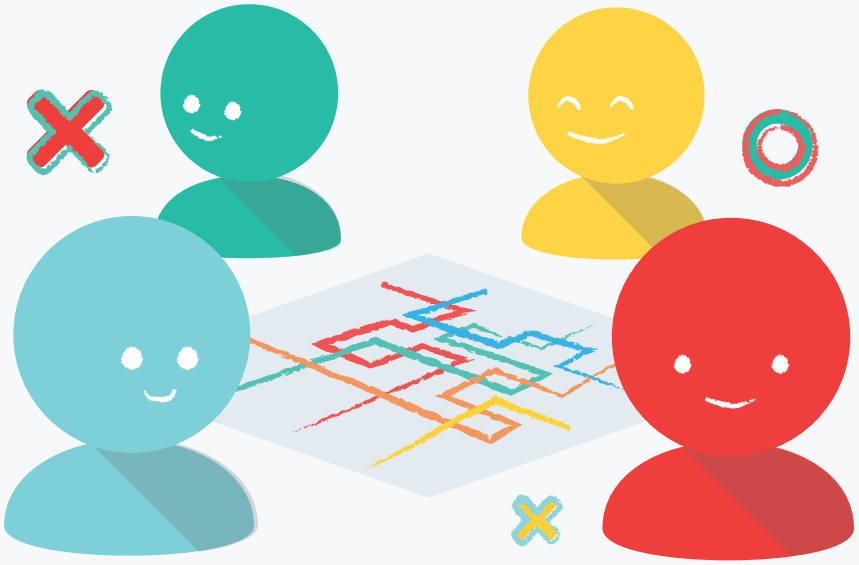


This Book is a Webmaker Mentor's Printed Copy of the

Lo-Fi, No-Fi! Teaching Kit

Webmaker Mentors are techies, makers, educators, parents and other passionate people who care about creating a more web literate world. We support learners everywhere: in our homes, local libraries, neighborhoods, classrooms and online. We share best practices with peers and learn from each other how to teach the web better.

Compiled in this book are the activities and resources from the Lo fi, No fi! Teaching Kit. Because these resources are meant to be accessible online, the book is pulled from these webpages. For this reason, the design of the book is rather crude. But we think a printed version of these resources will be useful to anyone who is planning on running an event.

You can find everything, and remix these resources, at http://mzl.la/lofi-nofi

Special thanks to the many authors of these resources, and the entire Webmaker Community. Join us at http://webmaker.org/getinvolved

Lo-Fi, No-Fi! Teaching Kit

How can we empower educators to teach the web in settings where connectivity isn't guaranteed? This Teaching Kit, codesigned with communities around the world, features a series of remixable, modular group activities that explore the Web Literacy Map using creative methods and lo-fi materials.

Facilitated by Kat Braybrooke, Karen Smith, Julia Vallera, Jess Klein and Chad Sansing.

Description

This project has been designed to support mentors who want to **teach the web offline** or where access to digital devices is limited. Because each of the activities outlined here are **modular and remixable**, they are flexible enough to stand alone so that you can mix and match depending on your environmental and social needs.

This kit emphasizes learning which is **both lo-fi *and* no-fi**. Let's talk a bit about what that means.

Lo-fi webmaking

By **lo-fi we mean low fidelity**. Low fidelity is a term used by web designers who create prototypes of their designs using materials like paper and sticky notes. Paper is low-fidelity itself when compared to the pixels and bits of data or a digital prototype. By lo-fi, we also recognize that there are teaching environments that have some connectivity (i.e., one computer online), but not much.

No-fi webmaking

Another important place for this work relates to sessions facilitated in **environments entirely without internet access**. No-fi or limited connectivity situations exist for a variety of reasons including lack of devices, lack of bandwidth, or outdoor settings that are not connected. If you are in a no-fi environment, there are many activities that you can use to teach web literacy from games to low fidelity materials to devices in offline modes.

Agenda

This kit is organized with 3 categories of activities that you can mix and match for your event.

Lo-fi games and simulations

1. Catch a network signal! Activity (Author: Team Mesh)
2. Web mechanics speed dating (Author: Julia Vallera)
3. A beginner's guide to creative game makery (Author: Chloe Varelidi)
4. Thimble tag puzzle activity (Author: Digital Corps)
5. Use puzzles to teach HTML (Author: Ginger Coons)
6. Create Your own games, summer edition (Author: Chloe Varelidi)
7. A strong wind blows for the open web icebreaker (Author: Laura Hilliger)

No-fi and paper-based activities

1. HTML puzzle box (Author: Yofie Setiawan, Mozilla Indonesia)
2. Teaching the whole child, even the digital bits (Author: Jeannie Crowley)
3. Prototyping with a teaching kit design canvas [English] and Prototipando kits de enseñanza con lienzos dibujos y bocetos en pape [Spanish] (Authors: Kat Braybrooke, Alvar Maciel)
4. Working with games in the wild (Author: Chloe Varelidi)
5. Code thief cards to teach Javascript offline (Author: Chad Sansing)
6. Web Literacy offline bingo (Author: Karen Smith)
7. Code castles to teach HTML (Author: Chad Sansing)

Getting creative with limited connectivity and devices

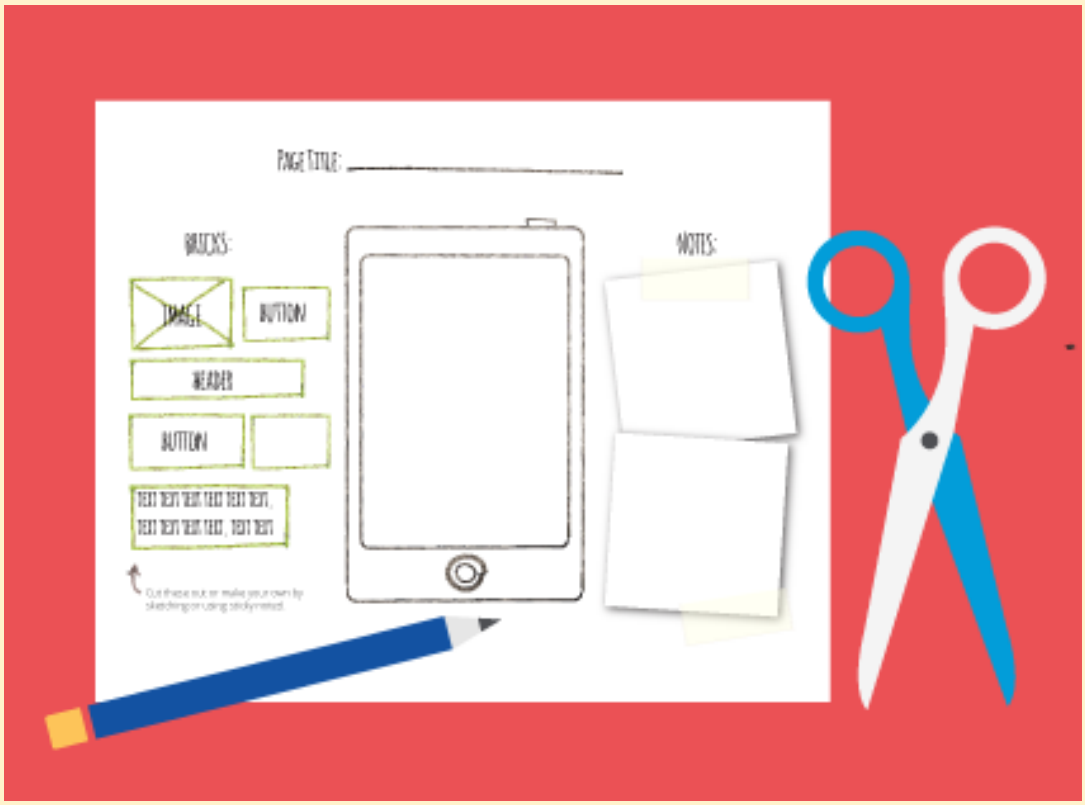
1. Report your own story (Author: Radio Rookies)
2. The Mobile design ideation Kit (Author: Jess Klein)
3. Create lo-fi Webmaker clubs in schools with Kidzilla (Author: Sathyabama Firefox Club)
4. Out in the field, exploring the city (Authors: Andi Argast, Michelle Gay)
5. Hack your notebook teaching kit (Authors: Jen Dick, Jie Qi, David Cole and Chad Sansing)

Assessment and review

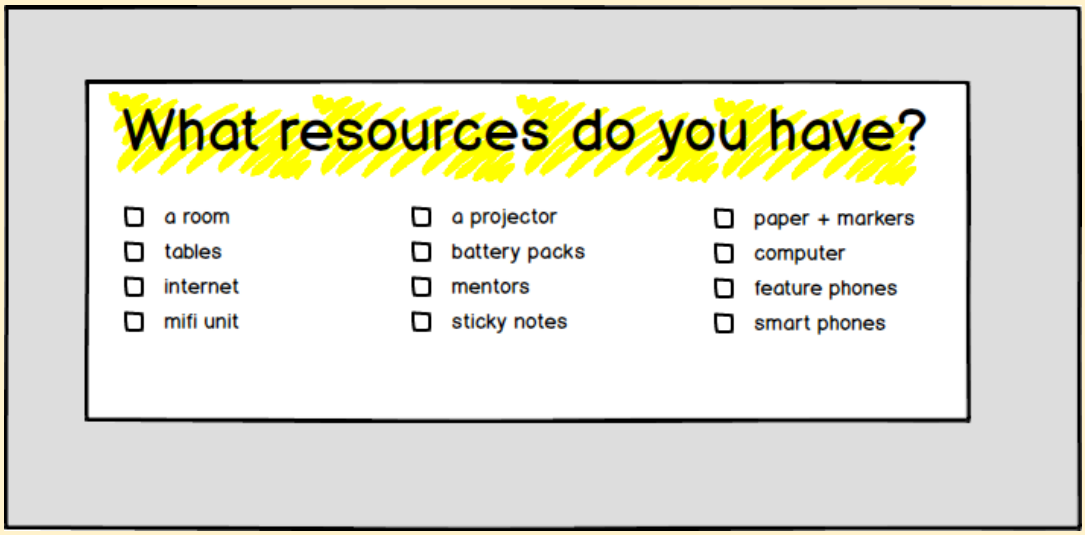
You can get an idea of whether your learners have gained from this session based on their knowledge of the following skills (in progress):

- [ ] Demonstrate knowledge gained through hands-on activities, games or discussion
- [ ] Work collaboratively and openly with others to complete activities or tasks
- [ ] Use creative methods to build technological skills in novel and unexpected ways

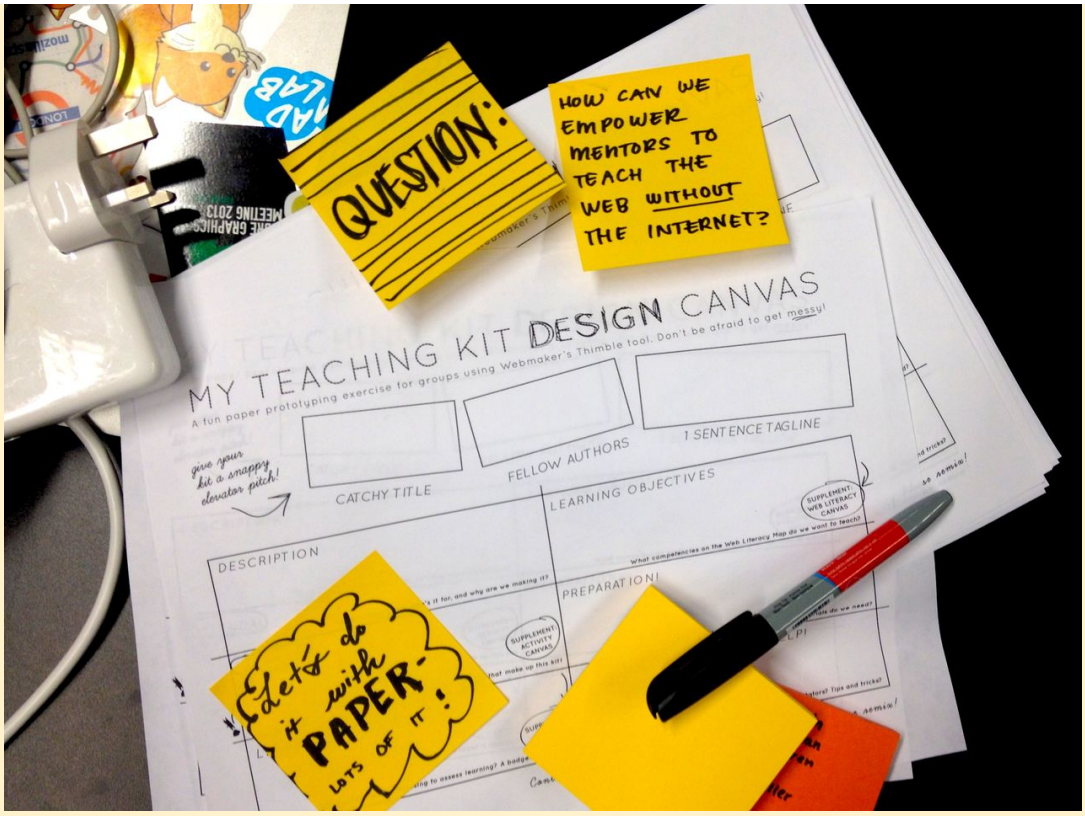
Printable Resources



Use this paper template to help learners prototype their own mobile apps without a computer.



Don't forget to consider your educational setting. This printable diagram will help narrow down the activities that work best for your environment.



This paper template is directed at educators instead of learners, and is used to outline teaching teaching kits before going online.

This kit is alive!

The contents in this kit are constantly evolving, and entirely remixable. Have you made a lo-fi or no-fi activity? We'd love to feature it! Get in touch via @Webmaker on Twitter or email us to submit.

Inspirations and further reading

- Frog's Collective Action Toolkit
- Digital Me's Badge Design Canvas
- Webmaker "offline" activities search
- Blog post: Paper prototying and lo-fi activities for Webmaker
- Blog post: Let's teach the web offline!

Acknowledgements

- This kit's facilitators would like to send a special thank you to **Chad Sansing, Julia Vallera, Jess Klein, Chloe Varelidi, Ginger Coons, Team Mesh, Digital Corps, Laura Hilliger, Radio Rookies, Jeannie Crowley, Jen Dick, Jie Qi, David Codle, Andi Argast, Michelle Gay, Alvar Maciel and the Sathyabama Firefox Club** for their contributions to bring v1 together.

Tags

#teach-kit #connecting #designaccessibility #webmechanics

Activity #1

Catch a Network Signal!

A traditional network follows a "hub and spoke" model, with one central network connection which all other nodes in the network connect to. A mesh network, on the other hand, connects all nodes to each other and allows them to communicate with each other directly by "hopping" from node to node. This activity will provide participants with a better understanding of network "hops" by getting them to act like nodes and pass a ball (or signal) to represent how a mesh network works.

Made by Team Mesh

Steps for the Activity

Find an open area that is large enough for the group to spread out in a circle. This area could be inside, outside, just make sure to watch out for breakables and other people!

First, the group should recreate a traditional "hub and spoke" network. Only one ball (signal) is needed for the first activity.

- Designate one member of the group as the "hub".
- The rest of the particpants should now form a circle around the "hub", representing the spokes of a network "wheel".
- Give the ball to the "hub". It is up to this person to pass the signal to one of the spokes.
- Remember: the ball must be passed back to the "hub" before the signal can be passed to another spoke!

Now it's time to create a mesh network! Each person should be given a ball for this activity.

- All participants should now scatter throughout the play area.
- Each person (node) can now throw their ball (signal) to another person.
- The person who caught the ball should then toss it to another person.

Kick it up a notch!

- Introduce obstacles to your "network".
- Participants should now arrange themselves around the obstacles you have chosen.
- Continue to try and pass the "signal" between your "nodes". Hint: Look for the path of least resistance!

Materials

- [ ] 5 or more people
- [ ] One ball per person
- [ ] Open space to play
- [ ] Obstacles (chairs, trees, desks, people)

Discussion

- How does mesh network "hopping" makes network trafficking more efficient?
- What is a network bottleneck? Hint: What happened when one person tried to catch multiple balls?
- How do mesh networks self-heal and self-configure? Hint: What happened when obstacles were introduced?

Activity

Web Mechanics Speed Dating

Web Mechanics are a combination of tools, characteristics and functions that determine how we use the internet. Knowing how web mechanics work help us use and understand URLs, IP addresses, search terms, bookmarks and more. This activity will introduce the basics of Web Mechanics through an offline, multi-person activity. All ages welcome.

Made by Julia Vallera

Preparation

- [ ] **Make name cards:** Create name cards for each of the web mechanics listed below. Each card has two sides. Write the name of the web mechanic on the front (i.e., Cookies). Write the description of the web machanic in a few sentences on the back (i.e., "I am a small piece of text sent to your browser by a website.") . You can make these cards on your own before the activity starts or ask your participants to help make the cards.

  - **Cookies:** I am a small piece of text sent to your browser by a website.
  - **Bandwidth:** I am an electronic byway that connects the internet toyour computer. Increasing me allows a faster internet connection.
  - **Bookmarks:** In the content of the world wide web I am an identifier that is stored for later retrieval.
  - **Web Programming Languages:** I tell web browsers how to structure and present content on a web page.
  - **URL:** I am a specific character string that constitures a reference to a recource.
  - **Privacy Settings:** I enable people using the web to determine various ways their information may be accessed.
  - **IP:** I am a numerical label assigned to each device participating in a computer network. I am also known as internet protocol.

- **Browser:** I am a software application for retrieving, presenting and traversing information resources ont he world wide web.

Participants: Asuming your participants are new to Web Mechanics, figure out a way to introduce them to what it is and how it works. This can happen in the form of a discussion, a lesson plan, a Q & A, etc. The goal is that everyone feel comfortable with discussing the components of Web Mechanics once the activity begins.

Activity

Introduce the Activity: Gather everyone that will be participating in the activity. Each person gets one namecard. Ask the participants to take a little time to read the front and back of the name card they were given. Everyone is pretending to be the web mechanic listed on their card. Once the activity begins, they will have two minutes to learn about the other web mechanics in the room.

- [ ] **Start the Activity:** Set a timer to 2 minute intervals. Start the clock and tell everyone to quickly match up with someone else (it works best with an even number of participants, but an odd number can work). They have two minutes to introduce themselves to each other and ask each other any of the short questions below. After the two minutes is up ask them to find another person and do the same thing. Keep going until everyone has had a chance to meet each other.

    - What do you do?
    - What are your friends like?
    - How do we connect?
    - How old are you?
    - Where are you from?

Materials

- [ ] Pens/Markers
- [ ] Paper
- [ ] Timer

Reflection

After the activity is over gather everyone in a circle and ask them to discuss the activity. Ask them to describe any challenges, funny moments or interesting things they learned.

Teaching Kit

A Beginners' Guide to Game Makery

In the game jam your participants will learn about the basic game design principles, making games in the open and hacking their way to making their very own digital or analog game.

Made by: Mozteach

What is this kit all about?

In this kit, we'll make all kinds of games inspired by other games, summer(!) and the world around us. We will discover that games are designed systems, they are made out of components, rules, goals, mechanics, space and challenges that present their players with interesting choices.

We will also discuss what makes a good game experience and how stories can be powerful tools in the hands of game desigers. The kit will show how Javascript relates to game design by providing an introduction into programming concepts like variables, conditionals, functions and loops. Finally, we will master the art of playtesting and critical thinking to understand what works and what doesn't in our game.

What are we going to do?

- Play different kinds of games and break them down as systems.
- Play controversial games and discuss- what is a game? what is a not-game?
- Mix and match mini design challenges to create digital and non digital games.
- Get introduced to Javascript and learn how to build a Choose Your Own Adventure game.

What we'll make together

We'll make minigames, paper prototype a game and build our game in Javascript.

Assessment and review

After the Game Jam, the learner should be able to answer:

- What is a game? What is not a game?
- What makes a good game? What makes a game balanced?
- Who is a game designer? What process does a game designer follow to make a game?
- Where do game ideas come from?
- What makes a good story in a game?
- How does play-testing and critical discussion helps us make better games?
- How are videogames shaped by culture? How have they shaped culture thus far? What do future videogames look like?

