

DIY Teen Activities Packet



Created by: Kim Delveaux
(RCL: Maplewood CTEP 19-20)

In Partnership with:





What is this?

This is a digital packet of MakerTeen and Teen Gaming programming projects designed for (pre)teens living near the Maplewood library to be able to complete at home/outside the library if they are unable to attend said weekly programming at Maplewood library or in cases where the library is closed on days of said programming. It is intended to give pre-teens/teens some of the same skills they would learn during in person library programming such as following instructions, learning new crafting skills/techniques, and most importantly exercising creativity! These projects are based on programming that (pre)teens have done and enjoyed at the library, but because said programming is always evolving due to feedback and resources, this document should be considered a living one and will be updated as necessary.

What's included? What do I need?

Although the projects included in this packet vary in difficulty, all of them require little to no physical materials or require materials that are basic household/school supplies that teens may already have or they/their families can easily procure at craft stores like Joann Fabrics and Michaels or general stores like Target and Walmart.

Also included in this packet is an evaluation form that participating (pre)teens are encouraged to fill out and turn back in via email (kimberly.delveaux@co.ramsey.mn.us) to help us decide and improve on the included projects, and for (pre)teens to receive a reward for completing them- besides the physical craft.

Why should I use this?

These projects are a fun and easy way for (pre)teens to be engaged with their local libraries, learn new skills, and create something they can keep and share with others. Moreover, (pre)teens who turn in proof of completion of a project(s) and a filled out evaluation form per the project(s) they completed via email (kimberly.delveaux@co.ramsey.mn.us) will be able to receive a variety of rewards depending on the level of difficulty of the completed crafts. Submissions of proof of completion and evaluation of each level of projects are as follows: easy- pack of bookmarks or bag of candy, medium- supplies pack of their favorite easy/medium project, & hard-\$10 giftcard to either Barnes & Noble or Target. Although, each project can be repeated as much as a (pre)teen wants, individuals can only receive one prize per submission of completion proof & evaluation within a given category, with only a total of 9 prizes possible for each individual to receive. Projects can be completed with friends &/or family, but all (pre)teens who wish to get a prize must submit their own proof of completion & evaluation forms via email.

Additional questions/concerns/feedback?
Please send an email to: kimberly.delveaux@co.ramsey.mn.us

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Evaluation Form

This form is optional as (pre)teens will still get access to supplies and instructions. However, (pre)teens who turn in proof of completion of a project(s) and a filled out evaluation form per the project(s) they completed via email (kimberly.delveaux@co.ramsey.mn.us) will be able to receive a variety of rewards depending on the level of difficulty of the completed crafts. See page one for a list of possible prizes and rules of submission.

1. How did you feel about this project before starting it? During? After? (e.g. emotions, thoughts, like/dislike, etc.)

2. What did you already know about this project before starting it? What did you learn by doing it?

3. Did you have access to all the required materials for your completed project? If not, were you still able to complete the project and how?

4. What other projects would you like to see included in this packet?

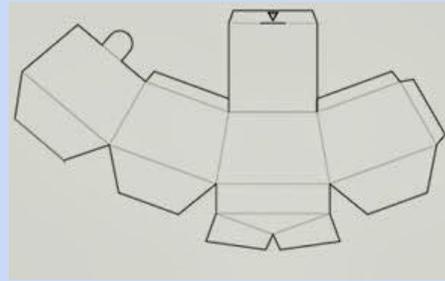
Name of participant: _____

Date of completion: _____



EASY PROJECTS





Make a comic/zine

Materials:

- Paper (8.5x11)
- Writing Utensils (markers, pencils, etc.)
- Optional: craft supplies like glitter, stickers, scrap paper, etc.

Instructions:

1. Brainstorm what kind of comic/zine you would like to create.
2. How to create a comic
 - a. Create the panels of your comic using the supplies above and your creativity or select from the following templates: [\[comic strip story\]](#) & [\[comic panels & word bubbles 1\]](#)
 - b. Fill in your panels either by using digital paint apps like Microsoft Paint or by printing out your comic template and filling it in by hand.
3. How to create a zine: [watch this fun & easy to follow YouTube tutorial](#)

Examples:

Make a Board Game

Materials:

- Paper (Cardstock or heavyweight preferred)
- Writing Utensils (markers, pencils, etc.)
- Optional: craft supplies like glitter, stickers, scrap paper, etc.

