iD@wentworth

The Industrial Design Program at
Wentworth Institute of Technology,
Boston, Massachusetts . . .

INDS 220 Industrial Design Studio I

Sophomores:

Christopher Batten
Stephanie Bincarowsky
James Bishai
Alessandro Bove
Luis Cañas
Owen Chan
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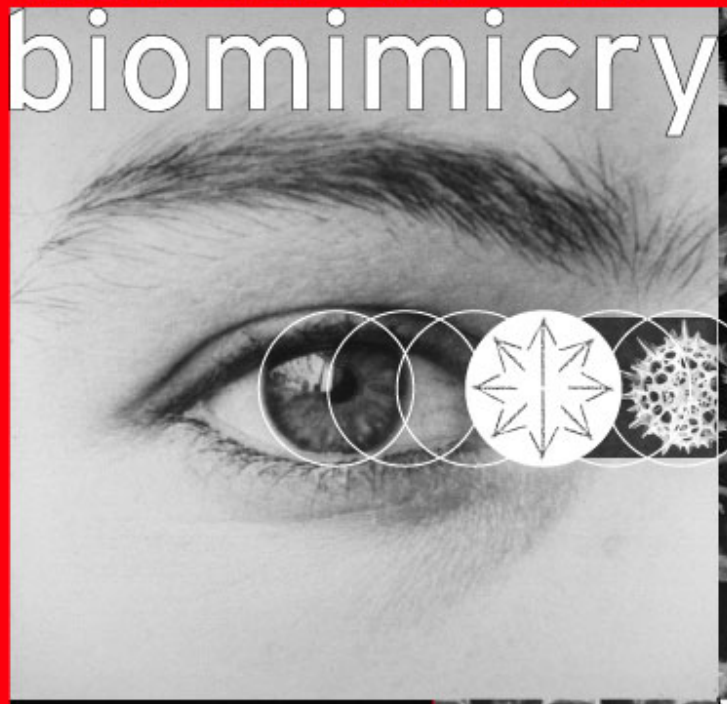
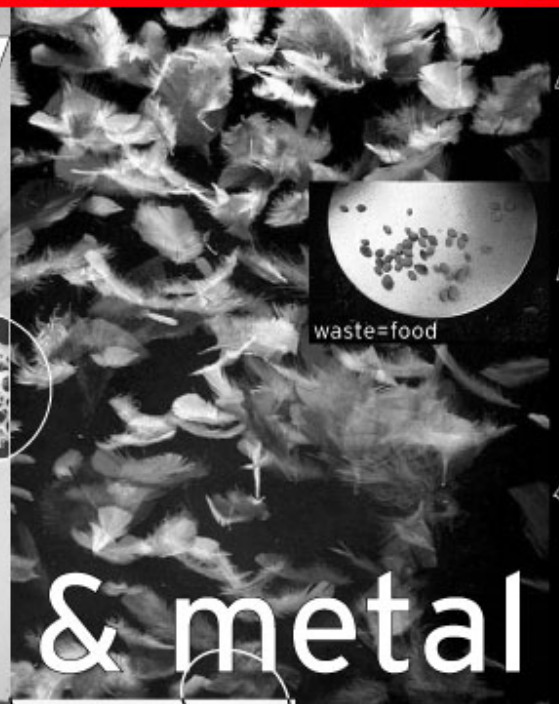
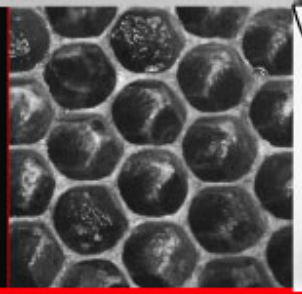
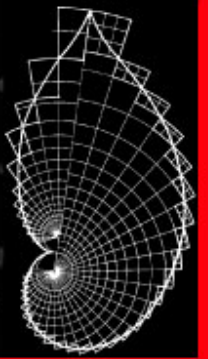
Angela Welch
James Zabala

