

Future Design Studio

**Building a growth mindset and a path to persistence
through improvisation and design fiction**

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Michigan State University
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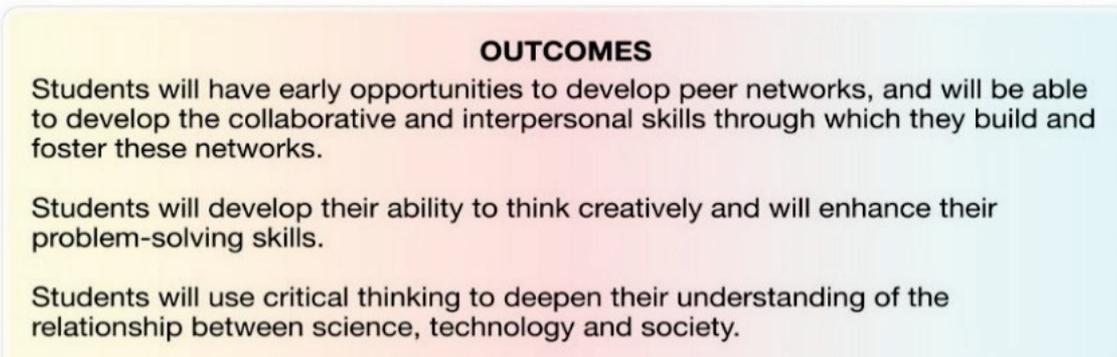
Future Design Studio

- For students in the INQUIRE program
 - ~50 students
 - Interested in STEM, but lack prerequisites
 - 70% women, 48% underrepresented minority, 47% high need financially, 38% first generation college
 - INQUIRE brings them up to speed in their first semester
- Two day orientation workshop
- Facilitated by professional improv actors

Goals of Future Design Studio

- Short term goals
 - Start building a Growth Mindset
 - Increase self-confidence with communicating
 - Instill reflexivity when thinking about science and technology
 - Introduce students to faculty before classes begin
 - Cohort and community building
 - Long term goals
 - Increase persistence in STEM fields
- 

Components of Future Design Studio



Choose your own adventure

- We feel tired after a busy conference. We just want to hear the step by step process of how you organized and ran Future Design Studio
 - Go to slide 6
- We'd rather experience a micro version of the workshop and will harass you later for these slides.
 - Go to slide 8

Pre-workshop freewrite - What will the world look like in 100 years?

future

design studio

The world will be all robots. People will be 'able' to literally do nothing. Yet, it is sad but true, the revolution of technology is becoming more and more great. The creators aren't aware of the human disadvantage but technology is quit convenient and non-money pay. Also, the world would probably come up with treatments for STD that weren't able to be sewed/helped.

Improvisation



Go to slide 11

FYEE – Improvisation Lightning Round!

- Stand up and shake it out.
- Pair up
- Party planning
- More party planning
- Debrief



FYEE - Improvisation Lightning Round!

- Now group up with 4-5 people.
- Tell the story of your favorite FYEE experience, one word at a time.
- Debrief

Go to Slide 14



Improvisation goals

- Cohort building
- Creative priming
- Building a “Yes, and...” mindset
- Break through fears about public speaking

- Exercises/games and debriefs between games



100 years ago



the washing machine went to market in the 1920s, but it was 40 years before even half of US households had one

washing clothes



the refrigerator came to market in the 1920s and reached 50% saturation around 1940

keeping cool



electricity was only in about 1/3 of homes in 1917

making light



in 1917, "computer" was a job title

computers



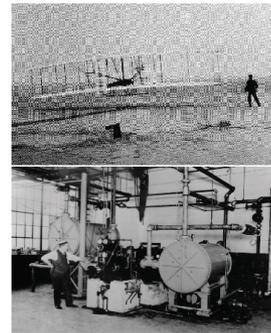
in the 1940s, tractors finally outnumbered horses and mules on farms

