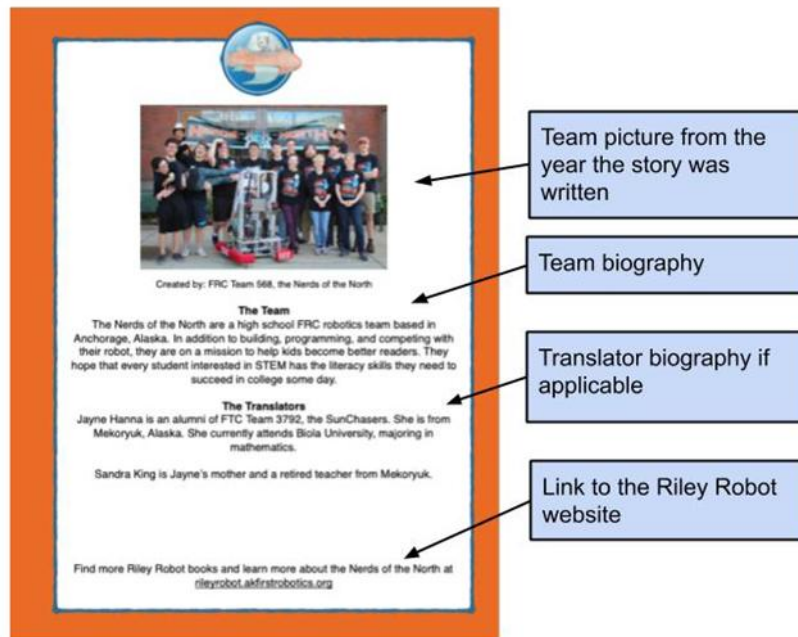
Title of the book in English

A key identifying image from the book

List of authors and illustrators in alphabetical order by last name, and the translator(s) for that translated versions.

Year of completion and link to the Nerds of the North website.

Back Cover



Formatting

In order to be printed on MagCloud, each book must be saved as a PDF document with at least 20 pages. These can include empty white pages, if needed. Books longer than 20 pages must have an even number of pages.

MagCloud magazines are printed with 8.25"x10.75" dimensions. The top and outer edges of the book may be cut from the book, so no text or important images should be in those areas.

Status of Current Books

Social Lessons

[Riley Robot & The Race in Space](#)

Status: Complete

Author: Rachel Curtiss, Erica Stryker, Jessica Winn

Illustrator: Erica Stryker

Summary: Riley's ship breaks down during a race in space and he must learn to accept help from other racers in order to finish.

Progress Notes: Book Completed Spring 2018, available for download and purchase in [English](#) and [Spanish](#)

Translations: Complete: Cup'ig by Jayne Hannah (FTC 3792) and Sandra King, Tlingit by Hoonah FTC Team, Spanish by Brian Cuevas.

Riley Robot Becomes a Big Brother

Status: In Progress

Author: Emily Massie and Ian Beck

Illustrator: Emily Massie and Oakley Fisher

Summary: Riley discovers he is going to become a big brother.

Progress Notes: [Planning Document](#), illustration line art by Emily Massie and coloring by Oakley Fisher

Translations: Not Started

Bullying (Title TBD)

Status: Draft

Author: Griffin Bailey

Illustrator: TBD

Summary: Riley deals with being made fun of online

Progress Notes: [Planning Document](#)

Translations: Not Started

Riley Robot is Different!

Status: Draft

Author: Matthew Johnson, Nikira Lane, Wade Roach

Illustrator: TBD

Summary: Riley learns that being unique is good.

Progress Notes: [Planning Document](#)

Translations: Not Started

Math Lessons

Riley Robot Goes to the Store

Status: In Progress

Author: Art Crozier and Cooper Danner

Illustrator: Laura Gordon, Cooper Danner, Toya Takahashi

Summary: Riley's ship is broken and he needs to buy supplies for the repairs.

Progress Notes: [Planning Document](#)

Translations: Not Started

Riley Robot and the Birthday Surprise

Status: In Progress

Author: Vicki Nechodomu

Illustrator: Sophia Lee

Summary: It's Riley's birthday! Riley finds a note from his friends telling him they prepared him a surprise, but he must wait all day to find out what it is.

Progress Notes: [Planning Document](#)

Translations: Not Started

Riley Robot and the Space Course Crash

Status: Draft

Author: Nora Dennison and Laura Gordon

Illustrator: TBD

Summary: Riley accidentally messes up the Space Race course, and must build a new one.

Progress Notes: [Planning Document](#)

Translations: Not Started

Riley Robot Picks a Rocket

Status: Draft

Author: Steve Ives

Illustrator: TBD

Summary: Riley picks a new rocket.