Instructions:

1. Brainstorm what kind of game you would like to create.
2. Create your board game using the supplies above and your creativity or select from the following templates: [\[board game mat 1\]](#), [\[board game mat 2\]](#), [\[game pieces 1\]](#), [\[game pieces 2\]](#), [\[play money\]](#), [\[6 sided dice\]](#) & [\[spinner \(stick pencil through red dots\)\]](#)

Examples:

Papercrafts

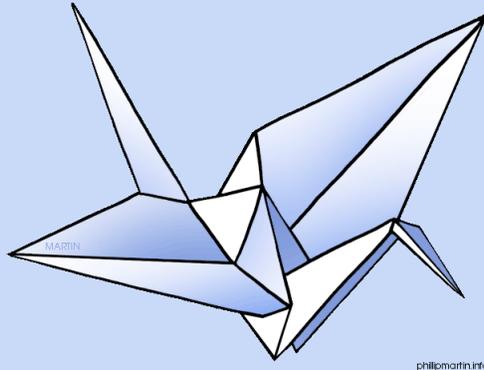
Materials:

- Paper (Cardstock or heavyweight preferred; can be procured at craft stores (Joann's, Michael's, etc.)
- Tape or glue stick/bottle
- Scissors
- Optional: Writing utensils (markers, pencils, etc.)

Instructions:

1. Create your own template using the above supplies and your creativity or download a template(s) from the following websites: [Pixel Papercraft](#) & [CubeeCraft](#)
2. Learn how to put together paper crafts using these quick tips:
 - a. Fold lines: dashes(---)=mountain/convex & dots(....)=valley/concave
 - i. Score along fold lines using scissors, rulers, or paperclips to make folds smoother & flatter.
 - b. Cut lines: solid lines (____) or **red lines**
 - c. Glue spots: white/black trapezoids attached to graphic design squares sometimes with letters/numbers on them indicating where to attach too.
 - d. Examples: [Pixelcraft mini minecraft Steve](#) & [cubecraft cube-shaped pokeball](#)

Examples:



Medium Projects



Origami

Materials:

- 8.5x11 Paper (Origami paper can be procured at craft stores (Joann's, Michael's, etc.)
- Optional: Writing utensils (markers, pencils, etc.)

Instructions:

1. Create your own template using the above supplies and your creativity or download a template(s) from the following websites: [Origami club](#) & [Jo Nakashima-Origami Tutorials](#)
2. Learn how to read Origami instructions [here](#)

Examples:

Typing tests

Materials:

- Laptop with WiFi connection
- <https://www.typing.com/student/games>

Instructions:

1. Go to <https://www.typing.com/student/games>
2. Play one, some, or all typing games (e.g. keyboard ninja like fruit ninja but typing, z type spaceship shooting game, etc.) to improve typing accuracy & skill.
3. Then go to <https://www.typing.com/student/tests> & take any test with the aim of getting 30wpm with 85% accuracy.

Examples:

Minecrafting challenge

Materials:

- Laptop with WiFi connection
- Access to version of Minecraft
- Crafting supplies (e.g. paper, tape, markers, string, scissors etc.)

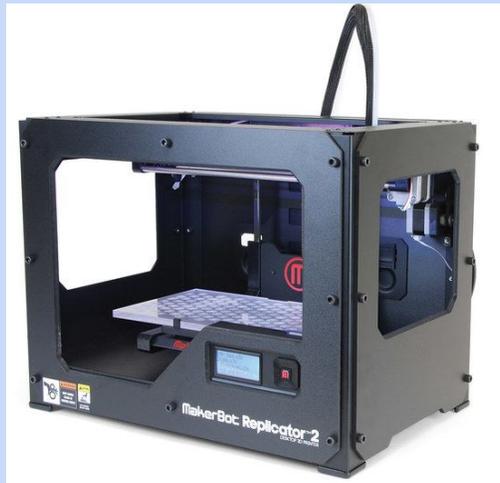
Instructions:

1. Either create something (house, art piece, maze, etc.) in minecraft or create something from minecraft in the real world using craft materials (e.g. see paper crafts/origami above) or materials from nature.
2. Creating in Minecraft
 - a. You can download & play Minecraft or versions of it several ways
 - i. Download free trial of Minecraft: Java [here](#) (only playable for about an hour but resetting world resets time & limited to basic gameplay)
 - ii. Borrow full version of Minecraft for PS4/WiiU/Nintendo Switch from the library [here](#)
 - iii. Play knockoffs of Minecraft via [Roblox](#) (free signup, download & most games). [Here is one such good knockoff.](#)
 - iv. (Costs money) Purchase full version via your choice of device (phone, computer, or console) (tip: see refurbished/pre-owned for lower price)
 - b. Minecraft tutorials
 - i. [How to play minecraft 101](#)
 - ii. [101 minecraft building hacks](#)
3. IRL Minecrafting:

