Appendix I
Curriculum Resources for Technology Studies

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Digital Literacy for Technology Teachers

Prospective Outcomes and Skill Sets
Our students will demonstrate and develop:

- Skills for computing and creating digital media imagery and sound, including animation and virtual environments for learning.
- Understandings of aesthetic and artistic disciplines underlying good design practice.
- Dispositions toward the psychological and cultural context of digital media as well as their personal and social effects.

1. **Ecology**: Our students will understand that with appropriate use of digital technologies, we will REDUCE our consumption of paper resources. They will take leadership in the eco-revolution in education where digital forms will be in place of, not in addition to, printed paper.

2. **Critical Dispositions**: Our students will critically engage with conditions and practices which underly inequities. As is our philosophy, we can best develop critical literacies through practice with digital technologies. Our students will develop literacies of production, consumption, identity, representation, and regulation of digital technologies. They will be able to read the signs of what is said and what is not said in digital media and cyberculture. They will be ethical about their uses while at the same time develop a critical disposition toward:
   - Conditions and practices of cyberculture and digital technology
   - Inequities related to the access of knowledge and tools as mediated through class, disability, gender, race, and sexuality
   - Limits upon free speech
   - Privacy and security
   - Copyrights of information and ownership
   - Commercialization of cyberculture
   - Cultural imperialism

3. **Creativity & Ingenuity**: Technology is essential to cultural expressions of creativity; creativity inspires a wide range of uses of technology. Epistemologically speaking, creativity, imagination, ingenuity and play are best developed through functional, hands-on engagements with technologies. Through uses of technology, our students will inspire insightful, novel and significant designs and styles of teaching practices. We aim to use digital technologies to inspire our students to deploy their innate latent and manifest abilities in the resolution of everyday classroom problems.

4. **Capability**: Critical literacies and creativity are best developed through functional, hands-on work. Our students will enter UBC with and develop skills that will help them present themselves as capable and sharp in communication, instruction and media. This means that they will have proficiencies in:
   - **Basic Digital Applications & Foundations**
     - Word processing (eg, MS Word)
     - Communication (eg, email, email listservs, Chat rooms and WWW browsing)
     - Resource accession (eg, browser interfaces, search engines, telnet, FTP, HTTP)
     - Presentation (eg, Apple Works, MS Powerpoint)
     - Programming (e.g., html, JAVA, C++, LISP)
     - Database management (eg, MS Excel, spreadsheets, tables)
     - Image production (eg, 3D Studio, Fireworks, Flash, Illustrator, MS Paint, MS Photo Editor, Photoshop)
     - Sound manipulation (eg, MIDI, Musicmatch Jukebox, Real audio, MP3 converters)
• Hypermedia (eg, Dreamweaver, Netscape Composer, MS Front Page)
• Digital Video (eg, I Movie, MS Movie Maker, Final Cut pro, Quicktime pro)
• Hardware systems and peripheral device configuration (eg, cameras, drives, memory, networks, routers, scanners, wireless)
• Design elements related to image, text and media

Basic Analog Applications & Foundations
• Video & Audio Editing (eg, Videotaping and dubbing)
• Video analysis (eg, evaluating student practices)
• Analog to Digital conversion

Advanced Applications
• Computer Languages
• Project Management
• Systems Development and Support
• Knowledge Management
• Telecommunications and Network Administration

Basic Instructional Design
• Instructional Theory
• Instructional Foundations
• Instructional Planning
• Instructional Development
• Instructional Implementation
• Instructional Management
• Instructional Evaluation

Selected Design Principles and Elements Related to Image, Sound and Text
• Media Impact
• Media Style
• Appropriate Form
• Simplicity
• Function
• Representation
• Meaning
• Economy

5. Democracy: To participate in the processes of deciding who uses what technologies, our students will be conversant in the discourses of technology and education. They will engage in popular and academic arguments. Within education, issues that are ecological, economic and psychosocial are contested. There are equity, labor and other cultural issues on which our students will be able to take a clear, coherent stance. Our students will be tuned into the rhetoric of commercializing digital technologies in the schools—they will be able to present a public critique of the media images vendors and the mass media use in their representations of education and digital technology.

6. Leadership: Our students will assume leadership in education on issues regarding digital technologies. Given that this is an extremely important area of social life, our students will play a key role in educational practice with digital technologies. They will be involved in decisions that affect the way that digital technology is practiced and perceived.
Appropriating and Globalizing Technology—Labels, Labor and Shoes

**Context**
Shoes have for some time, been an important part of the total fashion outfit for teens and older adults. "Ath-leisure" fashion has been a hot trend over the past three decades. Companies such as Nike are prospering within this larger revolution against formality in dress codes. Coolness and rebellion are connected to hats, shirts, or shoes with Freshjive, Nike, Quicksilver and other labels. Branded—Wearing a brand label is now the fashion norm in countries like Canada and the USA. The average person remains unaware of the practices of global companies and the harsh conditions under which laborers produce branded clothes or shoes.