Progress Notes: [Planning Document](#)

Translations: Not Started

Riley Robot Travels to Chrysalis

Status: Draft

Author: Mitchell Todd

Illustrator: Alexa Todd

Summary: Riley runs out of fuel at Chrysalis and has to ask Winnie for help with math.

Progress Notes: [Planning Document](#)

Translations: Not Started

Science Lessons

[Riley Robot and the Curious Lights](#)

Status: Complete!

Author: Tina & Nikira Lane

Illustrator: Nikira Lane

Summary: Riley learns about the aurora and what causes the phenomenon

Progress Notes: [Planning document](#), Artwork complete!

Translations: Spanish translation by Brian Cuevas complete

Riley Robot and the Hunt for SpaceCat

Status: Complete!

Author: Lawton Skaling and Seamus Rogacki, revisions by Laura Gordon

Illustrator: Breanna Andrew, Eliza Brink, Emily Massie, Ian Beck, Lawton Skaling, Madison Heckart, Nora Dennison, Taylor Heckart, Vicki Nechodomu, Wade Roach, Laura Gordon, Sophia Lee

Summary: Riley learns about the planets of the solar system while searching for his lost SpaceCat.

Progress Notes: [Planning document](#), [PDF Draft of Book](#), Artwork complete!

Translations: Spanish translation by Brian Cuevas complete

Riley Robot Visits Earth

Status: Draft

Author: Matthew

Illustrator: TBD

Summary: Riley plans a trip to Earth and learns about all the planets on his way.

Progress Notes: [Planning Document](#)

Translations: Not Started

Riley Robot Makes a RoboCake

Status: Draft

Author: Josh Bell and Will Schumway

Illustrator: TBD

Summary: Riley must collect the ingredients to make a RoboCake for his friends.

Progress Notes: [Planning Document](#)

Translations: Not Started

Translations

Alaska Native Languages

Language	Team/Organization	Contact	Info
Yup'ik	FTC 13468 Akula Fox Bots (Kasigulk, AK)	Greg Sweet - Coach	gregsweet@outlook.com
Yup'ik	Akiuk Memorial School Yup'ik Class	Howie Tinker	howard_tinker@lksd.org
Yup'ik	FTC Team	Kimberly Bentley - Coach	kim_bentley@lksd.org
Cup'ig	FTC 3792 SunChasers Alumna (Mekoryuk, AK)	Jayne Hanna, Sandra King	jayne.hanna17@gmail.com sandking421@yahoo.com
Tlingit	Hoonah Robotics Club	Ben McLuckie - Coach	
Tlingit	Hoonah High School Teacher	Heather Powell	powellh@hoonahschools.org
Athabascan	FLL Team (Northway, AK)	Lindsay Brush - Coach	lbrush@agsd.us

Other Languages

Language	Team/Organization	Contact	Info
Tagalog	Turnagain FLL	Virginia Groeschell - Coach	
Russian	UAA ASCE	David Tatrenko	dstatarenko@alaska.edu
Spanish	Dimond High School	Profe Velez	
Spanish	Team member	Brian Cuevas	
French	Mom	Elaine Todd	elaine@aktodds.com

Book Development Resources

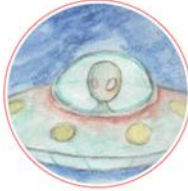
Riley Universe


In order to create stories that appear consistent within this imagined universe in which Riley Robot lives, team mentors created a website to document the team's ideas about the planets, species, and characters in the Riley Robot books. The website is also home to information about each of the books and their creators, as well as links to where to download PDFs or buy physical copies.


RILEY ROBOT
using STEM and Literacy to inspire
tomorrow's engineers

HomeBook Project -Creators -Universe -Shop

UNIVERSE


CHARACTERS



SPECIES


PLANETS


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WINNIE WIDGET

 PHYSICAL APPEARANCE


Winnie is the Smallest of the bots and is Primary round. She has a round head and ears with antennae. She has Squishy arms and clamp hands. Her body is plated and she has blue eyes.

 PERSONALITY

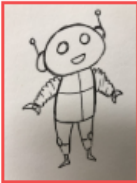
Winnie is the most mature of the bots and is very caring. She likes to take her time and can be a bit of a procrastinator. Regardless she respected everything she builds, and has a place of honor for each invention. While she is very well-rounded in STEM skills, she loves mechanical engineering the most.