Assessment criteria

Agenda

Additional Resources

- the Ultimate Gamemakery Tips
- How to Host a Hackjam
- Gamekit
- Coquette
- Codepen Example
- Craftyy
- Play My Code

Did the learner show their ability to:

- [ ] answer the discussion questions
- [ ] deconstruct a game into game components
- [ ] use paper prototyping to plan a new game
- [ ] attempt to make his/her game using Javascript

Digital Corps

HTML Thimble Tag Puzzle

Thimble Unplugged: Kids (1) create "perfect pairs" of HTML tags, (2) describe role of "opening" and "closing" tags, (3) position/nest tags to avoid "floating heads" and "open bodies", (4) discover if equivalent Thimble doc works.

Steps for the Activity

- Write "opening" and "closing" tags in index cards or post-its (use different colors for each pair, ex: <html> tags in blue, <head> tags in orange, <body> in dark green, in light green, <title> in pink = 5 pairs), and print a simple HTML document to serve as a "cheat sheet".
- Spread cards around the room and ask each kid to pick a tag. If you have less than 10 kids, use less tags (exclude less crucial tags, starting with <h1> and , and and or tell each kid to find a "perfect pair" (ex: <head> and </head>).
- Ask kids to find their "perfect pairs" (ex: kid1 holding <body> and kid2 holding </body>) and have them explain to the rest of the group what role they believe their tag plays in the HTML document (they can ask for the HTML "cheat sheet"). After the "perfect pairs" describe their "role", see if the entire group can nest the tags in the right order. If you have enough kids you can ask them to position themselves in rows in the room. If space is limited or if a kid has more tan one tag, ask them to place the cards on a surface (table or floor) nested in the right order. Remind them to avoid "floating heads" and "open bodies" :-)
- Drawing on these answers, create a digital version of the HTML Tag Puzzle in Thimble, while asking the group to choose what to write as and <h1> (or, if they´ve been eliminated, as <head> and <body>). Example of a "super simple Thimble template", and "one with CSS style added" to test the unplugged human HTML code.
- Have the group collectively assess its performance. Do they believe they have created a functioning HTML document in Thimble? If there are errors in their ordering, ask the participants to "debug" the code, offering placement suggestions to their peers. Continue this debugging, providing guidance as necessary, until participants have created a working Thimble template.

Materials

- [ ] Cards or Post-Its
- [ ] 5 Colored Markers
- [ ] HTML "Cheat Sheet"
- [ ] Thimble Template

Discussion

Learners should be able to replicate the structure of a basic HTML document, providing reasoning for their structural choices.

Puzzles for Teaching HTML

Learn how to use a variety of puzzles for teaching HTML skills and web literacy concepts

Description

Puzzle-like activities that involve people and paper can be useful in offline environments for teaching HTML and web literacy concepts

Learning objectives

- Learn how HTML tags function
- Explore "webmaking 101" tags and website components
- Explore the markup of text as a component of site architecture and the Web Literacy Standard
- Solve an HTML puzzle dealing with search syntax

What you'll make together

Participants in this session will complete activities to solve various types of puzzles.

Preparation

These activities are design for offline environments. You will find it helpful to print acitivies in advance if possible.

Assessment and review

Participants can assess and reflect on their work once it's complete by checking their puzzle solutions with a mentor or by checking HMTL code in Webmaker Thimble

- **Discussion questions**. What are the top 5 points about HTML you would teach a friend? What did you learn about today in additon to HTML?
- **Assessment**. The learners can collaborate thoughout the activities to assist each other and work towards solutions. Mentors or teachers can provide correct solutions to the puzzle or HTML can be checked in Webmaker. Thimble
- **Sharing**. Participants can share their puzzle solutions verbally throughout the session or activities.

Agenda

Additional Resources

- W3 Schools HTML resources
- Don't Fear the Internet

Tips and tricks

- Tips for creating great teaching kits
- Pro Tips for great teaching kits
- Event Guides

Activity

Human HTML Tag Puzzle

In this puzzle activity, participants pair up in "opening" and "closing" pairs. Part two of this exercise asks participants to create a human HTML code document.

Steps for the Activity

- Prepare sets of tags on post-it notes. Include all of the tags that would be found in the structure of a standard web page (check out the example at http://www.w3schools.com/html/html_intro.asp). Each post-it should include only one tag, like " " with the related closing tag (say, " ") appearing on another post-it.
- Randomly assign post-its to participants. Everyone should get one tag.
- Ask participants to find the person who has the tag corresponding to their own. This means that the person holding " " should find the person holding " ", the person holding "<h1>" should find the person with "</h1>", and so on.
- Once participants have found their tag partners, ask them to have a brief chat about the possible meanings of their tags. What might "<h1>" do or mean? What purpose might "<body>" serve?

Materials

- [ ] Pens
- [ ] Post-its

Discussion

After completing this exercise, participants should be able to name basic HTML tags and know that tags need to be both opened and closed.

Activity

Human HTML Tag Puzzle Part Two

In part one of this puzzle activity, participants paired up in "opening" and "closing" pairs. Part two of this exercise asks participants to create a human HTML document and teaches basics about how tags get positioned.

Steps for the Activity

- Arrange the room into rows, numbered 1-7. Each row should be clearly marked, and should have enough room for three people to stand side-by-side.
- Make sure every participant still has a tag from part one of the activity. If there aren't enough participants to make up the entire sample document (http://www.w3schools.com/html/html_intro.asp), exclude some tags, starting with "<h1>" and "</h1>".
- Ask participants to explain to the rest of the group what role they believe their tag plays in the HTML document. Drawing on these answers, see if the group can come to a consensus about which tags serve which functions.
- Based on the consensus from the previous step, ask participants to move to the row in which they think their tag belongs. If a row has more than one participant in it, ask them to arrange themselves in order, from left to right, based on their understanding of opening and closing tags.
- Have the group collectively assess its performance. Do they believe they have created a functioning HTML document? If there are errors in their ordering, ask the participants to "debug" the code, offering placement suggestions to their peers. Continue this debugging, providing guidance as necessary, until participants have replicated the tag order of the document.

Materials

- [ ] Pens
- [ ] Post-its

Discussion

Learners should be able to replicate the structure of a basic HTML document, providing reasoning for their structural choices.

Activity

Markup Mixer

Use post-it notes to build a basic understanding of markup.

Made by @malesser + @thomashpark

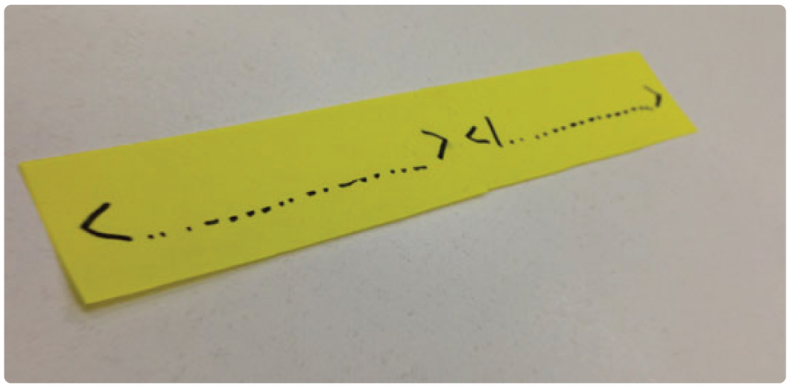
This is part 3. You can also go back to part 1 and part 2.

Steps for the Activity

Introduce the activity by explaining that for web browsers to understand how to display a webpage, its contents needs to be "marked up" using a language called HTML. We will mark up real-world objects in a similar way.

Explain that we use a pair of tags to mark up content — one at the start and one at the end of the item. Demonstrate the activity by using post-it notes to create your own start and end tags that describe an object in the room and "wrapping" them with the tags.

Distribute post-it notes that have been prepared with blank start and close tags: <_____> and </_____>. Have others invent their own tag, separate the start and close tags, and mark up an object.



Extend this activity by using photos or posters containing lots of objects, or print-outs of text documents like magazine pages and recipes.

Finally, provide post-it tags for valid HTML elements like img, h1, and p. Explain what each tag stands for, and then have participants mark up a printed webpage

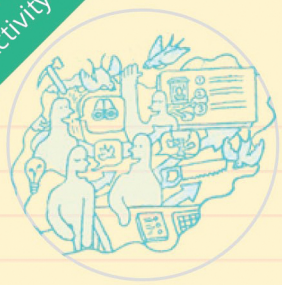
Materials

- [ ] Post-its
- [ ] Pens
- [ ] Prints, posters, or magazine pages

Additional Resources

- Intro to HTML on MDN

Activity



A Strong Wind Blows for the Open Web

This activity is a hack of the game musical chairs. Thematic statements are introduced and learners for whom the statement is true, must find a new seat.

Made by MozTeach

Steps for the Activity

To set up the game, get all participants sitting in a circle with no empty chairs. The facilitator, who is standing and has no chair, is the first to "play". Tell Learners that the topic is the Web. The facilitator makes the first statement, for example:

- A Strong wind blows for anyone who knows HTML syntax
- A Strong wind blows for anyone who knows what CSS stands for
- A Strong wind blows for anyone who thinks Wikipedia is always true

See "A Strong Wind Blows" in action!

As soon as the statement has been made, **every person for whom the statement is true must jump out of their seat and find a new available seat**. The person who made the statement is almost always able to grab a seat, which leaves a new person standing once all seats are filled. That person must then make a "strong wind blows" statement to continue the game.

An additional rule is provided **for amusement and chaos**, as well as for anyone unable to fashion a"strong wind" statement: the person standing may **yell "Hurricane!"**, which compels all participants to scramble for a new seat.

When the session facilitator is ready to bring the game to a close (after perhaps 5 or 10 minutes), they simply stand and refrain from grabbing a seat when other participants are changing positions.

Materials

- [ ] Chairs

Discussion

Help clarify topics that didn't a lot of learners moving from their seats. Ask the learners questions that help them reflect on themes in the statements made. For example:

- Who can put content on the Web?
- Who owns the Web?
- What does HTML actually do?
- What does HTML syntax look like?
- Why is it better to question the truth of something rather than take it at face value?

Related Activities

- Spectrogram
- Adventure Time
- Games in the Wild

HTML PUZZLE BOX

by Yofie Setiawan

Learn HTML in a fun way!

This is a tutorial to build the HTML Puzzle Box papercraft. I made this to support Mozilla's Webmaker project. If you want to help to teach about basic Web language (HTML) in a fun way, this might be useful for you.

With this tool, you can teach people the basic HTML tags structure, without relying on any internet access at all.

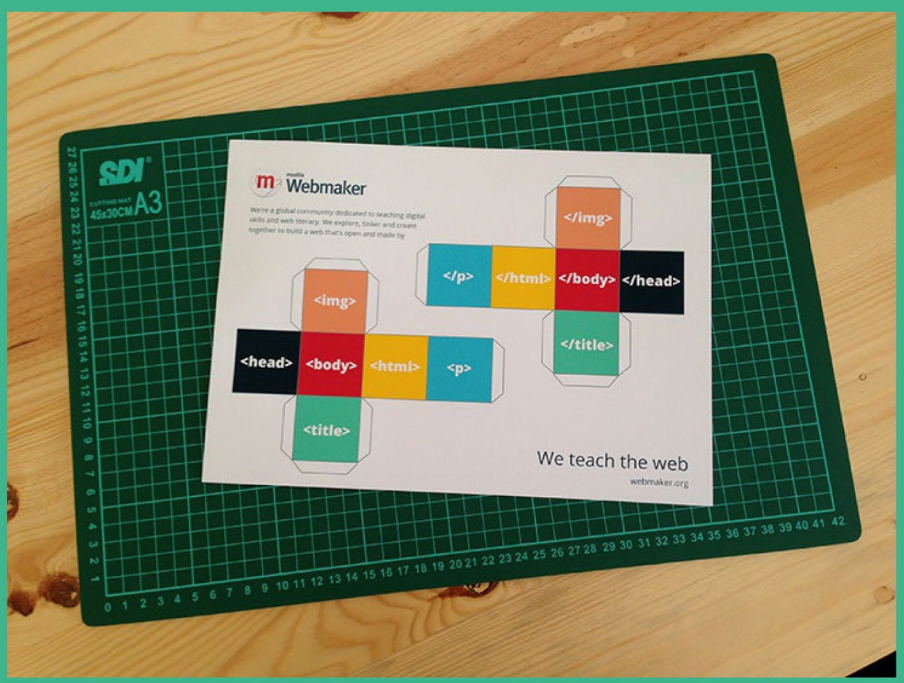
Tools

Scissors & Glue

Steps

1. PRINT THE PUZZLE BOX

You can start by downloading the Puzzle Box file here. The file contains a papercraft pattern that you can print. It is preferable to print the Puzzle Box with thick paper, so it will be easier to assemble, and will have a better build.



2. MAKE THE PUZZLE BOX

Cut the pattern that you have downloaded using your scissors. Fold it along the lines, and apply some glue on the small white part. After it can be formed into a cube, stick the glued part inside, so that the box can remain firm. If you use thick paper, try to use a stronger glue, so they won't easily fall apart.

3. DONE!

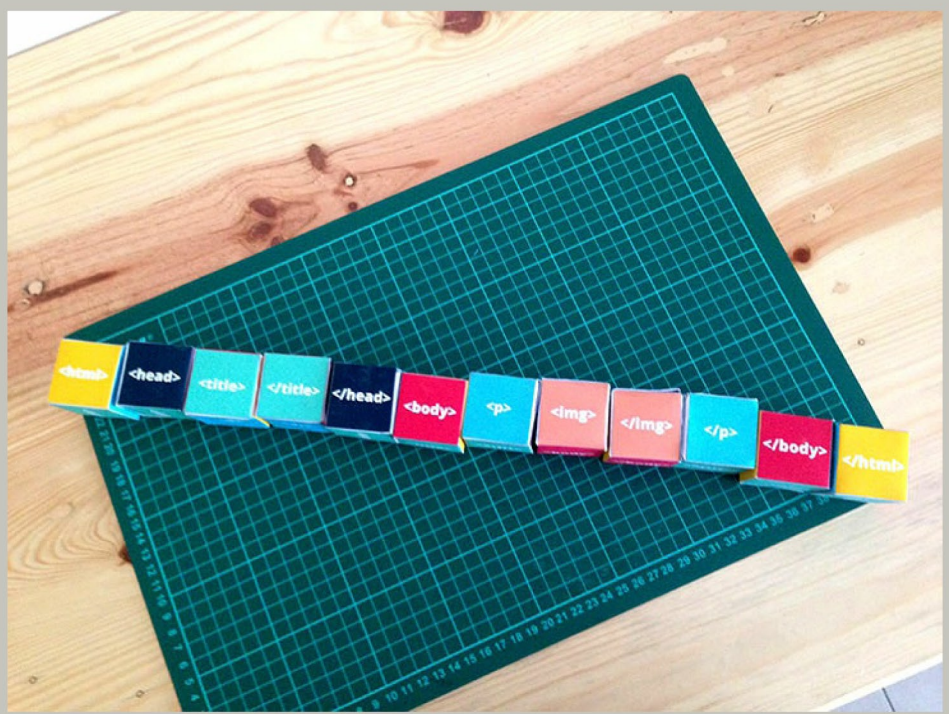
Now, you can make more Puzzle Boxes, depending on your needs!

HOW TO PLAY

To play a game with the HTML Puzzle Box, begin with picking two players that will compete against each other. Their task is to build HTML tags structure in the right combination. The winner of the game will be the one that assembled the correct structure the fastest. But, to make it more interesting, the maximum allotted time to build it would be limited to only two minutes!

If your players have very limited knowledge of HTML tags, allow them to take a peek to recognize what a correct HTML tags structure looks like before starting the game. This way, children or those who have only started to learn about the Web can have fun too. After giving them little time to memorize it, you can begin the game right away!

You can challenge them to build the structure vertically. But, if the players didn't build a strong and solid papercraft, this might be a little hard to do. To make it easier, you can also assemble them horizontally.



TIPS

Creating one Puzzle Box is pretty easy. But, to have enough Puzzle Boxes to play the game, you would need at least 12 boxes – to ensure that you have enough boxes for opening and closing tags. In total, for a pair of players, you need to build 24 boxes. So, to build all 24 boxes, you need to print 12 sheets of the papercraft pattern.

To make it easier for you, ask the participants to help you to cut and build the Puzzle Boxes at the beginning of the event. Although the amount needed is only 24 boxes, ask everyone to join in to make as many boxes as they can, so that they can take it home to play with it later. So, make sure that you have printed enough patterns for all the participants to make.

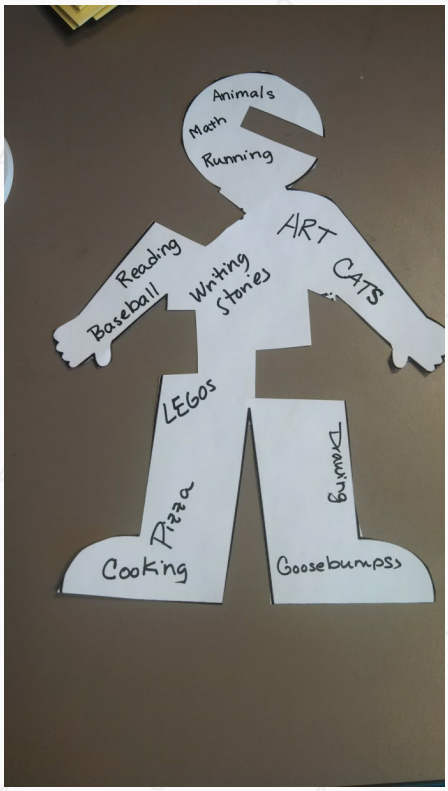
This is the right combination of HTML tags structure.

```
<html>
<head>
<title>
</title>
<style>
</style>
</head>
<body>
<p>
</p>
</body>
</html>
```

DOWNLOAD HTML PUZZLE BOX

Teaching the whole child, including the digital bits

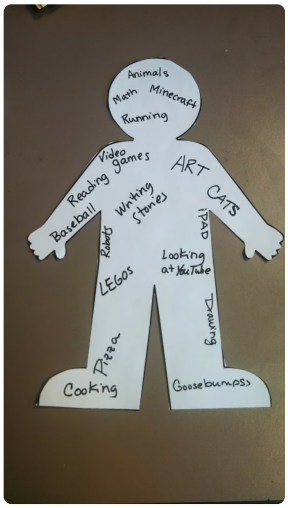
This is a quick icebreaker activity for educators who are hesitant to include technology or #teachtheweb activities into the classroom. This activity could be used as a lead in to other hacking activities planned for the day. Tapping into the importance of teaching the whole child, participants will explore the disconnect between the reality of the whole child and their perceptions of the whole child.



Made by Jeannie Crowley

Steps for the Activity

Prepare This step is done with young learners *before* the day of the workshop.

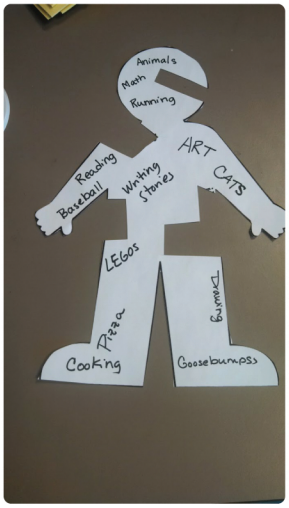


- Give young learners each a blank outline of a child.
- Ask young learners to fill in the outline with their interests and skillsets.
- If you dont' have access to young learners, you can modify this activity by asking participants to complete the outlines and then swapping with peers to remove an interest of your choice in step 3.

Brainstorm With participants, whole group brainstorm key elements of the whole child approach. Record responses on chart paper or surface visible to group. Sample questions to spark conversation about the whole child approach:

- How do we define the whole child approach?
- Why is teaching the whole child important?
- How do we bring interests of learners into the classroom?

Explore Give each teacher one of the completed outlines created by young learners before the workshop. Ask teachers to use provided scissors to remove any interests that relate to technology.



Reflect Revisit the definition of whole child approach developed during step 2. Ask teachers to look at modified outlines and share what the activity revealed for them. Potential discussion questions:

- If we ignore elements of the child (such as their interest in technology), are we really using the whole child approach?
- Is it ok for educators to decide what does and does not count as "legitimate interests" of the child?
- What risks are we running by selecting the parts of the child we want to teach?
- How would we feel if our interests were ignored or removed from learning environments?

Materials

- [ ] Scissors
- [ ] Pens
- [ ] Blank outline of a child
- [ ] Space to record discussion (chalk board, chart paper, etc.)
- [ ] Tape, magnet or strings to display modified outlines

Discussion

- Can we call it the "whole child" approach if we only teach the parts of the child we want to teach?
- Is it ok for educators to decide what does and does not count as "legitimate interests" of the child?
- What risks are we running by selecting the parts of the child we want to teach?