**Problem**
Design and construct an "appropriate" pair of shoes (cross trainers).

**Design Constraints**
- The shoes can be any size and must be cross trainers.
- One pair of cross trainers must be constructed.
- Must use recycled soles.
- There is no constraint on cost of new materials, but: a) you must account for all money spent, and b) you must provide details for the resource stream of the materials you purchase.
- Uppers must be assembled from pieces.
- Must not involve offensive labels.
- Must not include dangerous materials.
- Must be a design that is original (but can be modeled after big name brands).
- Must be accompanied by a "Labor Behind the Label" report.

**Design Considerations**
- Pay close attention to form of materials, economy, ecology, simplicity, and unity.
- Ductility and durability are important considerations for materials.
- Consider the parts that can be made by machine and parts that will be assembled by hand.
- Ecology and economics are more important than style.
- The designs of DC, Etnies, Nike, and Vans are good examples, but do not design an identical duplicate of these.

**Construction Sequence**
- Collect information on shoe designs.
- Sketch your designs and choose appropriate forms, materials and patterns.
- May use 2D computer aided design (CAD) techniques to lay out patterns.
- May use 3D CAD to work out details of color and form.
- Locate recycled materials or new materials.
- Cut materials to forms on patterns.
- Use glue to temporarily hold pieces together for assembly.
- Final assembly.
Management Issues
• End of Day 2 or 3: Approval of design sketches.
• End of Day 4 or 5: Approval of forms, materials and patterns.
• End of Day 13: Submit "Labor Behind the Label" report.
• End of Day 15: Submit finished shoes.

Related Studies
• Accounting
• Home economics
• Materials science
• Social Studies

Self (Group) Evaluation

<table>
<thead>
<tr>
<th>Question</th>
<th>Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. We stayed within the design constraints and deadlines</td>
<td></td>
</tr>
<tr>
<td>2. Our shoes are unique in their design</td>
<td></td>
</tr>
<tr>
<td>3. Our shoes have design features that are improvements over existing</td>
<td></td>
</tr>
<tr>
<td>designs</td>
<td></td>
</tr>
<tr>
<td>4. The materials used are local and recycled</td>
<td></td>
</tr>
<tr>
<td>5. Our use of materials was economic and efficient</td>
<td></td>
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<tr>
<td>6. Our shoes can be reproduced by people working for fair wages</td>
<td></td>
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<tr>
<td>under healthy conditions (Labor Behind the Label report)</td>
<td></td>
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<tr>
<td>7. Our report explains how the design and production of our shoes is</td>
<td></td>
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<tr>
<td>an improvement over practices of big name brands</td>
<td></td>
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<tr>
<td>Total</td>
<td>35</td>
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</table>

Assessment

<table>
<thead>
<tr>
<th>Category</th>
<th>Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group’s Self Assessment</td>
<td></td>
</tr>
<tr>
<td>Design Principles</td>
<td></td>
</tr>
<tr>
<td>Features and Form</td>
<td>10</td>
</tr>
<tr>
<td>Originality</td>
<td>10</td>
</tr>
<tr>
<td>Economics and Ecology</td>
<td>10</td>
</tr>
<tr>
<td>Craft and Quality</td>
<td>10</td>
</tr>
<tr>
<td>Labor Behind the Label report</td>
<td>15</td>
</tr>
<tr>
<td>Deadlines, Safety and Participation</td>
<td>10</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
</tr>
</tbody>
</table>
Fasten(at)ing Technology— Paper Clips

Context
In the family of fasteners, a paper clip is what you might call a simple, elegant solution to the problem of squeezing or clenching paper. Paper clips are easy to reproduce, easy to use, hold papers together without causing damage or crimping, and have many other uses besides clenching. This is only partially true. Paper clips do cause damage. Some get rusty and stain the paper. Some are too inflexible and leave a permanent crease or crimp in the paper. Your challenge is to improve fastening technologies by designing the perfect paper clip.

Problem
Design and construct a fastener for paper.

Design Constraints
- The fastener must be designed so it is reproducible.
- The fastener or clench must be made of one or two single, continuous pieces of material.
- The fastener must hold two and more sheets of paper together.
- The fastener must be portable and reusable.
- The fastener must not damage the paper.
- The fastener can be made from any material.
- The design must be scalable (e.g., from paper clip to money clip)

Design Considerations
- Pay close attention to the elegant function of the fastener: does it effectively clench?
- Consider a wide range of possible fastener designs.
- Review the range of paper clip designs presented, but do not duplicate these.
- Is the fastener reproducible and scalable?

Construction Sequence
- Brainstorm ideas for the fastener’s operation and appearance.
- Sketch four or five designs and choose appropriate features, forms and materials.
- May use 2D computer aided design (CAD) or 3D modeling techniques to lay out mechanisms and parts.
- Locate recycled materials or new materials.
- Test the materials for the properties.
- Bend and finish the final prototype fastener.
- Test the fastener.

Management Issues
- End of Day 1: Approval of fastener ideas.
- End of Day 2: Fastener prototype and sketches explained, presented and submitted.

Related Studies
- Physics
- Business
- Social Studies
- Sociology
- Psychology
- Engineering

### Honest Self (Group) Evaluation

<table>
<thead>
<tr>
<th>Statement</th>
<th>Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. We stayed within the design constraints and deadlines</td>
<td>______</td>
</tr>
<tr>
<td>2. Our fastener is unique in its design</td>
<td>______</td>
</tr>
<tr>
<td>3. Our fastener has makes effective use of materials</td>
<td>______</td>
</tr>
<tr>
<td>4. Most of the excess materials can be reused or recycled</td>
<td>______</td>
</tr>
<tr>
<td>5. Our use of materials was creative, economic and efficient</td>
<td>______</td>
</tr>
<tr>
<td>6. Our fastener successfully satisfies all the design brief requirements (i.e., holds two and more sheets of paper together; is portable, reproducible, reusable, scalable)</td>
<td>______</td>
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<tr>
<td>7. The demonstration of our fastener was creative and entertaining</td>
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**Total**                                                                                                                                       | ______ |

### Assessment

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<td>Features and Form</td>
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<tr>
<td>Originality</td>
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<tr>
<td>Economics and Ecology</td>
<td>______</td>
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<tr>
<td>Craft and Quality</td>
<td>______</td>
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<tr>
<td>Clenchability</td>
<td>______</td>
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<tr>
<td><strong>Deadlines, Safety and Participation</strong></td>
<td>______</td>
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<tr>
<td><strong>Total</strong></td>
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</table>
Mechanizing Technology—Critters

Context
Strange things have happened. Electronic pets have been escaping and running wild. Are they real creatures or electronic creatures? It doesn't matter right now. Have you ever cared for a Furbee? It's easy, but most kids forget about them. That's why the pets run away. They feel bad and have low self-esteem. The only things that can make them feel better are mechanical critters.

Mechanical critters, you see, are a class below the electronic pets. Maybe the pets are not really "above" the critters, but they think they are. Pair a mechanical critter with an electronic pet and there is an immediate change in personality-- the pet is feeling good. The critters are not so sensitive, or do not care. Our task is to make more critters to keep the pets happy!

Problem
Design and construct a kinetic, mechanical critter.

Design Constraints
- The critter must be kinetic and designed so it moves in more than one direction.
- The critter must be powered by at least one mechanical wind-up motor.
- The critter must fit into a size 8 shoebox.
- The critter must produce an audible sound.
- The critter must not be threatening to small children and pets.
- The critter must be free of electronic components.

Design Considerations
- Pay close attention to the balance and stability of the critter.
- Consider a wide range of possible designs.
- Consider the relation between power, sound and extensions (i.e., arms, legs, wheels, etc).
- Think of the critter as a real creature.

Construction Sequence
- Brainstorm ideas for the critter's operation and appearance.
- Sketch four or five designs and choose appropriate features, forms and materials.
- May use 2D computer aided design (CAD) or 3D modeling techniques to lay out mechanisms and parts.
- Locate recycled materials or new materials.
- Assemble materials for the mechanical processes.
- Assemble and finish the critter.
- Final assembly and test of the critter.

Management Issues
- End of Day 1: Approval of critter ideas.
- End of Day 2: Critter design on paper completed and approved.
- End of Day 3: Begin construction of critters.
- End of Day 5: Critters completed
- End of Day 7: Trials with critters.
Related Studies

- Cybernetics
- Sciences
- Mathematics
- Social Studies

- Sociology
- Psychology
- Engineering

Honest Self (Group) Evaluation

1. We stayed within the design constraints and deadlines ______ out of 5 marks
2. Our critter is unique in its design ______ out of 5 marks
3. Our critter has makes effective use of at least one mechanical power source ______ out of 5 marks
4. Most of the materials used are recycled ______ out of 5 marks
5. Our use of materials was creative, economic and efficient ______ out of 5 marks
6. Our critter successfully satisfies all the design brief requirements (i.e., kinetic, one motor, makes sound, moves in at least one direction) ______ out of 5 marks
7. The demonstration of our critter was creative and entertaining ______ out of 5 marks

Total ______ out of 35

Assessment

Group’s Self Assessment ______ Total/ 35

Design Principles

- Features and Form ______ out of 10
- Originality ______ out of 10
- Economics and Ecology ______ out of 10
- Craft and Quality ______ out of 10
- Working parts ______ out of 15

Deadlines, Safety and Participation ______ out of 10

Total ______ out of 100
Accessorizing Technology— Beads & Things

Context
OH NO! OH YES! I want to give my friend a gift— I want to design it! I want it to be funky— I want it to be elegant! I want it to be something to wear...some accessory to accessorize! I want it to be original! I want to accessorize— I want to make beads & things! I want to make everything! I want everything that money can’t buy!!!

Problem
Create a necklace, bracelet, or some accessory that is strung and can be worn.

Design Constraints
- Total length must not exceed 75 cm
- Total weight must not exceed 300 grams
- At least 75% of the items in the design must be made by you
- Total cost must not exceed $2.00 in materials that you want to buy
- Must use only dead organic, inorganic or synthetic (used or recycled) materials
- Must not involve offensive materials
- Must not include dangerous materials
- Must be a design that is original (can be modeled after other jewelry design)

Design Considerations
- Pay close attention to appropriate form of materials, simplicity, unity and economy
- Unity and repetition are very important design problems to address
- Try to express your own feelings in your design (funny, playful, spiritual, honest, etc.)
- Unity is very important and you will be asked to explain your choices
- (design, environmental, multicultural, political, etc.)
- Consider ceramic, clay, femo, sculpy, glass, metal, plastic or wooden beads and pendants
- Art deco and African designs for jewelry are great examples, but do not design an identical duplicate of these
- Do your very best in your design and in finishing your creation
- No Sloppy Work!

Sequence
- Think about and sketch your overall designs
- Design beads and pendants, and choose appropriate forms and materials
- Collect the materials that you need
- Be sure you like your design and check to make sure it is designed well
- Cut your beads or pendants and smooth any sharp edges
- Do your gluing, fastening or welding or painting before you assemble
- Assemble pieces temporarily and take a step back to observe
- Hang the creation and assess your design
- Place any clasps and tie or crimp the string or wire

Management Issues
- End of Day 1 or 2: Approval of design sketches
- End of Day 1 or 2: Approval of materials
- End of Day 4: Submit finished jewelry or accessory for display
- Be sure to obey all safety rules when using tools and machines!

• Remember to be polite to people who help you!

**Related Studies**

- Drafting and Sketching
- Modern art and technology
- Materials science
- Geography
- Fashion and jewelry design
- Multicultural Design
- Geometry
- Economics and trade

**Honest Self (Group) Evaluation**

<table>
<thead>
<tr>
<th>1. I stayed within the design constraints and deadlines</th>
<th>_____ out of 5 marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. My creation is very much like my approved sketches</td>
<td>_____ out of 5 marks</td>
</tr>
<tr>
<td>3. My creation is unified and looks great on people</td>
<td>_____ out of 5 marks</td>
</tr>
<tr>
<td>4. I have a nice display of principles and elements of design</td>
<td>_____ out of 5 marks</td>
</tr>
<tr>
<td>5. I was persuasive in explaining the unity in my design</td>
<td>_____ out of 5 marks</td>
</tr>
<tr>
<td>6. My finished creation represents quality work</td>
<td>_____ out of 5 marks</td>
</tr>
<tr>
<td>7. My use of resources and tools was economic and safe</td>
<td>_____ out of 5 marks</td>
</tr>
</tbody>
</table>

**Total**

_____ out of 35

**Assessment**

<table>
<thead>
<tr>
<th>Group’s Self Assessment</th>
<th>_____ Total/ 35</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design Principles</td>
<td></td>
</tr>
<tr>
<td>Features and Form</td>
<td>_____ out of 10</td>
</tr>
<tr>
<td>Originality</td>
<td>_____ out of 10</td>
</tr>
<tr>
<td>Fashion and Style</td>
<td>_____ out of 10</td>
</tr>
<tr>
<td>Craft and Quality</td>
<td>_____ out of 10</td>
</tr>
<tr>
<td>Economy and Simplicity</td>
<td>_____ out of 15</td>
</tr>
<tr>
<td>Deadlines, Safety and Participation</td>
<td>_____ out of 10</td>
</tr>
</tbody>
</table>

**Total**

_____ out of 100
Mobilizing and Stabilizing Technology—Mobiles and Stabiles

Context
For one of our first projects in design, we have been asked to construct sculptures! The sculptures will be displayed in the school and we want to show off our understanding of elements and principles of design. We may even decide to sell some sculptures as collectable art!

Problem
Design and construct a mobile.

Design Constraints
- Air is the only source of power that can be used to make the object move.
- Must fit without being crushed or folded into a 3 ft x 3 ft x 3 ft box
- Total cost must not exceed $2.00 in materials that you want to buy
- Must use only dead organic, inorganic or synthetic (used or recycled) materials
- Must not involve offensive materials
- Must not include dangerous materials
- Must be a design that is original (can be modeled after other sculptures)

Design Considerations
- Pay close attention to appropriate form of materials, simplicity, unity and economy
- Balance and motion are very important principles
- Remember, the entire object does not have to move (Can use a “stabile” for a base
- Try to express your own feelings in your design (funny, playful, spiritual, honest, etc.)
- Meaning and representation are very important and you will be asked to explain your theme
- (may be environmental, modern, postmodern, political, etc.)
- The modern mobiles of Alexander Calder are great examples, but do not design an identical duplicate of these
- Do your very best in your design and in finishing your mobile
- No Sloppy work!

Sequence
- Think about and sketch your designs and choose appropriate forms and materials
- Collect the materials that you need
- Be sure you like your design and check to make sure it is workable
- Cut your materials and smooth any sharp edges
- Do your gluing, fastening or welding or painting before you assemble the mobile
- Assemble pieces temporarily before you try to balance your mobile
- Hang the mobile or place it on the stabile and work on balance
- Tell me when you are completed with your mobile

Management Issues
- End of Day 1 or 2: Approval of design sketches
- End of Day 1 or 2: Approval of materials
- End of Day 5: Submit finished mobile for display

- Be sure to obey all safety rules when using tools and machines!
- Remember to be polite to people who help you!

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Related Studies
- Drafting and Sketching
- Modern art and technology
- Geometry
- Materials science

Honest Self (Group) Evaluation

1. I stayed within the design constraints and deadlines _____ out of 5 marks
2. My mobile is very much like my approved sketch _____ out of 5 marks
3. My mobile moves when air passes through it _____ out of 5 marks
4. I have a nice display of the principles and elements of design _____ out of 5 marks
5. My mobile is an effective representation of my theme _____ out of 5 marks
6. My finished mobile represents quality work _____ out of 5 marks
7. My use of resources and tools was economic and safe _____ out of 5 marks

Total _____ out of 35

Assessment

Group’s Self Assessment _____ Total/ 35

Design Principles

Features and Form _____ out of 10
Originality _____ out of 10
Representation and meaning _____ out of 10
Craft and Quality _____ out of 10
Economy and Simplicity _____ out of 15

Deadlines, Safety and Participation _____ out of 10

Total _____ out of 100
Projecting Technology—Catapults and Trebuchets

Context
The Handball And Racquetball Training Association for Teenie-boppers and Kids (Hartatak) has approached us to design an apparatus that will help in teaching the fundamentals and form of returns. The device must deliver a squash ball accurately and consistently to a target ten meters away.

Problem
Create an efficient device for consistently delivering a lightweight projectile (squash ball) on target.

Design Constraints
- The target is a 300 mm diameter hoop placed 1 meter above, and parallel to, the floor (horizontal)
- The device must be at least 10 meters, but no more than 12 meters from the target
- The projectile is a Dunlop ‘Championship S R-A Extra Slow’ squash ball
- The total cost must not exceed $10.00 in purchased materials
- Must not involve chemicals, compressed air, or combustion propellants
- Must be safe to operate

Design Considerations
- Pay close attention to appropriate form of materials, simplicity, unity and economy
- Consider engineering principles such as energy transfer, fluid drag, motion, and trajectory (dynamics)
- Catapults and trebuchets work well but there are many other possible solutions
- Consider aesthetics and elegance of form in the device
- Remember that your device must deliver the projectile consistently over a series of trials
- Do your very best in your design and in finishing your creation
- No Sloppy Work!

Sequence
- Think about and sketch your overall designs
- Choose appropriate forms and materials
- Collect the materials that you need
- Be sure you like your design and double-check to make sure it is designed well
- Carefully layout and cut individual parts
- Do your fastening, welding or painting of parts before you assemble
- Assemble the device temporarily first
- Test and assess your design
- Retest and “permanently” fasten parts
- Be sure to obey all safety rules when using tools and machines!
- Remember to be polite to people who help you!

Management Issues
- Place yourselves in groups of three
- End of Day 1 or 2: Approval of design sketches
- End of Day 2 or 3: Approval of materials
- End of Day 5 and 6: Test devices
- End of day 7: Final performance tests—Out of 5 trials
- End of day 8: Final reports due (Mathematical prediction of accuracy, drawings, calculations)
### Related Studies
- Drafting and Sketching
- Engineering
- Dynamics
- Materials Science
- Medieval History
- Physics

### Honest Self (Group) Evaluation

<table>
<thead>
<tr>
<th>Description</th>
<th>Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. We stayed within the design constraints and deadlines</td>
<td></td>
</tr>
<tr>
<td>2. Our device is very much like my approved sketch</td>
<td></td>
</tr>
<tr>
<td>3. Our device was accurate in each of the 5 trials</td>
<td></td>
</tr>
<tr>
<td>4. Our device has a good example of design features</td>
<td></td>
</tr>
<tr>
<td>5. Our device’s appearance represents quality work</td>
<td></td>
</tr>
<tr>
<td>6. Our report is complete and technical</td>
<td></td>
</tr>
<tr>
<td>7. My use of resources and tools was economic and safe</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
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</table>

### Assessment

<table>
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</tr>
</tbody>
</table>

#### Design Principles
- Features and Form                     |       |
- Originality                            |       |
- Performance                            |       |
- Craft and Quality                      |       |
- Economy and Simplicity                 |       |
| **Deadlines, Safety and Participation** |       |
| **Total**                               |       |
Subvertizing Technology— Print Media is the Message

Context
Abbusters, the Vancouver based organization has challenged us to make a difference in this world of mass advertisement, mass consumption, and mass production. Adbusters wants us to be culture jammers rather than mindless consumers. This organization wants us to participate in slowing down consumption by making fun of advertisements.