 HISTORY/BACKSTORY

Winnie was On-lined In April, on Wednesday at 12 pm. She later joined the space race and meet some new friends

 SKILLS

- Winnie can build any mechanical machine
- She has full permission and access to all equipment in any lab
- She is the only bot with singing abilities
- Winnie has the unique ability to be friends with almost anyone



ORIGINS

Species: Widget

Planet of Origin: Undetermined

First Appeared In: [Riley Robot and the Race in Space](#)

Developed by: [Erica Stryker](#)

STARTS

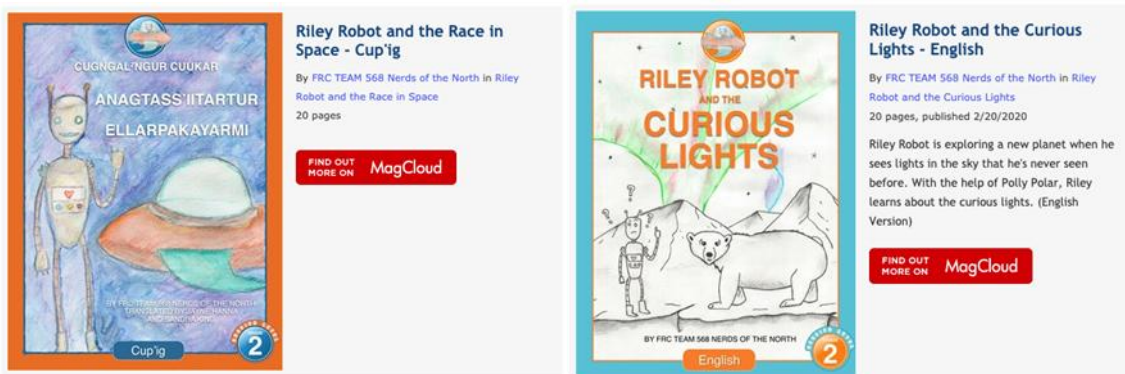
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Story and Writing Resources

The team maintains a folder collecting brainstormed ideas for future books. These include completed drafts, outlined stories, and descriptions of desired illustrations. It also has resources for writing books, including documents containing grade appropriate content, vocabulary, and curriculum. This folder is a perfect starting point for future writing workshops to either revise existing drafts or write new stories.

MagCloud Library and Storefront

All Riley Robot books are published online through MagCloud. The team has a unique storefront that displays collections for each title and the available translations of that book. All the books are available to be downloaded as PDFs for free, but physical copies of the books are available for purchase as well. The books are printed as 8.25"x10.75" full color magazines.



UAA Mentorship and Support

This year, the University of Alaska Anchorage Center for Community Engagement and Learning (CCEL) funded a position for a Community Engaged Student Assistant (CESA) to help FRC 568 improve their literacy initiative. Laura Gordon, the CESA assigned to the Riley Robot Book Project, assisting and participating in the writing and illustration workshops, editing and revising stories, completed digital layouts of the new books, updated the Riley Robot website, researched publishing and printing options, and coordinated the translation of Riley Robot books into Cup'ig, Tlingit and Spanish.

Looking Forward

The Riley Robot Book Project was always intended to be a multi-season, ongoing project. This year, FRC 568 took great steps towards a sustainable literacy initiative.

Consistency

The Riley Robot Book Project development guide (this document) can be used by future FRC 568 generations. This document can help keep consistency in the goals and intentions of the project, as well as consistency in the appearance of the books.

The team MagCloud account saves each book so they can be reprinted identically on demand.

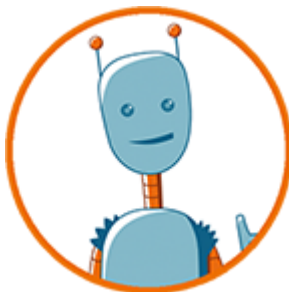
Sustainability

The Riley Robot Book Project development guide also contains detailed progress notes for each of the Riley Robot stories the team has created, from first drafts to completed books. This allows for new members or project participants to better see how and where to help.

By embracing multiple styles of art for the books, but with consistent character and setting designs, more artists of varying artistic confidence can contribute to the illustrations. A confident artist can illustrate an entire book from start to finish, like in *Riley Robot and the Race in Space* or many artists can collaborate to produce assets for a book, like in *Riley Robot and the Hunt for SpaceCat*.



Riley Robot and the Race in Space



Concept Art



Riley Robot and the Curious Lights



Riley Robot and the Hunt for SpaceCat



Riley Robot Becomes a Big Brother



Riley Robot Goes to the Store

Successfully continuing the Riley Robot Book Project will require the time and organization of a project manager. Therefore, an important goal is to find a new project manager, preferably from within the team, to take over the project after Laura graduates and her CESA position ends.

Future Goals for Riley Robot

The team hopes the Riley Robot books can be used as learning materials for children and teachers. The team aims to extend the Riley Robot Book Project through the following:

- Mentorship from published children's book authors
- Interactive digital storybooks
- Audio versions of the books, including read-along videos in multiple languages
- Videos/Animations with lessons like how to draw Riley Robot with mathematical shapes
- Fun learning materials such as online quizzes, games, and worksheets
- Read alouds at local libraries, classrooms, and events
- Classroom partnerships



Nerdlet Nora Dennison reads to Girl Scouts at a Riley Robot writing workshop