Activity

Prototyping Teaching Kits with a Paper-Based Design Canvas

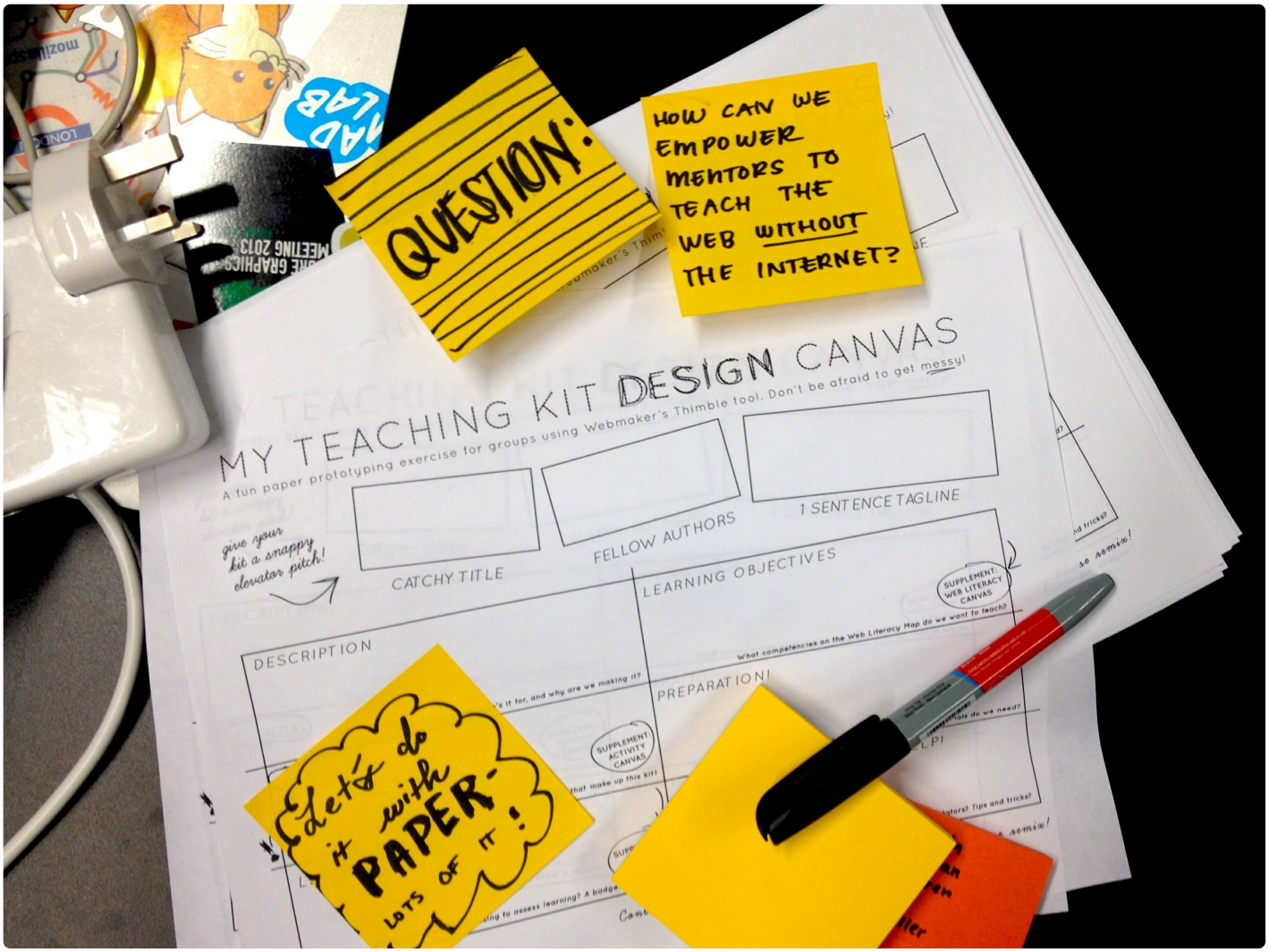
This activity, tailored to those in offline and low-fi environments, will lead participants through the process of prototyping Teach the Web's digital curriculum offline with a printed canvas on paper.

Made by Webmaker's codekat

Steps for the Activity

Introductions

This is a **modular and remixable** activity directed at mentors who want to help improve the **in-person experience** of other mentors while building Teaching Kits with Webmaker's Thimble tool. It is a part of this in-progress Teaching Kit which features webmaking activities for **low-fi and offline** environments.



Time to discuss

A good way to start this activity is with a bit of **thoughtful reflection** before **hands-on making**. Show participants 3 or 4 exemplary Teaching Kits that have inspired you, explaining the **modularity and remixability** of these kits.

Lead participants through a **critical roundtable-style discussion** about each kit's contextual details.

- Who are these kits made for, and who is neglected?
- How might language, tone and cultural usages affect outcomes?
- Lead the discussion by posing a few other thoughtful questions which allow participants start to feel **ready to become creators**.

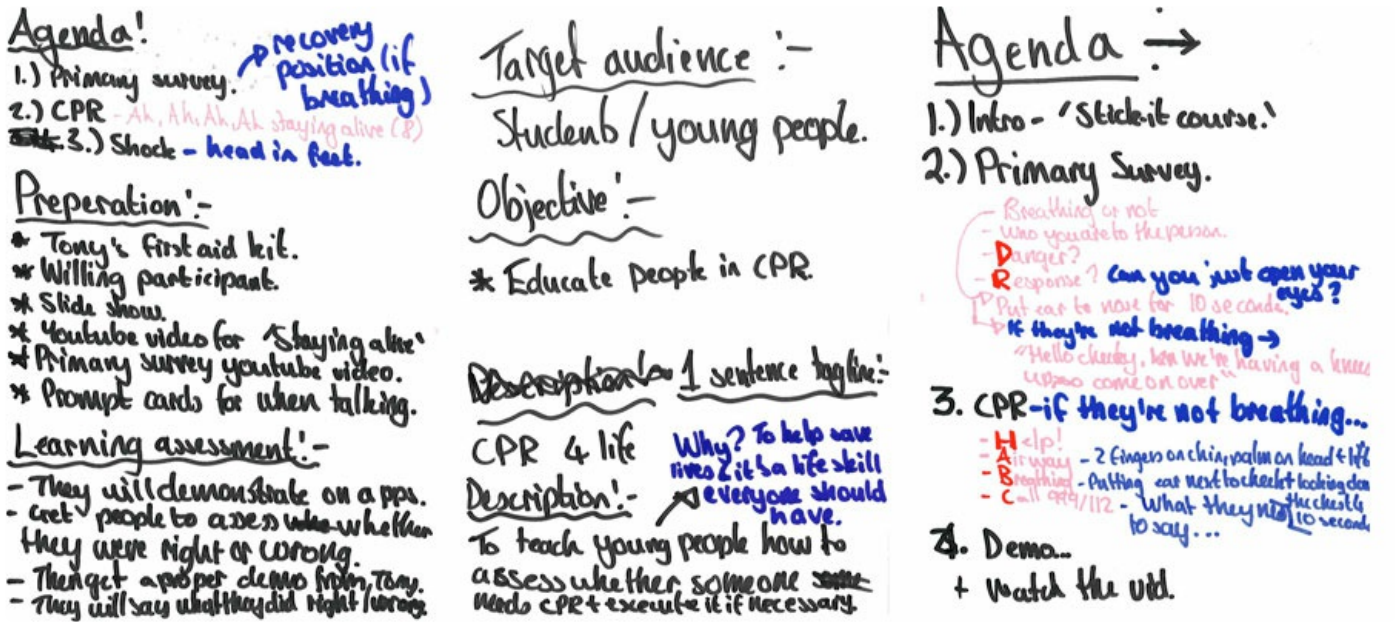
Brainstorming

Now it's time to get participants ready for **making**!

Get out the multi-colored markers, post-it notes, old magazines, scrap paper and other creative materials, and distribute amongst participants. Allow 20-30 minutes for an **initial brainstorm** to informally jot down free-form ideas, concepts, audiences and objectives for each Teaching Kit. Encourage a variety of creative **participatory design methods** -- cut out shapes, build user profiles, create wireframes for layout.

Optional: You may want to supplement this section with a **group mindmapping exercise** before getting out the materials. Here is a good example of an activity for this.

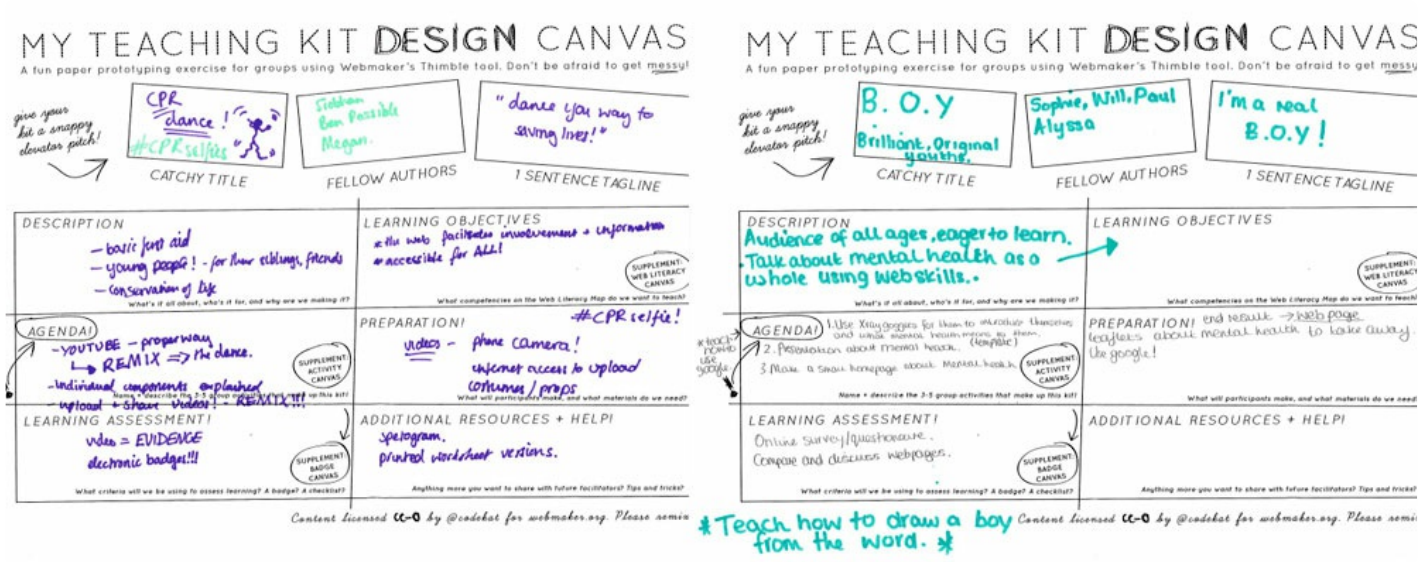
Participants wireframe teaching kits on paper at a Hive Toronto event.



Example of brainstorms on paper from a Webmaker Training in London.

Content Designing

Once it feels like participants are ready to draft the content of their kits, start handing out the Teaching Kit Design Canvas (PDF) and the Activity Design Canvas (PDF) (provide a few of these per kit) to each individual or group. Offer participants at least an hour of time to dig in, and ensure everyone is getting their hands dirty!



Filled-out Design Canvasses from Webmaker Training in London.

Curating and Sharing

If you have time, facilitate this **Speed Geek Playtesting activity** to guide participants through the process of sharing their makes and getting feedback. Congratulate everyone on a job well done -- they have now officially **created their first paper prototype**!

Photo from a Maker Party in Vishakapatnam thanks to Vikas Reddy Burri.

This is also a good moment to suggest opportunities for participants to receive the **mentoring and resources they need** to translate these prototypes into published Teaching Kits on the web. Do you know of an internet cafe, a school or another shared space where this can happen? Share it now, or get ideas on our weekly Teach the Web community call.

MY TEACHING KIT DESIGN CANVAS

A fun paper prototyping exercise for groups using Webmaker's Thimble tool. Don't be afraid to get messy!

give your kit a snappy elevator pitch!

CATCHY TITLE

FELLOW AUTHORS

TWEET-LENGTH DESCRIPTION

DESCRIPTION

What's it all about, who's it for, and why are we making it?

GOALS FOR LEARNING

SUPPLEMENT: WEB LITERACY CANVAS

List the Web Literacy Map competencies that you want participants to learn.

AGENDA!

SUPPLEMENT: ACTIVITY CANVAS

Write down titles of 3-5 group activities that make up this kit.
You'll get an Activity Canvas for each of these to fill out details!

PREPARATION!

What do future facilitators need to do this kit? Materials? Prep work?

LEARNING ASSESSMENT!

SUPPLEMENT: BADGE CANVAS

What criteria will we be using to assess learning? A badge? A checklist?

BY THE END OF THIS KIT...

Explain what you want participants to have MADE and LEARNED by the kit's end!

MY ACTIVITY DESIGN CANVAS

Use this supplementary page to plan out each of the activities for your TEACHING KIT. Make sure each activity is MODULAR (can it stand alone?), HANDS-ON (making as learning!) and REMIXABLE, so others can use it, too!

give your activity a fun elevator pitch!

CATCHY TITLE

MATERIAL LIST

TWEET-LENGTH DESCRIPTION

STEP ONE

Think of this part as an introduction. How do you want facilitators to get started?

STEP TWO

Bonus: take some step by step photos to show how each step works live!

STEP THREE

STEP FOUR

STEP FIVE

STEP SIX

Let's finish your activity with a debrief discussion to prompt learner reflection!

Teaching Kit canvas available in PDF form here, and supplementary Activity canvas available here. Want to give feedback? Let us know how it worked for you on Bugzilla.

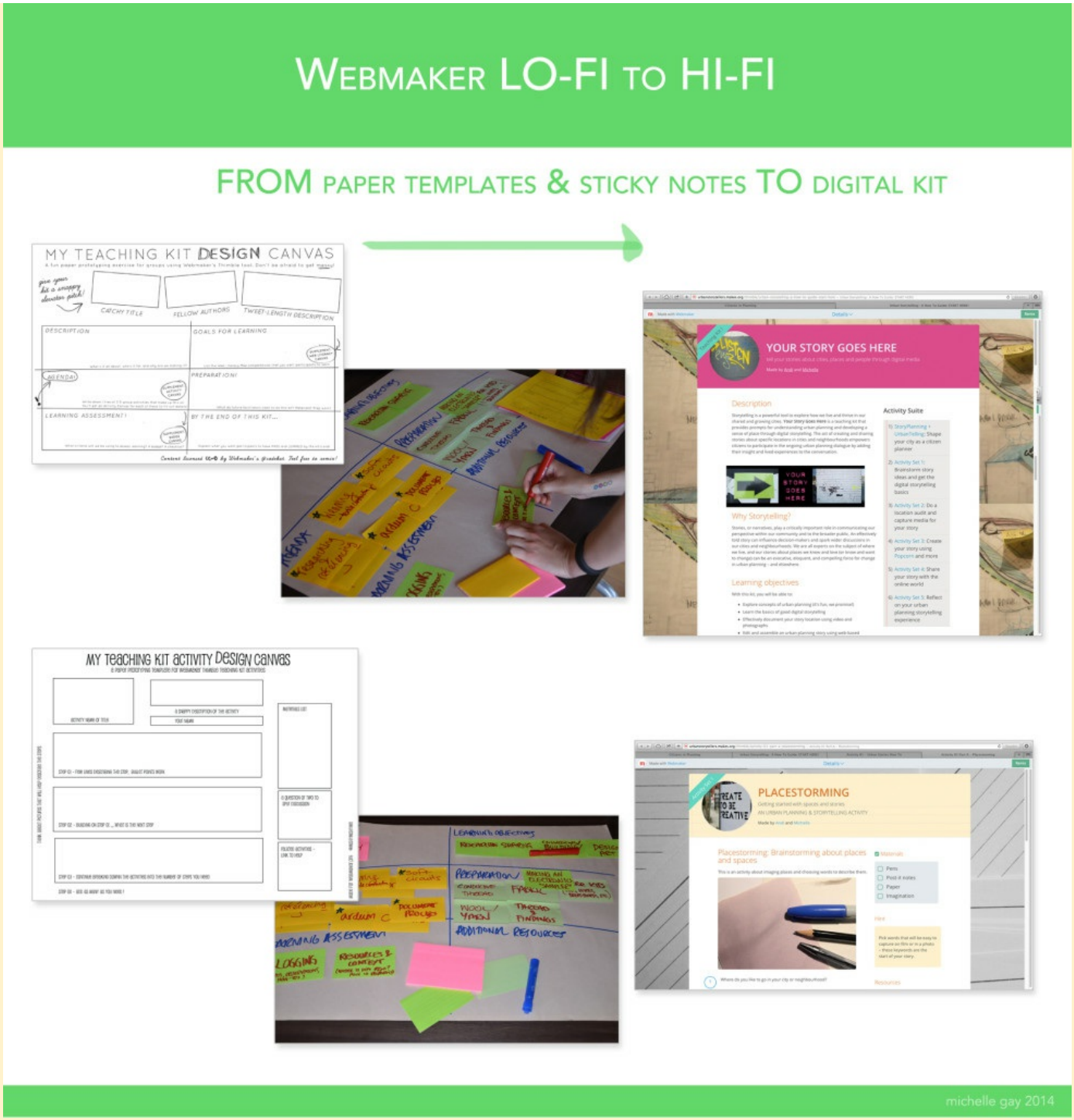
Materials

- [ ] Main: Teaching Kit Design Canvas (PDF version)
- [ ] Supplement: Activity Design Canvas (one for each activity) (PDF version)
- [ ] Pens and fun markers
- [ ] Post-its -- lots of them!
- [ ] Recycled printing paper
- [ ] Magazines, old books and other recycled matter to use in sketches
- [ ] Recommended, but not required: One computer for presenter to display what teaching kits look online

Facilitator's Notes

(1) Don't forget to decide whether you want participants to build their Kits **alone or together as co-designers**. Groupwork focus? Try starting with an icebreaker like this **Mini Maker's Scrum** to help participants organize themselves around topics they want to teach.

