Appendix B

Audio Track Transcripts

TRACK 1 TRANSCRIPT

Narrator
Listen to a conversation between a student and her professor.

Professor
Before we get started, I . . . I just wanted to say I'm glad you chose food science for your major course of study.

Female student
Yeah, it seems like a great industry to get involved with. I mean, with a four-year degree in food science, I'll always be able to find a job.

Professor
You're absolutely right. Eh, before entering academia, I worked as a scientist for several food manufacturers and for the U.S. Food and Drug Administration. I even worked on a commercial fishing boat in *Alaska* a couple of summers while I was an undergraduate. We'd, we'd bring in the day's catch to a floating processor boat, where the fish got cleaned, packaged, and frozen—right at sea.

Female student
That's amazing. As a matter of fact, I'm sort of interested in food packaging.

Professor
Well, for that, you'll need a strong background in physics, math, and chemistry.

Female student
Those are my best subjects—for a long time I was leaning toward getting my degree in engineering.

Professor
Well, then you shouldn't have a, a problem. And fortunately, at this university, the Department of Food Science offers a program in food packaging. Elsewhere, you might have to hammer courses together on your own.

Female student
I guess I lucked out, then! Um, so since my appointment today's to discuss my, my term paper topic . . . I wanted to ask, could I write about food packaging? I realize we're supposed to research food-borne bacteria, but food packaging must play a role in all of that, right?

Professor
Absolutely. Maybe you should do some preliminary research on that . . .

Female student
I have! That's the problem. I'm overwhelmed!

Professor
Well, in your reading, did anything interest you in particular, I, I mean something you'd like to investigate?

Female student
Well, I was surprised about the different types of packaging used for milk. Y'know, clear plastic bottles, opaque bottles, cardboard containers . . .

Professor
True! In fact, the type of packaging has something to do with the way milk's treated against bacteria.

Female student
Yeah, and I read a study that showed how *light* can give milk a funny flavor and decrease its nutritional value. And yet, most milk bottles are clear. What's up with that?

Professor
Well, consumers like being able to visually examine the color of the milk. That might be *one* reason that opaque bottles haven't really caught on. But that study . . . I'm sure there're more studies on the subject . . . uh, you shouldn't base your paper on, on only one study.

Female student
Maybe I should write about those opaque plastic bottles . . . find out if there's any *scientific* reasons they aren't used more widely. Maybe opaque bottles aren't as good at keeping bacteria from *growing* in milk after the bottle's been opened or something. But where to begin researching this, I don't . . .

Professor
Y'know, there's a dairy not far from here, in Chelsea. It was one of the first dairies to bottle milk in *opaque* plastic, but now they're using *clear* plastic again . . . And they're always very supportive of the university and our students, so if you wanted . . .

Female student
Hmm . . . Yeah, I like that idea.

TRACK 2 TRANSCRIPT

Narrator
Listen again to part of the conversation. Then answer the question.

Professor
Maybe you should do some preliminary research on that . . .

Female student
I have! That's the problem. I'm overwhelmed!

Narrator
What does the woman mean when she says this:

Female student
I'm overwhelmed!

TRACK 3 TRANSCRIPT

Narrator
Listen to part of a lecture in an environmental science class.

Professor

So, since we're on the topic of global climate change and its effects . . . in Alaska, in the northern *arctic* part of Alaska, over the last, oh . . . 30 years or so, temperatures have increased about half a degree Celsius per decade. And, scientists have noticed that there's been a change in surface vegetation during this time—shrubs are increasing in the tundra.

Tundra is flat land, with very little vegetation. Just a few species of plants grow there because the temperature's very cold and there's not much precipitation. And because of the cold temperatures, the tundra has two layers. The top layer, which is called the active layer, is frozen in the winter and spring, but thaws in the summer. Beneath this active layer is a second layer called permafrost, which is frozen all year round and is impermeable to water.

Female student

So, because of the permafrost, none of the plants that grow there can have deep roots, can they?

Professor

No, and that's one of the reasons that shrubs survive in the arctic. Shrubs are little bushes; they're not tall, and being low to the ground protects them from the cold and wind. And their roots don't grow very deep, so the permafrost doesn't interfere with their growth. OK? Now, since the temperatures have been increasing in arctic Alaska, the growth of shrubs has increased. And this has presented climate scientists with a puzzle.

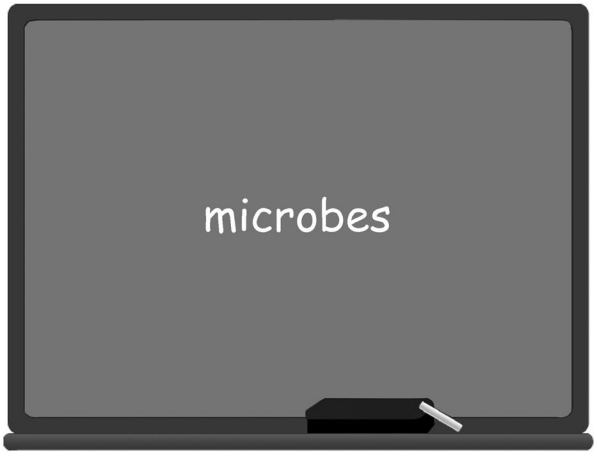
Male student

Um, I'm sorry, when you say the growth of shrubs has increased . . . um, do you mean that the shrubs are *bigger*, or that there are *more* shrubs?

Professor

Good question. And the answer is "both." The *size* of the shrubs has increased *and* shrub cover has spread to what was previously shrub-free tundra.

OK. So, what's the puzzle—warmer temperatures *should* lead to increased vegetation growth, right? Well, the connection's not so simple. The temperature increase has occurred during the winter and spring—not during the summer. But, the increase in shrubs has occurred in the *summer*. So, how can increased temperatures in the winter and spring result in increased shrub growth in the summer? Well, it may be biological processes that occur in the soil in the winter that cause increased shrub growth in the summer. And, here's how: there are microbes, microscopic organisms that live in the soil.



These microbes enable the soil to have more nitrogen, which plants need to live, and they remain quite active during the winter. There are two reasons for this. First, they live in the active layer which, remember, contains water that doesn't penetrate the permafrost. Second, most of the precipitation in the arctic is in the form of snow. And the snow which blankets the ground in the

winter actually has an insulating effect on the soil beneath it . . . and it allows the temperature of the soil to remain warm enough for microbes to remain active.

So there's been increased nutrient production in the winter, and that's what's responsible for the growth of shrubs in the summer and their spread to new areas of the tundra. Areas with more nutrients are the areas with the largest increase in shrubs.

Female student
But what about runoff in the spring, when the snow finally melts? Won't the nutrients get washed away? Spring thaw always washes away soil, doesn't it?

Professor
Well, much of the soil is usually still frozen during peak runoff. And the nutrients are deep down in the active layer anyway—not high up, near the surface, which is the part of the active layer most affected by runoff. But, as I was about to say, there's more to the story. The tundra is windy, and as snow is blown across the tundra it's caught by shrubs . . . and deep snowdrifts often form around shrubs. And we've already mentioned the insulating effects of snow . . . So that extra warmth means even more microbial activity, which means even more food for the shrubs, which means even more shrubs—and more snow around them, etc. It's a circle, a loop. And because of this loop, which is promoted by warmer temperatures in the winter and spring . . . well, it looks like the tundra may be turning into shrubland.

Female student
But will it be long-term? I mean, maybe the shrubs will be abundant for a few years, and then it'll change back to tundra.

Professor
Well, shrub expansion has occurred in other environments, like semiarid grassland and tallgrass prairies. And shrub expansion in *these* environments does seem to persist . . . almost to the point of causing a shift. Once it's established, shrubland thrives. Particularly in the arctic, because arctic shrubs are good at taking advantage of increased nutrients in the soil—better than other arctic plants.

TRACK 4 TRANSCRIPT

Narrator
What does the professor imply when she says this:

Professor
So what's the puzzle? Warmer temperatures *should* lead to increased vegetation growth, right?

TRACK 5 TRANSCRIPT

Narrator
Listen to a conversation between a student and a library employee.

Student
Excuse me. Can you help me with something?

Librarian
I'll do my best. What do you need?

Student
Well, I received a letter in my mailbox saying that I'm supposed to return a book that I checked out back in January—uh, it's called *Modern Social Problems*—but because I'm writing my senior thesis, I'm supposed to be able to keep the book all semester.

Librarian
So you signed up for "Extended Borrowing Privileges?"

Student
Yeah.

Librarian
But we're still asking you to bring the book back?

Student
Uh-huh.

Librarian
Well, let me take a look and see what the computer says. The title was *Modern Social Problems*?

Student
Yeah.

Librarian
OK . . . Oh, I see. It's been recalled. You can keep it all semester as long as no one else requests it. But someone else has . . . it looks like one of the professors in the sociology department has requested it, so you have to bring it back even though you've got "extended Borrowing Privileges." You can check out the book again when it's returned in a couple of weeks.

Student
But I really need this book right now.

Librarian
Do you need all of it, or is there a certain section or chapter you're working with?

Student
I guess there's one particular chapter I've been using lately for a section of my thesis. Why?

Librarian
Well, you can photocopy up to one chapter of the book. Why don't you do that for the chapter you're working on right now—and by the time you need the rest of the book, maybe it'll have been returned. We can even do the photocopying for you, because of the circumstances.

Student
Oh, well, that would be great.

Librarian
I see you've got some books there. Is that the one you were asked to return?

Student
Uh, no. I left it in my dorm room. These are books I need to check out today. Um, is it OK if I bring that one by in a couple of days?

Librarian
Uh, actually, you need to return it today, that is, if you want to check out those books today. That's our policy.

Student
Oh, I didn't know that.

Librarian
Yeah, not a lot of people realize that. In fact, every semester we get a few students who've had their borrowing privileges suspended completely because they haven't returned books. They're allowed to use books only in the library; they're not allowed to check anything out because of unreturned books.

Student
That's not good. I guess I should head back down to the dorm right now then.

Librarian
But before you go, what you should do is fill out a form requesting the book back in two weeks. You don't want to waste any time getting it back.

Student
Thanks a lot! Now I don't feel quite so bad about having to return the book.

TRACK 6 TRANSCRIPT

Narrator
Listen again to part of the conversation. Then answer the question.