biomimicry & metal



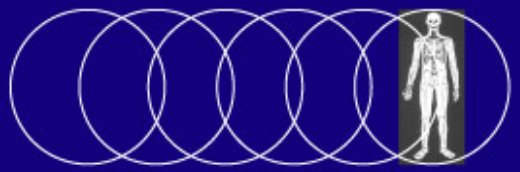






INDS 220 Industrial Design Studio I

Schedule for the 4th Assignment (30% of your final grade):
1st Week
October 31st, Thursday: Introduction & The Next Industrial Revolution Video . . .
2nd Week
November 4th, Monday: Final Presentation for the 3rd Assignment
November 7th, Thursday: Work in class & discussion about anthropomorphism . . .
3rd Week
November 13th, Wednesday: Critique: Natural Phenomena shown in Metal (15%)
November 14th, Thursday: Introduction of the 2nd part of the Project
4th Week
November 18th, Monday: Critique . . .Visiting the Junior's Outdoor Seating Presentation
November 21st, Thursday: Work in class . . .
5th Week
November 25th, Monday: Work in class . . .
November 21st, Thursday: no class . . . it's Thanksgiving
6th Week
December 2nd, Monday: Critique: 2nd part of the Project (15%)



biomimicry

Designing Something That Works the Way Natural Systems Do

Phenomena in Nature: How does something grow? . . . How do natural systems grip or fold? . . . How does an organism open & close?
How do things in the natural world connect? . . . How do things collapse?
Research: There are thousands of examples. Here are a few:
Ferns- unfold & Fractals – Leaves growing larger & camels-why do the back knees fold in the
the opposite direction of the front knees . . .
Armadillos- they have articulating shells & spiders – have folding Legs . . .
Lady bugs- have a hard shell that unfolds to reveal wings & duck feathers-
interlock to form a water-
resistant barrier
Mussels – have threads that attach them selves to rocks & vines-
have threads that grip bricks and rocks
look at: www.hoberman.com & look at: www.hypercar.com & everything by Buckminster Fuller & Frei Otto . . .
Russian Matryoshka Dolls & onions . . . Umbrellas & sails & parachutes . . . Bellows, as in the Polaroid Land Camera/SX70
look at: Skin...Substance,Surface & Design
by Ellen Lupton & The Cooper-Hewitt Museum . . .
Ships by Thor Heyerdahl (Ra & the Kon tiki project)
Elephant truck waste removal at construction sites . . .
Factory garage doors by Calatrava & The Jean-Marc Tibaou
Culture Center in Noumea, New Caledonia (1992) by Renzo Piano . . .

& metal

You will use sheet metal, shears, computers, & nuts and bolts & rivets to mimic the way nature works.

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biomimicry

Create a container to hold 3 cans of Canned Heat™ otherwise known as Sterno . . . This container will transform into a portable cooking device . . . It must be made entirely of metal . . . It must have a way to be self leveling . . . It must be able to support a cooking vessel & at the same time, protect the flame from wind & loss of heat . . . It should be self explanatory in terms of use & assembly, which means it needs a very clear visual logic . . . simple is, in this case good . . . minimum size & weight are also important . . . you must make all the components yourself . . . good luck & get cookin' . . .

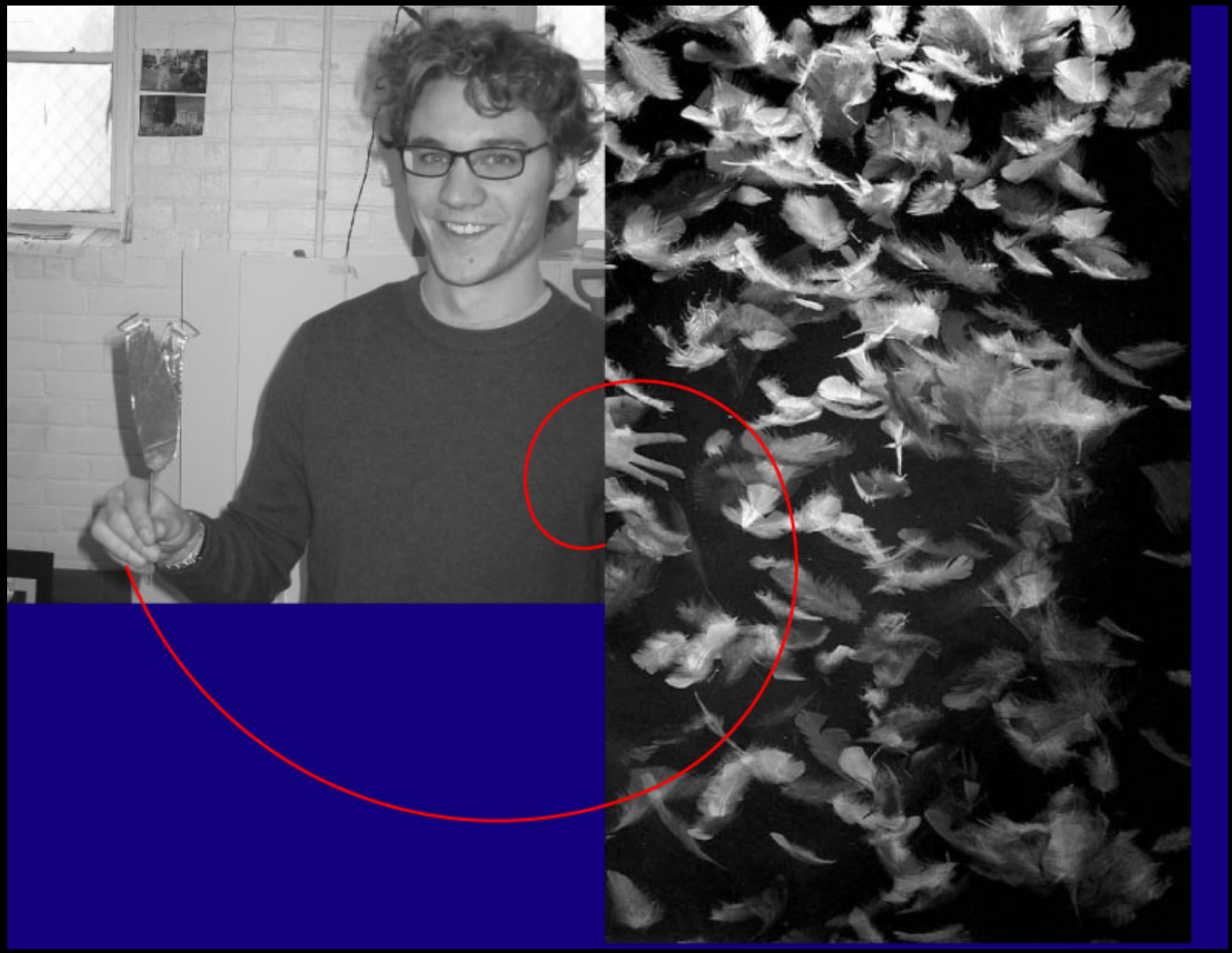
4th Assignment, 2nd half (20% of your final Grade, the Biomimcry half was 10%)
Design a Portable Cooking Device . . .