(2) Need a bit of imagery to explain the teaching kit prototype process to your learners? Here's a **handy diagram** by Michelle Gay at Hive Toronto:



Related Activities

- Article: Kickstarting teaching kits with paper prototypes in Toronto (Michelle Gay, University of Toronto)
- Activity: Prototyping apps with a mobile design canvas (Jess Klein, Mozilla)

Actividad

Prototipando Kits de Enseñanza con lienzos dibujos y bocetos en papel

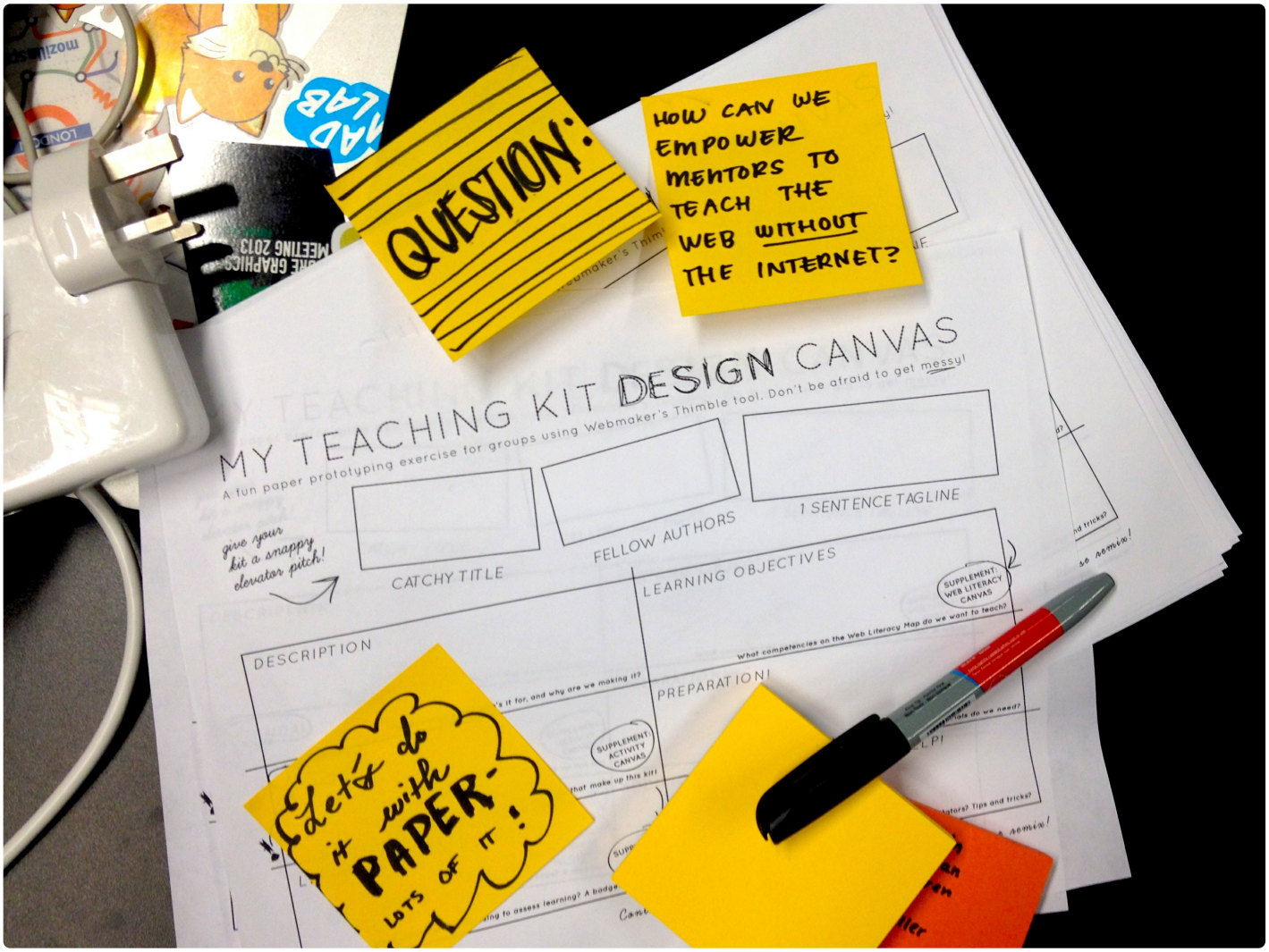
Esta actividad, hecha a medida para ambientes of-line o con poca conectividad, conducirá a los participantes a través del proceso de prototipado de kits de enseñanza y Actividades de forma ofline con bocetos y dibujos en papel.

Hecho por la Webmaker's codekat Traducido por Alvar

Pasos de la actividad

Introducción

Esta es una actividad **modular y remixable** dirigida a los mentores que quieran ayudar a mejorar la experiencia **en persona** de otros mentores en la construcción de Kits de enseñanza usando la herramienta Thimble. Es parte de este Kit que se está desarrollando y que cuenta con actividades para ambientes **low-fi y offline**.



Debate

Una buena forma de empezar esta actividad es con un poco de **reflexión profunda** antes de poner **manos a la obra**. Muestren a los participantes 3 o 4 ejemplos de kits de enseñanza que los hayan inspirado, explicando la fuerte

modularidad y remixabilidad de esos kits.

Conducir a los participantes a una discusión **crítica** al estilo mesa redonda sobre los detalles contextuales de cada kit.

- ¿Para quiénes están hechos estos kits? ¿A quiénes se descuida?
- ¿cómo puede el lenguaje, tono y costumbres culturales afectar el resultado?
- Dirija la discusión planteando algunas otras preguntas inteligentes que permiten a los participantes comienzan a sentirse **listos para sentirse creadores de contenido**.

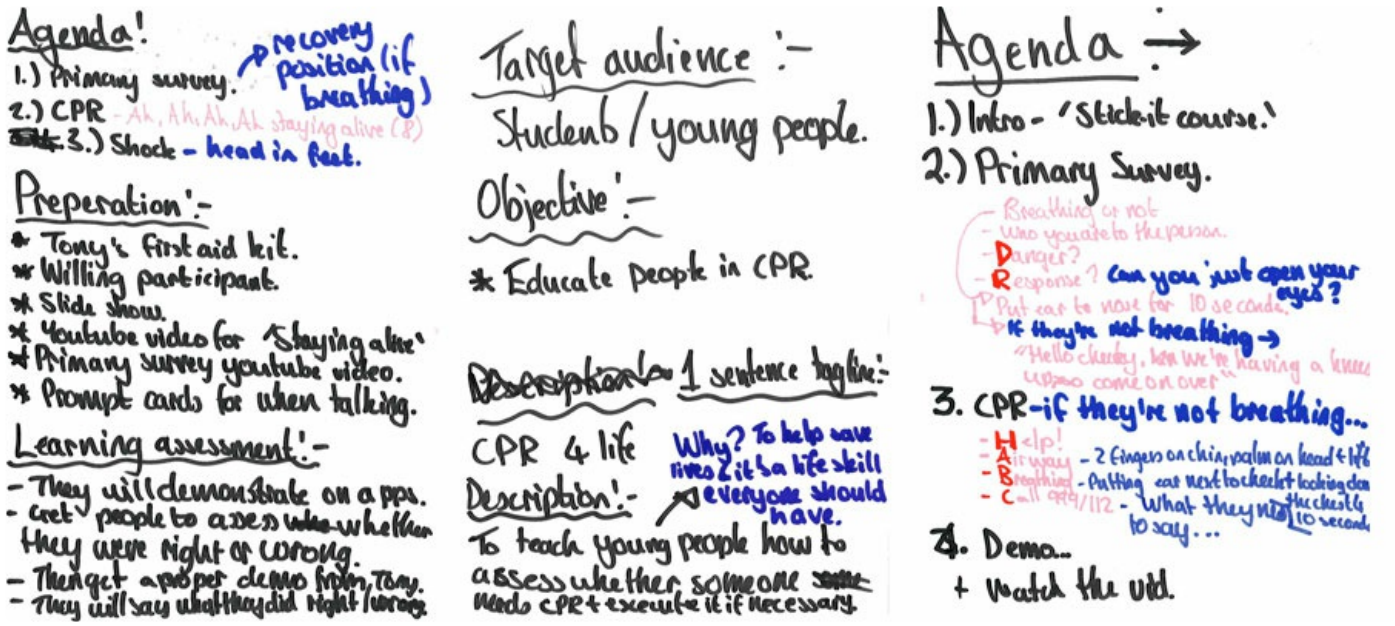
Lluvia de ideas

¡Ahora es el momento de poner a los participantes listos para **hacer!**!

Saquen los marcadores multicolores, post-it, revistas viejas, papel de desecho y otros materiales creativos, y distribuyanlos entre los particiantes. Den 20-30 minutos para que hacer una **lluvia de ideas inicial** para anotar de informalmente las ideas libres de estructuras, conceptos, audiencias y objetivos para casa uno de los Kits de enseñanza. Alienten a usar una variedad de métodos creativos propios del **diseño participativo** -- recorten distintas formas, hagan perfiles de usuarios, construyan la estructura del diseño.

Opcional: Tal vez quieran complementar esta parte con un ejercicio **grupal de mapas mentales** antes de poner manos en los materiales. Acá tienen una buena actividad de ejemplo.

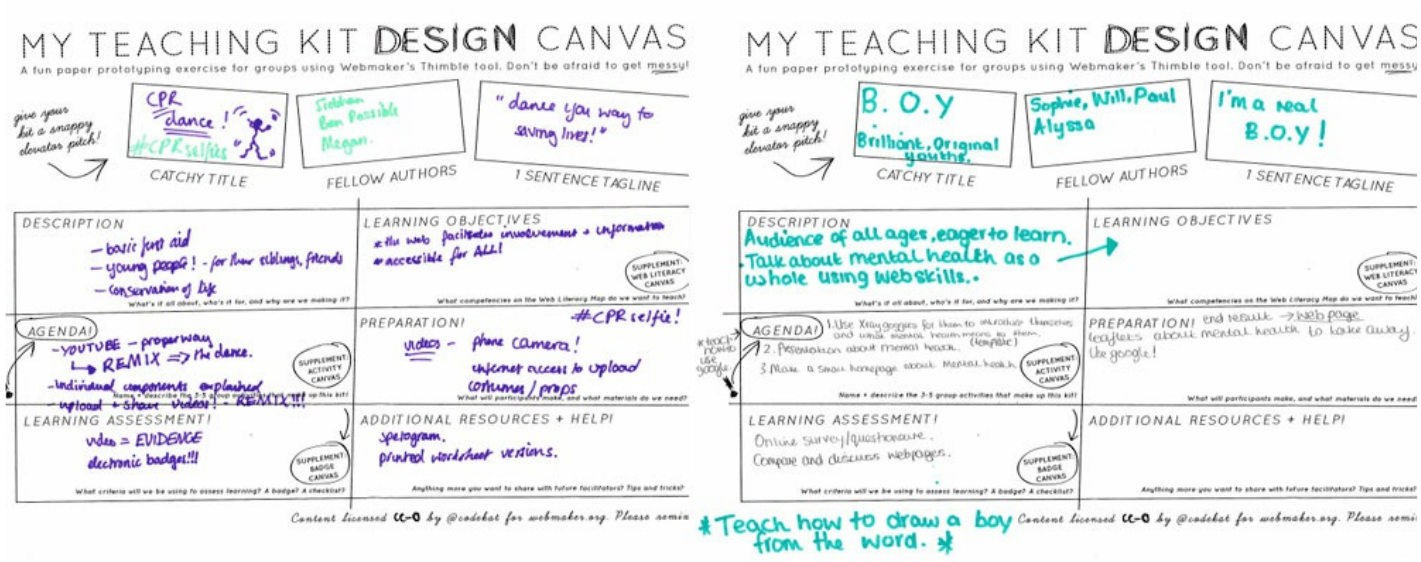
Ejemplo de la estructura en papel de un kit de enseñanza hecho en una de las semanas de trabajo en Toronto.



Ejemplo de una lluvia de ideas en papel de uno de los cursos de Webmaker en Londres.

Diseño de contenido

Una vez que sienten que los participantes están listos para escribir el contenido de sus kits, comiencen a repartir los lienzos de diseño de los Kits de Enseñanza (PDF) a cada participante o grupo. ofrecere a los participantes al menos una hora para meterse en el tema, y ¡asegurence que todos estén poniendo manos a la obra!



Lienzos de diseño completo de un curso de Webmaker en Londres.

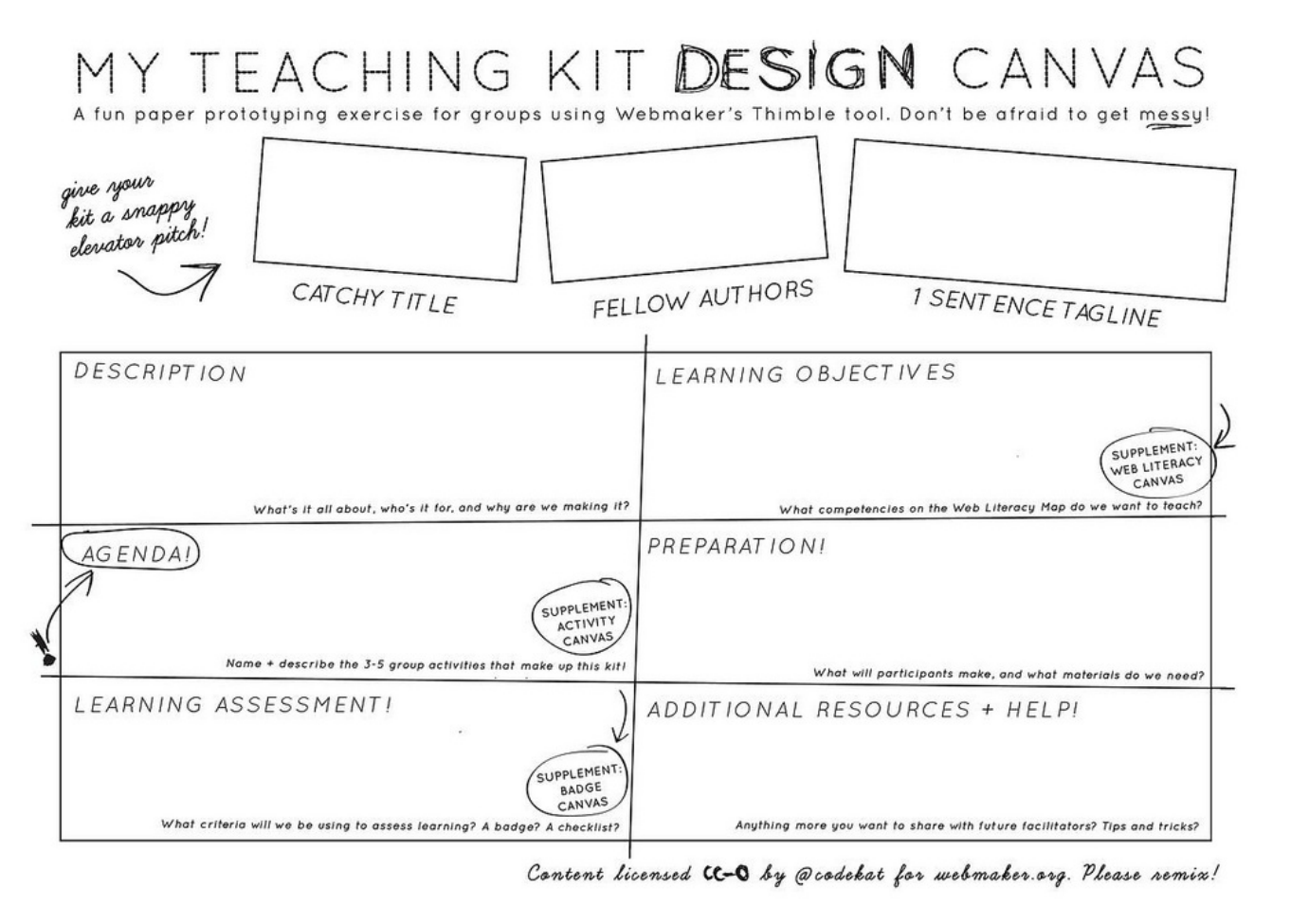
Curado y distribución

Si tienen tiempo, faciliten esta **actividad Speed Geek Playtesting** para guiar a los participantes en el proceso de compartir sus creaciones y obtener comentarios y feedbacks. Feliciten a todos por el trabajo que se llevó a cabo -- habrán **creado oficialmente ¡su primer prototipo en papel**!

Foto de una Maker Party en Vishakapatnam Gracias a Vikas Reddy Burri.

Este es también un buen momento para que los participantes reciban **el asesoramiento y los recursos que necesitan** para pasar estos prototipos a Kits de enseñanza publicados en la web. Si saben de algún café con Intenet, una escuela o otro espacio compartido donde esto pueda ocurrir compartanlo con los participantes. También pueden consguir ideas en nuestra llamada semanal comunitaria Teach the Web.

Lienzo de diseño



Lienzo disponible en PDFaquí. ¿Quieren darnos su opinión? Háganos saber cómo les funcionó en Bugzilla bug.

Materiales

- [ ] Lienzo de diseño de los Kits de enseñanza (PDF)
- [ ] Lapiceras y Marcadores de colores.
- [ ] Post-its -- ¡Muchos!
- [ ] Papeles usados de impresora.
- [ ] Revistas, libors viejos y otros mateiales para usar en los bocetos.
- [ ] Recomendada, pero no necesaria: Una computadora para que el facilitador muestre como son los Kits de Enseñanza online.

Apuntes para el facilitadores

No se olviden de decidir si quieren que los participantes construyan sus kits**sólos o juntos como co-diseñadores**. ¿Enfoque de grupo de trabajo? Traten de empezar con algo que rompa el hielo como este **Mini Maker's Scrum** para ayudar a los participantes a que se organicen en torno a lo que quieren producir.

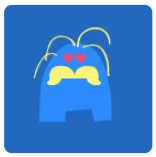
Activity

Games in the Wild

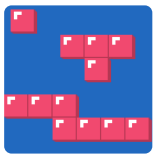
Ever wondered what would happen if you broke apart your favorite game into tiny little pieces and released them into the wild? What if your characters where playing in a real life setting like a city street or what if the games' villains cloned themselves? Let's find out!

Made by Mozteach

Steps for the Activity



Choose your favorite videogame. We know it's hard to just pick one, but choose an established game that you love.



Find a large piece of paper and get equipped with lots of sticky notes and markers. Ready for some art? **Sketch out your games main components; heroes, villains, monsters, gold blocks, special weapons – include them all and write next to each component a few of its key attributes.** For example, "this main hero jumps and shoots", "this special weapon throws glitter" and so on.

Now draw the space of your game. Don't worry about the details, it can be a map of the game or the space from one of your favorite game levels. Feeling ambitious? Add some of the space attributes; what is the texture like, the lighting, are there obstacles?

Time to include your games' goals in your mega-sketch. This should be fairly easy, **try to think of how you win the game.** Do you have to unlock all the puzzles, save the castle, beat the villain?

Time for some action! **Write down the main mechanics for your game**, you can draw them too. Consider mechanics as the main actions you take in the game. Think of verbs like jumping, collecting and negotiating.

The last component you should draw or write down is the challenge that leads you to make choices in the game. **Challenge and choice make us want to keep trying to complete the goal.** For example, one of the challenges in SimCity is to grow your city while keeping your population happy, in Portal 2 CoOp one of the challenges is to work together with your coplayer to solve spatial puzzles.

Materials

- [ ] Pens
- [ ] Post-its
- [ ] Markers

Discussion

Break it down: Can you name your games systems? What are the components, space, challenge, mechanics, goals and choices?

What is a game? What is not a game? Now that you have all your pieces, take a step back and circle back with the rest of the people in your game jam. Discuss what you think makes a game? Share what everybody made and consider what would happen if you took one element of a game system out, how would the game experience change and why?

Related Activities

- Mini Game Challenges
- Adventure Time!
- Adventure Time with Javascript

Code Thief!

Welcome, Code Thief!

Code Thief! is a low-fi game meant to teach some basic concepts about variables, objects, and arrays in **JavaScript**.

You play the role of a world-renowned thief who hacks into the vaults of the rich and famous to steal art, cash, and gems.

These vaults are like **arrays**, or collections of **variables** and **objects** kept inside code. Normally, a variable or object hangs out in place until you call it into another function or part of a webpage (written in **HTML**) using the prefix 'this.'

For example, in a piece of JavaScript (or .js), you might see variables or objects called into a webpage document from an array like this, where the 0 position of myRiches means 'Art,' or the variable or object that comes first in an array (counting 0, 1, 2, and onward.):

```
<script type="text/javascript">

    function Steal() {

     var vastRiches = ['Art', 'Cash', 'Gems'];

     this.myLoot = vastRiches[0]

     document.getElementById('myLootListOnAWebpage').innerHTML = '<p>I stole '
+ this.myLoot + ' !</p>'

    }

   </script>
```

Because you are a code thief, you have special 'this.key' cards that let you steal riches (variables or objects) from any vault (array) for your own nefarious use (a program called 'Steal').

Your goal is to become the richest code thief of all time and to beat your fellow thieves to the best scores in the game!

What you need to play

To play *Code Thief!*, you should print out the following remittable pages of cards and props for the game.

- 1 copy of these instructions for playing anywhere.
- 1 copy of the Loot Mat, which holds our vaults, or arrays, of Art, Cash, and Gems.
- 2 copies of the key cards page.
- 2 copies of the art cards page.
- 2 copies of the cash cards page.
- 2 copies of the gems cards page.
- If you know how to print the cards front/back, you may also want to print the card back sheet.

How to play

1. Cut out the Loot Mat and cards before you play.
2. Set out the Loot Mat in between the players.
3. Shuffle the key cards, art cards, cash cards, and gem cards into one combined draw deck.
4. Deal 5 cards to each player. Players keep their hands hidden from one another.
5. Decide who goes first with a toss of the dice (high roll) or any other house rule you like.
6. The first player must play an art, cash, or gem card into one of the vaults on the Loot Map. Neither the first player nor any other can pass a turn.
7. The first player draws back to 5 cards.
8. After that, players take turns placing an art, cash, or gem card into a vault or playing a this.key card. When a player plays a this.key card, he or she can take one art, cash, or gem card from any vault. That card stays face-up in front of the player and becomes part of his or her stash. When a this.key card is played, it goes to a discard pile next to the draw pile.
9. Each player draws back up to 5 cards at the end of his or her turn.
10. When the draw deck is empty or all 12 this.key cards have been played, the game is over. If players have any this.key cards left when the last card is drawn, they can play those this.key cards immediately, in the players' order, to steal their last pieces of loot.

How to win

After the game ends, players should tally up the value of their stashes. The player with the most valuable stash wins and becomes the ultimate code thief!

How to remix

There are oodles of way to remix *Code Thief!*, which is easy to do on Thimble from the Webmaker project. For example, you might...

- Design better looking cards using your own artwork or CC-licensed images.
- Localize the language and denominations of money.
- Change the game from being competitive to coöperative.
- Change the game's resource from money to something less artificial or scarce.
- Change the narrative frame of the game - maybe you want to assemble the pieces of a time-travel machine or build a disaster-response kit.
- Write and screenshot a better code snippet for this page showing how you use your this.key to pull objects from one array - the valut - to another - your stash! You could even get into objects' attributes, like 'name' and 'worth.'
- Put together an easy-peasey .pdf or printing kit for the game or your version of it.

You can visit and remix this page and any of the pages you printed to play. I hope you'll have fun playing AND remixing the game - and that you'll share your work with the Webmaker team!

Glossary

Array - a collection of variables or objects in a program.

Function - a piece of code that runs like a tiny little program of its own. Some functions are objects - they create themselves to be objects that bigger programs can use.

HTML - the language of the web that structures webpages.

JavaScript - a coding language that lets you make webpages interactive for users, abbreviated as .js.

Print'n'play - a genre of games you can download or copy and then cut-out and play yourself.

Object - a special kind of function in a program that has attributes in common with objects like it.

Remix - the act of creating something new by recombining pieces from something else. Best done in the open with credit for you and everyone else involved.

Variable - a building block of code that can carry a value a program needs to run itself.

License

Developed by Chad Sansing for Mozilla Webmaker.

Activity

Web Literacy Bingo

This activity can be used in offline settings, or between screen based activities. Web literacy Bingo allows you to explore a web literacy competency of your choice with a group of learners. This example shows a privacy Bingo card.

Made by Karen Smith

Steps for the Activity

- Create a Bingo card that aligns with your web literacy goals for an event. The example here shows a Bingo card created to help learners discover the privacy practices of others in the room as part of the web literacy map.

.

Password protects their cell phone _____	**Uses strong passwords** _____	**Knows how to clear their web browser cache for privacy** _____
Has "untagged" themselves or requested a photo be taken down by friends on social media _____	**Blogs or uses social media under a pseudonym** _____	**Has refused to share their email address at a store during check out** _____
Remembers a news story about privacy and digital media from the past year _____	**Has requested their data from a social media service (i.e., asked Twitter for an archive of their Tweets** _____	**Knows the name of a government office that deals with privacy** _____

- Design your Bingo cards and print out copies to distribute to participants with pens. A PDF of Privacy Bingo is available.

  Be creative in designing your own Bingo card. An alternative to the privacy example above could incude identifying file formats like *.jpg, .svg,* or *.html* that are a part of building a website and composing for the web.

- Have participants meet others in the room to collect signatures and collect one fact per square. Each person can sign someone's Bingo card in only **one** spot.

  For example, your participant Susan Doe may sign the bottom left square with her first name and note that she remembers a news story about wifi sniffing from the past year.

- Instruct participants to call out "Bingo!" when they have a vertical, horizontal, or diagonal line on the card. You can also challenge participants to fill the whole card.

- Award small prizes for the people who get the first type of each Bingo line, or fill the entire card. Great prizes include stickers or Webmaker gear.

- Faciliate a group discussion using a Bingo card answer key. The answer key will help you prompt discussion and you can also use the discussion questions listed here. To prepare to facilitate the discussion, you may choose to do some research if any of the terms are unfamiliar.

Materials

- [ ] A group of learners (10 or more)
- [ ] Pens
- [ ] Bingo Cards
- [ ] Answer Key for facilitator
- [ ] Knowledge of the web literacy topic
- [ ] Prizes

Discussion

What are the essential questions your learners should be able to discuss and reflect upon after this activity?

- What kinds of experiences have people had with privacy?
- Why would someone blog anonymously?
- Why do stores sometimes ask for email addresses?
- Why is untagging yourself something we do with photos online?
- Did you learn anything unexpected about privacy through the Bingo game?
- Is there anything you will do differently in the future in relation to privacy based on what you've learned from others?

Related Activities

- People Bingo instructions from About.com
- Privacy and Security Teaching Kit

DIY Toolkit

How to report your own story

Use this animated DIY video and accompanying resources to learn (or teach!) the basics of reporting autobiographical stories.

Made by Radio Rookies

Steps for the Activity

Watch this short, animated video to hear Rookie Reporter Alexis Gordon explain the basics of reporting a personal story

Brainstorming topics. These questions will help you come up with ideas for stories you have a unique perspective on:

* What do you have a unique perspective on?

* Is there a social problem you'd like to address in a story?

* What stories and interview subjects do you have access to?

* What sides of a story are often ignored?

* Is there something that might surprise?

* What's at stake? what do people have to win or lose?

* What is a story that people don't know about, but should?

* What is something you are very curious about and want to know more about? (ideally this is true for any story you tackle)

Suggested Activities to help develop your story ideas

- **Make a Graffiti Wall:** Pin up poster paper around the room and give students 10 minutes (no talking) to brainstorm story ideas by writing their ideas on the poster paper and adding their own +1 thoughts to interesting ideas others have written. Follow-up with a conversation about the stories, their angles, and who they would interview.
- **Make a Map of Your World:**

-what's important to YOU?

Materials

- [ ] Poster paper
- [ ] Markers/Pens
- [ ] Recording equipment:

Audio/Video recorders, cell phones or tablets

Discussion

What story ideas are you most excited about? What do you want to find out about each of these topics?

Additional Resources:

Youth News Network: Subject Matters: helping young reporters find the story: A digital storytelling tool from Y-Press with interactive videos, links and examples to help young producers create radio stories.

Generation PRX: Check out the discussion forums. Find answers on anything from recording equipment to curriculum ideas. Or pose your own questions to the group.

Cowbird: Tell your own story on Cowbird: An online community that provides free storytelling tools and a beautiful platform to share your own or hear stories posted by others.

-what have you experienced that you now have a UNIQUE PERSPECTIVE on?

-what parts of your IDENTITY do you want others to understand?

-what problems do you see in your COMMUNITY?

*Discuss identity maps in small groups. Each student writes down their 3 best ideas that come out of the conversation.

- **Answer these questions:**

1. Who would you interview?

(keep in mind who you have access to)

2. What do you want to find out?

3. What is your unique perspective on the subject? What is your point of access?

(For example, if I want to report a story on cyberbullying, I might have a unique perspective if I was the victim of cyberbullying who wound up switching schools as a result of it.)

More food for thought:

Watch this video about Where Good Ideas Come From

Mobile Design Ideation Kit

Participants will brainstorm to identify design opportunities in thereal world while they evaluate the appropriate platform for their design solution.

Made by @jess

Description

Participants will brainstorm to identify opportunities and solutions to real world problems while evaluating the appropriate platform for their design.

Participants will:

- identify a design opportunity
- evaluate what medium (mobile, desktop, other) is appropriate based on solution
- get inspired
- design systems to complete actions
- storyboard, create a user scenario and paper protoype an app idea

Big Ideas

- Design is a response to an inquiry or a problem
- Paper prototypes act as blueprints for app implementation
- Systems can be broken down into parts (components, core mechanics, goals, rules, space and choice).
- Inspiration and ideas can come from anywhere.
- Designing for a mobile experience provides unique affordances
- User testing allows you to see what improvements need to be made to your design in real time.
- Brainstorming helps you to work with peers to kickstart an idea or concept for a design.

Agenda

1. Firestarter
2. Storytime on the Go
3. Mobile App Brainstorming and Speed Geeking
4. Paper Prototyping Mobile Apps

Learning objectives

- Gain an understanding as to what a good design opportunity might be
- Formulate solution statements

- Explore a variety of methodologies for brainstorming
- Evaluate prototypes with user tests

The concrete Web Literacy skills that will be developed are in the domains of Building and Connecting

Essential Questions

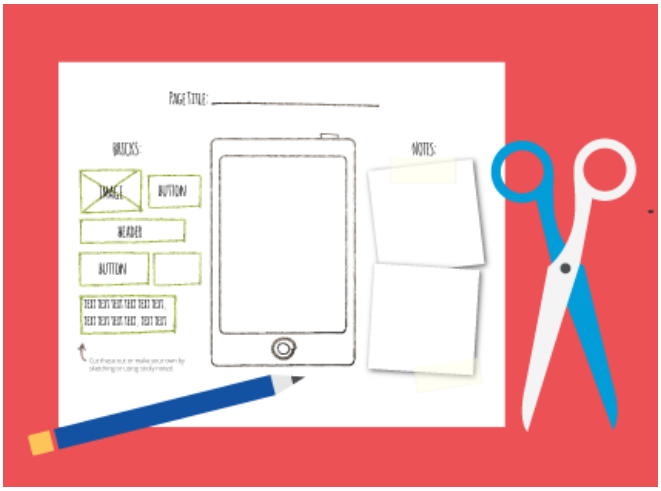
- How does the user affect your design decision?
- Is your medium choice appropriate for your solution?
- Did you paper prototype translate into an application?

Assessment and review

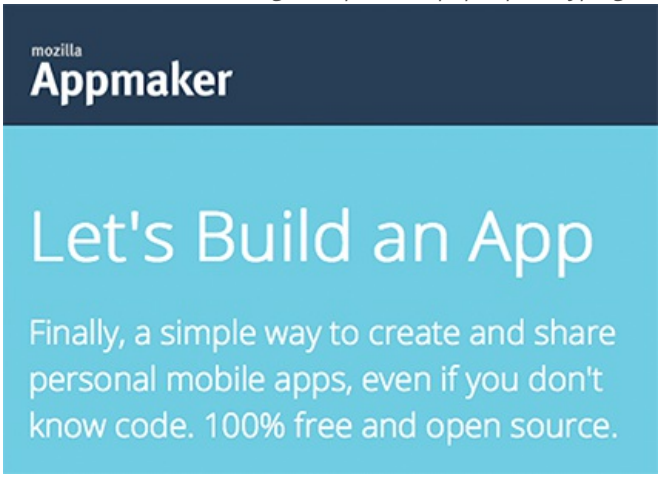
You can get an idea of whether learners have gained from this session by noticing if a learner:

- Demonstrates knowledge gained through hands-on activities, games or discussion.
- Works collaboratively and openly with others to complete activities or tasks.
- Uses creative methods to build technological skills in novel and unexpected ways.

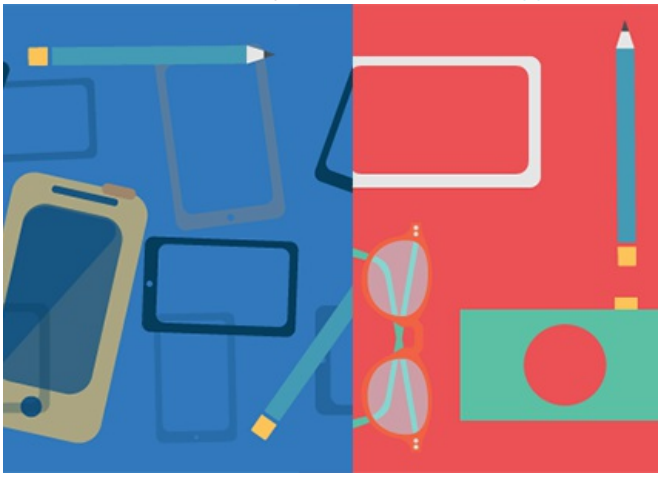
Additional Resources



Download the mobile design template for paper prototyping.



These activities will lead up to the use of Mozilla Appmaker, check it out.



Related Teaching Kits include the Mobile Designing Kit ,the Mobile Design Kit and the Mobile Hacking Kit.

Tips and tricks

- Add your workshop or event to Webmaker Events for publicity and community.
- Join Webmaker Discourse - a community of mentors.
- Event Guides

Activity

Firestarter

The goal of this activity is to get introduced to seeing your community as an inspiration for design opportunities. Design, by nature, is a response to an inquiry or a problem. In this activity, participants will identify opportunities and then brainstorm potential design solutions. This is also a chance to learn about the different kinds of devices that one might design for, and how to evaluate what is appropriate for the particular solution in question.

Identify a design opportunity

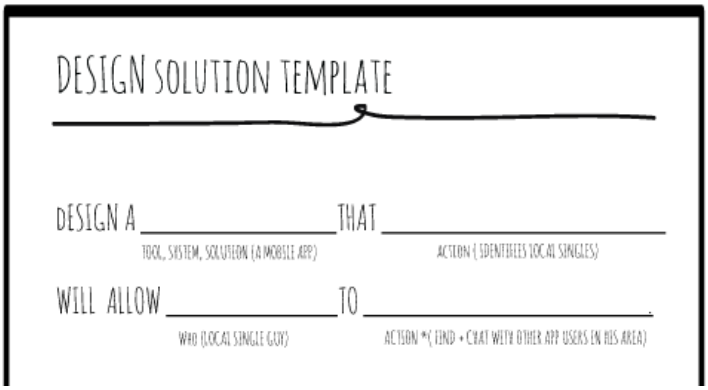
Participants break up into groups of 3 - 5 and are given 3 "opportunity cards", sticky notes and markers. Each group assigns: a time keeper, a reporter and a documenter

The reporter reads the design opportunity card to the group. After hearing the card, the group rapidly work together to generate ideas to provide a solution(s) to the card

Here's an example of an opportunity card:

The time keeper will alot 5 minutes for each card. The documenter will fill out the solution statement cards for each opportunity.

Here's an example of a solution card:



Materials

- [ ] index cards
- [ ] Post-its
- [ ] a timer
- [ ] markers
- [ ] drawing paper
- [ ] opportunity cards (pre-made)
- [ ] opportunity template cards (pre-made)
- [ ] solution cards (pre-made)

Discussion

After the activity is over, ask the participants to share out a few of their opportunity + solution cards. Ask guiding questions to help participants to verbalize their process.

The facilitator should highlight key words from the activity: **designer**, **user**, **medium**, **app**, **opportunity**, **solution** and **community**.

Related Teaching Kits

This activity is part of the Mobile Design Ideation Kit. Some other kits of interest might be the: Mobile Design Kit and the Mobile Hacking Kit.

Continue for 2 or 3 more rounds

Circle Up

After the activity is over ask the participants to share out 1 or 2 of their "opportunity" and "solution" cards. Ask guiding questions to help participants identify why they made certain design choices.

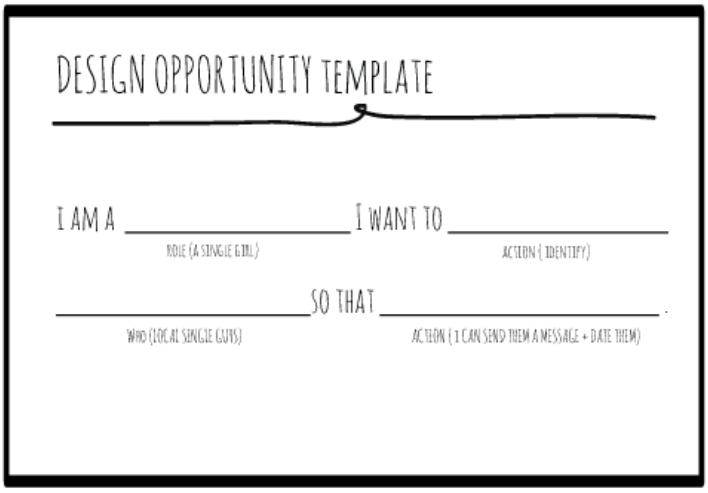
> *Who was the solution designed for?* How did the user affect their design decision?
>
> *Discuss the Medium:* explore the difference between designing for mobile, tablet or desktop. What affordances does each platform provide?
>
> When discussing the devices, it might be useful to have the group collaboratively make a mindmap (either digitally with a tool like this or just on paper) to identify all of the affordances one has when designing for the different kinds of devices.

Identify your own design opportunity

The second round of the activity is exactly the same as the first, except that now participants will also create the opportunity cards using the "opportunity card templates."

For 5 minutes,participants will independently or in their group, write a handful of opportunity cards. The facilitator might ask some guiding questions to help brainstorm, such as *"what makes a good opportunity?"*

Here's an example of an opportunity template card:



For the next 15 minutes, the group will work together to design solutions for these opportunities. Remind participants to consider their medium.

Activity

Storytime on the Go

What's so special about mobile? Participants will explore the mobile medium by tinkering with devices and crafting mobile stories. By the end of the activity, participates will be able to identify numerous actions that can you uniquely do on mobile devices.

Steps for this Activity

1. Have participants break into groups of 3 - 4, make sure that each group has a handful of working mobile devices to tinker with.

2. Ask participants to spend 5 - 10 minutes sharing their favorite apps with their peers.

3. Ask the group to create a list of words or phrases that describe actions that they are completing in their app

   Examples: touching, shaking, photographing, texting, detecting gps, recording

4. Ask each person in the group to choose 1 word from their list and to use that word to craft a short story or a joke to a friend. Participants can use existing apps, or use paper and markers to create an idea for an app within the parameter. Share some examples with the group before starting.

   Examples:

   - A trip to a local market using Instagram is an activity that you can do by ***photographing*** fruit on your mobile device.
   - A map of a schoolyard done using gps, utilizes the ***gps*** functionality on your mobile device.
   - A Storify version of the joke why did the chicken cross the road, can be done via using the ***texting*** functionality on your mobile device.
   - A soundcloud snippet that depicts your trip from the street to the workshop in audio, takes advantage of the ***recording*** functionality on your mobile device.

Note: This activity should be done fairly quickly , it should take no longer than 20 minutes. Have participants take advantage of going outside to explore the world, as one aspect of mobile is that by nature, it's moveable.

Show and Tell

At the close of the activity have a show and tell to get feedback. Each maker should present their story. Encourage dialogue by asking guiding questions such as: *"What was challenging about telling a story using this medium?"* or *"Why did you choose to use that particular app, tool, etc to make your story?"*

Materials

- [ ] mobile devices (feature phones, smart phones (iphone, android), tablets, etc)
- [ ] paper
- [ ] markers

Discussion

After the activity is over, ask the participants to share out a few of their opportunity + solution cards. Ask guiding questions to help participants to verbalize their process.

The facilitator should highlight key words from the activity: **mobile** and **storytelling**.

Related Teaching Kits

This activity is part of the Mobile Design Ideation Kit. Some other kits of interest might be the: Mobile Design Kit and the Mobile Hacking Kit.

Mobile App Brainstorming

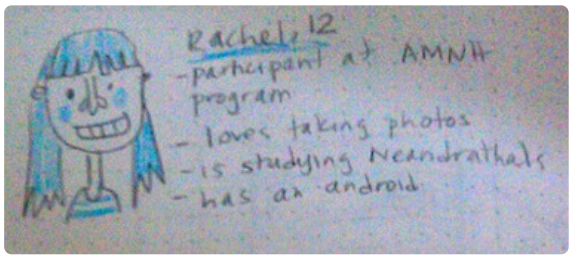
The goal of the activity is for participants to deep dive brainstorm on the concept for one app that they would like to prototype. This brainstorm will prepare participants to move into paper prototyping, so the goal here should be to get a refined concept down.

Steps for this Activity

Create a mindmap:

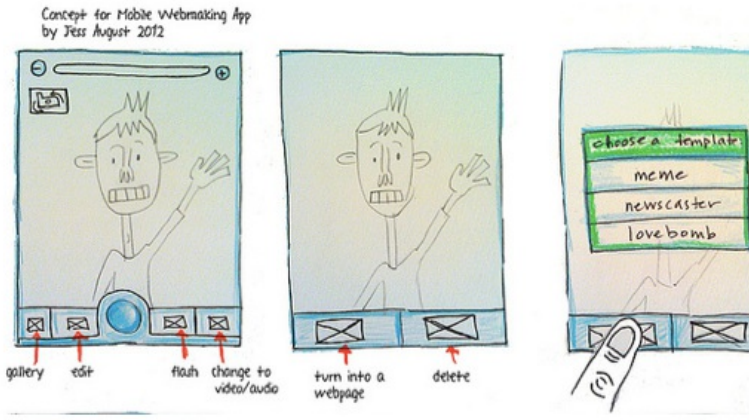
In small groups, participants will work to outline their thoughts about who their audience is and what goals they have in mind for their app. Use multi-colored markers, post-it notes, old magazines, scrap paper to help groups to brainstorm. Participants may build off of an idea from an ideation activity or, they might go in a completely different direction.

Participants will have many ways to brainstorm, so suggest many methods here, building user profiles, for example, might be particularly useful so they have a clear understanding of who is using their app.



A user profile can be as simple as listing as much information as you know about the intended user for your app

Another strategy might be to create a user scenario or storyboard - that walks participants through the process as to how someone might interact with their app.



a storyboard simply walks people through every action someone might take when using your app.

The goal here is to help participants envision their apps, so encourage participants to express their ideas creatively.

After the brainstorming activity is over, ask the participants to pitch their app idea in 2 minutes or less. The basic information that should be conveyed by each app designer is:

Materials

- [ ] post-its
- [ ] markers
- [ ] paper
- [ ] Etherpads*

** useful if you are doing this activity remotely or asynchronously*

Discussion

After the activity is over, the facilitator should highlight key words from the activity: **mobile**, **pitch**, **concept**, and **brainstorm**.

Related Teaching Kits

This activity is part of the Mobile Design Ideation Kit. Some other kits of interest might be the: Mobile Design Kit and the Mobile Hacking Kit.

- What is the design opportunity?
- Who is the app for?
- What is the proposed solution?

After each presentation, allow for a few minutes of feedback and questions. You can deep dive on Speed Geek Playtesting to share designs and get feedback.

Activity

Paper Prototyping Mobile Apps

Create paper protoypes of your apps in order to get a sense of what you are designing and to start to familiarize yourself with how to operate within the Appmaker design framework.

This activity is made up of three activities.

Made by Jess

Program the Robot

- [ ] Before getting starting paper prototyping, have participants circle up. Ask for one participant to volunteer to play the role of a "robot"
- [ ] Tell the remainder of the participants that their goal is to get robot to walk from one spot in the room to another. To do this they need to program the robot.
- [ ] Participants will have to declare the initial spot for the robot ,the spot that the robot is walking to and finally, link the two for the action to be complete. It will go something like this:

    - **Step One:** have the robot stand in a specific spot.
    - **Step Two:** choose the spot where the robot will walk to.
    - **Step Three:** tell the robot to walk to second spot.

- [ ] After the goal is accomplished, explain to participants that what they just did was design thinking. This same kind of thinking can be applied to their app design.

Link Paper Template Pages

- [ ] Show participants the mobile template
- [ ] Ask how they might go about making a button link to another page. It will go something like this:

    - **Step One:** use one template page - name it
    - **Step Two:** add a button brick to that page.
    - **Step Three:** create another template page and name it.
    - **Step Four:**use the color stick dot to show that the button should link to the other page.

- [ ] When participants complete the steps, have them walk through their link by touching the buttons and demonstrating the

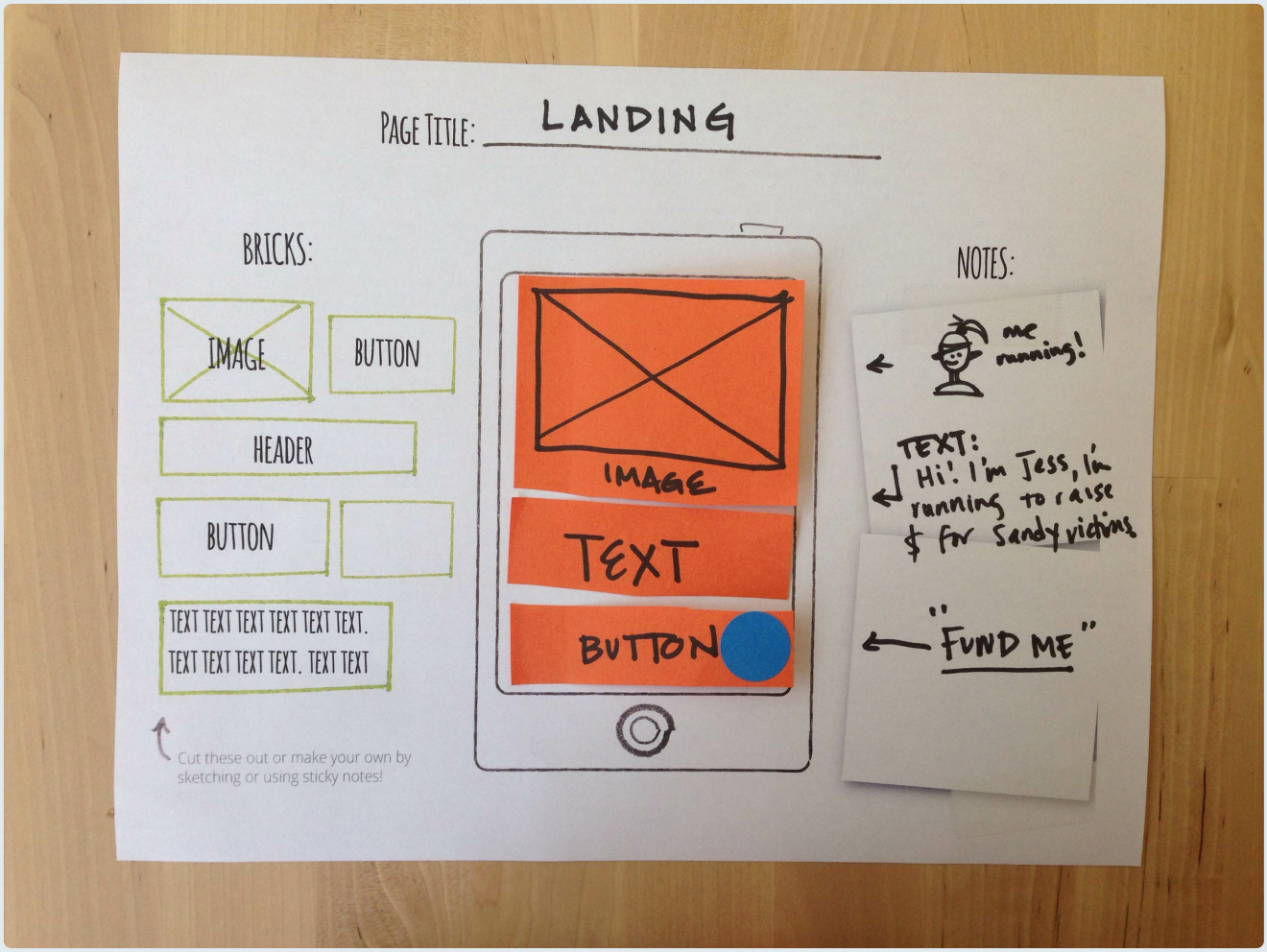
interaction.

Paper Prototyping

- [ ] Distribute multiple copies of the mobile design template: http://cl.ly/image/0Q0d3L2A451t and make sure that everyone has scissors, sticky dots, markers and any other supply that they might need to wireframe.

- [ ] Explain that a wireframe is like a blueprint or a floorplan for their app. Have the group spend an hour wireframing their app.

- [ ] Have participants to use the color dots to show the connections between components.



- [ ] At the close of the activity have a show and tell session to get feedback on their prototypes.

Materials

- [ ] Paper prototyping template
- [ ] Color dot stickers
- [ ] scissors
- [ ] pens
- [ ] pencils
- [ ] markers
- [ ] paper

Discussion

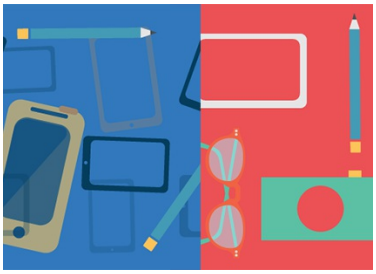
After the activity is over, the facilitator should highlight key words from the activity: **wireframe**, **paper prototype**, **concept**,**Appmaker** and **brainstorm**.

Show & Tell Tips

Encourage participants to give feedback in response to the following questions:

- What's awesome?
- What's confusing?
- Do you have an idea to contribute?

Related Activities



This activity is part of the Mobile Design Ideation Kit. Some other kits of interest might be the: Mobile Design Kit and the Mobile Hacking Kit.

KidZilla

An intiative to bring exposure to school kids about the web

By Sathyabama Firefox Club

Description

KidZilla is an initiative which aims at educating school children about the basics of Computers, Internet and other similar stuff, in a fun and interactive manner. This is also mainly concentrated on small schools with lesser facilities. The scope of this could be extended by forming Webmaker School Clubs.

Agenda

1. Computer & Internet
   Explaining the basic components of a Computer,how they work, basics of Internet, how to access the internet and how the internet is built.
2. Explain the various networks and their differences and how computers are connected in a network
   - LAN
   -MAN
   -WAN
3. Paper Prototyping and logo designing
   -Designing a basic webpage on paper by the students.
   -For younger students, they can design the logos of different products of Mozilla.
4. Hands on session
   Allow students to learn about the simplicity of coding by allowing them to practice designing web pages.
5. Webmaker School Clubs.
   Since Kidzilla is a one day program its not possible for the students to understand in a single day that's where webmaker school club comes into the picture!

Activities

- Human HTML tag Puzzle
- Interactive quiz with goodies for those who answer
- Hacking T-shirts and promoting creativity through similar activities
- Training session for the teachers to make them understand the importance of web literacy

Learning objectives

- Use of technology in academics
- New Practical approaches on the web
- Importance of Open Source and Open Web
- Web literacy and thereby safety

Assessment and review

The conceptual knowledge and understanding gained post the event.

- **Webmaker Club**. Interest shown be the students and teachers could be a deciding factor to start a Webmaker School Club
- **Sharing**. Publishing/Sharing on social networking site as well as event reports by the webmaker club in-charges

Assessment criteria

- [ ] Understanding the topics
- [ ] Practical Approach
- [ ] Eagerness to know
- [ ] Area of interest
- [ ] Possibilities of starting and sustaining a club

Tags

#HTML #CSS #offline #Design & Accessibility #Remixing #Navigation

Preparation

Require minimum knowledge of html and internet.

Interest to teach, learn and explore.

References:-

- Blog:http://wearethemoz.wordpress.com/
- Youtube:KidZilla Playlist
- Facebook : Sathyabama Firefox Club
- Wiki Link : Sathyabama Firefox Club
- Facebook Group : Sathyabama Firefox Club

Tips and tricks

- Tips for creating great teaching kits
- Pro Tips for great teaching kits
- Event Guides

YOUR STORY GOES HERE

tell your stories about cities, places and people through digital media

Made by Andi and Michelle

Out in the Field, Exploring the City: Activity Set 2

The first three activities in this kit are in two parts. You can just do one or the other, but it will be more fun if you do both.

In this activity set, you'll head outside and start exploring your city and surroundings. In **Location Audit & Keywords: Activity A**, you'll travel to the place where your story will be set. Here, you'll do a location audit—a detailed examination of your story location.

An important part of this activity is to think about the role urban planning plays in shaping the space you're investigating. Once you're in your story location, you should review your keywords and choose the 5 best as the building blocks for your story.

The Location Shoot: Activity B provides suggestions for filming and/or photographing the images for your story. Important things to consider such as the best time of day to shoot, camera point of view and movement, scale, colour, texture and sound are all discussed.

Things to think about

Once you get tonnes of great digital assets (photos and video) "out in the field," download these to your computer and begin assessing them for connections to the memory + place keywords you started with in activity 1.

Try writing a post-it note per asset as a way of seeing-at-at-glance the types of images or sequences of images, audio clips, etc. that you have collected.

- Why does a location audit help surface details about your city or surroundings that you didn't notice before?
- How can the location audit guide the keyword selection process?

Activity Set 2

Resources

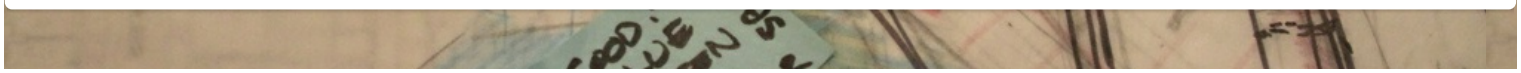
- Story crafting from Transom.org
- Tips for creating a short documentary
- Street audit guide from Project for Public Spaces

Great Examples

- Excellent database of all Streetfilms Video audits

How can the location audit guide the keyword selection process?

Fantastic Work - let's make our digital story.



Activity Set 2

LOCATION AUDIT + KEYWORDS

Hit the streets with your keywords in hand

AN URBAN PLANNING & STORYTELLING ACTIVITY

Made by Andi and Michelle

Take a minute (or 10) to observe your surroundings

Visit the location you want to film or photograph for your urban story. Complete a 'location audit,' which is a detailed examination of your story location.

Travel to your story setting

Go to the place you want to set your story. Try to walk or take public transit if possible – this way you can approach the location from a human perspective – not a vehicle's viewpoint! Bring your list of keywords, which describe your setting, and a notebook with you.

Entrances and exits

As you're approaching the location, take a moment to notice how you got there – where are the entrances and exits? Is it part of the cityscape, or set apart? Are there barriers to access?

Scout the scene

In your selected site, do a 'location audit.' An audit is an evaluation or detailed examination of something – in this case, of the place where you'll set your story.

Try to look at your location from different perspectives; for instance, from the point of view of a senior citizen, or a small child. What does the site reveal from these perspectives? Are there obstacles to enjoyment or opportunities for play?

In your notebook write a few observations about your location by answering the questions below. Of, if you want a more structured location audit, use the Jane's Walk resource.

- Are there any key features – large trees, benches, public art?
- Is it comfortable and safe?
- Does it provide opportunities for socializing?
- Would you meet people here?
- Would you come here at night?
- Is it active, vibrant, fun?
- Is it attractive and inviting? Does it have green space, resting space, and/or places to sit?
- Is it clean, or is there litter?
- How is it connected to other areas of the city?

Connecting the planning dots

Still standing in your location, consider the role that urban planning has played in shaping the place you're in. Consider who may have planned and landscaped the space, or perhaps why it has been neglected or misused. Think about what role you could play in changing the way the location looks

Materials

- [ ] Pens
- [ ] Paper or Notebook
- [ ] Camera

Hint

Try to see your story location as if you've never seen it before. What stands out?

Resources

- Jane's Walk location assignment worksheet
- Get Involved Toronto
- Vancouver Engaged City Task Force
- Projects for Public Space

Next Steps

- You're ready to move on to the The Location Shoot

or feels.

Finally, consider this question: how can your story about this location explain the changes you want to see?

In every city or neighbourhood, there are opportunities for civic engagement – ways of becoming involved in the governance and planning of your city or town. These opportunities vary from place to place, so you'll have to do some research to learn how you can get involved. Some starting points are listed in the resources section.

Connecting the keywords

Review your 10 keywords to see if they capture the essence of your location, and if they suggest the role that urban planning has played in shaping (or not!) the space you're in.

From your list of 10, pick **5 keywords** that work together and can be used to effectively create the arc of your story.

Discussion Questions

- Is it possible to tell what role urban planning has played in your location?
- What are some ways you can get involved in the urban planning process?
- How can your story help explain issues or ideas about your location?

Activity Set 2

THE LOCATION SHOOT

Quiet on the set! Capturing images for your story

AN URBAN PLANNING & STORYTELLING ACTIVITY

Made by Andi and Michelle

Shooting your story on location

Now that you have your keywords selected, it's time to capture images of your location. The Storytelling Machine you choose will determine what type of technology - smart phone, digital camera or video camera - will be best for shooting footage or taking photographs.

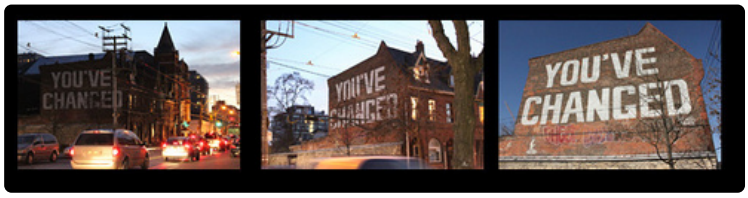
Since everyone's technology will be different, this section provides general guidelines for taking photos and shooting video.

Now that you've explored your story setting in the Location Audit, you're ready to start filming or photographing. But before you start...

Take note of elements such as:

Light + shadow conditions - best time of day to do your shoot

You've scouted around your site and noticed the way the light creates interesting patterns. Is there an interesting shadow/light play? Does a shadow affect your story? Can you use the light/shadow contrast to your advantage? Is there an optimal time of day to document your location? Is morning more interesting? Does a foggy, rainy day show something different? What about early evening with the city lights on?



Camera Point-of-View

Is there a more interesting perspective to situate your camera? Is there a hill to climb to give you a different view of your site? Shift left or right by a few steps - did this change your framing? Is it more interesting? Does shifting the Camera POV show or hide elements? What does it mean to show or hide these elements?

Camera Movement

Does moving your camera offer a new view or interpretation of a building, built form, or element in your location?

Materials

- [ ] Digital Camera OR
- [ ] Smart Phone OR
- [ ] Video Camera

Tip

Shoot more images than you think you need. You may find an interesting sequence when you review your images in the studio.

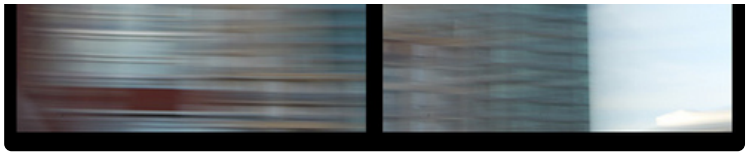
Resources

There are tonnes of great sites that give you specific tips on your digital photo techniques.

- Street Photography tips
- Photographing architecture

Next Steps

- Location Audit + Keywords and The Location Shoot are complete! You're ready to move on to Activity Set 3: Back in the Studio



Close-up vs. distance shots

When reviewing the framing in your camera, what hapens when you zoom in? What do you lose in the enviroment when you zoom? Have you edited out details that add interesting texture to the story? Is there a way to capture those details to be included in your story back in the studio? Think about context and detail.

Scale

Think of including elements in your shot that help identify the scale of the built-form or building you may be highlighting.

Colour

Do the buildings or built-forms in your location cast a particular colour to your shot? Grey sidewalks, red bricks, green glass? Are there interesting colours in neon signs, painted hoardings, street signs, nature, street-plantings?

People

Do you need people in your frame of reference to tell your story? A crowded sidewalk tells a different story than an empty one. Do you want to show people conversing in a public park or show the hustle bustle of a busy street. Do you want people moving or posed in your shots?

Texture

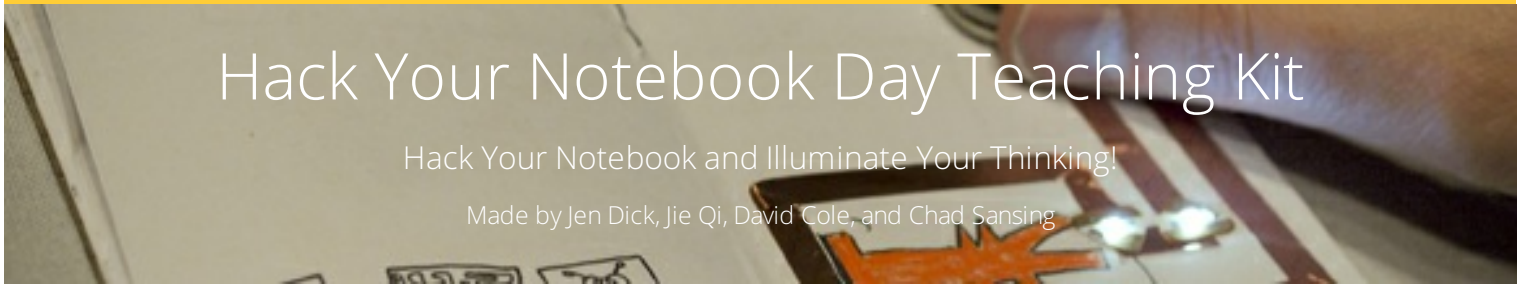
Think bricks, grass, sidewalks, street grit, signage, graffiti, glass, fencing, etc. You are the expert in your location - grab details and review later in the studio. You never know which shot will come in handy.

Sounds

Are you using live sound from the location? Be aware of traffic or wind noises that may not enhance your soundtrack.

Discussion Questions

- What technology have you chosen to capture your images?
- What are the benefits and limitations of the technology you've chosen?
- What filming techniques will best capture your story?



Hack Your Notebook Day Teaching Kit

Hack Your Notebook and Illuminate Your Thinking!

