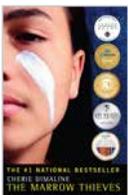


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SUPPLEMENTAL PROGRAM IDEAS



The Marrow Thieves

PROGRAM TITLE: **UPCYCLE AND BREAK THE CODE**

Program summary: Upcycle books, clothes and shoes into methods of communication.

How it relates to the book/project themes: Clandestine communication is used in the novel, while in the United States—during World War II—Navajo code talkers created an unbreakable code for the war effort. In times of struggle, upcycling is often the main way people get by.

Recommended program length: 1–2 hours

Program budget: Free–\$25

Materials:

- Paper, pens, Sharpies & pencils
- Old T-shirts (By donation or the participants can bring one. If none are available, one could purchase some at a thrift store.)
- Withdrawn books

Advance preparation: Program flyer, space for the program, enough T-shirts and books for participants, perhaps up to 20.

Program execution: Each participant can get paper, pencil, withdrawn books and a T-shirt to upcycle.

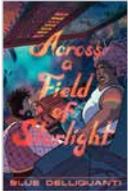
- Utilize the [Navajo Code Talkers' Dictionary](#), revised in 1945.
- Write a code into a T-shirt and then upcycle it into a [mask without cutting or sewing](#) or try a [DIY no-sew face mask](#).
- Using withdrawn books, you can use blackout poetry. For a variety of types of blackout poetry, try [these](#).

Informational websites to go with this title:

- [Métis Nation](#)
- [Cree Nation](#)
- [Anishinabek Nation](#) (union of nations)
- [Canadian Inuit](#)
- [Native American Rights Fund](#) (information on boarding school healing)

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Across a Field of Starlight

PROGRAM TITLE: **CREATE YOUR OWN ZINE**

Program summary: Practice visual storytelling by making your own zine. Librarians can then put them into the system for checkout.

How it relates to the book/project themes: In visualizing how to create a zine with images, one could carry on and create longer stories. If librarians catalog the zines and make a special collection, many can enjoy the work.

Recommended program length: 1–2 hours

Program budget: Free–\$30

Materials:

- Paper and/or colored paper (\$5–10)
- Pens, pencils, Sharpies of different colors (\$15)
- Old magazines to upcycle (free)
- Glue sticks (\$5)

Materials that could also be used

- Rubber stamps
- Washi tape
- Stickers
- String or yarn

Advance preparation: Space to hold the program; printed out examples such as [Quarantine Public Library](#) and [Library of Congress](#) Zines. One can also print out and/or study the simple instructions [How to make a Zine from Brightly](#).

Program execution: A zine can be made about anything. A snapshot of your life, your favorite foods, bands—the sky’s the limit. The librarian can help fold the papers and create the booklet and then the teens can be as creative as they like. At the end the student-made zines could be scanned and a full print version could be given to the library’s collection. Thinking about a visual story can also help to make a larger graphic novel, much like the one read.

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Victories Greater Than Death

PROGRAM TITLE: **SOCIAL IDENTITY WHEEL EXERCISE**

Shared with permission from the University of Michigan

Program summary: An activity to “encourage students to consider their identities critically and how identities are more or less keenly felt in different social contexts. The classroom and the university can be highlighted as a context as a way to approach questions on barriers to inclusion.”

How it relates to the book/project themes: Identity plays a huge part in *Victories Greater Than Death*. As individuals, we all have multiple identities and communities we are a part of. This program will get teens talking about themselves and their identities in a way that can connect greatly to the book as well as towards creating an inclusive and respectful space for discussions.

Recommended program length: 1 hour

Program budget: Free–\$25

Materials: This activity only requires handouts and pencils, and a space to hold a discussion.

Advance preparation: Download and print out the activity sheets for each student and the Spectrum-Activity Questions for yourself. Decide if you will be in person or virtual. Watch the video on [the website](#) “How to Facilitate the Spectrum Activity in the Classroom” (skip ahead to minute six for the Social Identity Wheel exercise).

