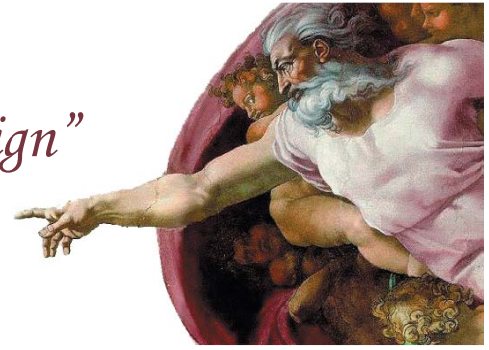


# *The Evolution of Creationism: Critically Appraising “Intelligent Design”*

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## **Part I—Teach the Controversy**

Nicole looked up from her table in the teachers’ lounge. She was halfway through grading her last pile of student papers, almost finished with the year’s work. It had been an uneventful year teaching sophomore biology at Park City High School, with the usual mix of motivated students and students who would rather be doing anything other than taking a required science class. So she was surprised and curious to find her principal standing next to the table with a serious look on her face.

“Nicole, can you take a break for awhile and come to my office? I have something important I need to discuss with you,” said Principal Skinner.

“Sure, I can finish these grades later,” replied Nicole as she gathered her things and followed her boss.

In the office, Nancy Skinner handed Nicole a sheet of paper. “Nicole, I’ve been hearing a lot this semester from several parents and board members about a hole in our science curriculum. Apparently the standard treatment of evolution that we follow is overlooking an important new development called “Intelligent Design.” You know I’m not that well-versed in science, but it seems that this idea has some merit, and teaching the controversy that’s floating around in the scientific community about evolution versus Intelligent Design should be great for our students’ critical thinking skills. You know how we’re always looking for new and better ways to introduce those skills into the curriculum. Would you be willing to take the lead in writing an expansion of the evolution unit for our district that includes Intelligent Design? Here are some resources that I’ve skimmed through on the Internet. I’m sure there are others out there.”

Nicole sat stunned. She had heard about school districts across the country facing pressure to include Intelligent Design, as it was called, in their curricula, but she had not expected to receive such a direct request from her principal.

“I’m not sure that this is a good idea, Nancy,” Nicole said. “I haven’t paid close attention to this issue, but I know that including ID in the science curriculum has been highly controversial in other districts. How about for starters I do some more research on ID and how other school districts have approached it? I’ll present my findings to the science faculty and you, and then we can make a decision on whether or not to proceed with the curriculum change.”

“OK, sounds good,” answered the principal. “From what I read it sounds solid, but like I said, I’ve never been big on science. When I was in college I was pretty relieved to get my science requirements finished and get back to my English and education classes. You’ll be a better judge of the merits of the claims than I am. Why don’t you report back to me in a week with your preliminary findings and we can see if we want to call in the rest of the faculty for discussing an addition to the curriculum or if we just want to let the matter rest.”

“Well then, I’d better knock off the rest of my grading so I can focus on this,” smiled Nicole. “See you in a week.”

## Questions

1. What other regions of the country have had attempts to include Intelligent Design into their science curricula? Where have ID proponents been successful in incorporating this viewpoint into public school science classes? Is ID different than creationism?
2. What are the major claims of Intelligent Design? What is the rationale for including ID in a science curriculum according to its proponents?
3. What are criticisms of including Intelligent Design in the science curriculum?

## Assignment

Write well-constructed answers to each of the three questions Nicole faces as she investigates Intelligent Design. Come to class prepared to “present” your findings to the principal.

## Resources

The Journal Editorial Report (PBS), May 27, 2005

<http://www.pbs.org/wnet/journaleditorialreport/052705/qa1.html>

Discovery Institute

<http://www.discovery.org/csc>

Website of the leading group supporting ID and its inclusion in high school science curricula.

National Center for Science Education

<http://www.ncseweb.org/>

Website containing news of school districts considering ID for inclusion in their curriculum as well as criticisms of ID.

