

There is a chill in the pre-dawn air. In the arid wastes of southern New Mexico, a few dozen scientists, engineers, and military personnel have their eyes trained on a distant, spindly 100-foot-high platform erected on the desert floor. Just fifteen seconds before 5:30a.m., a signal is given, and the platform erupts into a brilliant furnace of nuclear energy. The Trinity Test – the first test of an atomic weapon – is a success. But from the safety of a bunker, one of the leading physicists who had worked on the weapon, J. Robert Oppenheimer, recalls the fateful words of Krishna as spoken in the Indian epic *The Bagavad Gita*: “Now, I am become death, destroyer of worlds.” In that moment, the world was changed. Forever.

The Spring Project for the Discovery Core this semester is inspired by the BBC series The Day the Universe Changed. You will research a discovery, development, or invention from the last 150 years that changed the world; write a concise research paper about your topic; and create a board or card game to show & teach others what you’ve learned.

Your **Research Paper** must be 3-4 pages, typed, using MLA format. You must have 4-8 sources (no encyclopedia/wiki). Your focus should be on the following:

- What was the world like (in the context of your topic) before this development?
- How did it change the way people *think* and *live*? Consider the effects on health, environment, economy, politics, and/or interpersonal relationships.

For the **board/card game**, create an interactive experience that is both fun and educational. It should show thoughtful reflection about the changes you’ve researched can be translated into an engaging game. A carefully worded set of instructions for play are required.

### Schedule

Monday 3/5 6B	Tuesday 3/13 6B	Friday 3/23 6B	Tuesday 4/17 6B, 7B, 8B	Monday 4/23 6B, 7B, 8B	Friday 4/27 6B
Intro & Topic Lottery	Research Evidence* due	Essay outline due	Research Paper draft due	Final Research Paper due	Game Day!

\* evidence of 2 hours content research; at least 3 reliable sources/2 pp. of notes, color-coded.

## **Research Evidence**

Two required elements of your research are:

- online content research (for text & data)
- an interview with an adult (not a parent) to find how they experienced the change or view the consequences

You need to visit at least three different types of websites (.org, .edu, .gov, etc.) to gather information. You may also use relevant books, magazines, or newspapers. All research sources must be cited correctly (use MLA citation site online). Notes can be handwritten or typed into a document of your own. Such information should be clearly identified as to which aspect of research it pertains to. Each section of notes must include a 5-10 sentence **summary** (in your own words) and an explanation of the **significance** of the information.

### **Topic Areas:**

Commercial Air travel	Gasoline/Oil
Personal computers	Factory farming
RADAR	Vaccines
ICBM	Antibiotics
Cell phones	Antibiotic-resistant bacteria
Internet	smartphones
Solar panels	Cosmetics
Pesticides	Rubber
Jet aircraft	Television
Polyester/nylon	Electrification
Fast Food franchising	Soft drinks/proliferation of sugar
Blogging	Drone aircraft (warfare/surveillance)
Manhattan Project	Nuclear weapons
Nuclear power	Trains
Modern Advertising	Herbicides
SCUBA	Wind Power
Sputnik	Social networking
Rare earth minerals (tantalum, coltan)	Digital imagery
GPS	Digital music files & transmission
Rock & roll	SONAR
Sewage treatment	Hubble Space telescope
Electric Cars	Gene technology – medical
Gene technology – agricultural	YouTube
Amazon.com	Container shipping

You may choose from the above list or propose a topic of your own to the instructors.

## NOTES

- Students work with one partner.
- During launch day, ask students who are “willing to work with anybody in the core” to come to side of room; others pick their partners.
- One paper per group.
- We should more clearly define the elements that need to be addressed (not just “before and after”).