Librarian
So you signed up for "Extended Borrowing Privileges?"

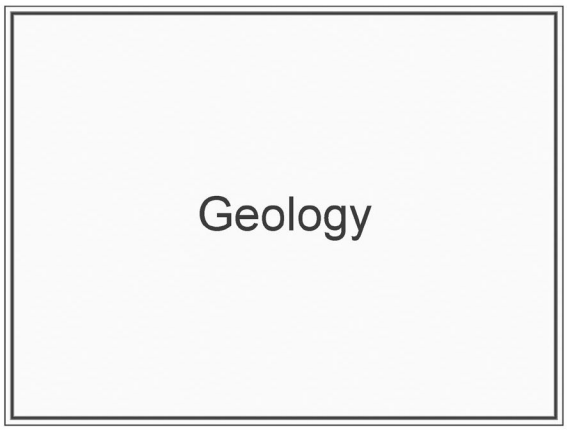
Student
Yeah.

Librarian
But we're still asking you to bring the book back?

Narrator
Why does the woman say this:

Librarian
But we're still asking you to bring the book back?

TRACK 7 TRANSCRIPT



Narrator
Listen to part of a lecture in a geology class.

Professor
So, continuing our discussion of desert lakes, now I want to focus on what is known as the Empty Quarter.

The Empty Quarter is a huge area of sand that covers about a quarter of the Arabian Peninsula. Today it's pretty desolate . . . barren and *extremely* hot. But, there've been times in the past when monsoon rains soaked the Empty Quarter and turned it from a desert into grassland that was dotted with lakes and home to various animals. There were actually two periods of rain and lake formation . . . the first one began about 37,000 years ago. And the second one dates from about 10,000 years ago.

Female student
Excuse me, professor, but I'm confused. Why would lakes form in the desert? It's just sand, after all.

Professor
Good question. We know from modern-day desert lakes . . . like Lake Eyre in South Australia . . . that under the right conditions, lakes **do** form in the desert. But the Empty Quarter lakes disappeared thousands of years ago. They left behind their beds, or basins, as *limestone formations* that we can still see today. They look like low-lying white or gray buttes . . . long, narrow hills with flat tops . . . barely a meter high. A recent study of some of the formations presents some new theories about the area's past. Keep in mind, though, that this study only looked at 19 formations . . . and about a thousand have been documented, so there's a lot more work to be done.

According to this study, two factors were important for lake formation in the Empty Quarter. Um, first, the rains that fell there were torrential. So it would have been impossible for all the water to soak into the ground. Second, as you know, sand dunes contain other types of particles besides sand . . . including clay and silt. Now, when the rain fell, water ran down the sides of the dunes, carrying clay and silt particles with it. And wherever these particles settled, they formed a pan . . . a layer that water couldn't penetrate. Once this pan formed, further runoff collected and formed a lake.

Now the older lakes . . . about half the formations, the ones that started forming 37,000 years ago, the limestone formations we see . . . they're up to a kilometer long but only a few meters wide . . . and they're scattered along the desert floor, in valleys between the dunes. So the theory is the lakes formed there . . . on the desert floor . . . in these long, narrow valleys. And we know, because of what we know about similar ancient desert lakes, we know that the lakes didn't last very long . . . from a few months to a few years on average.

As for the more recent lakes, the ones from 10,000 years ago . . . Well, they seem to have been smaller and so may have dried up more quickly . . . Another difference, very important today for distinguishing between older lake beds and newer ones . . . is the location of the limestone formations: the more *recent* beds are high up in the dunes.

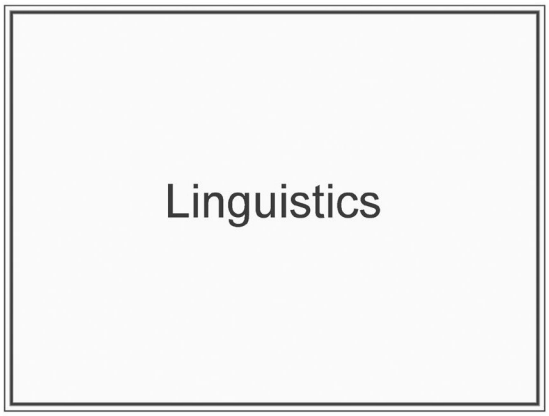
Why these differences? Well, there are some ideas about that and they have to do with the shapes of the sand dunes when the lakes were formed. 37,000 years ago the dunes were probably nicely rounded at the top . . . so the water just ran right down their sides to the desert floor. But there were thousands of years of wind between the two rainy periods . . . reshaping the dunes. So, during the second rainy period, the dunes were kind of . . . chopped up at the top . . . full of hollows and ridges. And these hollows would have captured the rain right there on the top.

Now, in a grassland and lake ecosystem, we'd expect to find fossils from a variety of animals. And numerous fossils have been found, at least at these particular sites. But . . . where did these animals come from? Well, the theory that has been suggested is that they migrated in from nearby habitats where they were already living. Then, as the lakes dried up, they died out.

The study makes a couple of interesting points about the fossils . . . which I hope will be looked at in future studies. At older lake sites, there's fossil remains from hippopotamuses, water buffalo . . . uh, animals that spend much of their lives standing *in* water . . . and also, fossils of cattle. However, at the sites of the more recent lakes, there's only cattle fossils . . . additional evidence for geologists that these lakes were probably smaller, shallower . . . because cattle only use water for drinking, so they survive on much less.

Interestingly, there are clam and snail shells, but no fossils of fish. We're not sure why. Uh, maybe there was a problem with the water . . . maybe it was too salty. That's certainly true of other desert lakes.

TRACK 8 TRANSCRIPT



Narrator
Listen to part of a lecture in a linguistics class. The professor has been discussing animal communication systems.

Professor
OK, so last time we covered the dances honeybees do to indicate where food can be found, and the calls and songs of different types of birds . . . Today I'd like to look at-at some communication systems found in *mammals*—uh, particularly in *primates* such as, uh, orangutans, chimpanzees, gorillas . . . um, yes, Thomas?

Male student
Excuse me, professor, but . . . when you talk about *gorilla* language, do you mean, like, those experiments where humans taught them *sign* language, or-or a language like . . .

Professor
OK, OK, wait-wait-wait just a minute—now, who in this class heard me use the word "language"? No one, I hope—what we're talking about here are systems of *communication*, alright?

Male student
Oh, sorry, communication, right . . . uh, but could you maybe, like, clarify what the *difference* is?

Professor
Of course, that's a fair question . . . OK, well, to start with, let's make it clear that *language* is a *type* of communication, *not* the other way around. OK, so *all* communication systems, language included, have certain features in common. For example, the *signals* used to communicate—from the bees' dance movements to the words and sentences found in human language—all these signals convey *meaning*. And all communication systems serve a *purpose*—a, uh, *pragmatic function* of some sort—warning of danger, perhaps, or offering other needed information.

But there are several features peculiar to human language, that have, for the most part, never been found in the communication system of any other species. For one thing, *learnability*: Animals, uh, animals have instinctive communication systems; um, when a dog, a puppy gets to a certain age, it's able to bark. It barks without having to learn how from other dogs. It just . . . barks. But much of human language has to be learned, from other humans. What else makes human language unique? What makes it *different* from animal communication? Debra.

Female student
Uh, how about *grammar*? Like, having verbs, nouns, adjectives . . .

Professor
OK, that's another feature and it's a good examp—

Female student
. . . I mean, I mention this 'cause, like, in my biology class last year, I kinda remember talking about a study on *prairie dogs*, where . . .

I *think* . . . the researchers claimed that the warning cries of prairie dogs constitute *language* because they have these different parts of *speech*—you know, like *nouns* to name the type of predator they've spotted, uh, *adjectives* to describe its size and shape, *verbs*, um . . . but now it seems like—

Professor
Alright, hold on a moment . . . I'm familiar with the study you're talking about—and for those of you who don't know, *prairie* dogs are not actual *dogs*; they're a type of *rodent* who-who burrow in the ground in the grasslands of the western United States and Mexico.

And, uh—in this study, the researchers looked at the high-pitched *barks* a prairie dog makes when it spots a predator. And from this they made some pretty—well, they made some *claims* about these calls qualifying as an actual *language*, with its own "primitive" grammar. But actually these warning calls are no different from those found among certain types of monkeys. And—well, let's not even get *into* the question of whether concepts like "noun" and "verb" can be meaningfully applied to animal communication.

Another thing that distinguishes a *real* language is a property we call *discreteness*. In other words, messages are built up out of smaller parts—sentences out of words, words out of individual sounds, etc. Now maybe you could say that the prairie dog's message is built from smaller parts. Like, say for example our prairie dog spots a predator—a big coyote, approaching rapidly. So the prairie dog makes a call that means "coyote," then one that means "large," and then another one to indicate its speed. But do you really suppose it makes any difference what *order* these calls come in? No. *But* the discrete units that make up *language can* be put together in different ways . . . those smaller parts can be used to form an *infinite* number of messages—including messages that are completely novel, that've never been expressed before. For example, we can differentiate between "A large coyote moves fast" and, say, um, hmm . . . "Move the large coyote fast," or "Move fast, large coyote!"—and I truly doubt whether anyone has ever uttered *either* of these sentences before. Human language is *productive*—an open-ended communication system—whereas no other communication system has this property.

And another feature of language that's not displayed by any form of animal communication is what we call *displacement*—that is, language is *abstract* enough that we can talk about things that aren't present here and now—things like, "My friend Joe is not in the room," or "It'll probably rain next Thursday." Prairie dogs may be able to tell you about a hawk that's circling overhead right *now*, but they've never shown any inclination to describe the one they saw *last week*.

TRACK 9 TRANSCRIPT

Narrator
Listen again to part of the lecture. Then answer the question.

Male student
when you talk about *gorilla* language, do you mean, like, those experiments where humans taught them *sign* language, or-or a language like . . .

Professor
OK, wait-wait-wait just a minute—now, who in this class heard me use the word "language"?

Narrator
Why does the professor say this:

Professor
Now, who in this class heard me use the word "language"?

TRACK 10 TRANSCRIPT

Narrator
Some people think that family members are the most important influence on young adults. Others believe that friends are the most important influence. Which do you agree with? Explain why.

TRACK 11 TRANSCRIPT

Narrator
The business studies department at State University is creating a new requirement. You have 45 seconds to read the announcement. Begin reading now.