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- a. Use papercrafts to create Minecraft building blocks in real life (e.g. [trees](#), [some basic blocks](#), weapons etc.)
- b. Use cardboard, foam, & crafting supplies listed above to create Minecraft armor & weapons & battle your friends: [Tutorial here](#)
- c. Create minecraft themed board games (e.g. [chess](#), [monopoly](#), etc.)
- d. Use leaves, sticks, rocks, & outdoor nature items in your backyard to create art & art supplies: nature art [1](#) & [2](#) & [DIY art supplies](#) (Please only use nature materials already on the ground and wash hands before & after art creating)

Examples:



Hard projects



3D design & print

Materials:

- Laptop with WiFi connection
- Account on Tinkercad

Instructions:

1. Navigate to the website tinkercad.com
2. Click the JOIN NOW button in the upper right corner.
3. See [here for how to create an account and learn the basic functions of Tinkercad](#)
4. Begin designing!
 - a. Not sure what to make? Check out the galleries of [tinkercad](#) &/or [thingiverse](#) to get ideas &/or build off someone else's work, &/or try out these beginner builds: [Name keychain](#), [Flexi build](#), &/or [Action figure](#)
 - b. Have an idea but not sure how to make it? Check out [instructables](#), a website dedicated to sharing tutorials on how to make various crafts.
5. If you want to have your design printed out using library printers using [PLA\(plastic\)](#) please see the following instructions:
 - a. Due to the amount of available resources, time, and to be fair to other patrons, your design must be under 2 hours of print time; build time is determined by size and complexity of builds so aim for smaller, not too complex, or broken up into smaller pieces or a few (3-5) files all under 2 hours.
 - i. If you want to make a bigger build or with material other than PLA plastic, check out the following websites: [3dhubs](#), [i.materialise](#), [sculpteo](#), & [shapeways](#).
 - b. When done designing, make sure your design is flat on the workplane, click export, export as stl. file.
 - c. Submit said file along with an evaluation form via email to have it printed and available for pickup at the Maplewood circulation desk.

Examples:

Photography Scavenger Hunt

Materials:

- Camera
- Optional: tripod for pictures that need longer time to take like night time or to create intentional blurring of objects/people in motion, plastic film to put over light sources or over camera to create various photo effects, and photo editing apps/sites (PIXLR or photoshop express-free & easy to learn)

Instructions:

1. Review this vocab packet on [Digital Storytelling with Photography](#)
 - a. Disclaimer: this packet was created for a library event where DSLR cameras were available, but for this exercise any camera can be used and the skills within the packet should be adjusted according to different cameras capabilities.
2. Using your own camera (e.g. your phone (newer phones have pro mode on them=similar to DSLR settings), disposable, film, DSLR), or mirrorless complete one easy and one hard prompt from the list below.
 - a. Easy
 - i. Choose a type of camera angle, element/principle/composition style of art, &/or genre of photography that seems interesting to you and create a photograph using it.
 1. Can count as hard if you include all three (angle, element/principle/style, & genre) in one photograph.
 - ii. Create a photograph of you in your favorite room of your house or spot in your neighborhood (e.g. local park, favorite study spot, bedroom, etc.) interacting with that place as you would normally.
 - b. Hard
 - i. Create two portraits, one of you and one of someone else that somehow conveys an aspect of your individual personalities, interests, secrets, etc.
 - ii. Create a photograph that pushes you outside your comfort zone: using an angle, genre, or element/principle/composition style of art that you aren't familiar with, photographing a place you aren't familiar with, or taking a stranger's portrait (with permission).

Examples:

EASY

HARD

Coding

Materials:

- Laptop with WiFi connection
- Account on [scratch\(online & downloadable programming software\)](#)

Instructions:

1. Navigate to [Scratch](#)
2. Create an account
3. Click on the [Ideas](#) tab on the top navigation bar of scratch website
4. Click on the [Get Started tutorial](#) to learn the basics of Scratch programming software and complete a simple activity.
5. To learn how to create an animation:
 - a. Go back to the [Ideas](#) page and scroll down and click [See All Tutorials](#) and select an animation tutorial (e.g. [code a cartoon](#)), &/or scroll further and click [Starter Projects](#) to see various animations you can add onto &/or use to make your own animation (e.g. [how to create an animated greeting card](#)).
6. To learn how to create a game:
 - a. Go back to the [Ideas](#) tab and scroll down and click [See All Tutorials](#) and select a game creator tutorial (e.g. [make an adventure game](#)), &/or scroll further and click [Starter Projects](#) to see various games you can add onto &/or use to make your own game (e.g. [dress up game](#)).

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7. Once you are comfortable with the controls, you can start creating your own animations, games, & more, just click the Create tab to open up a blank coding template.
8. When you are done, you can simply save changes and keep it for yourself or you can share your games via Scratch's site by clicking the orange "Share" button inside.
9. If you need inspiration or just wanna explore other indie games, click on the [Explore](#) tab on the top navigation bar.

Examples: