technovation

2014 Season
Student Workbook
Lessons 1 - 6

About Technovation

Mission: Our mission is to promote women in technology by giving them the confidence and skills they need to succeed in computer science and entrepreneurship

Vision: Our vision is to empower every young woman who wants to have a career in technology entrepreneurship.

Goal: Our goal is to teach young women the basic skills that will allow them to understand the opportunities in technology and entrepreneurship.

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Lesson 1 - 6 Task List

This is your syllabus for the first half of the course. The tasks for each week can be started with your mentor and finished up as "homework," as long as they are finished by the time she arrives the next week. Determine your class meeting schedule and write the dates in below. You will find the student workbook for lessons 7-12 on the Technovation curriculum page.

Lesson	Date	Tasks	✔
1		☐ Learn about App Inventor and complete and hack tutorials. ☐ Complete Mole Mash 2 before lesson 2.	
2		☐ Brainstorm your app idea with your team. ☐ Complete the Videowall2 tutorial before lesson 3	
3		☐ Create a survey and ask 20 friends to take it. ☐ Outline a plan for completing prototype. ☐ Complete the ColoredDots tutorial before lesson 4	
4		☐ Analyze competition by testing usability of similar apps. ☐ Finish paper prototype and bring to class next week.	
5		☐ Test your paper prototype and incorporate feedback from peers. ☐ Finish skeleton of screens in App Inventor.	
6		☐ Complete business model worksheet in Student Workbook. ☐ Continue to work on app prototype– implement all transitions in the blocks editor to help the user move from one screen to another.	

2014 Final Deliverables

☐ App prototype- screenshot of the app

☐ Presentation slide deck (please use Power Point if possible)

☐ Pitch Video on YouTube under 4 minutes (+/- a few seconds)

☐ Demo Video on YouTube under 4 minutes (+/- a few seconds)

☐ Business plan – typed and in PDF format

☐ 100-word app description

Judging Rubric

DIRECTIONS: Evaluate these items objectively to the extent that you can. It is ok for every team to gain the highest score in each of these items. In fact if the team completed the entire Technovation curriculum, they should receive a perfect score on every item in this section.

Objective items	0	2	4	SCORE
Did the girls identify a real problem in their community?	No	It somewhat, but not fully, addresses a local, real problem	Yes	
Does the app solve the problem that they identified?	No	It somewhat, but not fully, solves the problem	Yes	
Is the prototype they submitted fully functional? (It should contain at least 3 screens with all buttons and links functional and no obvious bugs.)	No, there are major defects.	Mostly, except for a few minor issues. I can still get the general idea.	Yes	

DIRECTIONS: Evaluate these items according to your expert, subjective judgment. These items should be measured relative to the quality of the other apps you judge in your pool. Every team should not be capable of receiving the highest score- these items should rank the different entries from ones that just fulfill the requirements to ones that are truly extraordinary.

Subjective items	2	4	6	8	SCORE
Overall Pitch Quality. Is the Pitch compelling, and would you invest resources in this team?	Not at all	Possibly	Compelling, I would invest	Yes! Top of my investment portfolio	
	1	**2**	**3**	**4**	**SCORE**
Business Plan. Do they have a sound business plan? (thorough market analysis, viable marketing plan, etc.)	Not at all	A little	Quite a lot	Definitely	
Future Vision. Do they have a practical vision for extending the capabilities of their app beyond the prototype?	Not at all	A little	Quite a lot	Definitely	
Dynamic Functionality. Does the app go beyond static content and include dynamic functionality?	Not at all	A little	Quite a lot	Definitely	
User Interface. Is the app's interface intuitive and easy to use?	Not at all	A little	Quite a lot	Definitely	

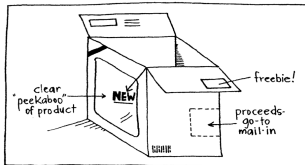| Bonus Points! Does the App include the following?	0	2	SCORE
External Data Integration (calls data from an external API)	No	Yes	
An Especially Creative Design	No	Yes	
		TOTAL SCORE	

Brainstorming App Ideas

1 User: _____

1 Verb: _____

1 Object: _____

1 Noun, Adjective, Adverb, or Verb: _____

Index card stories:

1. Write a 2-sentence story using the 4 index cards you picked:

| |
| |

2. Write a 2-sentence story, using the 4 index cards, about how someone would use your app

| |
| |

Design your app box:

1. What's it called?_____

2. Who's it for?_____

3. What's its tagline/slogan?_____

   _____

4. What are its most compelling features and benefits?_____

   _____

5. What imagery would make it stand out?_____

   _____

Example Surveys

⑥ SHAZAM

Shazam is a mobile app based music identification service.

Survey Questions:
The goal of this survey is to find a group of people that can give you information about your idea/ product / market opportunity

1. Do you enjoy listening to music? [yes or no] _____
2. How satisfied are you hearing music you like but you do not know the title of? (1= not satisfied, 10 = very satisfied) _____
3. How can we contact you to talk further about this? _____

Resulting Metrics (data we received):
Divide the number of people who responded in a selected way by the number of people who took the survey.
1. 45/50 said yes, they enjoy listening to music
2. 22/30 reported a satisfaction level of less than 4
3. 40/50 included at least one way to contact them

What we learned:
- There is a large market size for our product
- Most people are not very satisfied listening to music that they don't know the title of
- People are interested in talking to us about it

Example Surveys

Angry Birds is a mobile app game

Survey Questions:
The goal of this survey is to find a group of people that can give you information about your idea/ product / market opportunity

1. Do you enjoy puzzle games? (yes or no) _____
2. How satisfied are you with your options of mobile phone games? (1= not satisfied, 10 = very satisfied) _____
3. How can we contact you to talk further about this? _____

Resulting Metrics:
Divide the number of people who responded in a selected way by the number of people who took the survey.
1. 30/50 said yes, they enjoy puzzle games
2. 12/30 reported a satisfaction rate of less than 7
3. 40/50 included at least one way to contact them

What we learned:
- We have a good market size for our app
- Most people are fairly satisfied with their options of mobile games
- People are interested in talking to us about it

Market Research Survey

When creating your survey think about the following:
- What do you want to know about your target user?
- What problem does your app solve?
- What groups of people have these problems?
- How big is this group(s) of people (i.e. your market)?
- Where is there a need for your app?
- What currently fills that need?
- If your app existed, would people use it? How often?
- How much would people pay for it?
- Which features are most important for your app to have?
- Does your target audience have the problem that you think they have?
- Is your solution (your app) the only solution to the problem?

Brainstorm Survey Questions

Tip: If you had your customer in front of you, what questions would you ask them to find out what they need from an app, how they would use it, etc. List your ideas and questions here. Make sure your final survey is typed when you give it to people.

Write your Final Survey Questions and Results Here:

Survey Question	Summary of Survey Results
1.	
2.	
3.	
4.	
5.	
6.	
7.	

Usability testing of competitor apps

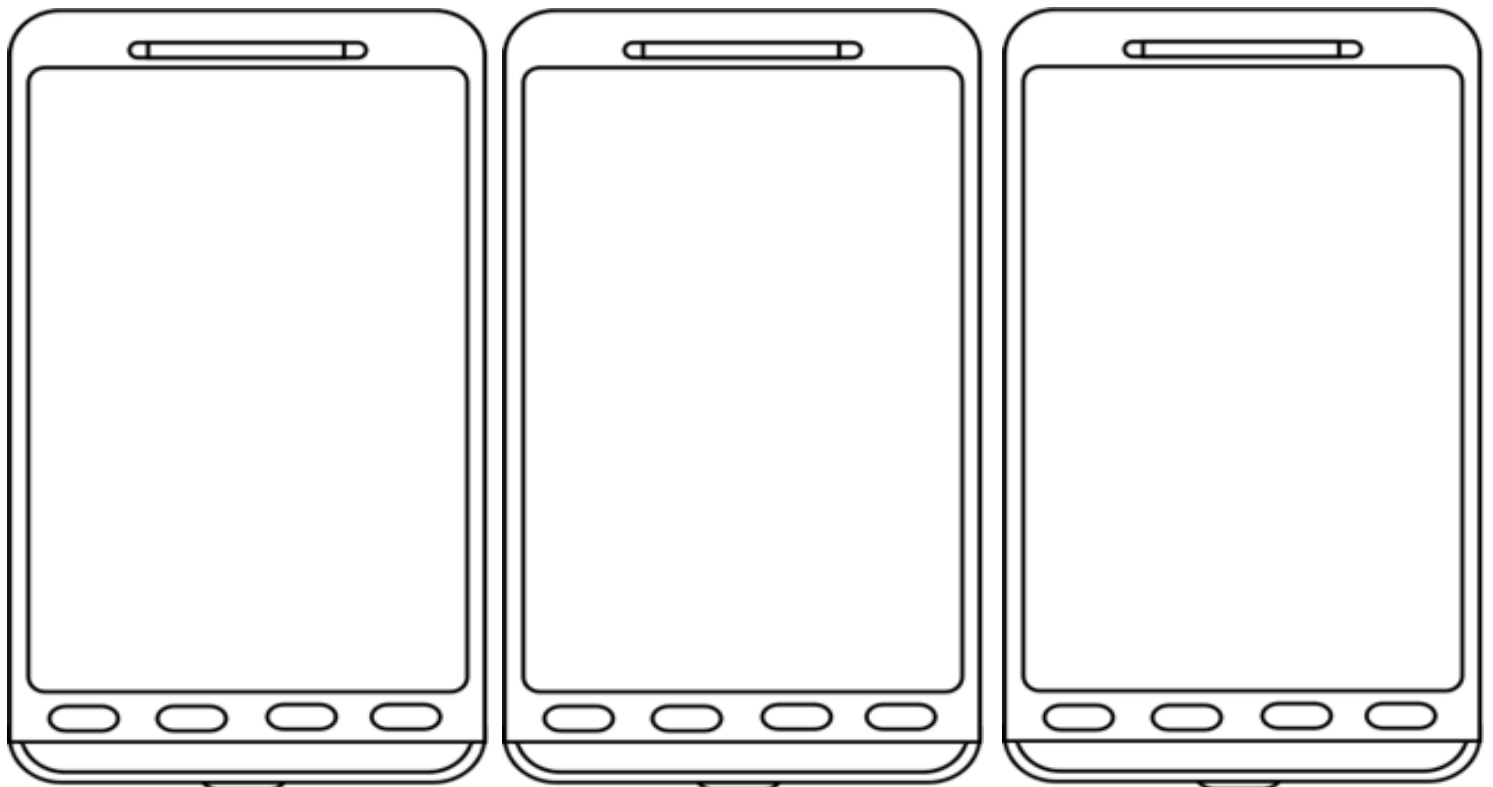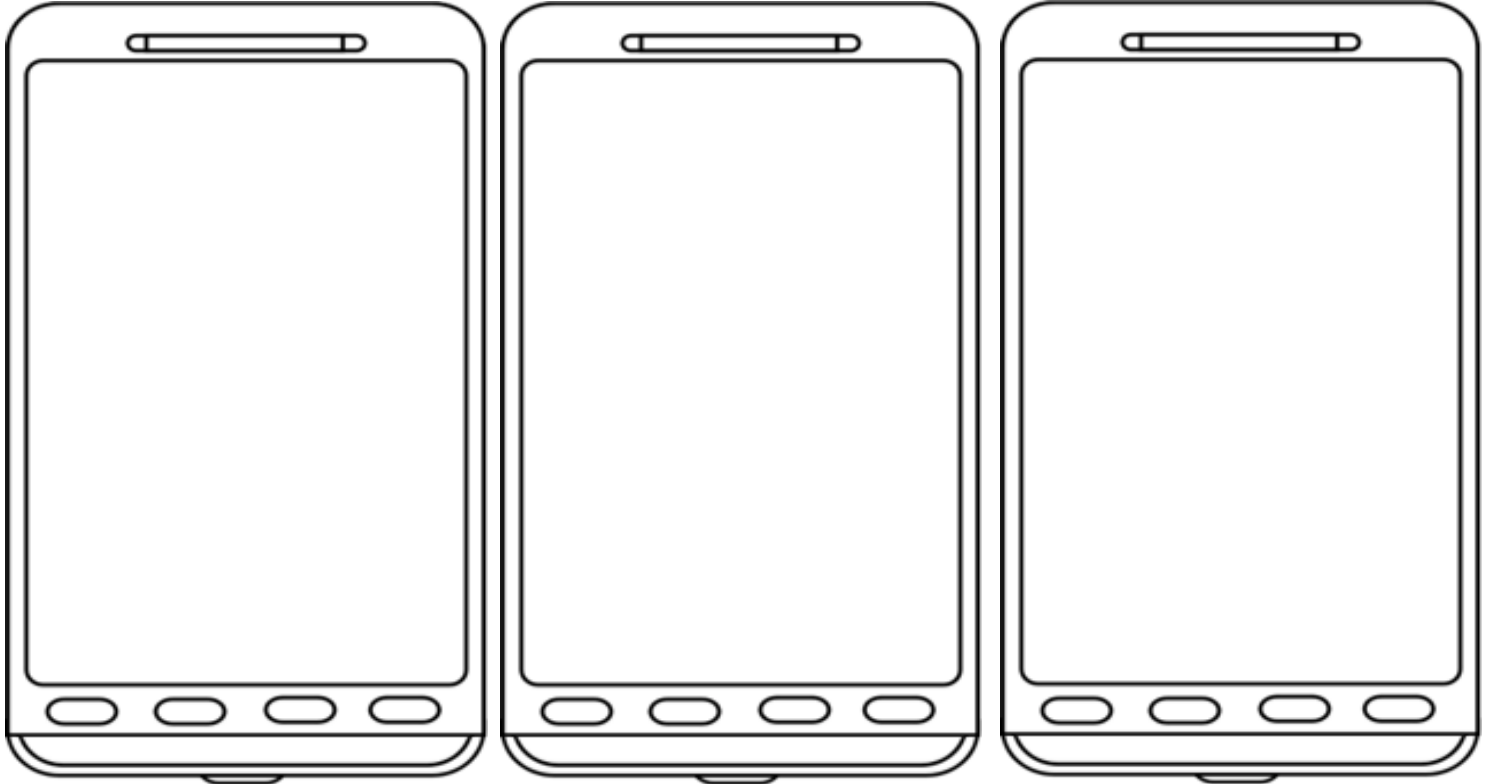