TRACK 12 TRANSCRIPT

Narrator
Now listen to two students discussing the announcement.

Male student
Did you read this announcement?

Female student
Yeah, and I disagree—I don't think it will actually help students.

Male student
Really? Why not?

Female student
Well, they talked about leadership . . . and organizational skills . . . but that's not really the kind of work you do. Like my older brother's had the kind of jobs they're talking about . . . and typically you're just there to do basic tasks like typing or filing stuff—nothing very meaningful.

Male student
Oh, so you wouldn't actually learn anything new . . .

Female student
Exactly.

Male student
I guess I see what you mean—but what about the other point they make?

Female student
About this helping us after we graduate? I don't agree.

Male student
How come?

Female student
Well, the problem is that there are lots of other universities in our area that have the *same requirement* . . . so there are lots of other students at these positions.

Male student
Yeah, I guess I hadn't thought of that.

Female student
So even if you take a position like this in a company while you're still a student, once you graduate, the competition for permanent jobs will be impossible . . . I mean, there just won't be enough jobs available for all the business graduates in this city who will be looking for full-time work.

Male student
Hmm . . . I see what you're saying.

Narrator
The woman expresses her opinion of the university's new policy. State her opinion and explain the reasons she gives for holding that opinion.

TRACK 13 TRANSCRIPT

Narrator
Read the passage from a film studies textbook. You will have 50 seconds to read the passage. Begin reading now.

TRACK 14 TRANSCRIPT

Narrator
Now listen to part of a lecture on this topic in a film class.

Professor
So, the other day I went to this great new movie. And one of the scenes in particular, I thought, was really set up nicely. At the start of the scene . . . uh, before the action and talking and things started . . . you saw, on the movie screen, an image of a city. You could tell it was a big city . . . there were lots of buildings—tall ones, skyscrapers. And the cars and signs on the city streets looked old-fashioned—like they were from the past, like the 1940s.

The other thing I noticed right away, from this first image, just when the scene started, was that the city seemed, uh, gloomy. You couldn't see much because it was, well, there was mostly darkness rather than sunlight, and there was only just a little bit of light from the streetlamps. On top of that, it was raining, and kinda foggy. All of these details worked together to create a dark, gloomy, mysterious feeling.

So, then, when the action started, and it showed detectives talking to each other in an office, I already knew that the office was located in a tall building in a big city, sometime in the 1940s. And I, uh, had a good idea that the events that'd be taking place would be pretty dark and mysterious, because of the shot, the image, I saw at the beginning of the scene.

Narrator
Using the professor's example, explain what an establishing shot is and how it is used.

TRACK 15 TRANSCRIPT

Narrator
Listen to part of a lecture in a biology class.

Professor
We all know that insects like to eat plants. But some plants have been able to-to develop ways to protect themselves from insects. Today I'm gonna talk about some ways plants defend themselves.

Now, some plants have physical features that prevent insects from landing on them. Like the *passion plant*, for example. Its leaves have little spiky hairs all over them. They're like spikes . . . sticking out of the plant . . . that are so numerous and dense that they prevent insects from landing on the leaves. Basically, there's just no room for the insect to land. And since insects can't land on the leaves, they can't eat them. So, the little hairs serve as a physical feature that helps protect the passion plant from insects.

Alright, but other plants protect themselves using *chemical defenses*. Like the *potato plant*. The potato plant's able to release a chemical throughout its leaf system whenever an insect attacks it—starts eating the leaf. So, say an insect starts eating a potato plant's leaf. That will cause the plant to react by releasing a chemical throughout its leaf system. The insect swallows this chemical

as it eats. And this chemical discourages the insect from wanting to eat any more of the plant. How? Well, the substance makes the insect feel full, like it's already had enough to eat. The insect no longer feels hungry. So it stops eating the plant. So, by emitting this chemical, the potato plant protects itself from insects.

Narrator
Using points from the lecture, explain how the passion plant and the potato plant defend themselves from insects.

TRACK 16 TRANSCRIPT

Narrator
Now listen to part of a lecture on the topic you just read about.

Professor
It's quite possible that *R. robustus* actively chased and hunted moving dinosaurs. It was not just a scavenger that ate eggs.

First, about *R. robustus* being too small to hunt dinosaurs. Sure, it would've been too small to have hunted a full-grown psittacosaur, but that doesn't mean it couldn't have hunted baby dinosaurs. *R. robustus* was considerably bigger than a baby psittacosaur would have been, which supports the idea that *R. robustus* was a hunter. Ya see, most predators have at least twice the mass of the animals they prey on, and *R. robustus* was more than twice the mass of the dinosaur in its stomach. Those size relations are exactly what we would expect to find if *R. robustus* hunted baby psittacosaurs and similarly sized dinosaurs.

Second, the length and position of *R. robustus's* legs. Well, there's a *modern* mammal known as the Tasmanian Devil.

Like *R. robustus*, the Tasmanian Devil also has short legs positioned a little to the side, and yet the Tasmanian Devil can achieve speeds of up to 15 kilometers per hour and is an active and successful predator. Clearly, if the Tasmanian Devil can run fast enough to catch prey, an *ancient* mammal with similar legs probably could too.

Third, the absence of teeth marks on the psittacosaur's bones. The reading overlooks some important facts about *R. robustus*. While *R. robustus* had powerful jaws that it used for grabbing and holding onto prey, it didn't use its back teeth for chewing. We've concluded this because there isn't much wear on the back teeth of various *R. robustus* specimens. Given this evidence, it seems that *R. robustus* swallowed its prey whole or in big pieces. So, given the way *R. robustus* consumed meat, we shouldn't expect to find tooth marks on the bones of prey in its stomach.

TRACK 17 TRANSCRIPT

Narrator
Summarize the points made in the lecture, being sure to explain how they respond to the specific points made in the reading passage.

TRACK 26 TRANSCRIPT

Narrator
Listen to a conversation between a student and her photography professor.

Student
Professor Johnson, there's something that's been on my mind . . .

Professor
OK.

Student
Remember last week you told us that it's really important to get our photography into a show, basically as soon as we can?

Professor
Yup, it's a big step, no question.

Student
Thing is, I'm sitting here and I'm just not sure how I'd get there. I mean, I've got some work I like, but is it really what a gallery is looking for? How would I know? How do I make the right contacts to get into a show? I just really don't . . .

Professor
OK, hold on, slow down. Ah, these are questions that . . . well, that just about every young artist has to struggle with. OK, the first thing you should do is: you absolutely have to stay true to your artistic vision . . . uh, take the pictures you want to take. Don't start trying to catch the flavor of the month and be trendy because you think you'll get into a show. That never works, because you wind up creating something you don't really believe in, that's uninspired, and won't make any shows. I've seen it happen so many times. Uh, this doesn't mean that you should go into a cave. Uh, keep up with trends, even think about how your work might fit in with them, but don't mindlessly follow them.

Student
Well, yeah, I can see that. I think, though, that I've always been able to stay pretty true to what I want to create, not what others want me to create. I think that comes through in my work.

Professor
OK, just remember that it's one thing to create work that you really want to create when it's in the classroom—uh, the only thing at stake is your grade. But work created outside the classroom, that can be a different story. I'm not talking about technique, or things like that. It's just that there's so much more at stake when you're out there making art for a living–uh, there's a lot of pressure to become something you're not, and people often surrender to that pressure . . .

Student
But to get stuff exhibited . . .

Professor
Well, you need to be a bit of an opportunist—y'know, common sense things . . . like always having a sample of your work on hand to give to people. You won't believe the kind of contacts and opportunities you can get this way. And try to get your work seen in places like restaurants, bookstores. You'd be surprised how word gets around about photography in places like that.

Student
OK. It's just so hard to think about all of those practical things *and* make good work, you know?

TRACK 27 TRANSCRIPT

Narrator
Listen again to part of the conversation. Then answer the question.

Student
I think, though, that I've always been able to stay pretty true to what I want to create, not what others want me to create. I think that comes through in my work.

Narrator
Why does the student say this:

Student
I think that comes through in my work.

TRACK 28 TRANSCRIPT

Narrator
Listen to part of a lecture in a European history class.

Professor
So would it surprise you to learn that many of the foods that we—uh, *today*—consider traditional European dishes—that their key ingredients were not even known in Europe until quite recently—until the Europeans started trading with the native peoples of North and South America? I mean, you're probably aware that the Americas provided Europe—uh, and Asia—with foods like squash . . . beans . . . turkey . . . peanuts . . . But what about all those Italian tomato sauces, Hungarian goulash or—my favorite—French fries—those yummy fried potatoes?

Male student
Wait—I mean, I knew *potatoes* were from—where, South America—?

Professor
South America, right—the Andes Mountains.

Male student
But you're saying . . . *tomatoes* too? I just assumed, since they're used in so many Italian dishes . . .

Professor
No, like potatoes, tomatoes grew wild in the Andes—although *un*like potatoes, they weren't originally *cultivated* there; that seems to have occurred first in *Central* America. And even *then* the tomato doesn't appear to have been very important as a food plant until the Europeans came on the scene. They took it back to Europe with them around 1550, and Italy was indeed the first place where it was widely grown as a food crop. So, in a sense, it really *is* more Italian than American. And another thing—and this is true of both the potato *and* the tomato—both of these plants are members of the nightshade family.

The nightshade family is a category of plants which also includes many that you *wouldn't* want to eat . . . like oh, uh, mandrake, belladonna, and, uh . . . and even tobacco! So it's no wonder that people once considered tomatoes and potatoes to be inedible too, even poisonous—and, in fact, the leaves of the potato plant *are* quite toxic. So it took both plants quite a while to catch on in

Europe, and even *longer* before they made the return trip to North America and became popular food items here.

Female student
Yeah, you know, I remember . . . I-I remember my grandmother telling me that when *her* mother was a little girl, a lot of people still thought that tomatoes were poisonous.

Professor
Oh, sure—people didn't really start eating them here until the mid-1800s.

Female student
But, ah—seems like I heard . . . didn't Thomas Jefferson grow them or something?

Professor
Ah! Well, that's true . . . but, then, Jefferson is known not only as the third President of the United States, but also as a scholar who was way ahead of his time—in many ways! He didn't let the conventional thinking of his day restrain his ideas.