Program execution: Consider soft, instrumental background music. Allow students plenty of time to work on the sheets and consider the prompts. Incorporate a discussion on safe/brave spaces. Additional discussion questions can be found via this blog in [Modern Campus](#).

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The Sound of Stars

PROGRAM TITLE: **DIY SMARTPHONE HOLOGRAM**

Sourced from [Instructables.com](https://www.instructables.com)

Program summary: A STEM program using upcycled CD jewel cases to create something that seems high tech but uses basic geometry and materials.

How it relates to the book/project themes: The Ilorians have come to Earth with advanced technologies that humans have only dreamed of. Create your own cool example of future tech!

Recommended program length: 30 minutes to an hour

Program budget: \$25

Materials: If you can source CD cases from weeded items or coworkers, this project is very budget-friendly. You will also need:

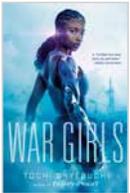
- Paper
- Pens
- Tape
- Scissors
- A box cutter or X-acto knife

Advance preparation: Make a sample and gather supplies for your group: CD jewel cases, paper, pens, tape, scissors, and a box cutter. Have links to the sample videos as QR codes.

Program execution: Using the diagram on [the website](#), trace and cut out the CD case pieces and tape them together. Download one of the sample videos and place your hologram and phone on a flat surface. Sharp corners in this project, as well as the need for a smartphone, make this program better suited for older teens. It will definitely work better as an in-person program as well. Cutting the CDs works best if you score them multiple times with an X-acto or box cutter and then use scissors. Make sure students are being careful with sharp objects! Have band-aids handy, just in case.

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War Girls

PROGRAM TITLE: **BUG HOTELS**

Program summary: Use recycled and natural materials to create habitats that encourage insect populations to thrive.

How it relates to the book/project themes: Post-apocalyptic Nigeria has been ravaged by nuclear warfare and global warming. A project like making bug hotels would be a small step towards rebuilding the environment.

Recommended program length: 30 minutes to an hour

Program budget: Free–\$20

Materials:

- 2-Liter soda bottles cut in half
- Plastic coffee containers
- Recycled glass jars
- Corks
- Twigs, pine cones, leaves, stones, mulch, moss, etc.

Advance preparation: Cut and clean out the containers. If you want to do this program indoors, you will need bags of natural materials for the participants to choose from. If you can, it would be fun to go outside as a group and gather supplies. You might also have some “fast facts” ready to display or discuss about what kind of insects and pollinators are native to your community.

Program execution: Starting with larger objects like stones and twigs, each participant should fill their bug hotel with the natural items. Perhaps some can be placed around library grounds for future viewing, and some can be taken home. While the hotels are being assembled, play a short video from [PBS](#) about bees, or something similar.

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Additional links and resources

- [Mystery Maker Challenge](#)
- [Extreme Event role-playing game from LabX](#)
- [Climate activities for tweens from NASA](#)
- [Make a cardboard robot hand with Instructables](#)
- [Scratch Coding](#)
- [MakeCode: Free Coding from Microsoft](#)
- [Lemon battery project](#)
- [Lunar and Planetary Institute](#)
- [Code at Home by Girls Who Code \(GWC\)](#)
- [NASA Stem Engagement](#)
- [National Science Teaching Association](#)
- [StarNet](#)
- [Science Buddies](#)
- [DIY mobile amplifier](#)
- [Free software from Flexclip](#) (Make a book trailer)
- [Diddley Bow](#) (Make a musical instrument)

General programming ideas

- Work with a community partner to learn about composting.
- Work with a community partner to have a “Fix It Hour.” People can bring broken devices and repair can be attempted.
- Working with donated tech or devices, take them apart and see if they can be put back together.
- Watch an episode or two of *Dr. Who* or *Star Trek* and discuss how race and identity play a role in one or both of these amazing science fiction shows.