The Talk.Origins Archive, “Exploring the Creation/Evolution Controversy”

<http://www.talkorigins.org/>

The True.Origin Archive, “Exposing the Myth of Evolution”

<http://www.trueorigin.org/links.asp>

## Part II—Reporting Back



One week later, Nicole was back in Nancy Skinner’s office. She reported her findings.

Nancy leaned back in her desk chair. “Interesting. I’ve never been afraid of a little controversy in the district, so I’m not convinced yet that we should drop the matter. While you were talking I thought of a few questions for you as a science teacher. I probably should know the answers, but I’m sure you can state them better than I ever could...”

“First, isn’t evolution just a theory?”

“How does one define science? What makes something “count” as part of science so it can be part of the curriculum?”

“And, then, wouldn’t it be easier just to skip evolution altogether? What’s so important about teaching this topic in biology? Does knowing about evolution do anything beneficial for us as a society?”

Nicole gathered her thoughts, and then tackled the questions one by one.

### **Assignment**

How should Nicole answer Principal Skinner’s questions? Write your answers to the three sets of questions and come to the next class prepared to discuss them. The resources listed at the end in Part I can guide you.



### Part III—Making a Decision

Principal Skinner leaned forward after Nicole finished talking. “That was quite thorough!” she replied. “Tell me then, what is your opinion—should we include Intelligent Design in the science curriculum, put it somewhere else in the curriculum, or ignore it completely? Why don’t you write up a policy statement that we can use to give to interested parties when they propose adding ID to the curriculum.”

#### *Assignment*

Write a formal policy statement outlining what should be included in the science curriculum for this district. Include well-supported arguments for why you are proposing these topics and not others.

## Part IV—The Flagellum



Nancy smiled. “OK, I’m with you. No Intelligent Design in the biology curriculum for now. But this whole issue makes me think that our science faculty needs to be better prepared to answer questions from parents and students about the topic. Since you’ve already done some of the homework, could I convince you to take a little summer stipend for your trouble and give a professional development presentation to the science faculty in August? I think it would be great if you took an in-depth look at one specific claim of Intelligent Design, explained it really well from its supporters’ point of view, and then gave a clear presentation of the criticism of it from the scientific community’s point of view. How about tackling that flagellum thing? It came up all the time when I was surfing the web.”

Nicole agreed. Who couldn’t use a little extra spending money on a teacher’s salary? Plus, she loved microbiology and molecular biology in college, so the flagellum topic was right up her alley. “Sure, I’ll do it,” she said. “Just make sure there’s plenty of coffee and doughnuts for my colleagues when I present. Full stomachs make for happy listeners.”

### Assignment

Research the irreducible complexity of the bacterial flagellum and the criticisms of these claims. Include a conclusion that describes any predictions that Intelligent Design makes on this topic, and describe an experiment that could confirm or nullify the Intelligent Design hypothesis. Report your findings as an oral presentation using visual aids to enhance your communication process. Be sure to provide enough background for the audience to understand the context of the argument—for example, it would be important to include a discussion of the structure of the bacterial flagellum.

### Resources

The following are just a few of the many resources available on the Internet.

For information on the structure of a bacterial flagellum, see:

- *Molecular Biology of the Cell*, 4<sup>th</sup> ed., New York: Garland Publishing, 2002.  
Available online at PubMed (search books, bacteria AND flagella)  
<http://www.ncbi.nlm.nih.gov/entrez/>

For Michael Behe’s argument, see:

- A general overview:  
[http://www.arn.org/docs/behe/mb\\_idfrombiochemistry.htm](http://www.arn.org/docs/behe/mb_idfrombiochemistry.htm)
- The flagellum in particular:  
Behe, M.J., “Irreducible Complexity: Obstacle to Darwinian Evolution,” in *Debating Design: From Darwin to DNA*, W.A. Dembski and M. Ruse, eds., Cambridge; New York: Cambridge University Press, 2004.

For the views of a critic, see:

- Ken Miller’s “The Flagellum Unspun: The Collapse of ‘Irreducible Complexity’” at  
<http://www.millerandlevine.com/km/evol/design2/article.htm>

Image Credit: Based on a detail of Michelangelo’s *The Creation of Adam* (1508–1512, fresco, Sistine Chapel, Vatican).  
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