Now, potatoes went through a similar sort of, ah—of a rejection process, especially when they were first introduced in Europe—you know how potatoes can turn green if they're left in the light too long? And that greenish skin can make the potato taste bitter—even make you ill. So that was enough to put people off for over 200 years! Yes, Bill?

Male student
I-I'm sorry, Professor Jones, but—I mean, yeah, OK, American crops've probably contributed a lot to European *cooking* over the years, but . . .

Professor
But have they really played any kind of important role in European *history*? Well, as a matter of fact, yes, I was just coming to that. Let's, uh—let's start with North American *corn*, or *maize*, as it's often called. Now, before the Europeans made contact with the Americas, they subsisted mainly on grains—grains that often suffered from crop failures—and it's largely for this reason that political power in Europe was centered for centuries in the *south*—around the Mediterranean Sea, which was where they could grow these grains with more reliability. But when corn came to Europe from Mexico . . . well, now they had a much heartier crop that could be grown easily in more *northerly* climates, and the centers of power began to shift accordingly.

And *then*—well, as I said, potatoes weren't really popular at first, but when they finally *did* catch on—which they did first in Ireland, around 1780—well, why do you suppose it happened? Because potatoes had the ability to provide an *abundant* and extremely *nutritious* food crop—no other crop grown in northern Europe at the time had anything like the number of vitamins contained in potatoes. Plus, potatoes grown on a single acre of land could feed many more people than say, uh, wheat grown on that same land. Potatoes soon spread to France and other northern European countries, and as a result, the nutrition of the general population improved tremendously, and populations soared in the early 1800s. And so the shift of power from *southern* to *northern* Europe continued.

TRACK 29 TRANSCRIPT

Narrator
Listen again to part of the lecture. Then answer the question.

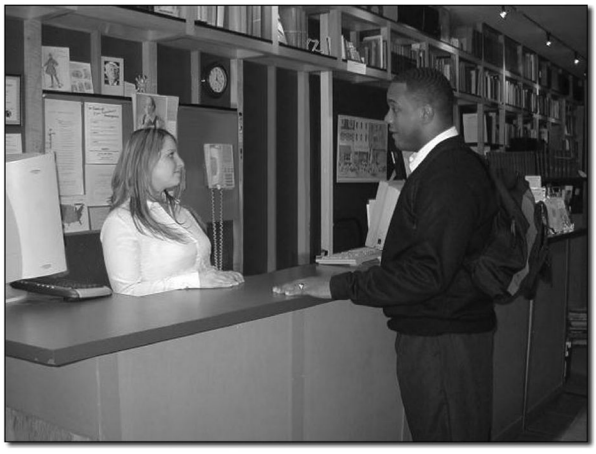
Male student
I-I'm sorry, Professor Jones, but—I mean, yeah, OK, American crops've probably contributed a lot to European *cooking* over the years, but . . .

Professor
But have they really played any kind of important role in European *history*? Well, as a matter of fact, yes, I was just coming to that.

Narrator
What can be inferred about the professor when she says this:

Professor
But have they really played any kind of important role in European *history*?

TRACK 30 TRANSCRIPT



Narrator
Listen to a conversation between a student and an employee in the university bookstore.

Student
Hi, I bought this book at the beginning of the semester, but something's come up, and I'd like to return it.

Employee
Well, for a full refund, store policy is that you have to return merchandise two weeks from the time it was purchased, but for assigned textbooks or anything having to do with specific courses . . . wait, was it for a specific course?

Student
Yes, but, uh, actually . . .

Employee
Well, for course books, the deadline is four weeks after the beginning of the semester. So for this fall semester, the deadline was October first.

Student
Ouch! Then I missed it. But, uh, why October first?

Employee
I guess the reasoning is that by October first, the semester is in full gear and everyone kinda knows what courses they'll be taking that semester.

Student
I get it. So, it's mainly for people who decide to withdraw from . . . uh, to change to new courses early on . . .

Employee
Exactly. The books have to be in perfect condition of course; they can't be marked up or look used in any way. For the full refund, I mean.

Student
Well, but uh, see, my situation is a little different . . . I-I hoped you might be able to make an exception.

Employee
Well, the policies are generally pretty rigid—*and* the semester is almost over.

Student
OK—here's what happened . . . uh, I think my professor really miscalculated. Anyway, the syllabus was way too ambitious in my opinion. There are only two weeks of classes left in the semester, and there are, like, six books on the syllabus that we haven't even touched.

Employee
I see. So you were hoping to return this one.

Student
Yeah—the professor already announced that we won't be reading this one by Jane Bowles. And all the others I bought used.

Employee
Jane Bowles? Which book of hers?

Student
It's called *Two Serious Ladies*.

Employee
Oh! But you should keep that one! Are you interested in literature?

Student
Well, I am an English major . . .

Employee
You're lucky to have a professor who includes a lesser-known writer like her on the syllabus. You know, not the usual authors we've all read.

Student
So you really think, uh . . . ?

Employee
I do, and especially if you're into literature.

Student
Hmm, well, this I wasn't expecting. I mean, uh, wow!

Employee
I hope you don't think I'm being too pushy. If you prefer, you can return the book and arrange for a store credit. You don't qualify for a refund—policy is policy, after all—but you can make an exchange. And you can use the credit for your books for next semester. The credit carries over from one semester to the next.

Student
Hmm—that's good to know. But now I'm really intrigued. I guess that just because we ran out of time to read this book in class doesn't mean that I can't read it on my own time. You know, I think I'll give it a try.

TRACK 31 TRANSCRIPT

Narrator
What does the man mean when he says this:

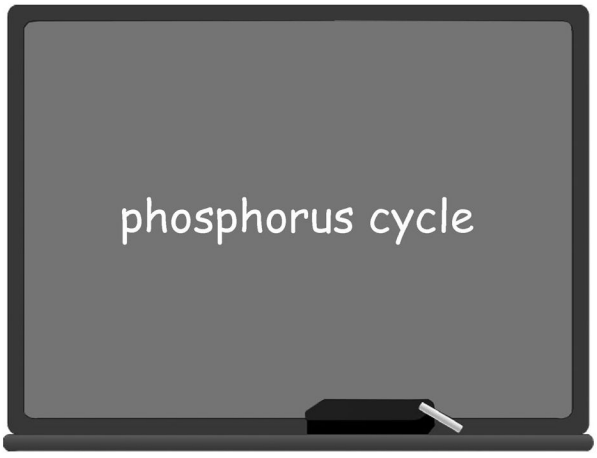
Student
Hmm, well, *this* I wasn't expecting. I mean, uh, wow!

TRACK 32 TRANSCRIPT

Narrator
Listen to part of a lecture in an ecology class.

Professor
So we've been talking about *nutrients*, the elements in the environment that are essential for living organisms to develop, live a healthy life, and reproduce. Some nutrients are quite scarce; there just isn't much of them in the environment, but fortunately, they get recycled. When nutrients are used over and over in the environment, we call that a *nutrient cycle*. Because of the importance of nutrients and their scarcity, nutrient recycling is one of the most significant ecosystem processes that we'll cover in this course.

The three most important nutrient cycles are the nitrogen cycle, the carbon cycle, and the one we're gonna talk about today, the phosphorus cycle.



So, the phosphorus cycle has been studied a lot by ecologists because, like I said, phosphorus is an important nutrient, and it's not so abundant. The largest quantities are found in rocks and at the bottom of the ocean. How does phosphorus get there? Well, let's start with the phosphorus in rocks. The rocks get broken down into smaller and smaller particles as they're weathered—they're weathered slowly by rain and wind over long periods of time. Phosphorus is slowly released as the rocks are broken down, and it gets spread around into the soil. Once it's in the soil, plants absorb it through their roots.

Female student
So that's the reason people mine rocks that contain a lot of phosphorus? To help with agriculture?

Professor
Uh-huh. They mine the rock, artificially break it down, and put the phosphorus into agricultural fertilizers. So humans can play a role in the first part of the phosphorus cycle—the breaking down of rocks and the spreading of phosphorus into the soil—by speeding up the rate at which this natural process occurs, you see?

Now . . . after the phosphorus is in the soil, plants grow, they use phosphorus from the soil to grow. And when they die, they decompose, and the phosphorus is recycled back into the soil. Same thing with the animals that eat those plants . . . or eat other animals that have eaten those plants. We call all of this the *land phase* of the phosphorus cycle.

But, a lot of the phosphorus in the soil gets washed away into rivers by rain and melting snow. And so begins another phase of the cycle. Can anyone guess what it's called? Nancy?

Female student
Uh, well, if the one is called the land phase, then this has to be called the *water* phase, right?

Professor
Yes. That's *such* a difficult point, isn't it? In a normal water phase, rivers eventually empty into oceans, and once in the oceans, the phosphorus gets absorbed by water plants like algae. Then fish eat the algae . . . or eat other fish that have eaten those plants.

But the water phase is sometimes affected by excessive fertilizers. If not all of the phosphorus gets used by the crops, and large amounts of phosphorus gets into the rivers, this could cause rapid growth of water plants in the river, which can lead to the waterways getting clogged with organisms, which can change the flow of the water . . . Several current studies are looking at these effects, and I really do hope we can find a way to deal with this issue before these ecosystems are adversely affected.

OK? Of course another way that humans can interrupt the normal process is fishing. The fishing industry helps bring phosphorus back to land. In the normal water phase, the remaining phosphorus makes its way—settles—to the bottom of the ocean and gets mixed into ocean sediments.

But remember, this is a cycle: the phosphorus at the bottom of the ocean has to somehow make its way back to the surface . . . to complete the cycle, to begin the cycle all over again. After millions of years, powerful geological forces, like underwater volcanoes, lift up the ocean sediments to form new land. When an underwater volcano pushes submerged rock to the surface, a new island is created. Then, over many more years, the phosphorus-rich rocks of the new land begin to erode . . . and the cycle continues.

Male student
What about . . . well, you said that the nitrogen cycle is also an important nutrient cycle. And there's a lot of nitrogen in the atmosphere, so I was wondering: Is there a lot of *phosphorus* in the atmosphere too?

Professor
Good question, George. You're right to guess that phosphorus can end up in Earth's atmosphere . . . it can move from the land or from the oceans to the atmosphere, and vice versa. However, there's just not a substantial amount of it there, like there is with nitrogen. It's a *very* minimal quantity.