Problem
Design a print advertisement that spoofs, or subverts, a corporate ad.

Design Constraints
- Original ad must be a print ad (fashion, food, movies, recreation, vice, etc.)
- The spoof ad must be original
- Must not involve racially, religiously, or sexually offensive content (text or images)
- Subvertizement can be in black and white or in color, or a combination
- Subvertizement must appear on an 11 x 17 piece of paper

Design Considerations
- Pay close attention to appropriate principles of graphic design and persuasion
- Unity and repetition are very important design problems to address
- Try to express your own feelings in your ad (funny, playful, spiritual, honest, etc.)
- Content is very important and you will be asked to explain your choices (design, gender, environmental, multicultural, political, etc.)
- Consult forms of subvertizing created by Adbusters, Culture Jam and Guerrilla Girls.
- No Sloppy Work!

Sequence
- Choose a print ad to subvert, spoof, or 'bust' (fashion, food, movies, recreation, vice, etc.)
- Study the ad closely to determine what is being promoted: WHAT are the messages (obvious and hidden)?
- Determine WHO the message is for (broad- vs. narrow-casting)
- Determine WHERE the messages are coming from and WHEN they are effective
- Determine WHY the messages are a problem and WHY you want to bust them
- Determine the WHAT, WHO, WHEN, WHERE and WHY of your ad: What are your intentions
- Design about 3 to 6 alternatives to choose from
- Assess your design alternatives--have friends help you to choose
- Begin to formally re/present your ad

Management Issues
- End of Day 1 or 2: Approval of ad to be busted
- End of Day 1 or 2: Approval of alternative ads
- End of Day 4: First completed draft of your redesigned ad
- End of Day 7: Final Draft of ad due for peer assessment
- Remember to be polite to people or agencies who help you!
### Related Studies
- Art, Drafting, and Sketching
- Fashion and graphic design
- Modern media
- EcoDesign
- Economics

### Honest Peer Evaluation

| 1. He or She stayed within the design constraints and deadlines | ______ out of 5 marks |
| 2. Her or his ad is from one of the alternative designs | ______ out of 5 marks |
| 3. Her or his ad is unified and well re/presented | ______ out of 5 marks |
| 4. He or she has as nice display of principles and elements of design | ______ out of 5 marks |
| 5. The ad persuasively subverts the original ad | ______ out of 5 marks |
| 6. The ad represents quality work | ______ out of 5 marks |
| 7. The use of resources and media adhered to n/etiquette | ______ out of 5 marks |

______ Total out of 35

### Assessment

| Peer Assessment | ______ Student Total |
| Design Principles | ______ out of 10 |
| Appropriate Form | ______ out of 10 |
| Unity | ______ out of 10 |
| Style (humorous, political, etc.) | ______ out of 10 |
| Effectiveness of Message | ______ out of 10 |
| Media Sophistication | ______ out of 10 |
| Deadlines and Participation | ______ out of 15 |

______ Total out of 100
Subvertizing Technology—Digital Media is the Message

Context
Adbusters, the Vancouver based organization has challenged us to make a difference in this world of mass advertisement, mass consumption, and mass production. Adbusters wants us to be culture jammers rather than mindless consumers. This organization wants us to participate in slowing down consumption by making fun of advertisements and placing the spoof ads on the World Wide Web.

Problem
Design a digital advertisement that spoofs, or subverts, a corporate ad. Work in groups of three.

Design Constraints
- Original ad must be a digital, print or television ad (fashion, food, movies, recreation, vice, etc.)
- The spoof ad must be original
- Must not involve racially, religiously, or sexually offensive content (text or images)
- Spoof ad can be in black and white or in color, or a combination
- Subvertizement must be placed on the WWW or shown as a video.
- If animation or video the Subvertizement must be at least 3 minutes in duration and no more than 10 minutes (Use PowerPoint, I Movie or Windows Movie Maker).

Design Considerations
- Pay close attention to appropriate principles of graphic design and persuasion
- Unity and repetition are very important design problems to address
- Try to express your own feelings in your ad (funny, playful, spiritual, honest, etc.)
- Content is very important and you will be asked to explain your choices
- Consult forms of subverting created by Adbusters, Culture Jam and Guerrilla Girls.
- No Sloppy Work!

Sequence
- Choose a digital, print or television ad to contradict, spoof, or 'bust' (fashion, food, movies, recreation, vice, etc.)
- Study the ad closely to determine what is being promoted--WHAT are the messages (obvious and hidden)?
- Determine WHO the message is for (broad- vs. narrow-casting)
- Determine WHERE the messages are coming from and WHEN they are effective
- Determine WHY the messages are a problem and WHY you want to bust them
- Determine the WHAT, WHO, WHEN, WHERE and WHY of your ad--what are your intentions
- Design about 3 to 6 alternatives to choose from
- Assess your design alternatives--have friends help you to choose
- Begin to formally re/present your ad

Management Issues
- End of Day 1 or 2: Approval of ad to be busted
- End of Day 1 or 2: Approval of story boards for alternative ads
- End of Day 7: First completed draft of your Subvertizement
- End of Day 14: Final Version of ad due for peer assessment

- Remember to be polite to people or agencies who help you!