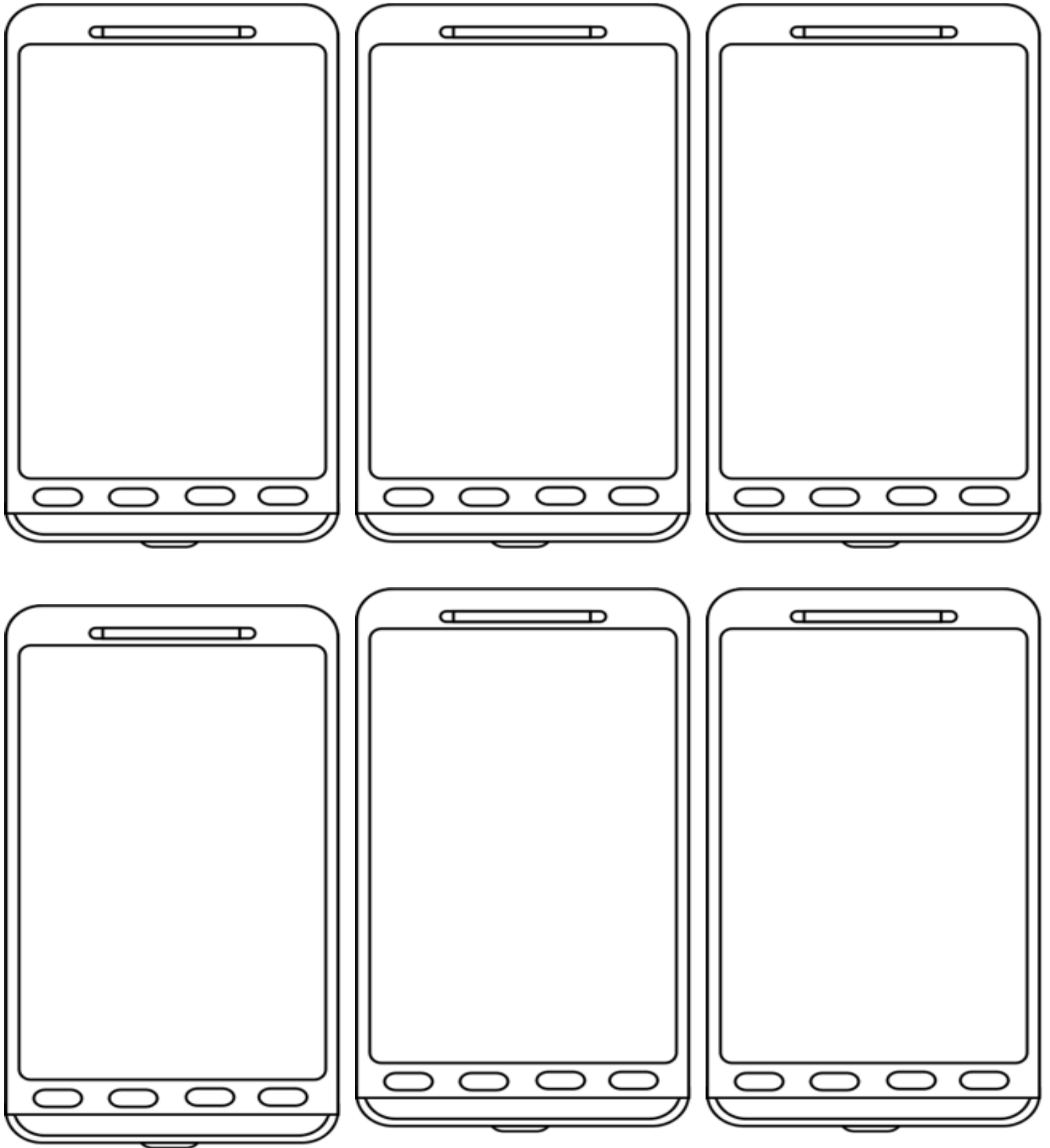| Name of competitor	What does it do well?	What could it do better?	How will your app be different?