TRACK 33 TRANSCRIPT

Narrator
Listen again to part of the lecture. Then answer the question.

Professor
Can anyone guess what it's called? Nancy?

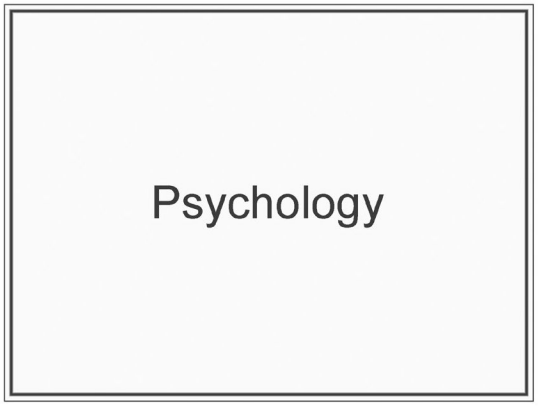
Female student
Uh, well, if the one is called the land phase, then this has to be called the *water* phase, right?

Professor
Yes. That's *such* a difficult point, isn't it?

Narrator
What does the professor mean when she says this:

Professor
That's *such* a difficult point, isn't it?

TRACK 34 TRANSCRIPT



Narrator
Listen to part of a lecture in a psychology class.

Professor

OK, if I asked about the earliest thing you can remember, I'll bet for most of you, your earliest memory would be from about age 3, right? Well, that's true for *most* adults . . . we can't remember anything that happened before the age of 3. An-and this phenomenon is so widespread and well-documented it has a name. It's called childhood amnesia and was first documented in 1893.

As I said this phenomenon refers to *adults* not being able to remember childhood incidents. It's not *children* trying to remember events from last month or last year. Of course it follows that if you can't remember an incident as a child you probably won't remember it as an adult. OK? So-so-so why is this? What are the reasons for childhood amnesia . . . Well, *once* a popular explanation was that childhood memories are repressed . . . um, the memories are disturbing, so that as adults we keep them buried. And so we can't recall them . . . and this is based on . . . well-well it's *not* based on-on-on the the kind of solid research and lab testing I want to talk about today, so-so let's put that explanation aside and concentrate on just two. OK? It-it could be that as children we *do* form memories of things prior to age 3, but forget them as we grow older. That's one explanation. Another possibility is that children younger than 3 lack, um, lack some cognitive capacity for memory. And *that* idea . . . um, that children are unable to form memories, um . . . *that's* been the dominant belief in psychology for the past hundred years. And this idea is very much tied to two things: the theories of Jean Piaget and also to language development in children.

So . . . Piaget's theory of cognitive development. Piaget suggested that because they don't have language, children younger than 18-24 months live in the "here and now," that is, they lack the means to symbolically represent objects and events that are not physically present. Everybody get that? Piaget proposed that young children don't have a way to represent things that aren't right in front of them. That's what language does, right? Words represent things, ideas. Once language starts to develop, from about age 2, they *do* have a system for symbolic representation and can talk about things which aren't in their immediate environment, in-including the past. Of course, he didn't claim that infants don't have any sort of memory—uh, it's acknowledged that they can recognize some stimuli, like faces. And for many years, this model was very much in favor in psychology even though memory tests were never performed on young children.

Well, finally, in the 1980s, a study was done. And this study showed that very young children—under the age of two—*do* have the capacity for recall. Now, if the children can't talk, how was recall tested? Well, that's a good question, since the capacity for recall has always been linked with the ability to talk. So the researchers set up an experiment using imitation based tasks. Adults used props, um, toys or other objects, to demonstrate an action that had two steps. The children were asked to imitate the steps immediately, and then again after delays of 1 or more months. And, even after a delay, the children could-could recall, or replicate the action—the objects used, the steps involved and the order of the steps. Even children as young as 9 months! Now, tests showed that there was a faster rate of forgetting among the youngest children . . . but most importantly, it showed that the development of recall did not depend on language development. And that was an important finding. I guess I should add that the findings don't say that there was *no* connection, um no connection between the development of language and memory. There's some evidence that being able to talk about an event does lead to having a stronger memory of that event. But that doesn't seem to be the real issue here . . .

So, back to our question about the cause of childhood amnesia. Well, there is something called the "rate of forgetting." And childhood amnesia may reflect a high rate of forgetting. In other words, children under the age of 3 do form memories, and do so without language. But they forget the memories at a fast rate, probably faster than adults do. Researchers have set a standard . . . sort of an *expected* rate of forgetting. But that expected rate was set based on tests done on adults. So what is the rate of forgetting for children under the age of three? We expect it to be high but the tests to prove this really haven't been done yet.

TRACK 35 TRANSCRIPT

Narrator
Do you agree or disagree with the following statement? Use details and examples to explain your answer.

All children should be required to learn a second language in school.

TRACK 36 TRANSCRIPT

Narrator
Read a student letter in the university newspaper. You have 45 seconds to read the letter. Begin reading now.

TRACK 37 TRANSCRIPT

Narrator
Now listen to two students discussing the letter.

Male student
Mary, *you're* an art student—what do you think of this letter?

Female student
I don't like the idea.

Male student
Why not?

Female student
Well, first of all . . . his first point, about a lot of people passing through the student center. That's true, but . . .

Male student
But?

Female student
But it's always really crowded with people coming and going, it's not good for showing artwork. Imagine you're standing there, trying to look at a painting . . . there's gonna be, like, a million people walking through . . . people walking in front of you, blocking your view, distracting you . . .

Male student
Hmm, yeah. I hadn't thought of that.

Female student
You won't be able to appreciate the artwork . . . or get a good look at anything, with so much going on, with so many people moving around.

Male student
Yeah, I see what you mean.

Female student
Plus, he's wrong about the windows.

Male student
But isn't it true that it's good for art to have lots of light?

Female student
In a sense, yeah. But *that* kinda light, all that *natural* light from windows, that's actually *not* good, because if it's really sunny out, it'll be way too bright, if it's cloudy it'll be way too dark.

Male student
Oh.

Female student
What you want is *controlled* light, *consistent* light—the kind you get from electric light bulbs. Think about in an art museum . . . in an art museum you've got electric lighting, and the light is always carefully controlled, always at the same level.

Narrator
Briefly summarize the proposal in the student's letter. Then state the woman's opinion about the proposal and explain the reasons she gives for holding that opinion.

TRACK 38 TRANSCRIPT

Narrator
Read a passage from a marketing textbook. You have 50 seconds to read the passage. Begin reading now.

TRACK 39 TRANSCRIPT

Narrator
Now listen to a lecture from a marketing class.

Professor
OK, so I've actually got a few different examples of this. You know, ah, when I was a kid a character named Action-hero was really popular with my friends and me. We would always watch the Action-hero program on television every week and, and play games pretending that we were as strong and powerful as he was. Then pretty soon we began seeing these small Action-hero figures in all the stores and . . . well . . . we all just had to have them. I mean, we'd been watching the television show for so long that it seemed only natural to want to own the toys too.

Well, I finally grew up and left the Action-hero television program and toys behind. Ah, but now I have a seven-year-old daughter who watches television a lot and also likes to play with her toys. And lately her favorite toy is a cute little baby doll with a big round face and lots of curly hair named Rosa. All my daughter's friends have Rosa dolls too, and they enjoy going to each other's houses to play with them. Then a few weeks ago my daughter came running up to me all excited because she had just heard there was going to be a new television program on every week with the doll—Rosa—as the main character. So naturally she and all her friends have begun watching the show, and it's already very popular—as popular as the toy doll.

Narrator
Using the examples from the lecture, explain the concept of entertainment merchandising.

TRACK 40 TRANSCRIPT

Narrator
Listen to part of a lecture in a psychology class.

Professor
OK, we generally assume that babies can feel only very basic emotions, like happiness, or anger. That is, that babies just react to things that happen directly to them. However, some new research is suggesting that babies may be able to feel concern for *others* . . . to have *empathy* for others. Now, empathy is a complex emotion—it involves a baby relating to someone else's emotions, not just reacting to things happening directly to them. Let's talk about an experiment that may show that babies could be capable of feeling empathy.

OK, for the first part of the experiment . . . Well, we've always known that babies start to cry when they hear other babies crying, right? One baby in a room starts crying, and all the rest join in. We've always assumed that the other babies cried because they were reacting to the *noise* of the crying, that the noise itself was distressing. So, in the experiment, researchers played a tape recording, a tape of babies crying, to another baby. And, sure enough, the baby started crying when he heard the sound of other babies crying. This was no surprise, of course, and the researchers assumed that the baby cried because of the noise.

But the next part of the experiment *was* surprising. The researchers played the baby a tape of his *own* crying. It was just as noisy, so the researchers expected him to cry. However, this time, the baby did *not* cry; he wasn't upset by the sound of his own crying. Why not? Well, maybe it wasn't the *noise* that had made him cry before, when he heard other babies crying. In fact, maybe noise had nothing to do with it. It could be that the baby felt empathy for the other babies, and that was why he got upset when he heard them crying. The researchers concluded that it's indeed possible that babies feel empathy, concern, for others.

Narrator
Using the points from the lecture, explain why researchers think that babies may feel empathy.

TRACK 41 TRANSCRIPT

Narrator
Now listen to part of a lecture on the topic you just read about.

Professor
Well, ongoing investigations have revealed that predation is the most likely cause of sea otter decline after all.

First, the pollution theory is weakened by the fact no one can really find any dead sea otters washing up on Alaskan beaches. That's not what you would expect if infections caused by pollution started killing a lot of otters. On the other hand, the fact that it's so hard to find dead otters is consistent with the predator hypothesis: if an otter is killed by a predator, it's eaten immediately so it can't wash up on shore.

Second, although orcas may *prefer* to hunt whales, whales have essentially disappeared from the area because of *human* hunters. That means that orcas have had to change their diet to survive, and since only smaller sea mammals are now available, orcas have probably started hunting those. So it probably *is* the orcas that are causing the decline of all the smaller sea mammals mentioned in the passage, the seals, the sea lions, and the sea otters.

And third, the uneven pattern of otter decline is better explained by the orca predation theory than by the pollution theory. What happens to otters seems to depend on whether the location where they live is accessible to orcas or not. In those locations that orcas can access easily, the number of sea otters has declined greatly. However, because orcas are so large, they can't access shallow or rocky locations. And shallow and rocky locations are precisely the types of locations where sea otter populations have *not* declined.

