Pick ten bean leaves, weigh them to the nearest 0.01 g, and place into 15 ml methanol in a small beaker. Allow these leaves to sit in the methanol for at least 10 minutes before the beaker is exposed to light. Set this preparation aside for extraction later.

Prepare 13 petri dishes as follows:

1, 2, 3, 4, and 9 to contain 3 ml 0.2 M sucrose; 5 to contain 3 ml rifamycin; 6 to contain 3 ml chloramphenicol; 7 to contain 3 ml cycloheximide; 8 and 9a to contain 3 ml δ-aminolevulinic acid (these should be placed in the refrigerator until 20 minutes before they are needed); 10 to contain rifamycin-δALA; 11 to contain chloramphenicol-δALA; 12 to contain cycloheximide-δALA.

Harvest ten leaves for each petri dish except 8 and 9a. Place the leaves in the dishes so that a maximum of their surface is in contact with the solution. Place dishes 2 through 7 and also 9-12 in the light (make sure the etiolated plants have been returned to the dark before you do this). Dish 1 should be placed in the dark.

After 5 hours (afternoon lab) or 10 hours (morning lab) place dish 3 in the dark (do not allow light to strike dish 1). At the same time, place 10 leaves in dish 8 and transfer the leaves from dish 9 to dish 9a (both dishes 8 and 9a should now be placed in the dark). Finally, at this time remove the leaves from dish 2, blot them dry, weight to the nearest .01 g, place them in 15 ml methanol in a small beaker, and store this preparation in the dark.

After 24 hours treat all leaves as #2 (remember to keep dish #1 in the dark during this procedure).

In the next lab period boil each of the sets of leaves for 2 to 3 minutes to extract the pigments. After boiling discard the leaf tissue and add enough methanol to the pigment solution to bring the volume back to 10 ml. Determine the absorbances of each of these solutions at 626 nm and at 667 nm. The former is the absorption maximum for protochlorophyllide; the latter is the absorption maximum for chlorophyllide and chlorophyll. Calculate the amount of these pigments/gm fresh weight of leaves (assume that 0.1 absorbance = 1 unit of pigment). Obtain the class results and interpret this experiment.

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THE ANATOMY OF A NEW PROGRAM

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Recently I returned from a trip to the Antarctic. While there I was befriended by a young penguin. The little monster would follow me everywhere. So, to make a long story short, I brought the penguin home with me. Still he followed me - upstairs, downstairs, mowing the lawn, and even to the grocery store!

People stared at me, laughed, and made jokes - they asked me if I had taken up the tuxedo trade.

One day I got fed up with the jokes and asked one of my friends what he would do if he had a penguin following him around. He replied, "Take it to the zoo." So I did.
Later that week the same friend saw me and the penguin waiting in line at a Lions football game.

"I thought you took that thing to the zoo," he remarked.

"I did, and had such a good time we decided to go to a football game this weekend."

This is how one feels with a new program. 
Others look at you 
you have broken from tradition 
you have defied the system 
you are different - estranged from your colleagues 
At times you feel paranoid 
as if a penguin were following you around

So why undertake the enormous task of preparing and introducing a new program? 
Why fight the system? 
Why make waves?

Why - I'll tell you why. 
The system is failing 
not all at once 
not quickly 
but having a slow, lingering cancer which is eating right at its very core - its tradition.

You ask for proof. 
1. We have been bombarded with reports over the past two years of 
   a. decreasing enrollments 
   b. academic financial instability 
   c. folding institutions. 
      not a pretty picture. 
2. Institutions are already giving in to the pressures 
   a. allowing coeducational housing 
   b. allowing alcoholic beverages on campus 
   c. converting segregated schools, racially and sexually, to integrated facilities 
   d. introducing new programs of study

This is why I'm writing this article - I Have a Penguin!

The first question most people ask is how to get a penguin accepted in a system that doesn't recognize his species. The keys are:

Innovation 
1. The program must offer an immediate picture of goodness. Even in its name! 
2. The idea must reach out and grab the administrative personnel - who will pat you on your back and send you on through the chain of command - with their blessings and their support.
3. And most important, the program must offer something that will attract students.

Esthetic Appeal 
1. The program must be of the now generation. 
2. The program must be contemporary in nature. 
3. The program must offer some feedback or immediate renumeration for the student. 
4. The program must be more than academic - it must be functional.
Cognizance

1. You must be aware at all times of the status of your program.
   a. solicit administrative concern and suggestions
   b. circulate student interest forms regularly
2. You are your program – if it is going to work, you have got to make it work.
3. Be proud of your penguin!

My penguin’s name is Environmental Control Technology. Environmental Control Technology is a rapidly expanding area. The need for technicians is increasing every year. Employment opportunities are excellent and include work in pollution control plants, water treatment plants, industrial waste treatment facilities, and in municipal inspections. There is also a growing need for people trained in solid waste disposal and air pollution abatement.

The Environmental Control Technology Program at Iowa Central Community College is designed to prepare students for immediate employment by various governmental units and industry. The two year sequence leads to the Associate of Arts degree with flexibility in scheduling based upon the students interests and abilities. The student can option at any time to transfer to a four year institution and continue study in some area of environmental science.

The program includes laboratory and classroom instruction along with a supervised field experience in some aspect of environmental control technology. The program will provide in-service training for those already employed in the field.

We have been fortunate in having our students employed with such agencies as the Iowa Department of Health, Department of Natural Resources, Webster County Department of Forestry, and the Iowa Department of Environmental Quality.

The opportunities are there, the student interest is there, you are there – go for a walk with a penguin!

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MATRIX (Letters to the Editor)

As soon as we get some we will fill this space.