Plan for Completing Prototype:

Create a plan for how you will complete your prototype. Figure out what basic features or components your app will need (text-to-speech, accelerometer, lists, etc.) and then research videos or tutorials that will teach you how to implement those features. Finally, make a plan for when you will work on each component.
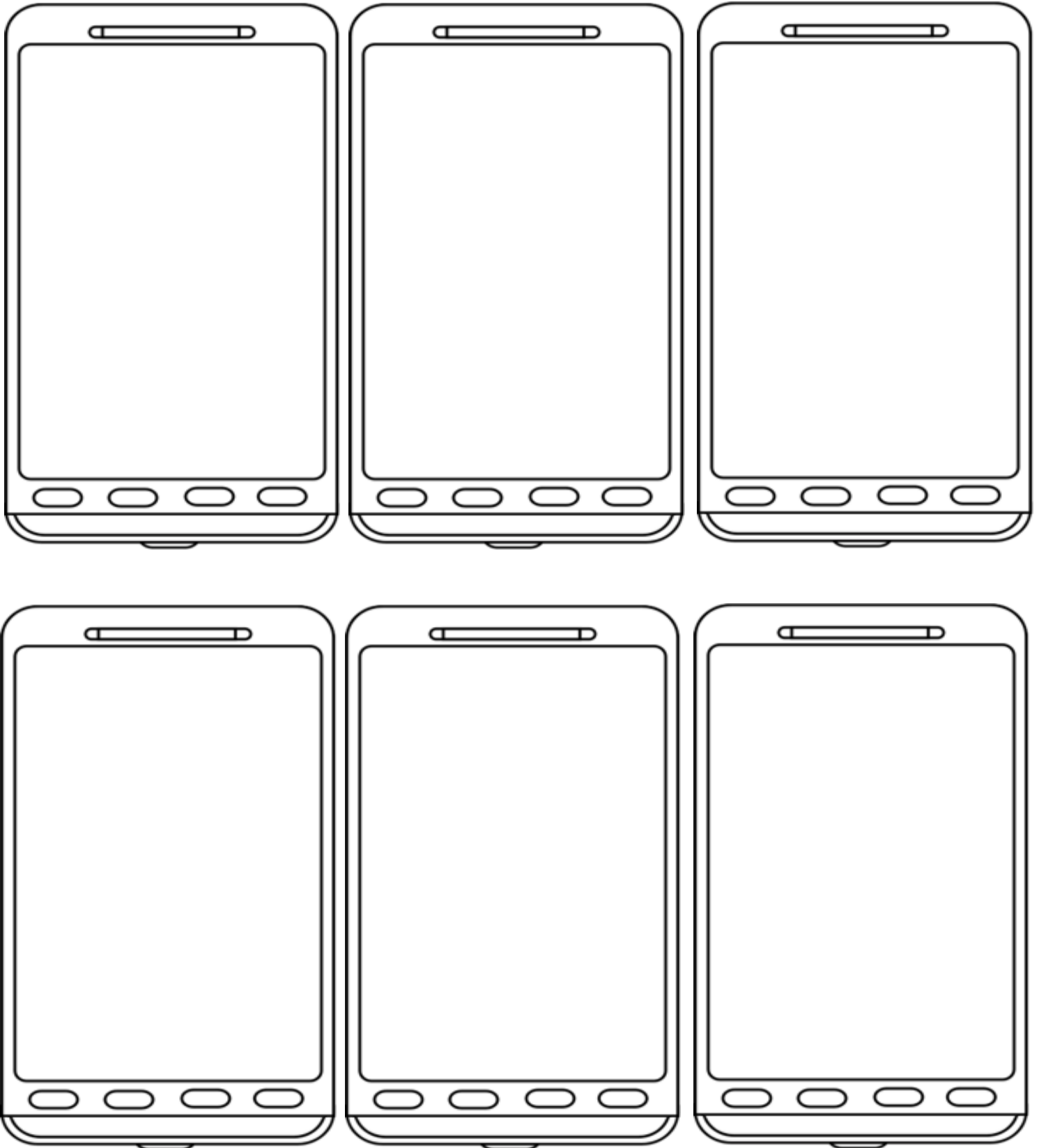
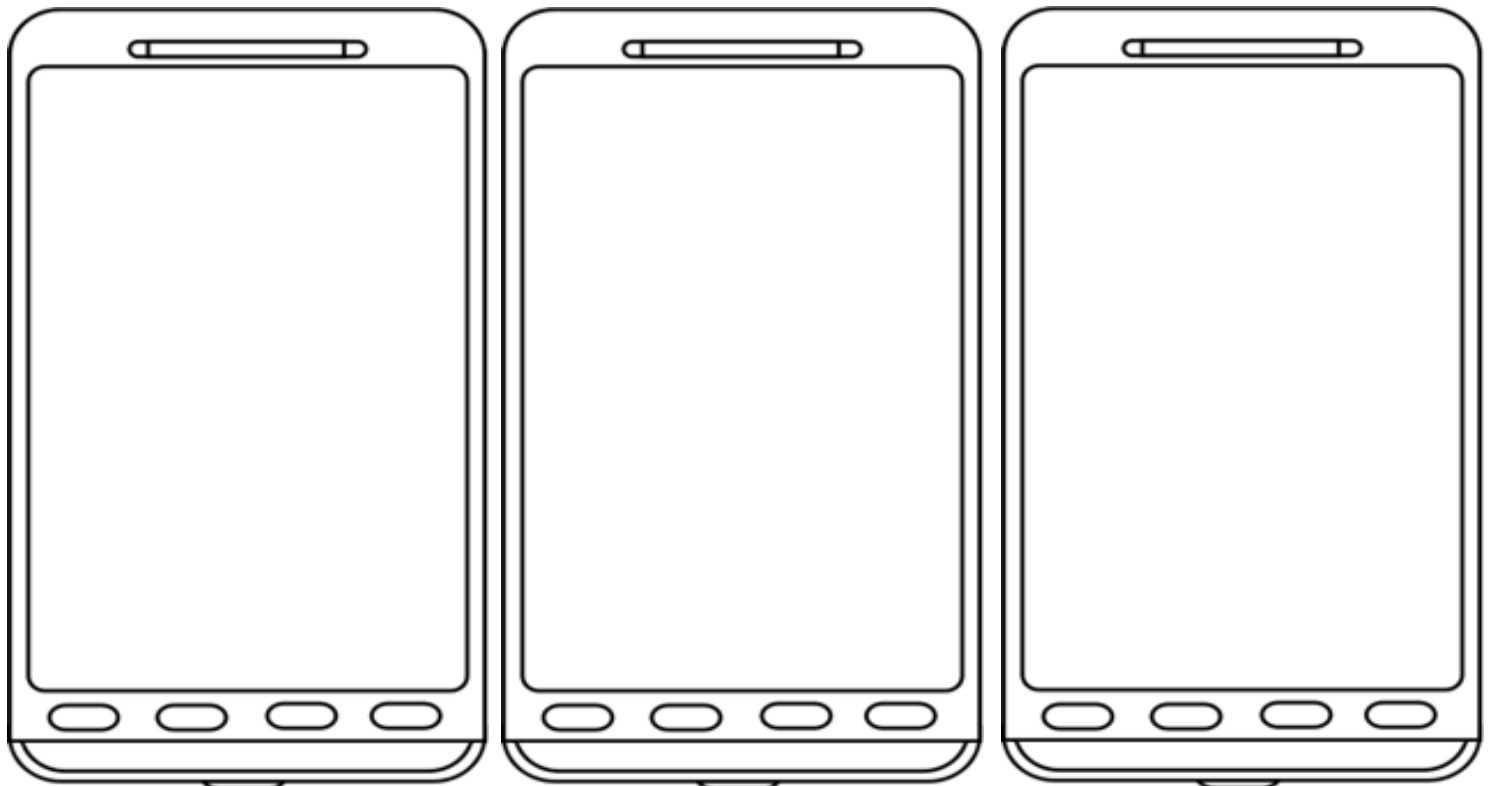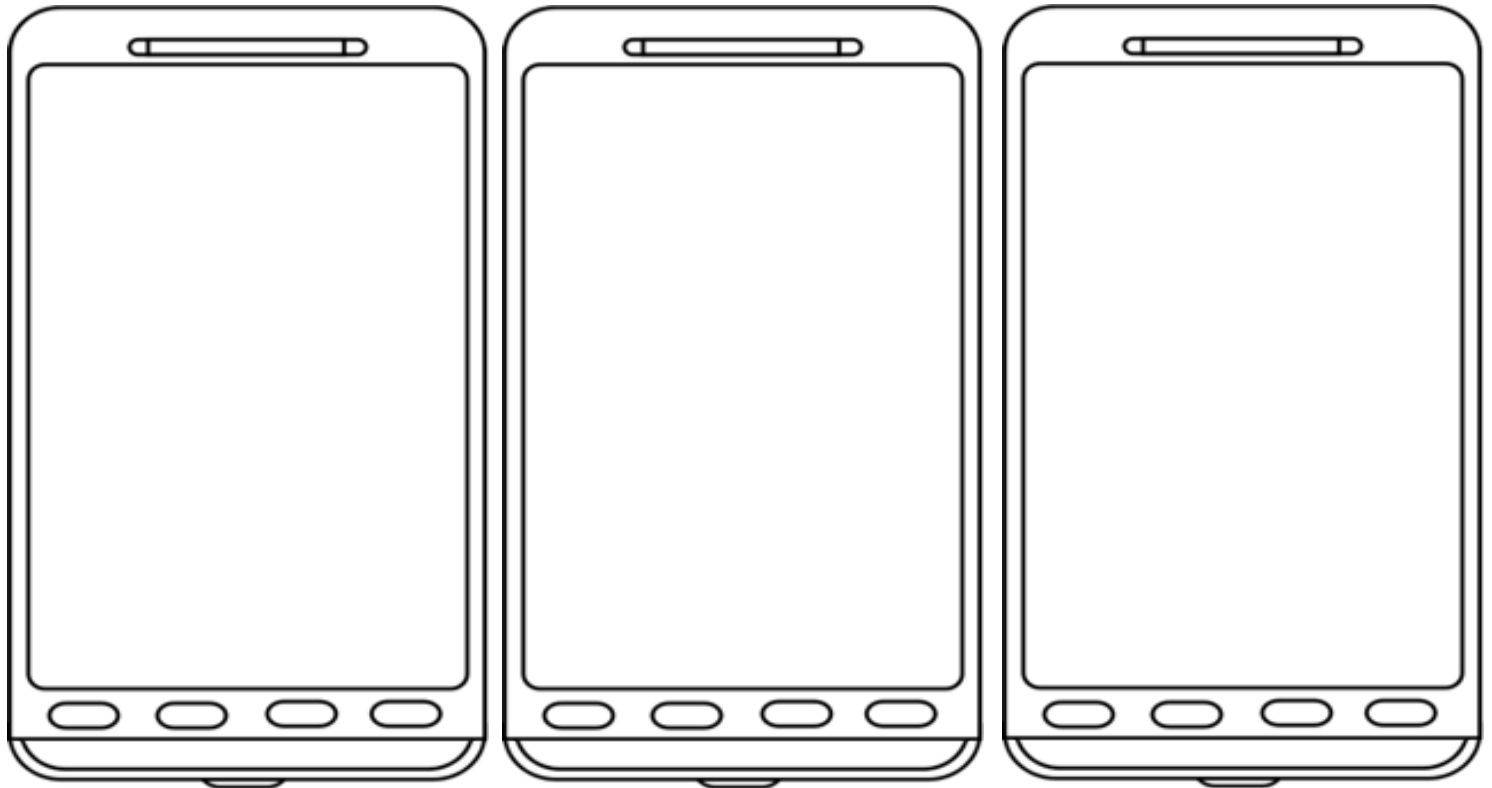| Feature	Resources to learn how to use feature	Timeframe

