

Mock Ups is an excellent activity to get students brainstorming in a fun and creative way. There is no wrong way to play it so find what works best for you. See below for some of ISTI's favorite ways.

If you do not have the cards, make your own! Remember to create the following categories

1. User
2. Problem
3. Constraint

### **Game Play 1 (Individual focus)**

#### *Round 1*

- Give every student a set of three cards (one user, one problem, one constraint)
- Give the students a set time (ie. 5 mins) to come up with 10 ideas!
- Have the students pause and reflect for initial engagement. Ask guiding questions
  - What did you feel when you heard you only had 5 minutes?
  - Did the time constraint impact you at all?
  - Are you happy with your initial ideas

#### *Round 2*

- Give students another time limit to hone in on one idea.
- After time is up, consider a group or all class share out of ideas
- Discuss how the game played out. What was challenging? What was silly? Etc.

### **Game Play 2 (Individual start, group finish)**

#### *Round 1*

- Give every group of students a set of three cards (one user, one problem, one constraint)
- Give the students a set time (ie. 5 mins) to individually and silently come up with 10 ideas!
- Have the students stop and prepare for round 2

#### *Round 2*

- Give students another time limit, this time to discuss their ideas out loud with the group.
- Listen that all students are contributing
- Pause and have groups select 1 idea
- Allow groups to present
- Reflect
  - What was different about shifting from individual to group brainstorming?
  - What was helpful?
  - What was challenging?
  - How did the group benefit you as an individual?

### **Game Play 3 (Group Brainstorm)**

#### *Round 1*

- Give every group of students a set of three cards (one user, one problem, one constraint)
- Give the students a set time (ie. 5 mins) to come up with 10 ideas as a team!
- Have the students stop and prepare for round 2

*Round 2*

- Give students another time limit, this time to select the one they like the most and elaborate on their solution.
- Listen that all students are contributing
- Allow groups to present
- Reflect
  - What did you learn about working in a group?
  - What was helpful?
  - What was challenging?
  - How did the group benefit you as an individual?
  - How did you feel about the time limit?

**Game Play 4 (Withholding the constraint)**

*Round 1 (Can be played in ANY of the above variations)*

- Give every group of students TWO CARDS ONLY (one user, one problem)
- Give the students a set time (ie. 5 mins) to come up with 10 ideas!
- Have the students stop and prepare for round 2

*Round 2*

- Give students another time limit, and hand them the constraint card!
- Prompt them to either apply the constraint to their ideas or come up with new ones
- Listen that all students are contributing
- Pause and have groups select 1 idea
- Allow groups to present
- Reflect
  - How did the constraint impact your solutions?
  - Did the constraint pose a challenge or offer an advantage?
  - What was helpful?
  - What was challenging?
  - How did the group brainstorming benefit you as an individual?

**No cards? No problem. Make your own with the options below, or let your students get creative!**

## USER

Soldiers  
Rural farmers  
Janitors  
Angry old men  
Samurai  
Bartenders  
Mothers  
Midlife crisis father's  
Young male executives  
Middle schoolers  
Robots  
Bus drivers  
Babies  
Inventors  
Best friends  
Middle aged woman  
Witches  
Firefighters  
University professors  
Construction workers  
Ancient Egyptians  
The person to your left  
Rock climbers  
Adventurous preschoolers  
Traffic cops  
Golfers  
Superheros  
Girlfriends  
Rockstars

## CONSTRAINT

Edible  
Made of glass  
Works under water  
Easy to clean  
Can talk  
Biodegradable  
Non-flammable  
Doubles as a birdhouse  
100% recyclable  
Very European  
Covered in mushrooms  
Solar powered  
In the cloud  
No plastic components  
Uses nanotechnology  
Grows  
Absorbent  
Works without electricity  
Weighs less than a brick  
Magnetic  
Minty fresh  
Made from paper  
Works on the moon

## PRODUCT

A way to save water  
A way to settle disputes  
A way to interact over the Internet  
Something to use on the train  
A better way to catch mice  
Something that covers their head  
A way to keep kids playing outside  
Something to give the person who has it all  
Something to make eating more fun  
A way to train animals  
Something to teach children  
A way to clean their teeth  
A way to make music  
A way to play with animals  
A way to dispose of nuclear waste  
Something your mother would hate  
Something to replace fast food  
A way to exercise while working