**Related Studies**
- Art, Drafting, and Sketching
- Fashion and graphic design
- Modern media
- EcoDesign
- Economics

**Honest Peer Evaluation**

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
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<th></th>
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</thead>
<tbody>
<tr>
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<tr>
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<tr>
<td>7.</td>
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_____ Total out of 35

**Assessment**

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<td></td>
</tr>
</tbody>
</table>

_____ Total out of 100
Aesthetic Problems: Principles of Design

Principles of Design
• Appropriate Form
• Simplicity
• Function
• Representation
• Meaning
• Economy

Problems of Form and Composition
• Balance
• Contiguity
• Continuity or Flow
• Contrast or Dissonance
• Ecology
• Emphasis or Dominance
• Harmony
• Integration & Unity
• Material
• Motion and Transition
• Proportion
• Relevance
• Rhythm and Repetition
• Variety or Diversity

Elements of Visual Form
• Point
• Line
• Direction
• Position
• Scale
• Color
• Value
• Shape (Form)
• Texture

Metric Elements
• Point
• Line
• Plane
• Plate (Disc)

Stereometric Elements
• Prism & Antiprism
• Cylinder & Rod
• Cone
• Sphere
• Pyramid & Dipyramid
• Dome
• Cube & Polyhedra
Activities for Global Economic Awareness and Activism

Global Economic Awareness
Goal: To illustrate to students the imbalances of the current world order.

PROCESS:
1. Present students with Scenario I from the Findlay-Kettering Committee on International Awareness Fact Sheet.
2. Present students with Scenario II from the Real Global Village.
3. Divide students into groups to demonstrate global distributions of wealth and purchasing power.

Scenario I: Imagine that we could compress the world’s present population of over six billion persons into one town of 100 people, with all of the existing human ratios remaining the same, there would be:

- 6 North American (Canada and the USA) citizens
- These 6 North Americans—a mere 6% of the town’s population—would receive 59% of the town’s income.
- This would be the direct result of their controlling over half of the town’s available material resources.
- The 6 North Americans would have an average life expectancy of 70 years.
- The other 94 would have an average life expectancy of less than 40 years.
- The lowest income group among the North Americans, even though it included a number of people who were hungry much of the time, would be better off by far than the average of the other townspeople.

Scenario II: In this village of precisely 100 people, with all of the existing human ratios remaining the same, there would be:

- 57 Asians
- 21 Europeans
- 14 from the Western Hemisphere, both North and South
- 8 Africans

- 52 would be female
- 48 would be male

- 70 would be non-white
- 30 would be white

- 70 would be non-Christian
- 30 would be Christian

- 89 would be heterosexual
- 11 would be homosexual

- 6 people would possess 59% of the entire world’s wealth and all 6 would be from the United States

- 80 would live in substandard housing
- 70 would be unable to read
- 50 would suffer from malnutrition
- 1 would be near death, 1 would be near birth
- 1 (yes, only 1) would have a college education
- 1 would own a computer

QUESTIONS:
- Could such a town, in which the 94 non-Americans were quite aware of both the fact and means of the Americans’ advantages, survive?
- Could the 6 North Americans continue to extract the majority of raw materials essential to their own standard of living from the property of the other 94 townspeople?
While the 6 North Americans were using over half the resources to maintain their own comfort, could they at the same time convince the other 94 to limit their population growth by saying that resources of the town were limited?

Would some of the 6 North Americans have to become soldiers and would some of their material and human resources have to be devoted to military efforts in order to keep the rest of the town at its present disadvantage?

What roles might technology play in this village?

Should all of us try to learn more about the have-not nations of this world and become more aware of their importance to our well-being?

**Distribution of Wealth**

Divide the class into groups to demonstrate the distribution of wealth of the world with the use of peanuts. This example is based on groups of forty students. Use proportions adjusted to class size.