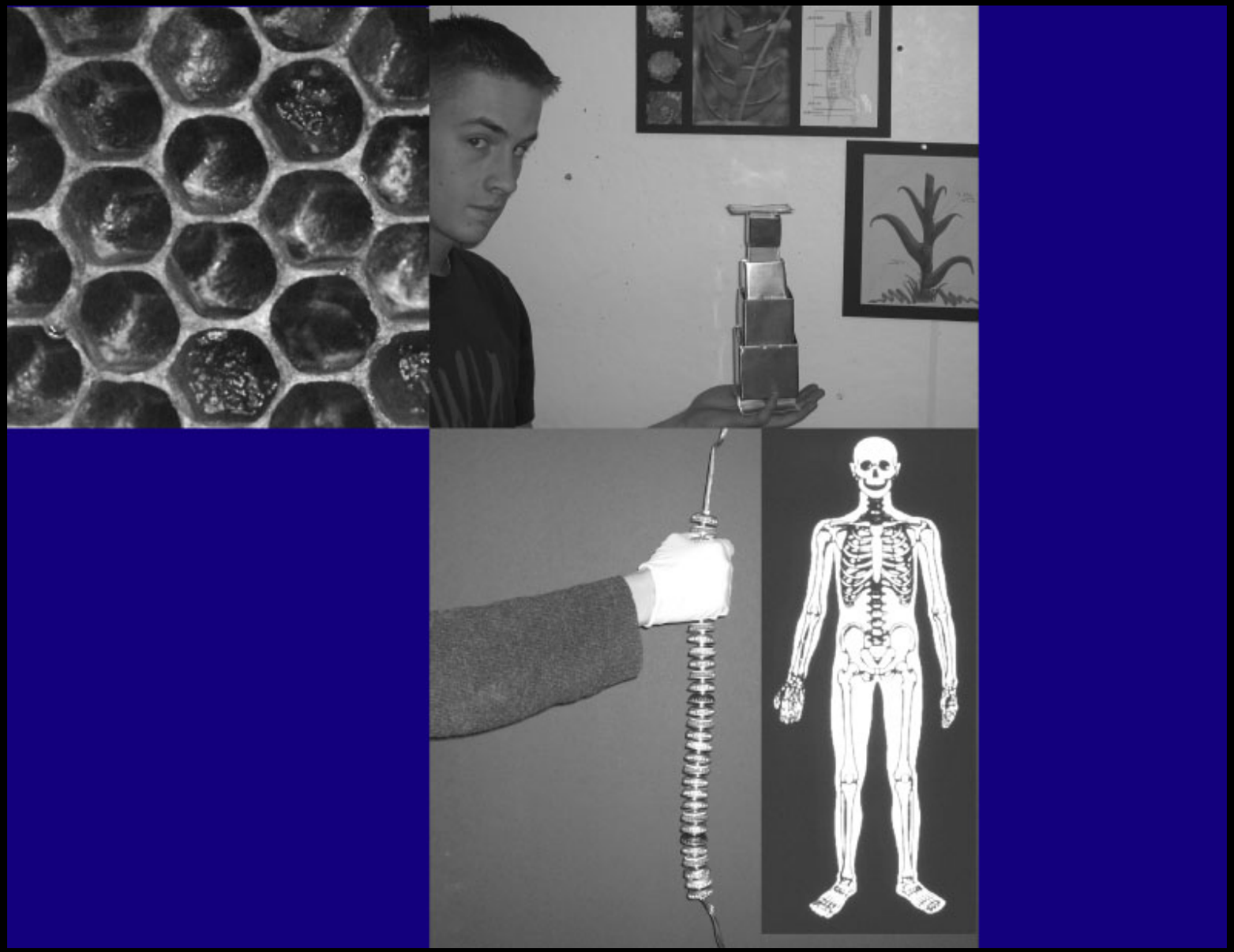
& metal . . .

x 3

transformation

Wentworth Institute of Technology, department of Design & Facilities






biomimicry &
metal
& . . .
canned heat™,
otherwise known as sterno . . .
x 3


canned heat™

heat

eat

Instructor:
Bill Bancroft

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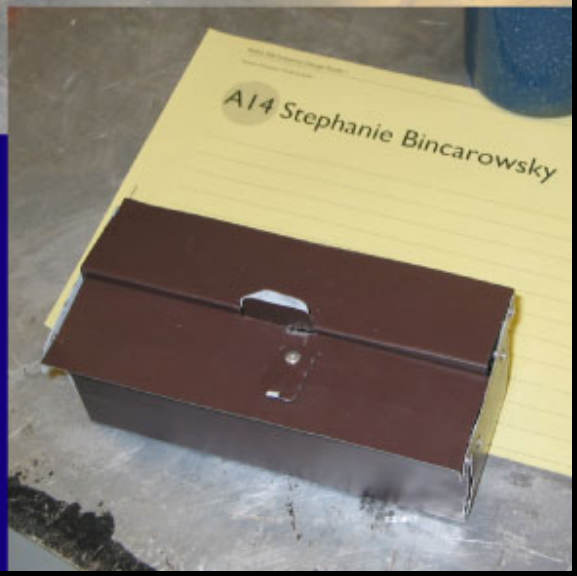
Instructor:
Bill Bancroft
A7 Bryan Kneeland
A4 Emmanuel Espiritu



