

Name: _____ Date: _____ Class: _____

Activity Worksheet

Part 1: Personal Evaluation

Imagine you are a *Time Magazine* editor who must choose just ONE design for the “Invention of the Year,” plus one runner up. Indicate your choices below and explain how you designated first and second place.

My first choice: _____

Why? In your judgement, what important criteria does this invention meet?

My second choice: _____

Why? In your judgement, what important criteria does this invention meet?

Part 2: Critical Evaluation

As a class, you voted on the two most influential inventions of 2014. Using complete sentences, answer the following questions for each of those designs.

The first invention my class chose was _____

1. Who does this design benefit? In what ways?
2. Who or what might be harmed by this design? In what ways?
3. Who might be discouraged or excluded from using this design?
4. Who funded the development of this design, and why do you think they funded it?
5. After looking more critically at this design, is there anything else you noticed about it?

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The second invention my class chose was _____

1. Who does this design benefit? In what ways?
2. Who or what might be harmed by this design? In what ways?
3. Who might be discouraged or excluded from using this design?
4. Who funded the development of this design, and why do you think they funded it?
5. After looking more critically at this design, is there anything else you noticed?

Part 3: Class Definition of Ethics

Review the *Engineering Code of Ethics* and discuss as a class. Create a class definition of “ethics” by agreeing on five most-important principles.

1. _____
2. _____
3. _____
4. _____
5. _____

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Part 4: Jorge Odón's Invention

Read the *Car Mechanic Dreams up a Tool to Ease Births* article. As you are reading, write down five questions that occur to you. Come up with one question in each of the following topic areas: manufacturing, testing, availability and impact; and one last question of your choice.

Write the questions in the boxes below.

Manufacturing:		Testing:
Availability:	Impact:	Other:

Part 5: Make Your Own Alternative Design

Review the *Top Inventions of 2014*, choose one, and create an alternative design. Make your alternative design more ethical according to the class definition of “ethics.” At the end of the period, you will present your design to the Bill and Melinda Gates Foundation who will decide which design to fund. Be sure to keep in mind the definition of “ethics” agreed upon by the class.

1. What ideas do you have for modifying an existing design to make it more ethical?
2. What problem(s) can your design solve?
3. Who will benefit from your design?

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4. On whom will you test your design? How will you test your design?

5. To whom will you market your design and why? How will you market it?

6. What else will you do to ensure your design is ethical? How will you ensure ethical testing and manufacturing/distribution?

7. In what ways might your design not be ideal?

8. Draw your alternative design below (or on a separate sheet of paper).
Include as many details as possible. Especially indicate modifications from the original design.

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Part 6: Alternative Design Presentation

In the space below, write the words for a presentation that you would make to a charitable foundation that funds humanitarian projects in which you try to persuade them to sponsor your design. Make connections between your design changes and the class definition of “ethics.” Make sure to include the following key terms as they apply to the invention: altruism, production, testing, availability and impact. Be sure to explain *why* they should fund your design.

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.