<table>
<thead>
<tr>
<th>Region</th>
<th>Number of Students (Based on share of world population)</th>
<th>Number of Peanuts* (Based on GNP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asia and Australia</td>
<td>24 (60%)</td>
<td>7 (17.5%)</td>
</tr>
<tr>
<td>Africa</td>
<td>4 (10%)</td>
<td>1 (2.5%)</td>
</tr>
<tr>
<td>USA and Canada</td>
<td>2 (5%)</td>
<td>13 (32.5%)</td>
</tr>
<tr>
<td>Latin America</td>
<td>3 (7.5%)</td>
<td>2 (5%)</td>
</tr>
<tr>
<td>Western Europe</td>
<td>3 (7.5%)</td>
<td>10 (25%)</td>
</tr>
<tr>
<td>Eastern Europe, Russia and Middle East</td>
<td>4 (10%)</td>
<td>7 (17.5%)</td>
</tr>
</tbody>
</table>

*About 85% of the world’s economic activity (GDP) is controlled by the richest fifth of all people in the world. The total economic activity of the top 200 corporations is nearly twice the amount of the poorest four-fifths, or 4.5 billion people. While incomes have increased over the past forty years, the relative positions of people in dollar-rich versus dollar-poor countries remains the same. Currently, over 50% of the world has an income of $300.00 or less per capita per year.

Ask the students how they feel about the distribution of “wealth.”

- Is it just?
- Should it be changed?
- If so, how might you change it?
- Have you ever experienced a similar situation where something was distributed so unevenly? What did you do?
- What roles does technology play in distributions of wealth?

**Purchasing Power**

Now with the class divided, demonstrate the global purchasing power of these regions of the world, using peanuts again. This example is also based on a class size of forty students so adjust accordingly.

<table>
<thead>
<tr>
<th>Region</th>
<th>Number of Students (Based on share of world population)</th>
<th>Purchasing Power (Based on “real” GNP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asia and Australia</td>
<td>24 (60%)</td>
<td>11 (27%)</td>
</tr>
<tr>
<td>Africa</td>
<td>4 (10%)</td>
<td>1 (2%)</td>
</tr>
<tr>
<td>USA and Canada</td>
<td>2 (5%)</td>
<td>13 (33%)</td>
</tr>
<tr>
<td>Latin America</td>
<td>3 (7.5%)</td>
<td>3 (7%)</td>
</tr>
<tr>
<td>Western Europe</td>
<td>3 (7.5%)</td>
<td>9 (22%)</td>
</tr>
<tr>
<td>Eastern Europe, Russia and Middle East</td>
<td>4 (10%)</td>
<td>4 (10%)</td>
</tr>
</tbody>
</table>

Ask the students how they now feel about their global purchasing power (Ask the previous questions, and add):

- What can be done with “surplus” goods and services (peanuts)?
- What ought to be done?
- What roles might technology play in this scenario?
- What if more than food (peanuts) are needed or desired?
Resources for Global Economics (for Teachers)

Child Labor: Costly at Any Price
CoDevelopment Canada
205 2929 Commercial Drive
Vancouver BC V5N 4C8
Phone: 604-708-1495
Fax: 604-708-1497
Email: codev@web.net

Global Sweatshop Curriculum Packet
Campaign for Labour Rights
1247 “E” Street, SE
Washington DC, 20003
Phone: 541-344-5410
Email: clr@igc.apc.org
http://www.summersault.com/~agj/clr/

Next Steps in Global Education
The American Forum for Global Education
120 Wall Street, Suite 2600
New York, NY 10005
Phone: 1-800-813-5056
Fax: (212) 624-1412
http://www.globaled.org/order.html

Learning Materials for Your Classroom:
Development Education Program
Getting Down To Data
World Bank

United Food and Commercial Worker Union
Child Labor Links
http://www.ufcw.ca/pubs/clabour/links.htm

Child Labor: ILO Kids
US International Labor Organization
http://us.ilo.org/ilokids/

The Paper Trail: Connecting Economic and Natural Systems
Sustainability Education Center,
The American Forum for Global Education
120 Wall Street, Suite 2600,
New York, NY 10005
Tel: 212-624-1300
Fax: 212-624-1412
Email: globed120@aol.com
http://www.globaled.org/sustain/sustain.html

Wear Fair Action Kit
Labour Behind the Label Coalition
606 Shaw Street
Toronto, ON M6G 3L6
Phone: 416-532-8584
Fax: 416-532-7688
Email: perg@web.net
http://www.web.net/~msn/5cats.htm
Technological Literacy Dispatch (9 January 2004)
Levi Strauss & Co. Closes Last Two US Factories—Canadian Factories will Close in March

Stephen Petrina

After celebrating its 150th year anniversary on 5 May 2003, Levi Strauss & Co. closed its last US factory in San Antonio, Texas on Friday, January 9th. This closing is symbolic of the trend of textile manufacturing and other industries, which shifted operations into Asian and Central American sweatshops to take advantage of (i.e., exploit) foreign labour (mostly women) who work for $1 per hour. Levi Strauss was paying US workers $11.00 to $14.00 per hour. The last three Canadian factories, in Brantford, Edmonton and Stoney Creek, will close in March. At that time, the final 1,180 Levi Strauss and Co. factory jobs in Canada will be eliminated. Levi Strauss & Co. total sales "stagnated" in 2002 at $4.1 billion after a peak of $7.1 billion in 1996. A Levi Strauss spokesman, Jeff Beckman, promised "we're still an American brand, but we're also a brand and a company whose products have been adopted by consumers around the world." "We have to operate as a global company."