TRACK 42 TRANSCRIPT

Narrator
Summarize the points made in the lecture, being sure to explain how they respond to the specific points made in the reading passage.

TRACK 51 TRANSCRIPT

Narrator
Listen to a conversation between a student and a university employee.

Student
Hi, I need to pick up a gym pass.

Employee
OK, I'll need your name, year, and University I.D.

Student
Here's my I.D. card, and my name is Gina Kent and I'm first year.

Employee
OK, Gina, I'll type up a pass for you right away.

Student
Great. This is exciting. I can't wait to get started.

Employee
Oh, this is a wonderful gym.

Student
That's what everybody's been saying. Everyone is talking about the new pool and the new indoor courts, but what I love is all the classes.

Employee
The classes?

Student
Yeah, like the swimming and tennis classes and everything.

Employee
Oh yeah, but this pass doesn't entitle you to those.

Student
It doesn't?

Employee
No, the classes fall into a separate category.

Student
But that's my whole reason for getting a pass. I mean I was planning to take a swimming class.

Employee
But that's not how it works. This pass gives you access to the gym and to all the equipment, and to the pool and so forth, but not when the teams are practicing, so you'd have to check the schedule . . .

Student
But what do I have to do if I want to take a class?

Employee
You'll have to one, register, and two, pay the fee for the class.

Student
But that's not fair.

Employee
Well, I think if you think about it you'll see that it's fair.

Student
But people who play sports in the gym . . . they don't have to pay anything.

Employee
Yes, but they just come in and play or swim on their own. But taking a class, that's a different story. I mean someone has to pay the instructors.

Student
So . . . if I want to enroll in a class . . .

Employee
Then you have to pay extra. The fee isn't very high, but there is a fee. So, what class did you say you wanted to take?

Student
Swimming.

Employee
OK, swimming classes are $30 a semester.

Student
I guess I could swing that, but I'm still not convinced it's fair. So, do I pay you?

Employee
Well, first you need to talk to the instructor. They have to assess your level and steer you to the right class—you know, beginner, intermediate.

Student
You mean, I have to swim for them, show them what I can do?

Employee
No, no, you just tell them a little bit about your experience and skills, so they know what level you should be in.

Student
Oh. OK, so, I guess I'll need an appointment.

Employee
And I can make that for you right now. And then I'll type up your gym I.D. card, you'll need it to get into the building. Now, about that appointment, um, how does Wednesday at 3 sound?

Student
Fine.

Employee
OK, and you'll be meeting with Mark Giddis, he's the swimming instructor. He also coaches the swim team. And, here . . . I've jotted it all down for you.

Student
Great. Thanks.

TRACK 52 TRANSCRIPT

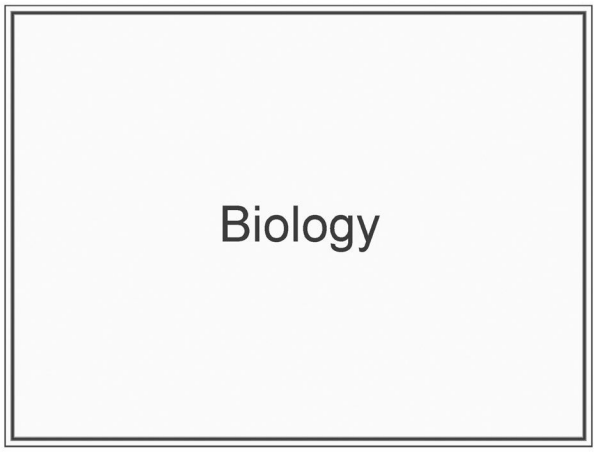
Narrator
Listen again to part of the conversation. Then answer the question.

Employee
Yes, but they just come in and play or swim on their own. But taking a class, that's a different story.

Narrator
What does the man imply when he says this:

Employee
But taking a class, that's a different story.

TRACK 53 TRANSCRIPT



Narrator
Listen to part of a lecture in a biology class. The class has been learning about birds.

Professor
OK. Today we're going to continue our discussion of the *parenting* behaviors of birds . . . And we're going to start by talking about what are known as "distraction displays."

Now if you're a bird, and there's a predator around, what're you going to do? Well, for one thing, you're going to try to attract as *little* attention as possible, right? Because if the predator doesn't know you're *there*, it's not going to try to *eat* you. But sometimes, *certain species* of birds do the exact *opposite*: when a predator approaches, they do their best to *attract* the attention of that predator. Now why would they do that? Well, they do that to *draw* the predator *away* from their *nest*, away from their *eggs* or their *young birds*. And the *behaviors* that the birds engage in to *distract* predators are called "*distraction* displays," and there are a number of different kinds of distraction displays.

Most of the time, when birds are engaging in distraction displays, they're going to be pretending . . . either that they have an *injury* . . . or that they're *ill* . . . or that they're *exhausted* . . . You know, something that'll make the predator think, "Ah, *here's* an *easy* meal."

One pretty *common* distraction display is what's called the *broken-wing* display. And, uh, in a broken-wing display, the bird *spreads* and *drags* a wing or its tail. And while it does that, it slowly moves away from the nest. So it really looks like a bird with a broken wing. And these broken-wing displays can be pretty convincing.

Another version of this kind of distraction display is where the bird creates the impression of a mouse or some other small *animal* that's running along the ground. A good example of that kind of display is created by a bird called a "purple sandpiper."

Now what the purple sandpiper does is, when a predator approaches, it drags its wings—but *not* to give the impression that its wing's *broken*—but to create the illusion that it has a second pair of legs . . . and then it raises its feathers, so it looks like it's got a coat of fur . . . and then it runs along the ground, swerving left and right—you know, like it's running around little rocks and sticks . . . and as it, as it goes along, it makes this little squealing noise, so from a distance it really looks and sounds like a little animal running along the ground, trying to get away. Again, to the predator, it looks like an easy meal.

Now what's interesting is that birds have different levels of performance of these distraction displays. They don't give their top performance, their prime-time performance, every time. What they do is, they save their best performances, their most conspicuous and most risky displays, for the time just before the baby birds become able to take care of themselves. And they time it that way because that's when they'll've made the greatest investment in parenting their young. So they're not going to put on their best performance just after they've laid their eggs, because they haven't invested that much time or energy in parenting yet. The top performances are going to come later.

Now you have some birds that are quite mature, quite capable, almost as soon as they hatch. In that case, the parent will put on the most conspicuous distraction displays just before the babies hatch. Because once the babies are hatched, they can pretty much take care of themselves. And then you have other birds that're helpless when they hatch. In that case, the parent will save its best performances until just before the babies get their feathers.

TRACK 54 TRANSCRIPT

Narrator
Why does the professor say this?

Professor
But sometimes, *certain species* of birds do the exact *opposite*: when a predator approaches, they do their best to *attract* the attention of that predator. Now why would they do that?

TRACK 55 TRANSCRIPT

Narrator
Listen again to part of the lecture. Then answer the question.

Professor
Most of the time, when birds are engaging in distraction displays, they're going to be pretending . . . either that they have an *injury* . . . or that they're *ill* . . . or that they're *exhausted* . . . You know, something that'll make the predator think, "Ah, *here's* an *easy* meal."

Narrator
Why does the professor say this?

Professor
You know, something that'll make the predator think, "Ah, *here's* an *easy* meal."

TRACK 56 TRANSCRIPT

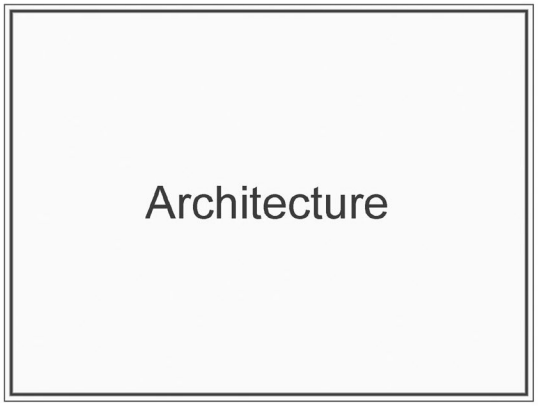
Narrator
Listen again to part of the lecture. Then answer the question.

Professor
Now what the purple sandpiper does is, when a predator approaches, it drags its wings—but not to give the impression that its wing's *broken*—but to create the illusion that it has a second pair of legs . . .

Narrator
Why does the professor say this?

Professor
but *not* to give the impression that its wing's *broken*

TRACK 57 TRANSCRIPT



Narrator
Listen to part of a lecture in an architecture class.

Professor
Today we're taking, uh, a little detour from the grand styles of *public* architecture we've been studying . . . to, uh, look at *residential* architecture in the United States. Since this is something we can all identify with, I, I think it'll help us see the relationship between the *function* of a structure and its, uh, its style, or *form*; this has been an ongoing theme in our discussions, and we'll be getting back to it in just a moment.

Uh, but before we get started, I want you to take a moment to think: Does anyone know what the *single* most popular style for a house in the United States is today? Bob?

Male student
I bet it's the ranch-style house.

Professor
Well, in *this* area, probably—But are we typical? Yeah. Sue?

Female Student
How about the kind of house my grandparents live in? They call it, uh, a Cape Cod . . .

Professor
That's the one. Here's a drawing of a, of what we consider—of a classic Cape Cod house.

Cape Cod house

These days, you see this style all *over* the United States, . . . uh, but it **first** showed up in the U.S. northeast—in the New England region—around the late 1600s. Uh, for those of you who don't know the northeast coastal region—um, Cape Cod is a peninsula, a, a narrow strip of land that juts out into the Atlantic. And um . . . so, so *many* houses in this particular style were built on Cape Cod, that the name of the *place* became the name of the *style*. Uh, now, *why* did the Cape Cod-style house become so popular in the northeast? Well, *one* reason is that it's a great example of form following function. Uh, we've, we've talked about this design principle a lot . . . about form following function . . . and . . . what'd we say it meant? Someone give me an application of this principle. What does this concept, that form should follow function, how would it be applied to housing design?

Female student
Well . . . if it means that the *design* of a building should be based on the needs of the people who *use* it. Then . . . well . . . the architect has to be very practical—to think about . . . the people who'll actually be living in the house . . . or working in the office building—whatever . . . So, for the *architect*, it's all about the *users—not* about showing off how creative you can be.