farming labor

the more things change



convergence



airplanes got faster and safer, air conditioning got smaller and quieter



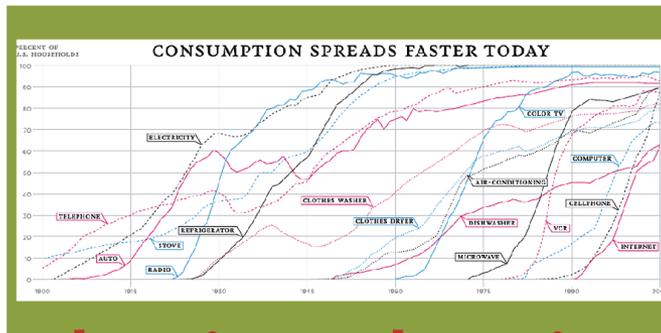
the pill

the contraceptive pill was approved in the United States in the 1960s and may have catalyzed the sexual revolution



penicillin

penicillin was discovered in 1928, but was not in regular use until 1942



adoption takes time



design
the
future
with us

future
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Thanks to
The MSU Museum
College of Arts and Letters (CAL)
Hub for Innovation in Learning and Technology
Lyman Briggs College
Department of Theatre

science fiction inspires science fact

direct inspiration



1927 video conferencing first appeared in the classic science fiction film, *Metropolis*



1966 the *Star Trek* Communicator was the precursor to the first cell phone



1987 *Voyager's* replicators look remarkably like today's 3D printers



1992 *Lawnmower Man* provided a terrifying vision of Virtual Reality long before Oculus Rift

inspires science fact



1962 folding cars from *The Jetsons* are pure fiction



1982 but folding bicycles have been around for a few decades

1989



everything from *Back to the Future II*



what will you create today to inspire future designers?

design the future with us

future design studio

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Science, technology, and society – past and future

- Introduction to radical technological and social changes over the past 100 years
 - Introduction to science fiction and fictional design as inspiration for scientists and engineers
 - Short presentation format, followed by discussion
 - Introduces students to faculty
- 
- Primes students for imagining the future



What does a visit to the doctor look like in the future?

ImageChef.com



What does sharing look like in the future?

ImageChef.com



What does a state fair look like in the future?

ImageChef.com



How do we regulate temperature in the future?

ImageChef.com

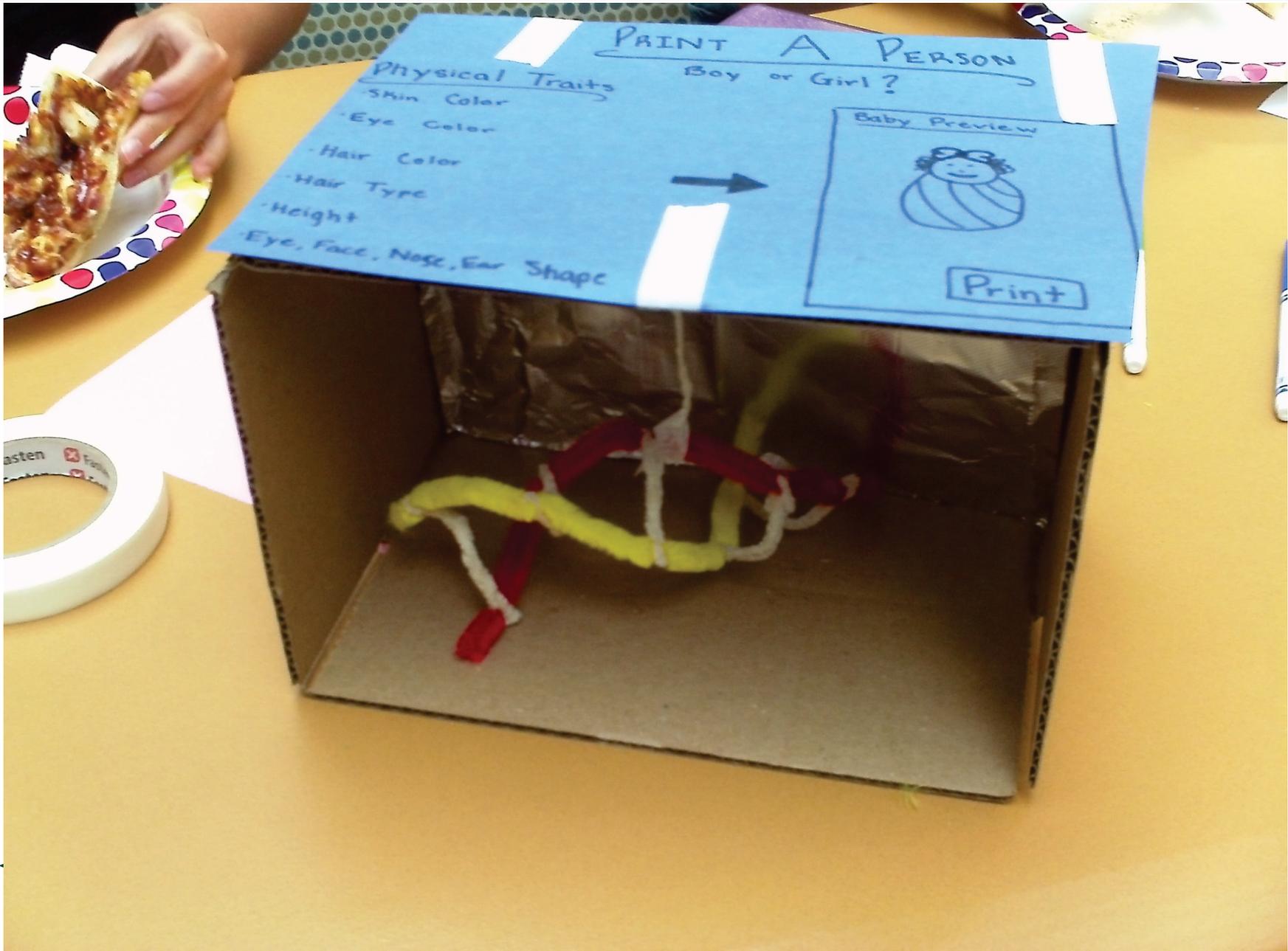
Ahead of you is a fork in the road, but your destiny is already written in stone...

