

### **Honors Topic Assignment #3**

Paper Copy Due Thursday October 18th

Discussion at Lunch on Thursday October 18th

Please read "[Funding basic research plays the long game for future payoffs](#)" from The Conversation, "[What is basic research](#)" from Science Nordic, and "[What's the Use of Basic Science?](#)" an article from the former director of the CERN team to develop an understanding of what basic/fundamental research is and why scientists conduct it.

Please also read "[Basic Science Can't Survive without Government Funding](#)" from Scientific American, "[Agencies must show that basic research is worth funding](#)" from Nature, and "[The Most Important Science to Fund is the Hardest to Explain](#)" from Forbes to develop an understanding of hows and whys of funding basic science.

Finally please also read the Abstract (on 1st page) and Conclusion (starts on page 18) of the following article: "[The economic benefits of publicly funded basic research:a critical review](#)" from Research Policy to gain understanding of the economic and government policy implications of basic research. If you would like to read the whole article you are welcome to, but this is a VERY long article from a peer review research journal, and will take you some time to read.

After reviewing these resources please answer the following questions in a reflection. You can answer the questions individually or write them as a short reflection essay. Please make sure to use complete sentences as well as correct spelling and grammar.

Feel free to discuss your answers with others, but make sure that your reflection is in your own words and reflects the conclusions which you arrived at. If you do discuss this assignment with other students from the honors class, please list them at the top of your reflection.

#### **Reflection Questions:**

1. After reading the articles on what basic research is, how it is used, and how it has impacted our world, please reflect on how you now see the value of the fundamental physics research you learned about in our previous reflections. How have the articles changed or reinforced your previous opinion? Please cite examples from the articles (from this topic assignment or previous ones) in your response.
2. After reading the articles covering the funding of basic research, what are your thoughts on how basic research is typically funded? Do you think there should be more or less funding from public sources? Should funding be determined by the likelihood of success of the research or the likelihood of the research spinning off more applied research?
3. After reading the Research Policy article, reflect on how basic research can economically impact a country and the case that the authors make for the government policies that should be in place to generate the biggest impact. In addition please comment on what surprised you the most about the authors conclusions?

### **Preparation for Discussion**

We will be conducting a socratic seminar style discussion with multiple groups. Within each group there will be one sub-group discussing and one sub-group observing. Each discussing group will be discussing a selection of questions from Honors Topics 1-3, so if you are in the discussion group this time (list below), please be prepared to discuss any of them and bring printed copies of your responses.

These are the groups for this first discussion. You will switch roles for the second discussion

<b>Discussing Group</b>	<b>Observing Group</b>
Kaleb Breton	Ryan Cruz
Marino de Boer	Luci Guthey
Nicholas Jennings	Kevin Rojas
Rachel Mendelsohn	Dylan Bilek
Katie Roner	Aliza Bos
Kieran Cunningham	Evan McDuffie
Elly Jarvis	Trevor Prais
Topher Rojas	Bella Riveria
Kaitlyn Tremble	Kelaiah Salustiano
Kevin Villa	Ciy'Jarrah Williams
Hannah Davis	Tait Carrillo
Emily Madera	Connor Jennings
Jackson Welsh	Taylor Silveria