Professor
Good! Of course, for a Cape Cod house, it might be even *more* accurate to say that, uh, form *also* follows *climate*.

Who knows what the climate's like on Cape Cod?

Male student
Cold in the winter!

Female student
And whenever I visit my grandparents, it's really wet—it's usually either raining or snowing or foggy . . . and windy, too. I guess because it's so exposed to the ocean?

Professor
That's right. So take another look at this drawing, and, uh, you can imagine how this design might be particularly helpful in that kind of climate.

Cape Cod house

Notice how the house sits fairly low to the ground. Uh, this relatively low, compact structure helps the house withstand the strong winds blowing off the ocean. An-and look at the slope of the roof. The steep angle helps keep off all that rain and snow that accumulates in the winter. A-another thing: Cape Cod houses usually face *south*, to take advantage of, of the sun's warmth through the windows—that's helpful in winter.

Now. What can you tell me about the chimney? A-about its location.

Female student
Well. It's in the middle . . . Because . . . Does that have something to do with heating the houses . . . I mean, since—the heat never has to travel very far.

Male student
That'd mean you can heat the house more efficiently, right?

Professor
Exactly. Now, see how the house has very little exterior decoration? Tha-That's also typical of early Cape Cod houses. The wind was one reason—nothing sticking out that might blow away in the harsh weather. Uh, but there was probably another reason—*not* related to the climate—um, more, um—more a reflection of rural New England *society* back then. You see, Cape Cod houses were not built in the big cities, where all the rich people lived back then. These were modest dwellings; the people who built them simply couldn't afford lots of expensive decorative details. But, it was *more* than just a matter of money. In these rural areas, people depended on each other for survival: uh, neighbors had to help and support each other in a difficult environment. So, you didn't want to appear to be showing off. You'd want to avoid anything that might set you apart from your neighbors—the same people you might need to help you some day. So, so, all this helped to create an attitude of *conformity* in the community . . . and you can see why a modest—a, a very plain style would have become so widely imitated throughout rural New England.

Female student
It *is* plain but, you know, it's nice looking.

Professor
Good point! And, in fact, it's precisely that aesthetic appeal—the um, uh, the purity . . . the nearly perfect proportions of the house—that's another reason for the Cape Cod's enduring popularity—even in places where the climate's so mild that its functional design doesn't matter.

TRACK 58 TRANSCRIPT

Narrator
Listen again to part of the lecture. Then answer the question.

Professor
Does anyone know what the *single* most popular style for a house in the United States is today? Bob?

Male student
I bet it's the ranch-style house.

Professor
Well, in *this* area, probably—But are we typical?

Narrator
Why does the professor say this:

Professor
Well, in *this* area, probably—But are we typical?

TRACK 59 TRANSCRIPT

Narrator
Listen to a conversation between a student and a professor.

Student
Hi Professor Atkins, you wanted to see me?

Professor
Hi Bill, thanks for coming. I wanted to talk to you about . . .

Student
. . . Is there . . . is there something wrong with my research paper?

Professor
No, not at all. In fact, it's very good. That's why I wanted to talk to you.

Student
Oh . . . thanks.

Professor
I *think* you know the department is looking to hire a new professor. Are you familiar with our hiring process?

Student
No . . . but . . . what's that gotta do with me?

Professor
Well, Bill . . . we have several qualified applicants we're serious about. And as part of the interview process, we have them meet with a committee of professors and students in our department. They also have to give a talk.

Student
Do you mean . . . like a lecture?

Professor
Yes. Like a sample lecture on one of their academic interests.

Student
Oh . . . so you can see their teaching style?

Professor
Exactly.

Student
Uh-huh, makes sense.

Professor
So I'd like to know if you'd be willing to join as a student representative on the interview committee. It'd be a good experience for you. You could . . . uh . . . put it on your résumé.

Student
Oh! That'd look good for my grad school application, I guess. So what do I have to do?

Professor
The department secretary will give you a schedule of the applicants' visits. If you're free, we'd like you to attend their talks, and then later you can give us your opinion. Oh, and, we usually serve lunch or snacks, depending on what time the talk is.

Student
Cool! That's another good reason to do this. Um . . . when is the next talk?

Professor
We actually haven't had *any* yet. The first one is next Friday at 10:00 A.M. Then lunch and informal discussion with the applicant right after.

Student
Oh, well I'm free on Fridays. If all the talks are on Fridays, I'll be able to make it to all of them.

Professor
That's great! Now you should know that this job candidate is interested in the life cycles in the forest . . .

Student
That's . . . that's what my research is about!

Professor
Yes, I know. That's why I feel it necessary to point out that even though this applicant's research interests are similar to yours, we want you to tell us what you think about the teaching of all these applicants. Your perspective as a student—how the applicant *teaches* in the classroom—that's what's important to us.

Student
I understand. So, how many applicants are there?

Professor
Let's see . . . we have . . . four—all very good candidates that we'll be looking at over the next few weeks. It's going to be a tough decision. But it'll be a good experience for you—especially if you're going to grad school.

Student
Thank you! It'll be cool to do this. I'll get a copy of the schedule from the secretary on my way out.

Professor
You're welcome! See ya in class this afternoon.

TRACK 60 TRANSCRIPT

Narrator
Listen again to part of the conversation. Then answer the question.

Professor
I *think* you know the department is looking to hire a new professor. Are you familiar with our hiring process?

Student
No . . . but . . . what's that gotta do with me?

Narrator
Why does the student say this:

Student
what's that gotta do with me?

TRACK 61 TRANSCRIPT

Environmental Science

Narrator
Listen to part of a lecture in an environmental science class.

Professor
When land gets developed for human use, the landscape changes . . . we don't see as many types of vegetation . . . trees . . . grasses . . . and so forth . . . this in turn leads to other losses . . . the loss of animals that once lived there . . . uh, but these are the *obvious* changes . . . But there are also *less* obvious changes, like the *climate*. One interesting case of this . . . uh . . . of changes in the local land use causing changes in climate, specifically the temperature, is in Florida. Now, what comes to mind when you think of the state of Florida?

Male student
Sunshine! Beaches . . .

Female student
Warm weather and oranges . . .

Professor
Yes, exactly. Florida has long had a great citrus industry—large groves of oranges, lemons, and the like. Florida's winter is very mild; the temperature doesn't often get below freezing. But there are some areas of Florida that do freeze, so in the early 1900s farmers moved even further south in

Florida to areas that were even less likely to freeze. Obviously, freezing temperatures are a danger to the crops. A bad bout of cold weather . . . a long spell of frosts . . . could ruin a farmer's entire crop. Anyway, before the citrus growers moved south, much of the land in south Florida was what we call "wetlands."

Wetlands are areas of marshy . . . swampy land . . . areas where water covers the soil, or is present either at or near the surface of the soil, for a large part of the year.

Wetlands have their own unique ecosystems with plants and animals with special and interesting adaptations—very exciting, but it's not what we're talking about today—Ummm . . . where was I?

Male student
Farmers moved south?

Professor
Oh yes . . . farmers moved south, but the land was not suitable for farming . . . you can't grow oranges in wetlands . . . so farmers had to transform the wetlands into land suitable for farming. To do that, you have to drain the water from the land, move the water elsewhere, and divert the water sources, such as rivers. Hundreds of miles of drainage canals were built in the wetlands. Now these areas . . . the new areas the farmers moved to . . . used to be warm and unlikely to freeze, however, recently the area has become susceptible to freezes . . . and we are trying to understand why.

Female student
Is it some global temperature change or weather pattern . . . like El Niño or something?

Professor
Well, there are two theories. One idea, is as you suggest . . . that major weather patterns . . . something like El Niño . . . are responsible. But the *other* idea, and this is the one that I personally subscribe to, is that the changes in the temperature pattern have been brought about by the loss of the wetlands . . .

Male student
Well, how would loss of wetlands make a difference?

Professor
Well, think about what we've been studying so far. We've discussed the impact of landscapes on temperature right? What effects does a body of water have on an area?

Male student
Oh yeah, uh, bodies of water tend to absorb the heat during the day . . . and then they release the heat at night.

Professor
Yes, exactly! What you just said is what I want you all to understand. Bodies of water *release* heat—and moisture back into the environment. So places near large bodies of water are generally milder . . . uh, slightly warmer . . . than those without water. And what I . . . and others think is that the loss of the wetlands has created a situation where the local temperatures in the area are now slightly different, slightly *colder*, than they were a hundred years ago before the wetlands were drained.

Female student
Hmmm . . . do we know what the temperature was like back then?

Professor
Well, we were able to estimate this: We have data about south Florida's current landscape, uh, the plant cover, and we were able to *reconstruct* data about its landscape prior to 1900. Then we entered those data . . . information about what the landscape looked like before and after the wetlands were drained, we entered the data into a computer weather model. This model can predict temperatures . . . and when all of the data were entered . . . an overall *cooling* trend was predicted by the model.

Female student
How much colder does it get now?

Professor
Well, actually, the model shows a drop of only a few degrees Celsius . . . but this is enough to cause dramatic damage to crops. If temperatures overnight are already very *close* to the freezing point, then, this drop of just a few degrees can take the temperature below freezing . . . and freezing causes frosts, which kill crops. These damaging frosts wouldn't happen if the wetlands were still in existence. Just a tiny temperature difference can have major consequences.

TRACK 62 TRANSCRIPT

Narrator
Listen again to part of the lecture. Then answer the question.

Professor
Wetlands have their own unique ecosystems with plants and animals with special and interesting adaptations . . . very exciting, but it's not what we're talking about today . . . Ummm . . . where was I?

Male student
Farmers moved south?

Narrator
Why does the student say this:

Male student
Farmers moved south?

TRACK 63 TRANSCRIPT

Narrator
Some people think that children should be allowed to watch whatever television programs they choose to. Others think that parents should exercise control over the television programs their children watch. Which do you agree with? Explain why.

TRACK 64 TRANSCRIPT

Narrator
Central College is planning to renovate its dormitories. Read the article in the college newspaper about the plan. You will have 45 seconds to read the article. Begin reading now.

TRACK 65 TRANSCRIPT

Narrator
Now listen to two students discussing the college's plan.

Female student
The college is making a mistake with this new plan.