- If you chose to see the step by step process, go to slide 16.
- If you chose the experiential path, go to slide 24.



One group's experience





PRINT A PERSON

Boy or Girl?

Physical Traits

- Skin Color
- Eye Color
- Hair Color
- Hair Type
- Height
- Eye, Face, Nose, Ear Shape



Baby Preview



Print

Fasten

Abridged User's Manual

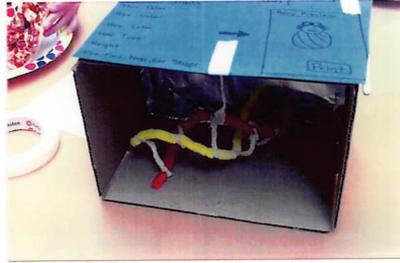
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artifact name: Make A ^{Man} Printer (Printer)

design fortune: Science

ideas and notes:

Create a human being where you can choose physical traits, personality, intelligence, and special abilities.



description: A printer that gives life to babies that are created by the couple that wants a kid, but can't have one. The couple is going to be able to choose: skin color, eye color, hair type, ^{and} height.

instructions for use:

Use your computer which has a list of all physical traits for your new baby. Here you can choose traits like height, eye color, skin color. Then you can generate your preview of your new baby. ~~Wait~~ Wait 4 months to get your new baby. After the 1st month you can take it home in a pod and watch it grow.

Artifact Number:



End of day 1 – Time to relax

- Pizza, snacks, and a chance to debrief the day



The Invocation, Acted Scenes, and Group Discussion



After the Orientation Workshop

- End of workshop survey
- Follow-up 1 hr improv and feedback session midway through the semester
- Final feedback session/focus group at the end of the semester



Results

- Students self reported
 - Increased confidence in speaking up in classes
 - The creation of lasting friend groups
 - Thinking more deeply about science and technology within society
 - Greater interest in emerging technologies
- More results to come as we track their progress



You died... The End

- Just kidding, this Choose your own adventure only has happy endings.
 - If you got here experientially...
 - Quick, one group, tell me what your artifact is and two sentences on how it works.
 - Now I'll do a crappy job improving it...
 - If you took the linear path, thank you for listening!
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