Made by Jen Dick, Jie Qi, David Cole, and Chad Sansing

Description

This summer, NEXMAP and CV2 are partnering with Educator Innovator to offer Hack Your Notebook Day on July 9th. This program is part of the Summer to Make, Play and Connect, a MacArthur Foundation-sponsored initiative powered by the National Writing Project and the Mozilla Foundation. Explore the rich connections between art, electronics, notebooking and systems thinking by hacking your notebook with power and LEDs.

Curious about how to get your notebook hacking kit together? You can broswe materials here to assemble a kit yourself, as well as order an event kit here.

Learning objectives

Participants will learn to:

- Work with simple electronics components. (Exploring)
- Experience a creative paper electronics project. (Building)
- Think about how expressive electronics can enhance a physical artifact. (Building)
- Create a simple circuit. (Building)
- Create a parallel circuit. (Building)
- Create a simple circuit with a mechanical switch. (Building)
- Convert an existing notebook, sketchbook or journal into a powered notebook. (Building)
- Share their notebook hacks and paper circuitry experience with the 21st Century Notebooking online community on Google+ and on Twitter with #HYNBD2014 and @sfnexmap. (Connect)

Facilitators will learn to:

- Use participatory learning and play to engage learners with complex tasks and respond to their emergent questions and needs.
- Structure a workshop to allow for participants' discussion, inquiry, peer and mentoring.
- Connect making and writing.
- Teach responsively according to audiences' questions and needs.

Have a look at the new Web Literacy Map to think about the connections bewtween hacking your notebook and writing the web!

Agenda

1. Human Circuits: Participants introduce themselves and then get up into groups and make 'human machines' of singing series circuits and parallel circuits with switches.

2. Simple Circuit
3. Parallel Circuit
4. Switch
5. Level 1 Notebook Hack
6. Discussion - Have participants share what they made with each other; gallery walks work well for this. Reflect on the experience. Ask participants to share what they learned about circuitry, making and their learning process. Invite them to talk about what their next project might be and what new features, functions and technologies they'd like to incorporate.
7. Documentation: Invite participants to share their work with other notebook hackers via the 21st Century Notebooking Google+ community and on social media using #HYNB2014. Consider creating a webpage for your site using Thimble.

Assessment and review

Did each participant:

- Successfully illuminate the LED in their simple circuit?
- Successfully illuminate the LEDs in their parallel circuit?
- Successfully add a switch to a simple circuit?
- Add a dedicated power source to their notebook?
- Make design choices about their power lead materials based on their individual needs, their notebook's construction and their aesthetic tastes?
- Participate in a discussion about circuit design, making and learning?
- Share their ideas for next project ideas both in and out of the classroom? (if applicable)
- Share what they made with others?

Assessment criteria

You can use a self-assessment, facilitator/workshop assessment, or any other form of exit slip to get at these items.

Does each 'make' feature...

- [ ] A working LED?
- [ ] A meaningful image, visualization or text that thoughtfully incorporates the technical features of the circuit illuminating it?

Does each participant feel ready to...

- [ ] Share her learning?
- [ ] Mentor others?
- [ ] Use participatory learning in her practice?
- [ ] Remix a make independently?

Together we'll make...

A notebook with a dedicated power supply, flexible power leads and light using copper tape and LED stickers. Customize your hacks to create a notebook as unique as you. Each activity adds a new circuit design technique to your toolbox, allowing you to create beautiful, interactive electronics that help you tell your story.

Preparation

Gather your hacking materials. We have a list of core materials and recommended additional materials here.

Book a space that comfortably seats the number of participants and gives them at least 2 square feet of workspace; more is better. We recommend arranging the room in small groups so everyone can work together; most participants will want to ask each other questions and look at each other's work as they make. Prepare a few drawing prompts appropriate to your audience. Questions whose answers require the visualization of ideas work really well.

Facilitators should run through all the activities themselves and review the common troubleshooting issues listed on the Activity Pages. There are a number of digital resources (videos and animated GIFs) that participants may find useful, so if possible, make these available via laptops or tablets.

Helpful How-To Resources

- Hack Your Notebook Day printable & digital resources from NEXMAP
- How-to animated GIFs & video tutorials from NEXMAP
- Video tutorials from Jie Qi & Chibitronics
- Circuit Sticker Sketchbook (PDF) from Jie Qi & Chibitronics
- Google+ 21st Century Notebooking Community

Helpful Workshop & Classroom Implementation Resources

- Educator mini-guide - Paper Circuitry: Hack Your Notebook and Illuminate Your Thinking (PDF) from NEXMAP & CV2
- Kevin Hodgson's (@dogtrax) notebook hack activity on Webmaker
- Lou Buran's (@ljangler) notebook hack write-up activity on Webmaker

Tips and tricks

- Some people like to figure out things on their own while others feel more comfortable getting a walkthrough--and some people go back and forth. Accommodate both by having a demonstration station where participants can opt-in to a more scaffolded workshop experience.
- The Hack Your Notebook Day kits contain the basic supplies needed to get familiar with basic paper circuitry practices and create a powered notebook. Providing extra art and craft supplies can inspire participants and allow further personalization of their notebook hacks. We have a list of suggested auxiliary materials, but get creative and see what else you can come up with.
- Some people can find manipulating the copper tape tricky, especially folding corners. Practicing with strips of paper can help participants develop confidence in their manual skills.
- Event Guides

Activity

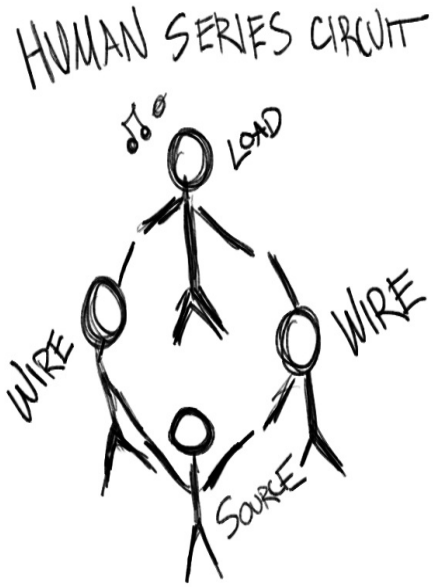
Human Circuits

Hold hands and lift your voices to model how electricity moves through circuits and powers the devices around us.

Made by Chad Sansing

Steps for the Activity

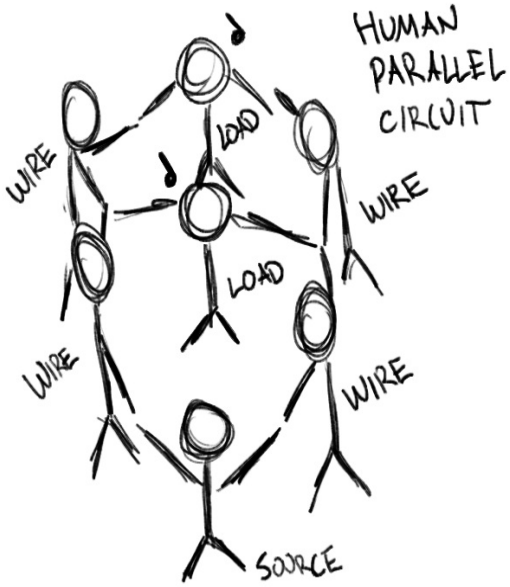
Begin with a series circuit. In a series circuit, electricity flows along one path - made of conductors, like wire - from the power source, through whatever 'loads' or components need to be powered, and then back to the source. The loads are arranged in a series. For this model, ask for four volunteers: one source, one wire going away from the source, one load, and one wire going back to the source. Ask the first wire to hold hands with the source; then ask the load to hold hands with the first wire; then ask the second wire to hold hands with both the load and the source. Once all the hands are held and the circuit is complete, ask the load to sing a note or do a little dance to show that he or she is powered. A load needs current, so a circuit has to be complete before it's powered - electricity won't flow, so it can't move or generate current, in a broken or incomplete ciruit.



As an extension, you can add volunteer loads (and wires) to the series circuit by having the additional loads and their accompanying wires stand in a loop headed back towards the source. In a series circuit with multiple loads, each load gets a fraction of the power, so you might ask 2 loads in a series circuit each to sing at half volume or ask four loads to sing at a quarter volume, etc.

In this model and the others, since electrivity moves through a circuit from positive to negative poles of a power source, just for fun, you can ask volunteers on the positive side to smile and volunteers on the negative side to frown.

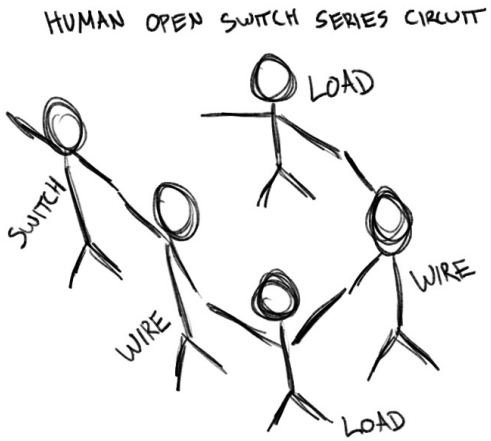
Try a parallel circuit next. In a parallel circuit, all of the loads receive the full current because the current travels along multiple paths, not just one. Volunteer loads for this circuit should always sing at full volume or dance at full vigor. You'll need seven volunteers for this circuit: one source, one wire going from the source to the first load, the first load, another wire going from the first load to the second load, a second load, and then two wires going back from the second load to the first, and then from the first load back to the source.



Each load should stand perpindicular to the wires and stand between the wires so that the loads are in parallel with one another and the source, while the wires go up and down the sides of the human model. Once the last wire takes its place and links the first load back to the source, both loads should sing as the ciurcuit is complete!

As an extension, you can add loads and wires to the circuit creating a kind of circuitry ladder with each load singing at full blast.

- **Finish** with a switch. A switch is like a drawbridge that completes a circuit when it's down and interrupts or 'breaks' a circuit when it's up. Ask for volunteers to build a quick series or parallel circuit - either can use a switch. Then ask for a volunteer switch to stand between a the first wire and the first load. Let the switch hold hands with the load or let go and swing away from the load while still holding hands with the first wire. When the switch and the load touch, the load should sing or dance. When the switch moves away from the load, the load should fall silent or still.



As an extentsion, move the swtich around the circuit to see what happens or add multiple switches to see what happens when the move together or independent from one another.

Materials

- [ ] Participants
- [ ] Space for acting out circuits

Discussion

How do electricity and information - online and offline - relate to one another in how they move and carry current?

Key Terms

- **Circuit** - a 'cirle' in which electricity flows from a source (like a battery) and through a conductor (like a wire) to power a load (like a light) before the electricity flows back to the source to complete the circuit
- **Series circuit** - a circuit in which a load or a series of loads line up on a single path - or loop - and each draw a proportionate amount of electricity from the source
- **Parallel circuit** - a circuit in which multiple loads 'stack' like rungs in a ladder bewtween conductors and in which each load draws the full amount of electirc current flowing from the source
- **Conductor** - a material, like a wire, that serves as a path through which electricity travels in a circuit
- **Source** - a power source for your circuit, like a battery
- **Load** - a component of your circuit that draws current to operate, like a light, buzzer, or sensor

Related Activities

- Evolution for Geeks
- Hack Your Notebook Teaching Kit.
- 'How to See Through the Cloud with Popcorn' Activity

Make a Simple Paper Circuit

Make a simple circuit and light up a drawing, diagram or piece of writing in your notebook. Learn about basic circuit principles and explore the beauty of electronics. This page frames the activity for facilitators, as well as their learners.

Made by Jen Dick, Jie Qi, David Cole, and Chad Sansing

Steps for the Activity

- [ ] Facilitators, try it before you teach it. Go through the activity with your facilitation team and review the common troubleshooting issues found here.

- [ ] Draft a series of drawing prompts that are appropriate to your audience and situation. Tie into any relevant themes for the day such as the Connected Learning principles or Web Literacy Map.

- [ ] Arrange the room for small groups. Participants will want to talk to each other throughout the making to ask questions, bounce ideas off each other and share what they've made. Set materials out at tables.

- [ ] If possible, have a computer, LCD projector and a webcam or camera on a tripod set up in the space so that you can project what you're doing to the entire group.

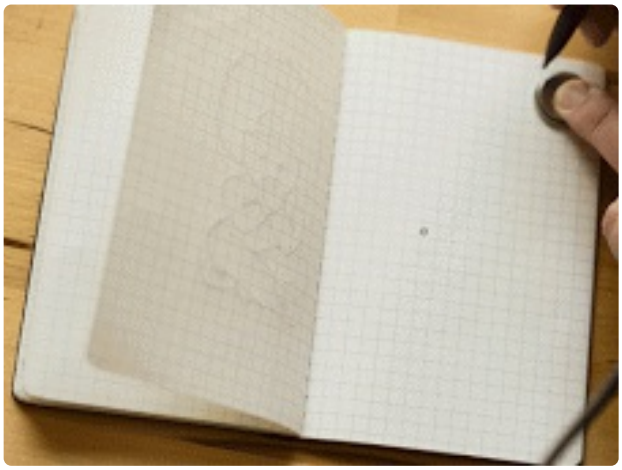
- [ ] Set the mind space. Emphasize the importance of communication, failure, and play in making new learning personally meaningful.

- [ ] Flip to a new page in your notebook. Make sure the page underneath it is blank.

- [ ] Draw a picture in your notebook. Decide what two points you want to light up.

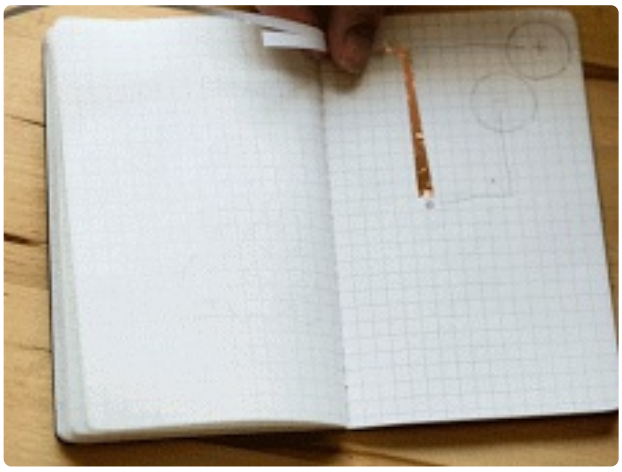
- [ ] On the page underneath your drawing, mark where the light should go.

- [ ] On the same page, trace your battery twice as shown. Label one circle - (negative) and the other + (positive).



- [ ] Draw lines connecting where your light should go through each of the battery circles.

- [ ] Lay down copper tape along the path, leaving a small gap no larger than ¼" where the light should go. The copper tape should extend well into the battery circles.



- [ ] Place the light so that the wide end is touching the tape that connects to the + circle.

- [ ] Add your battery. Make sure the + side is touching the + circle. Clip in place. The LED should light up.

Materials

- [ ] Notebook
- [ ] 1 LED (circuit sticker or Type 1206 surface mount LED)
- [ ] Copper tape
- [ ] 1 coin battery, 3V
- [ ] Scissors
- [ ] A small binder clip
- [ ] Tape (if using surface mount LEDs)

Troubleshooting Tips

- Check your battery orientation. The side labeled + should be touching the + circle.
- Check your LED sticker orientation. Check your LED sticker orientation. The point should touch the line of tape that connects to the - circle.
- Check your copper tape joins. Press down firmly on all corners.
- Check your LED sticker connection to the copper tape. Press down on both ends to ensure a strong connection.

Discussion

What did you learn about how circuits work? What did you learn about the properties of each component?

What different methods or strategies did you see your peers use when making their circuits? What ideas might you take with you?

What did you discover about yourself as a learner? As a maker?

What ideas did this give you for your next paper circuitry project?

Related Activities

- Parallel Circuit
- Switch
- Notebook Hack
- Post your pictures to our G+ Community

Make a Parallel Circuit

Add multiple lights to your paper circuitry project by designing a parallel circuit. Learn about basic circuit principles and explore the beauty of electronics.

Made by Jen Dick for NEXMAP, Jie Qi, David Cole, Chad Sansing

Steps for the Activity

- [ ] Try it. Go through the activity with your facilitation team and review the common troubleshooting issues found here.

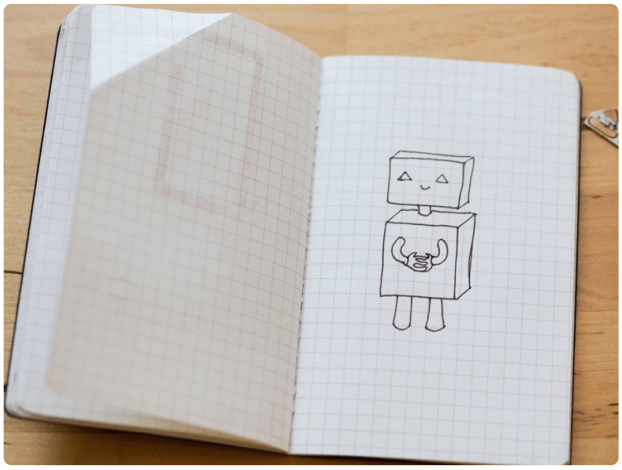
- [ ] Draft a series of drawing prompts that are appropriate to your audience and situation. Tie into any relevant themes for the day such as the Connected Learning principles or Web Literacy Map.

- [ ] Arrange the room for small groups. Participants will want to talk to each other throughout the making to ask questions, bounce ideas off each other and share what they've made. Set materials out at tables. If possible, have a computer, LCD projector and a webcam or camera on a tripod set up in the space so that you can project what you're doing to the entire group.

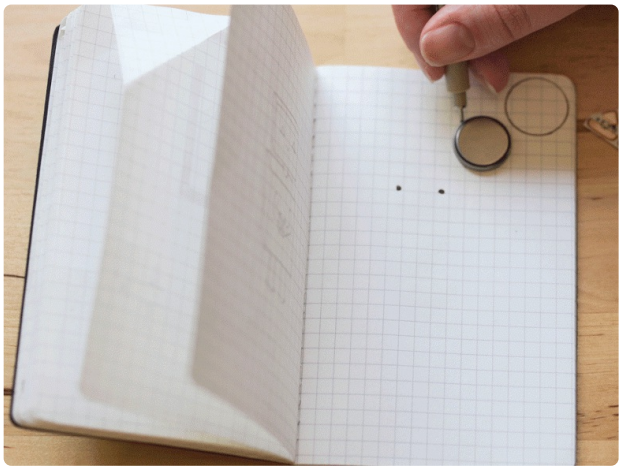
- [ ] Set the mind space. Emphasize the importance of communication, failure, and play in making new learning personally meaningful.

- [ ] Flip to a new page in your notebook. Make sure the page underneath it is blank.

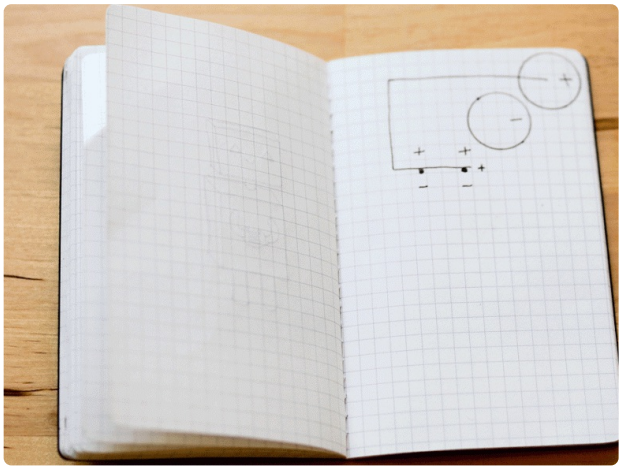
- [ ] Draw a picture in your notebook. Decide what you want to light up. On the page underneath your drawing, mark where the lights should go.



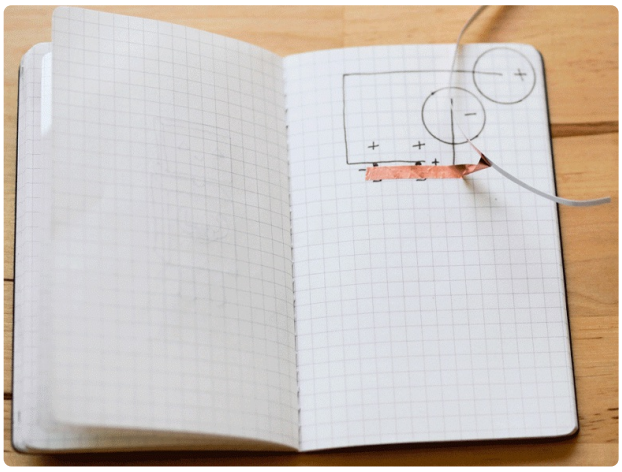
- [ ] On the same page, trace your battery twice. Label one circle - (negative) and the other + (positive). Also label a + and - side to each LED mark you've made.