A18 Bryce Gibson

Instructor: Fredrick Kuhn


Janel Gurney
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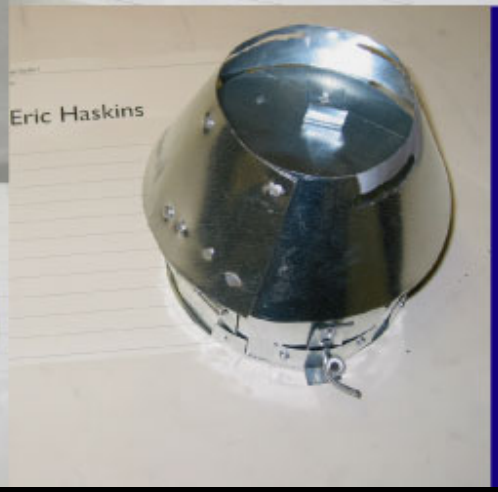
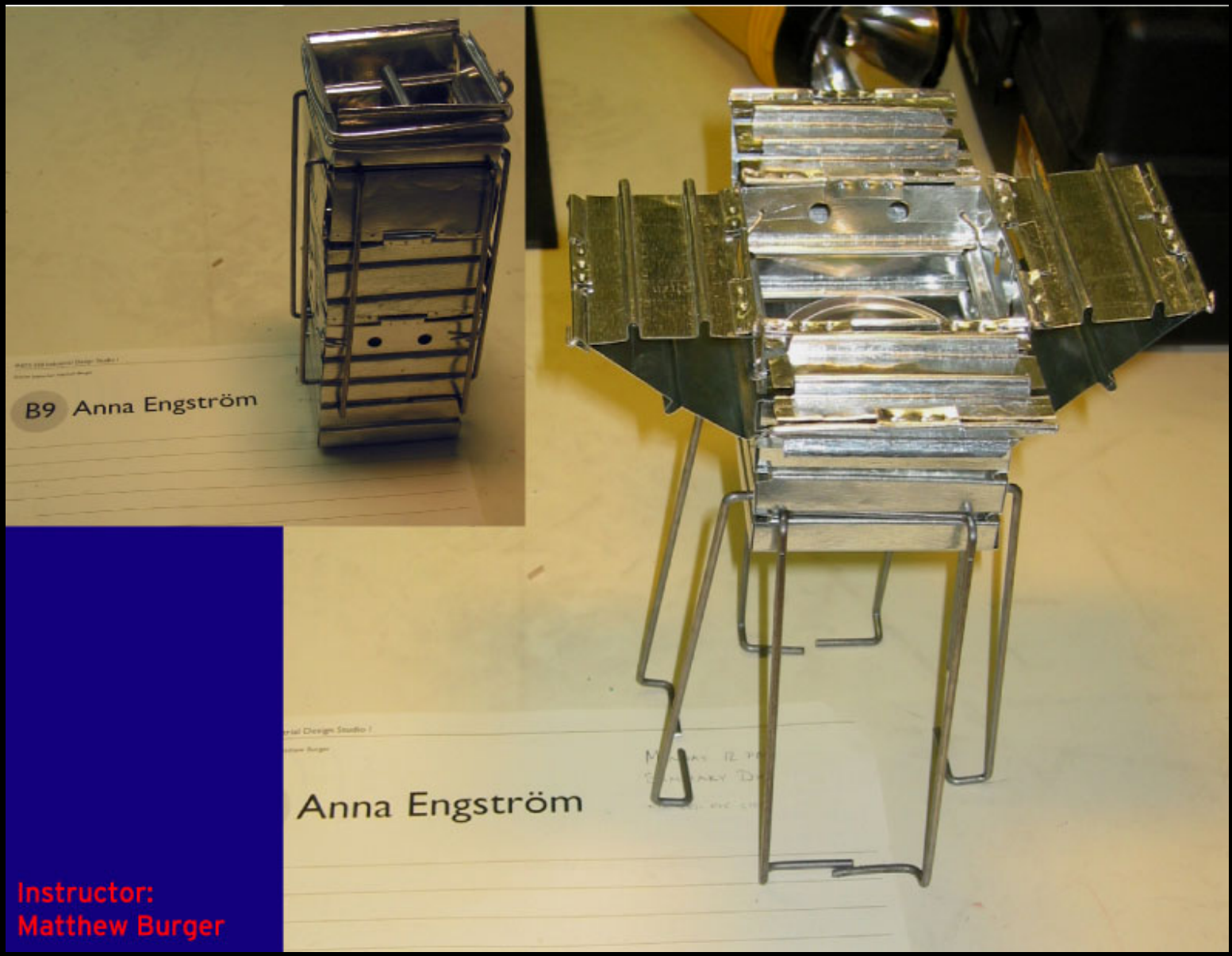
B1 Janel Gurney

