

characteristic is a distinguishing feature, something out of the ordinary, not the normal.

It's all as clear as pea soup.

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WANTA BUY STOCK IN MY MINK-RAT RANCH?

Have you ever had a "Walter Mitty" fantasy to be a "Bunko Artist"? I get that urge out of my system by peddling stock in my mink-rat ranch to biology classes.

The scene is like this, see. The class has been working on a unit on energy. We have defined energy, kinds of energy, transformations of energy, the second law of thermodynamics, and entropy. We have explained, repeated, and reviewed photosynthesis, gross production, net production, food chains, energy transfer, and energy loss by passage from one consumer to the next. If we had a free association test right now, I am confident that most of the students would make an acceptable grade.

The "hook" goes something like this. We have just finished studying a food web and biomass pyramid of a grassland ecosystem patterned from a grass-mouse-weasel energy budget (Golley 1960), which just happens to remind me of the perfect enterprise for a biologist.

In the kids' eyes, "ole doc" has surely been ready for retirement long ago (they are correct, but the system won't allow me to leave with any retirement pay for another 15 years). Because of this senior citizen status and my confident approach, the students are willing to share my ideas about retirement.

"You know, I've been thinking about starting a mink ranch kind of like this mouse-weasel system," my pitch starts. "I think my ranch may make enough money to pay for my retirement because the way I have it planned, I won't need to buy any feed.

"I plan to build two environmentally controlled buildings; one will house an immense breeding colony of white rats, and the other will be occupied by reproducing pairs of fur-bearing ranch minks. You know, mink ranches generally feed their minks on waste from meat processing plants, but wild mink prefer muskrats and other rodents for food. So I intend to feed the surplus rats from the breeding colony to my mink. It takes only 30 days for a female rat to produce a litter of young, and she has the potential of producing nearly 100 babies per year. Thus if I start with a large number of pregnant female rats, I can be assured of an ample supply of young rats.

"The feed for the rats will be free also because I'll feed the mink carcasses to the rats. Just as soon as the young mink develop prime furs, I will slaughter them, sell their furs, and use the carcasses for rat food. Rats are omnivorous; thus, the whole mink body should be very nutritious food for growing rats and their reproducing mothers.

"The way I see it, the feed for the mink and rats will

be free. The mink will eat the excess rats and the producing rats will eat the remains of the harvested mink. I will sell each of the furs for \$25 to \$75 depending on their color and quality. I will use this income to pay overhead and labor and for my profit.

"Unfortunately, I do not have enough money right now to construct the buildings and establish the colonies of mink and rats. I would have to create a corporation and sell stock, but it seems to me that the enterprise will return enough to yield a sizable profit for a number of stockholders.

"I have been thinking about this operation for some time and, although it looks good to me, I believe I should get as many opinions as I can before I invest my savings, incorporate, and seek stockholders. What do you think about our mink-rat ranch? Will you give me your opinion? Take out a piece of paper and tell me what you think about the enterprise. So that I can analyze the votes, start your comments with the statement, 'If I had as much money as Lawrence Rockefeller, I would (or would not) buy stock in Mr. Kelley's mink-rat ranch because'" Seventy-five to 100 words should express your opinion sufficiently."

Would you believe that more than half of the students think we have hit upon the perfect business? About 30% will not support the operation because they don't believe in fur coats; it would be inhumane; it would be unhealthy; local sanitary laws wouldn't permit such a farm; rats are dirty; rats are repulsive; rats might get loose and create a menace to the community; rats won't eat mink meat; an exclusive diet of rat meat would be inadequate for mink; and so on.

Generally about 10% of the pupils reject the scheme for the right reason—entropy. **PEOPLE STILL DO THINK THAT THERE ARE FREE LUNCHES.**

At this point I resume my place behind the lectern and as we return to the classroom atmosphere I punch holes in my scheme and jokingly interject the comment that next period I intend to sell shares in the Brooklyn Bridge.

This little "con-game" helps shatter my complacency and makes me realize that although I have been confidently sailing along over concept after concept I just haven't always been hitting the student "where he lives." I hope this excursion helps to demonstrate to the students the importance of transferring blackboard facts to everyday problems. Maybe some of the students will encounter problems that remind them of "ole doc's" mink-rat ranch as they struggle along in an overcrowded used-up world.

Say, could I interest you in this newly developed energy-conserving device that can be attached to the gas line of your car? I can explain how it will save you untold gallons of gasoline.

Reference

GOLLEY, E. B. 1960. Energy dynamics of a food chain of an old-field community. *Ecological Monographs* 30(2):187

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