- [ ] Draw lines connecting where your light should go through each of the battery circles.

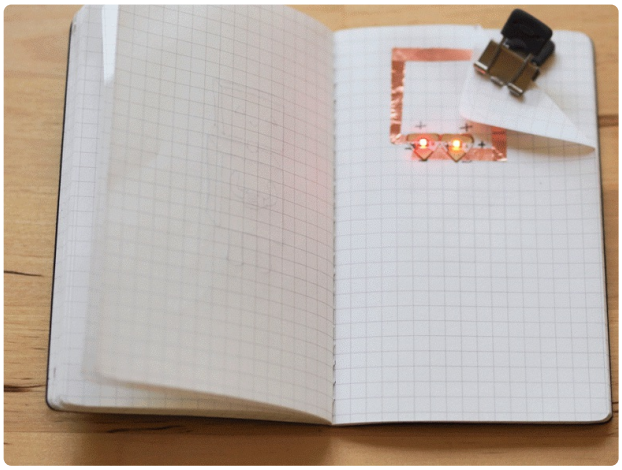


- [ ] Lay down copper tape along each path, leaving a small gap no larger than ¼" between the two paths. The copper tape should extend well into the battery circles. Label the + and - paths respectively.



- [ ] Place the lights so that the wide end is touching the + path and the narrow end is touching the - path.

- [ ] Add your battery. Make sure the + side is touching the + circle. Clip in place. The LED should light up.



Materials

- [ ] Notebook
- [ ] 2 or more LEDs (circuit sticker or Type 1206 surface mount LEDs)
- [ ] Copper tape
- [ ] 1-3V coin battery
- [ ] Scissors
- [ ] A small binder clip
- [ ] Tape (if using surface mount LEDs)

Troubleshooting Tips

- Check your battery orientation. The side labeled + should be touching the + circle.
- Check your LED sticker orientation. The point should touch the line of tape that connects to the - circle. Also make sure both stickers are oriented in the same direction: □ □ or □ □.
- Check your copper tape joins. Press down firmly on all corners.
- Check your LED sticker connection to the copper tape. Press down on both ends to ensure a strong connection.

Discussion

What did you learn about how parallel circuits work? How did this new way of designing a circuit change or extend your understanding of how electricity works?

What different methods or strategies did you see your peers use when making their parallel circuits? What ideas might you take with you?

How does the ability to add multiple components to your circuit inform your project ideas?

What did you discover about yourself as a learner? As a maker?

What ideas did this give you for your next paper circuitry project?

Related Activities

- Make a Simple Circuit
- Add a Switch
- Hack Your Notebook
- Post pictures of your circuits to our Google+ Community

Activity

Add a Switch

Make your paper circuits interactive by adding a switch to control when and how your circuit is activated.

Made by Jen Dick for NEXMAP, Jie Qi, David Cole, Chad Sansing

Steps for the Activity

- [ ] Try it. Go through the activity with your facilitation team and review the common troubleshooting issues found here.

- [ ] Draft a series of drawing prompts that are appropriate to your audience and situation. Tie into any relevant themes for the day such as the Connected Learning principles or Web Literacy Map.

- [ ] Arrange the room for small groups. Participants will want to talk to each other throughout the making to ask questions, bounce ideas off each other and share what they've made. Set materials out at tables. If possible, have a computer, LCD projector and a webcam or camera on a tripod set up in the space so that you can project what you're doing to the entire group.

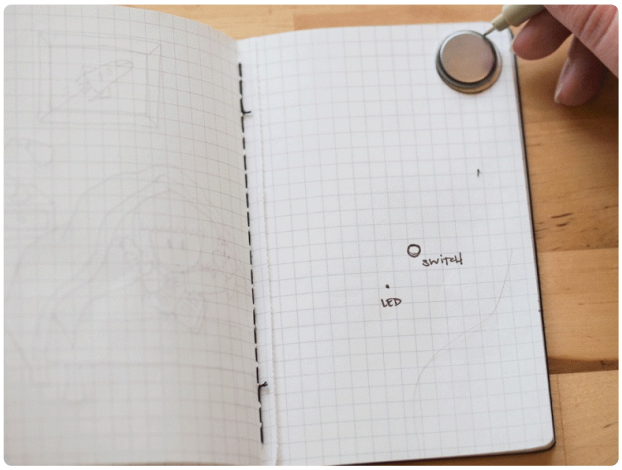
- [ ] Set the mind space. Emphasize the importance of communication, failure, and play in making new learning personally meaningful.

- [ ] Flip to a new page in your notebook. Make sure the page underneath it is blank.

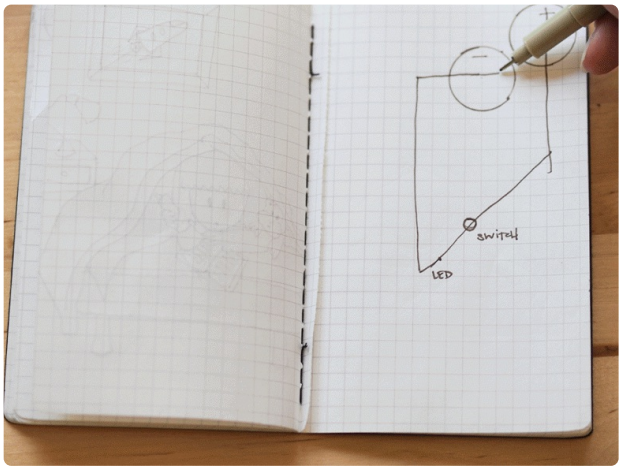
- [ ] Draw a picture in your notebook. Decide what you want to light up and what element in your picture you want to turn on the light.

- [ ] On the page underneath your drawing, mark where the light and where your switch should go. X's mark the spots!

- [ ] On the same page, trace your battery twice. Label one circle - (negative) and the other + (positive). Also label a + and - side to each LED mark you've made.

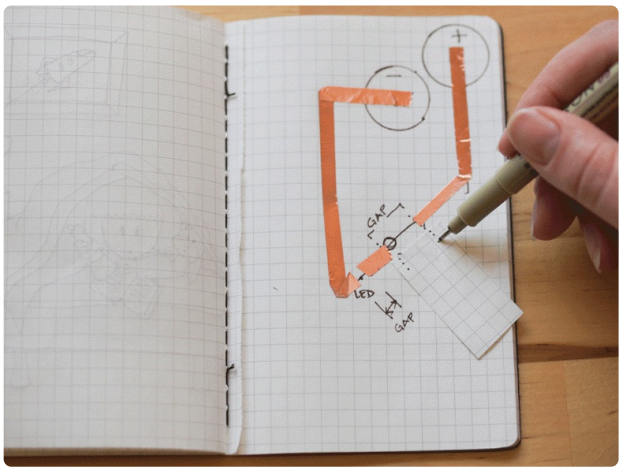


- [ ] Draw lines connecting where your light should go through each of the battery circles. (Straight lines and wide angles are easiest.) Break the line where your switch will go.



- [ ] Lay down copper tape along the path leaving two small gaps no larger than 1/4." where the light and the switch should go. The copper tape should extend well into the battery circles.

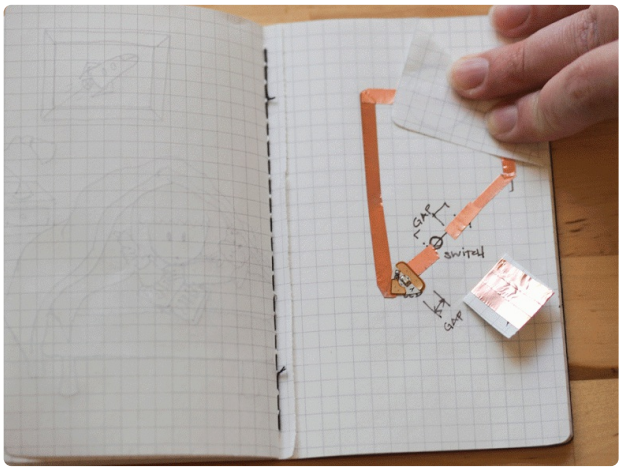
- [ ] Create a switch by cutting a strip of paper twice as long as the gap left for the switch and four times as wide as your copper tape. Run a piece of copper tape the full length of your paper switch. Position copper tape side down over the switch gap in your circuit. Tape down edge of the switch parallel to your circuit.



- [ ] Place the light so that the wide end is touching the + path and the narrow end is touching the - path.

- [ ] Add your battery. Make sure the + side is touching the + circle. Clip in place. Press down on the switch flap. The LED

should light up.



Materials

- [ ] Notebook
- [ ] 2 or more LEDs (circuit sticker or Type 1206 surface mount LEDs)
- [ ] Copper tape
- [ ] 1-3V coin battery
- [ ] Scissors
- [ ] A small binder clip
- [ ] Scrap paper for the switch
- [ ] Tape

Troubleshooting Tips

- Check your battery orientation. The side labeled + should be touching the + circle.
- Check your copper tape joins. Press down firmly on all corners.
- Check your LED sticker orientation. Check your LED sticker orientation. The point should touch the line of tape that connects to the - circle.
- Check your LED sticker connection to the copper tape. Press down on both ends to ensure a strong connection.
- Make sure the copper tape on the switch flap has plenty of room to make contact with the copper tape on both sides of the circuit.

Discussion

What did you learn about how switches work? How did this new way of designing a circuit change or extend your understanding of how electricity works?

What other ways can you think of making a switch?

What different methods or strategies did you see your peers use when making their switches? What ideas might you take with you?

How might you apply the concept of a switch to different projects?

What did you discover about yourself as a learner? As a maker?

What ideas did this give you for your next paper circuitry project?

Related Activities

- Make a Simple Circuit
- Make a Parallel Circuit
- Hack Your Notebook
- Post pictures of your circuits to our Google+ Community

Activity

Basic Notebook Hack

Empower your thinking process by hacking your notebook with a built-in power source and LEDs. Light up your notebook to literally highlight your personal light bulb moments.

Made by Jen Dick for NEXMAP, Jie Qi, David Cole, Chad Sansing

Steps for the Activity

- [ ] Try it. Go through the activity with your facilitation team and review the common troubleshooting issues found here.

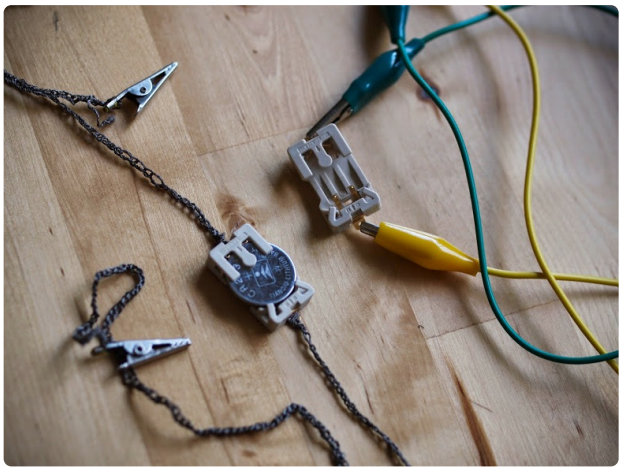
- [ ] Draft a series of drawing prompts that are appropriate to your audience and situation. Tie into any relevant themes for the day.

- [ ] Arrange the room for small groups. Participants will want to talk to each other throughout the making to ask questions, bounce ideas off each other and share what they've made. Set materials out at tables. If possible, have a computer, LCD projector and a webcam or camera on a tripod set up in the space so that you can project what you're doing to the entire group.

- [ ] Set the mind space. Have participants consider something they're really good at now. Ask them to reflect on how much they've improved over time with practice. Mistakes are how we learn!

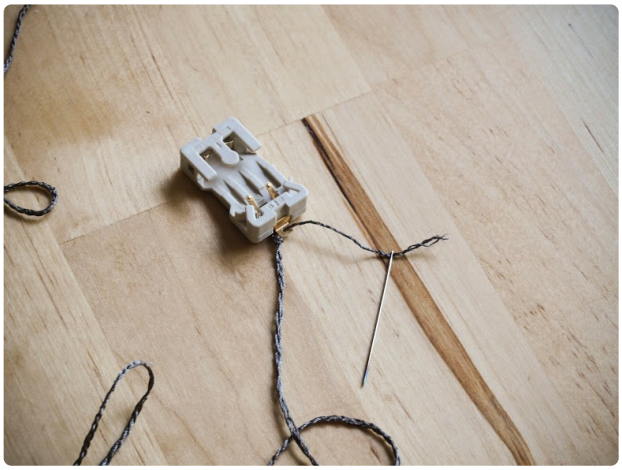
- [ ] Determine where you want to place the battery holder in or on your notebook.

- [ ] Decide what material you want to create your power leads. Consider thickness, flexibility, color, etc. Make sure each lead is long enough to comfortably reach from the battery holder's final position to your notebook pages. Cut two to length.
    - Ideas for lead construction (video tutorials):
        - braid conductive thread
        - use the jumper wires as-is
        - knot your leads like a friendship bracelet using conductive thread
        - crochet leads by using the chain stitch and conductive thread



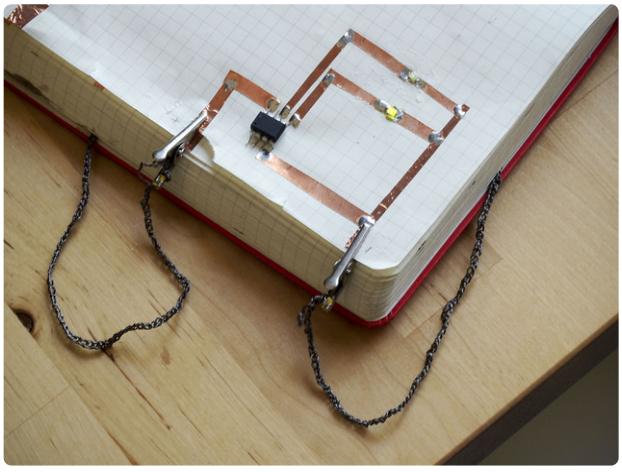
- [ ] Attach an alligator clip to the end of each power lead. If using conductive thread as your power lead material, you will need to cut them from the jumper wires.

- [ ] Attach the other end of each lead to the battery holder.



- [ ] Attach battery holder to the notebook using tape or glue.

- To power circuits in your notebook, extend copper tape to edge of pages. Clip the + lead to the + copper tape circuit trace and the - lead to the - copper tape circuit trace.



Materials

- [ ] Notebook
- [ ] 1-3V coin battery holder (or make one yourself!)
- [ ] 1-3V coin battery
- [ ] 2 jumper wires with alligator clips
- [ ] Conductive material to create the power leads (wire, conductive thread, etc. Get creative!)
- [ ] Scissors
- [ ] Adhesive tape and/or glue

Optional Materials

To further personalize your notebook hack, consider the following materials.

- [ ] Markers, crayons or colored pencils
- [ ] Embroidery floss, ribbon or yarn
- [ ] Needle
- [ ] Needle threader
- [ ] Crochet hook (if you want to crochet your power leads)
- [ ] Beads
- [ ] Colored and/or patterned paper
- [ ] Washi/decorative tape
- [ ] Hole punch

Troubleshooting Tips

- Make sure each lead is firmly connected to its battery holder terminal and its alligator clip.
- Check that the battery is placed in the holder + side up.

Discussion

What new design features might you introduce into your next notebook hack? What new materials would you use?

What different methods or strategies did you see your peers use when hacking their notebook? What ideas might you take with you?

What did you discover about yourself as a learner? As a maker?

Related Activities

- Make a Simple Circuit
- Make a Parallel Circuit
- Add a Switch

Page Title: _____

Bricks:

IMAGE

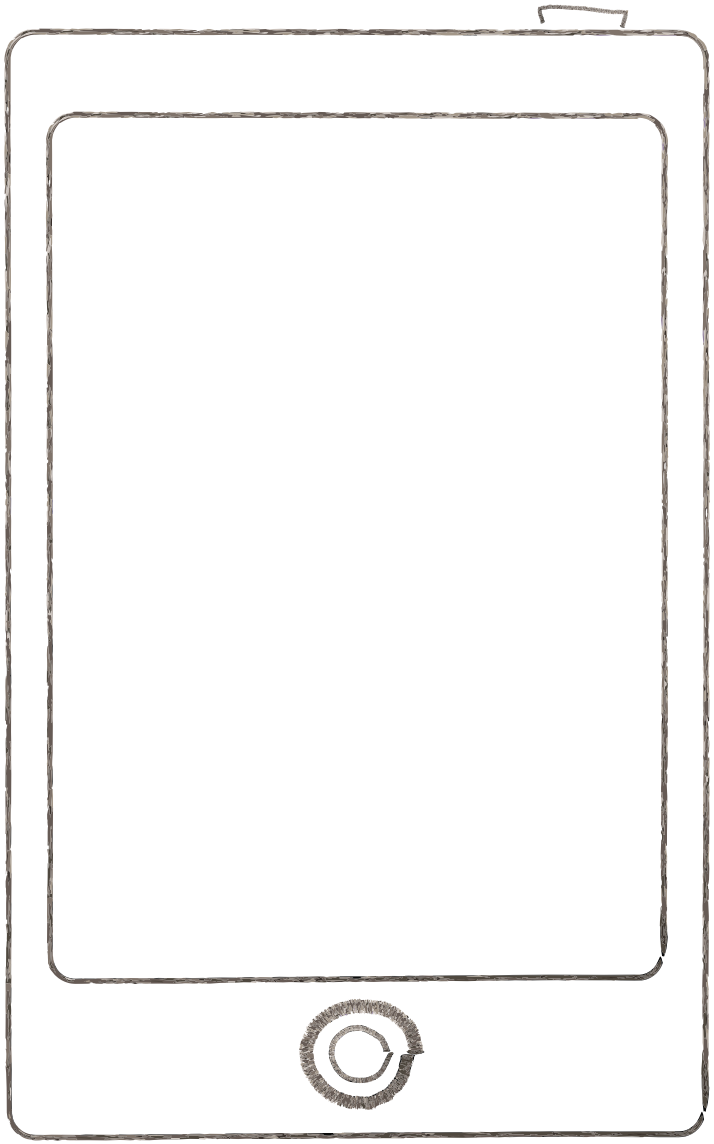
BUTTON

HEADER

BUTTON

TEXT TEXT TEXT TEXT TEXT TEXT.
TEXT TEXT TEXT TEXT. TEXT TEXT

Cut these out or make your own by sketching or using sticky notes!



Notes:

MY TEACHING KIT DESIGN CANVAS

A fun paper prototyping exercise for groups using Webmaker's Thimble tool. Don't be afraid to get messy!

give your kit a snappy elevator pitch!

CATCHY TITLE

FELLOW AUTHORS

TWEET-LENGTH DESCRIPTION

DESCRIPTION

What's it all about, who's it for, and why are we making it?

GOALS FOR LEARNING

SUPPLEMENT: WEB LITERACY CANVAS

List the Web Literacy Map competencies that you want participants to learn.

AGENDA!

SUPPLEMENT: ACTIVITY CANVAS

Write down titles of 3-5 group activities that make up this kit.
You'll get an Activity Canvas for each of these to fill out details!

PREPARATION!

What do future facilitators need to do this kit? Materials? Prep work?

LEARNING ASSESSMENT!

SUPPLEMENT: BADGE CANVAS

What criteria will we be using to assess learning? A badge? A checklist?

BY THE END OF THIS KIT...

Explain what you want participants to have MADE and LEARNED by the kit's end!

MY *ACTIVITY* DESIGN CANVAS

Use this supplementary page to plan out each of the activities for your TEACHING KIT. Make sure each activity is MODULAR (can it stand alone?), HANDS-ON (making as learning!) and REMIXABLE, so others can use it, too!

give your activity a fun elevator pitch!

CATCHY TITLE

MATERIAL LIST

TWEET-LENGTH DESCRIPTION

STEP ONE

Think of this part as an introduction. How do you want facilitators to get started?

STEP TWO

Bonus: take some step by step photos to show how each step works live!

STEP THREE

STEP FOUR

!

STEP FIVE

STEP SIX

Let's finish your activity with a debrief discussion to prompt learner reflection!