Instructor: Matthew Burger





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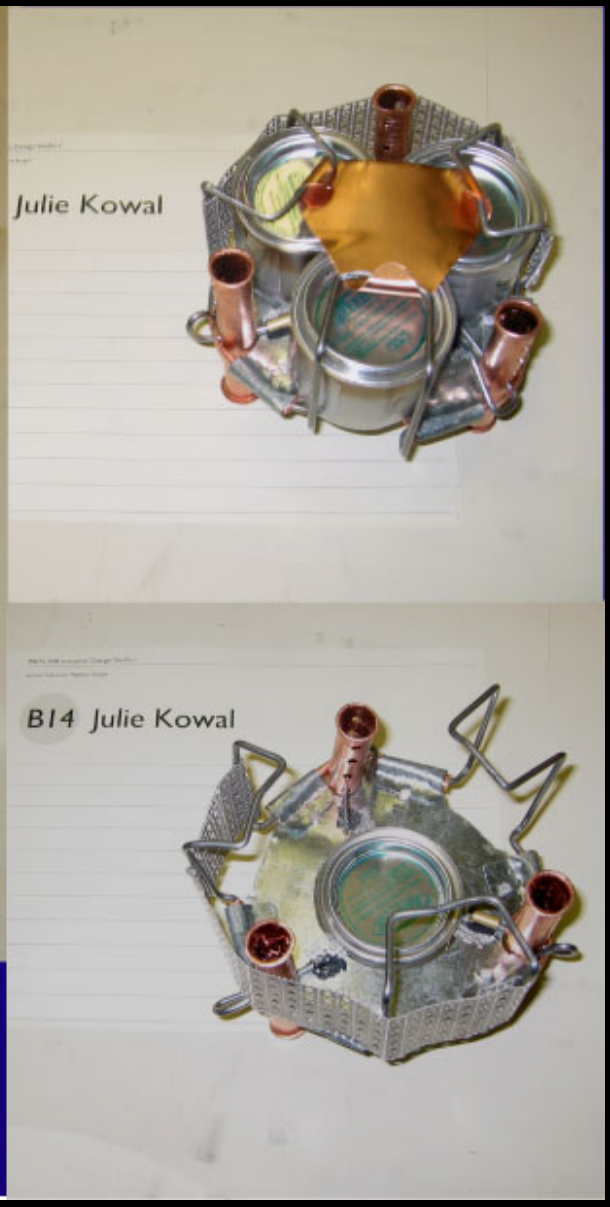

