



*Independent Lens : The Atom Smashers*  
USA, 73 minutes  
(Directors : Clayton Brown, Monica Long Ross)

### **Synopsis**

Welcome to Fermilab, home of the world's most powerful particle accelerator and the possible site of a breakthrough in our understanding of the universe. Physicists at Fermilab smash atoms in the 4-mile-long accelerator at nearly the speed of light. Their hope is to find a yet-unseen particle posited by the Scottish scientists Peter Higgs more than four decades ago, which might be the missing piece in the puzzle of the universe's origins and makeup.

### **Study Ideas/Questions**

1. How important do you think science is as part of a well-balanced education? Do you think it is as important as math or the arts?
2. The physicists at Fermilab are searching for the Higgs boson. At times the search seems impossible and it is possible they will never find the boson. Do you think the search is still important? Why or why not.
3. What, if anything, do you know about the Large Hadron Collider (LHC)? Have you heard of CERN? What have heard?
4. *The Atom Smashers* discusses both the work of the physicists as well as their personal lives. Do you think the documentary subjects do a good job of balancing their work and their personal lives? Do you think the documentary does a good job of showing both sides of their lives?
5. Did *The Atom Smashers* help you gain more insight or knowledge about physics? Do you find physics interesting? Why or why not.
6. The film discusses the issue of government support for Fermilab's programs. It takes place during the Bush administration. Do you think the Obama administration will put money back into science programs? Do you think it is important that the US government supports science programs?
7. Fermilab has been in the news recently. Find newspaper articles regarding Fermilab and its programs and compare the current information to the information presented in the film. Have things changed at Fermilab? What are they working on now?
8. People don't often associate creativity with science and physics. Do you think there is a lot of creativity (not just an ability to understand the concepts) involved in science and physics? Why or why not. And, why do you think people don't connect creativity to science?
9. Who was the most interested character to you? Why did this person stick out to you in the story?
10. Did you like the film? Do you think it related the concepts and story to you well?

### **Useful websites**

<http://www.pbs.org/independentlens/atomsmashers/>

<http://theatomsmashers.blogspot.com/>

[http://www.youtube.com/watch?v=Qa-ypx\\_wUms](http://www.youtube.com/watch?v=Qa-ypx_wUms)

[www.cinemachicago.org](http://www.cinemachicago.org)