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- Utilize a music app to create a playlist as a way to introduce yourself to others.
- Put together a list of favorite books and write small synopsis on how you would share them. A book and music “tasting.”
- Listen to David Bowie’s space-themed songs on [Spotify](#).
- “NASA has released a sleek new video for David Bowie’s [Space Oddity](#)” (NPR)
- Pick a side character, or create an original one. Then write a page about what their thoughts, feelings, or actions are during that particular time in the book. How do they look upon the main characters? What’s their destiny, task, or end goal?
- Bristle bots: You can buy a kit for 20 kids on [Makerspaces.com](#) for \$50, which also comes with an ebook.
- The [MakerLab](#) books published by DK have many great, easy to follow STEM projects.
- [Storyboard](#) a scene from the book into an animated short or live-action film.

Suggested books for STEM projects

***Maker Lab: 28 Super Cool Projects* by Jack Challoner**

With all the style and intellectual authority that readers would expect from the Smithsonian’s DK series, this book affirms that science is not strictly a discipline to be studied behind a school desk, but rather is a demonstrable set of principles and properties that can be reinforced using simple found objects. This principle is eloquently supported in a foreword written by Jack Andraka, a young scientist who pioneered new means of cancer detection at the age of fifteen. Directions are clear, materials are easily accessible, and results are rooted in fundamental principles of physics and chemistry. Each experiment can be completed at home, but is also easily adapted to a large-group classroom setting. Though not all projects are innovative, what sets this book apart is that each experiment is accompanied by real-world applications that tie new observations to kids’ existing understanding and offer endless opportunities for STEM-related discussions. Not only are young scientists encouraged to experiment, they are challenged to apply the information gleaned to real-world problem-solving. —Erin Anderson for [Booklist](#)

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STEM Lab by Jack Challoner

DK maintains its high-quality standard with this continuation of the Maker Lab series. Twenty-five STEM-based projects are divided into four categories: forces and motion, liquids and reactions, shapes and structures, and light and sound. Each activity begins with a double-page spread including a photo of the completed craft along with an introduction to the pertinent concepts. Required materials are listed (most, though not all, are common household items), time commitment and difficulty level are forewarned, and the step-by-step instructions are neatly laid out, with a clear photo accompanying every stage. Each project concludes with more information in a “How It Works” section and a paragraph illuminating real-world applications of the STEM concept being explored. Challoner doesn’t miss an opportunity to contextualize the crafting in terms of STEM, inserting little asides into the margins—though the pages never feel too cluttered. Between the crisp, colorful presentation and the interactive, kid-friendly projects (windup cars, Pythagoras cups, guitars), young makers will be sucked into STEM-filled learning fun, whether in the classroom or at home. —Ronny Khuri for [Booklist](#)

Awesome Science Experiments for Kids: 100+ Fun STEAM Projects and Why They Work by Crystal Chatterton

Loaded with 100+ kid-tested experiments in science, technology, engineering, art, and math—*Awesome Science Experiments for Kids* puts the STEAM back in learning. Getting kids excited about science can be difficult. *Science Experiments for Kids* provides young scientists ages 5–10 with hands-on experiments that teach them how to apply the scientific method. From the home laboratory of former chemistry teacher and blogger behind the Science Kiddo, Crystal Chatterton combines fun experiments with the hows and whys behind them. *Awesome Science Experiments for Kids* contains:

- 100 + STEAM experiments providing interactive science experiments for kids in science, technology, engineering, art, and math
- Easy-to-follow instructions making science experiments for kids simple and fun to do

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- Colorful photos illustrating science experiments for kids, common household materials used, plus the final results

From figuring out how quicksand works to turning a lemon into a battery, *Awesome Science Experiments for Kids* teaches young scientists how cool it is to be curious.

***Cardboard Box Engineering* by Jonathan Adolph**

Cardboard is everywhere! For creative kids aged 9 to 14, it's the perfect eco-friendly building material, and *Cardboard Box Engineering* is the perfect guide to get them started on inventive tinkering. A working kaleidoscope, a marble roller coaster, a robotic hand, and a wind-powered tractor with cardboard gears are just some of the ingenious projects developed by Jonathan Adolph, author of the best-selling *Mason Jar Science*. Working with simple household tools, kids can follow the step-by-step photographic instructions to exercise their design smarts, expand their 3D thinking, and learn the basics of physics and engineering with activities that have real-life applications.