Sketch Your Paper Prototype

Draw your screens out here or use index cards. Think about how your screens will interact with each other, and draw arrows to indicate the flow of your app.

Test your paper prototype with another team:

Take notes on the feedback you receive here. Answer the Usability Testing questions and add some of your own before you begin if needed.

Questions	Notes	Changes that need to be made by your team
Is there anything that is unclear or confusing in the user-interface?		
Would your user prefer the app look or behave differently?		
Which features of your app interface and usability are of highest value to your target market?		
Are there any missing buttons or other content from your app?		
Did the user's expectations differ from the intended functionality of the app?		

List of Terms

User-Centered Design: Designing with the user in mind (Remember, *you* are not necessarily the user!)

Interface: A common boundary or link between two things.

User Interface: Interface between person and thing, especially in software.

User Interface Design: Designing things that will make sense for the end user, by thinking about how the user will interface with the product.

Market Research: Figuring out what your market wants. What problem is your customer interested in solving and does your product/service solve this problem in the customers' eyes?

Lean Startup Methodology: Talking to your customers early and often, testing your product with potential customers as early as possible even if the product is imperfect, and learning as much as you can about your market and business quickly, before pouring resources into it. The Lean Startup Methodology was developed by Eric Ries.

Pivot: Changing your business strategy/app idea to suit either a new customer or the same customer... for example, making your app a solution to a problem that your customer indicates as a problem, rather than the one you originally intended to solve.

Customer development: Understanding your customer's needs even better than they do, and making sure customers will use your product.

Value Propositions: What value do we deliver to the customer? Low Price//Accessibility/Convenience?

Distribution Channels: How are you reaching your customers? Which method works best? Which are the most cost-efficient?

Cost Structure: What are the important costs in your business?

Market Size: Who are all the people and organizations for which you are creating value? There must be enough people who would buy your product/service to make a profit.

Revenue Streams: To be a business, you have to make money...from whom and how? Paid apps? Advertising? In-game purchases?

Profit: The extra money that you have made, subtracting any costs incurred, at the end of the day. Profit = Revenue – Cost.

Business Model

What problem in the community your app is solving?
How are you defining your community (similar to market):
Describe your app in 3 sentences max.
Value Propositions: What value does your app idea add to a customer? Why is your app idea something that people will want to use? What stands out about your app idea from others? What is special about your app idea?
Market Size: Who are you trying to sell your app to? How many people do you plan to sell your app to? There needs to be enough people who will buy your app to make $.
Revenue Streams: What are the different ways that you will make money? Will you charge people to use your app? If so, how much and how often (monthly subscription, yearly, or daily)?

Cost Structure: What are the expenses for your team? Where would you work out of if you started your own business and how much would it cost? Do you have employees? Who will you need to hire, if anyone?

Distribution Channels: How are you getting your app to customers? How are you increasing your market size? Will you use social media, sell to people in person, sell your app to schools or other business? Where will you advertise?

Is there anything that your team will have to find out (or needs more information on) in order to build your app? What would you ask investors for to take your app to market?