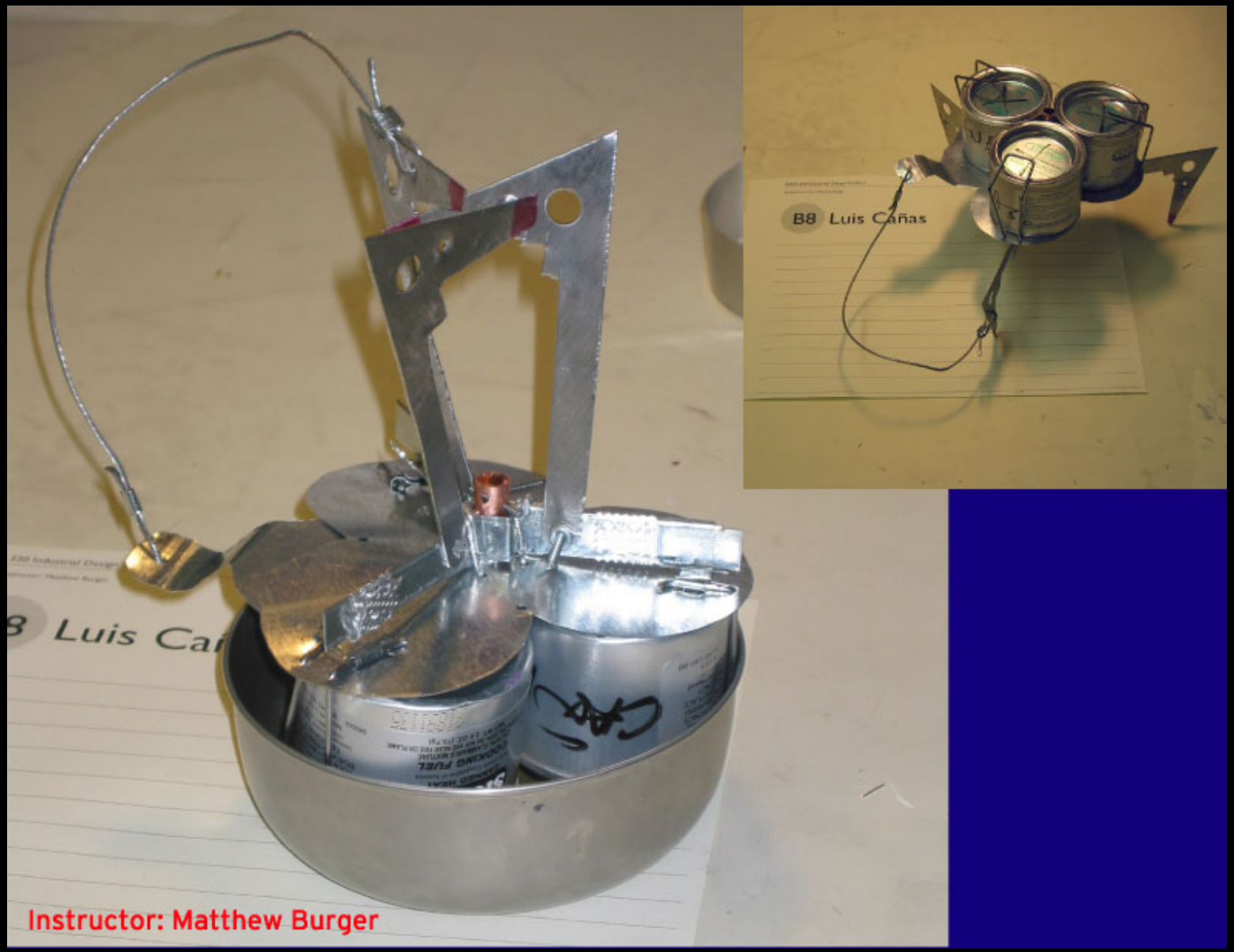
B8 Luis Cañas
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Scott Petrichko
B15 Ross Mehaffey
Petrichko
Instructor: Matthew Burger

Danke

iD@wentworth students in this presentation would like to thank you . . .

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Randall Salso • James Sandiford • Brett Smith • Sieva Tsodokov • Eric Wallin

Angela Welch • James Zabala . . .

as well as their instructors . . . Bill Bancroft • Matthew Burger • Fredrick Kuhn

Danke