

AUDIO SCRIPT

[Passage 1 – M1: Male Interviewer; M2: Male Interviewee]

M1: Good morning, listeners. I'm Kurt Sanders. Welcome to Science Matters. Today, I'm speaking with Dr. Roger Clemens, a meteorologist and author of *The Danger from Above*. Welcome to the program, Dr. Clemens.

M2: Thanks for having me, Kurt.

M1: First, what exactly is the danger from above?

M2: Asteroids and meteors, Kurt. Scientists estimate that hundreds of Near-Earth Objects, or NEOs, come into contact with the Earth each year. About 99% of these NEOs disintegrate, or burn up, in the Earth's atmosphere. Some are large enough to cause damage, though. These are very scary. For example, a meteor exploded over southern Russia in 2013. That meteor injured about 1,500 people, damaged thousands of buildings and so on. That event reminded us just how dangerous these objects can be.

M1: And they have certainly caused a lot of damage in the past, haven't they, Dr. Clemens?

M2: They certainly have, Kurt. There have been several major impacts throughout history. For example, in 1490 several thousand people were killed by asteroids overhead in Ch'ing-yang. Ch'ing-yang is a city in China.

M1: How would we defend ourselves against a future collision, Dr. Clemens? Could we destroy an asteroid before it hit us?

M2: Well, we might not be able to destroy a large asteroid, Kurt. Scientists are worried that the asteroid might just break apart. Then a piece of the asteroid could hit the Earth, resulting in widespread damage. We could try to alter the area *near* an asteroid though. The energy produced by doing this might deflect it, you know, push it off course. NASA has been doing research into this type of method.

M1: I like that idea. Are there any other options on the table, Dr. Clemens?

M2: Well, scientists have outlined a plan to construct a sun-powered laser. The laser would be powerful enough to disintegrate and completely destroy an asteroid. This would obviously be a complex operation. In addition, scientists are considering a strategy that involves using a spacecraft to pull the asteroid in a different direction.

M1: Are there any asteroids we know about that could pose a threat in the future?

M2: Well, scientists have detected an 885-foot-wide asteroid called Apophis that comes uncomfortably close to Earth every now and then. Some scientists believe there is a small possibility that Apophis could collide with Earth in the 2030s. So we must keep watching this asteroid. Right now, a powerful telescope is in the preliminary stages of construction in northern Chile. It's called the Large Synoptic Survey Telescope, or LSST. When the telescope is completed around 2022, it will photograph the sky every few nights and give us a much better picture of what's going on out there in space. Of course, the chance of an impact occurring in the next century is about 1 percent.

M1: Hm, very interesting. Unfortunately, that's all we have time for today. Thanks for joining us, Dr. Clemens.

M2: It's been my pleasure, Kurt.

[Passage 2 – F1: Female Professor; M1: Male Student; F2: Female Student]

F1: So, I hope everyone has done their homework and prepared a business plan for today. Who wants to start? No volunteers? Sanjay, how about you?

M1: Sure, Dr. Brady. I propose starting a company that caters to overseas students on our campus. The company would prepare and deliver authentic cuisine at an affordable price.

F1: Catering. Hm, you don't think there are enough restaurants in our community?

M1: No, I don't. I mean, there are plenty of restaurants, but the food is mostly not authentic. For example, my preliminary research revealed that most Chinese students don't eat at local Chinese restaurants because they don't like the food. It's not like the food they're used to at home, and that's a problem. The students are reluctant to eat out because they can't find any food they like, plus restaurants are expensive. And if students don't eat well, they become unhealthy and depressed. After all, there's no substitute for a home-cooked meal.

F1: What about other nationalities, or would you just focus on Chinese food?

M1: No, I'd also focus on other cuisines—for example, Thai, Japanese, and Indian. There's been a 25% increase in international enrollments in the past five years, so it's a growing market.

F1: I see. What do others think of this idea? Maya?

F2: I'm not sure about this idea. It might be difficult to cater to so many different nationalities. Who would cook all this food?

M1: I thought of that. Many students are looking for part-time work. Some of them are here to learn English. It's hard for them to find jobs. I would employ those students.

F2: But you don't speak Mandarin or Thai. You'd need to be able to communicate with your staff.

M1: Yes, that's true. Well, of course, they'd need to speak *some* English in that case.

F2: And you couldn't just hire random students to cook these authentic meals. It takes years to become a professional chef.

M1: To some extent, you are right. But many students here are excellent cooks. Last week, my math class had a potluck lunch. Students prepared food from their culture. Some of the dishes were absolutely amazing and much better than most restaurant food. Also, I wouldn't have to pay students as much as professional chefs, so that would keep labor costs down.

F1: What about the location? And what about the cost of establishing the business?

M1: I'd rent a place on Pleasant Road. There are several abandoned buildings on that street.

F2: It would cost a lot of money to fix up one of those buildings and install a fully equipped kitchen.

F1: That's a good point, Maya. You'd need investors, Sanjay.

M1: Yeah, I thought of that. I'd establish a crowd-funding account. I have a large network of friends from various countries who really like my idea. Also, I'm sure many of the students' parents would be interested in funding the business.

F1: Okay, so you've done a customer analysis and you have an investment strategy. What about your marketing and operations plans?

M1: I'd use social media as a marketing tool, of course. The main financial output is establishing the kitchen, creating and maintaining a website, and building an app. I would keep the company structure simple. I would run the business, hire someone to coordinate orders and deliveries, three part-time cooks, and two on-call deliverers.

F1: Very good, Sanjay. Now let's move on to someone else's business plan. Judy?