Male student
What do you mean? I think it'll really help accomplish the college's goals.

Female student
Don't be so sure. All that construction—for *two* years—it's gonna create a lot of noise.

Male student
Oh you mean in the beginning, for students still living in the dorms . . .

Female student
Yeah, students who are trying to sleep or do work are constantly going to be disturbed. So people will try to get as far away as possible—probably by moving off campus. So they'll lose even more people.

Male student
Huh. I hadn't thought of that. But still, once all the construction's over, more people will probably want to live in the dorms, right? I mean, the living conditions will be so much better.

Female student
If they can afford to . . . Do you know how the college is planning on paying for this plan? By raising the cost of campus housing.

Male student
Oh, I didn't realize that.

Female student
Yeah. So if it's more expensive, why would people want to move back into the dorms if they can rent an apartment for less money?

Narrator
The woman expresses her opinion about the college's plan. State her opinion and explain the reasons she gives for holding that opinion.

TRACK 66 TRANSCRIPT

Narrator
Now read a passage about outsider art from a modern art textbook. You will have 45 seconds to read the passage. Begin reading now.

TRACK 67 TRANSCRIPT

Narrator
Now listen to part of a lecture in an art history class.

Professor
Alright, so let's consider the work of the outsider artist Henry Darger. Darger lived by himself in a tiny apartment in Chicago in the 1900s. He had no friends and spent all his spare time there alone, creating hundreds of paintings and drawings. He had never formally studied art and kept his work completely private, so no one ever saw it or responded to it during his lifetime.

And so when you see Darger's work, you notice how unique it is—it doesn't remind you of anything you've ever seen before—it's very much his own. For example, one piece—it's a watercolor painting . . . in this piece he illustrates a story . . . about the adventures of seven children. But see, Darger had a really hard time drawing human figures . . . yet he managed to come up with his own rather unique solution for the problem. He simply cut out pictures of children from newspapers and magazines and pasted them into his own painted illustration of trees, flowers, and grass. The results look . . . uh . . . a little strange. Darger's picture looks more cluttered . . . more crowded with details . . . than the pictures of other artists because its entire surface is painted and there are no spaces left empty. It's also a lot longer than the pictures of most other artists—about nine feet long.

Narrator
Explain why Henry Darger is considered an Outsider Artist.

TRACK 68 TRANSCRIPT

Narrator
Listen to part of a lecture in an interior design class.

Professor
So, we're talking about interior design, er, specifically the basic principles typically used in home and office decoration in the United States. Effective designs create a delicate balance between two things. You need unity *and* you also need contrast, which is essentially a break in unity. Now this might seem a little contradictory, but let me explain why we need both of these for an effective design.

So for the first principle . . . we need *unity* in our design . . . think of it as, hmm, *consistency*. Well, an easy and very effective way to do this is by bringing together similar elements—a common example is by matching colors. You pick a color and use it for different parts of the room. Say, you pick green, and then use a light shade of green for the walls, and maybe a somewhat darker shade for the fabric on the sofa, and finally complement that with a matching green in the rug. When elements match, the room is unified and gives its residents a sense of order and comfort.

OK, but there is such a thing as *too much* unity. Remember, you need a balance of unity and contrast. If all you do is focus on unity, the result will be a booooring room. So, what do you do? Well, you apply the second basic principle of design, which is *contrast*. Contrast serves to disrupt, or, er, break up, the unity in places, but in a careful, intentional way. Uhmmm . . . well let's continue using color as an example . . . to create contrast, color contrast, you need to abruptly change your color scheme once in a while. Ah let's see . . . you could um . . . throw bright red cushions on your dark green sofa, for example. Contrast makes things stand out: the green will look even greener next to the red. So, now your room is more interesting, not completely the same. But watch out, too much contrast is also dangerous, just like too much sameness is . . . too much contrast will make the room feel busy, chaotic.

Narrator
Using the points and examples from the lecture, explain what unity and contrast are, and how they make interior design more effective.

TRACK 69 TRANSCRIPT

Narrator
Now listen to part of a lecture on the topic you just read about.

Professor
It is often said that people are reading less literature today than they used to. What should we make of this?

Well, first, a book doesn't have to be *literature* to be intellectually stimulating. Science writing, history, political analysis, and so forth aren't literature, perhaps, but they're often of high quality. And these kinds of books can be *just* as creative and well-written as a novel or a play—they can stimulate the imagination. So don't assume that someone who isn't reading literature isn't reading a good book.

But let's say that people aren't just spending less time with literature, they're also spending less time with books in general. Does that mean that the culture is in decline? No. There's plenty of culturally valuable material that isn't written: music and movies, for example. Are people wasting their time when they listen to a brilliant song or watch a good movie? Do these non-literary activities lower cultural standards? Of *course* not. Culture has changed. In today's culture there are many forms of expression available other than novels and poems, and some of these creative forms speak more directly to contemporary concerns than literature does.

Finally, it's probably true that there's less support for literature today than in earlier generations. But don't be too quick to blame the *readers*. Sometimes it's the *author's* fault. Let's be honest: a lot of modern literature is *intended* to be difficult to understand. There's not much reason to suppose that *earlier* generations of readers would have read a lot of today's literature *either*.

TRACK 70 TRANSCRIPT

Narrator
Summarize the points made in the lecture, being sure to explain how they cast doubt on specific points made in the reading passage.

TRACK 79 TRANSCRIPT

Narrator
Listen to a conversation between a student and a professor.

Student
So, Professor Tibbits, your note said that you wanted to see me . . . about my Hemingway paper? I have to say, that grade wasn't what I was expecting. I thought I'd done a pretty good job.

Professor
Oh, you did. But do you really want to settle for *pretty* good when you can do something *very* good?

Student
You think it can be *very* good?

Professor
Absolutely.

Student
Would that mean you'd, I could get a better grade?

Professor
Oh sorry, it's not for your grade; it's . . . I think you could learn a lot by revising it.

Student
You mean rewrite the whole thing? I'm really swamped; there's deadlines wherever I turn, and . . . and I don't really know how much time I could give it.

Professor
Well, it *is* a busy time . . . with spring break coming up next week. It's your call, but I think that with a little extra effort you can really turn this into a fine essay.

Student
No, yeah, I mean, after I read your comments—I can see how it tries to do too much.

Professor
Yeah, it's just too ambitious for the scope of the assignment.

Student
So I should cut out the historical part.

Professor
Yes, I would just stick to the topic, anything unrelated to the use of nature imagery has no place in the paper; all that tangential material just distracts from the main argument.

Student
I never know how much to include, you know, where to draw the line.

Professor
Tell me about it. *All* writers struggle with that one. But it's something you can learn, that'll become more clear with practice. But I think if you just cut out the, uh . . .

Student
The stuff about the history . . . but, if I cut out those sections, won't it be too short?

Professor
Well, better a short, well–structured paper than a long paper that's poorly structured and wanders off topic.

Student
So, all I have to do is delete those sections?

Professor
Well, not so fast. After you cut out those sections you'll have to go back and revise the rest . . . to see how it all fits together. And of course, you'll have to revise the introduction, too, to accurately describe what you do in the body of the paper. But that shouldn't be too difficult; just remember to keep the discussion focused. Do you think you can get it to me by noon tomorrow?

Student
Wow . . . um, I have so much . . . uh, but I'll try.

Professor
OK, good, do try. But if you can't, we'll shoot for after spring break, OK?

TRACK 80 TRANSCRIPT

Narrator
Listen again to part of the conversation. Then answer the question.

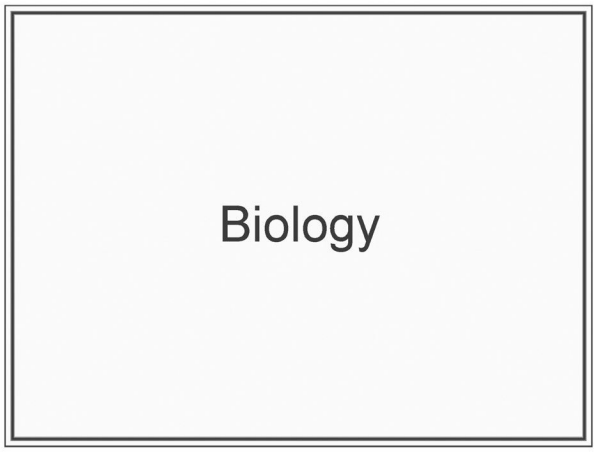
Student
I never know how much to include, you know, where to draw the line.

Professor
Tell me about it.

Narrator
What does the professor mean when she says this:

Professor
Tell me about it.

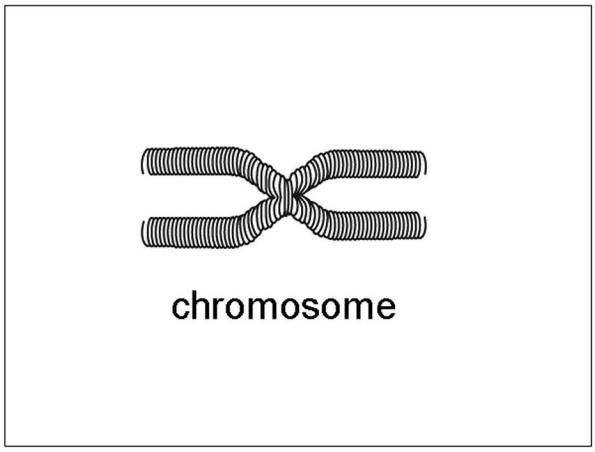
TRACK 81 TRANSCRIPT



Narrator
Listen to part of a lecture in a biology class.

Professor
As we learn more about the DNA in human cells . . . and how it controls the *growth and development of cells* . . . then maybe we can explain a very important observation—that when we try to *grow* most human cells in a laboratory, they seem programmed to divide only a certain number of times before they die. Now this differs with the type of cell; some cells, like nerve cells, only divide seven to nine times in their total life. Others, like skin cells, will divide many, many more times. But finally the cells stop renewing themselves and they die. And in the cells of the human body itself, in the cells of every organ . . . of almost every type of tissue in the body, the same thing will happen eventually.

OK. You know that all of a person's genetic information is contained on very long pieces of DNA called chromosomes—46 of them in a *human* cell, that's 23 pairs of these chromosomes—of various lengths and sizes.



Now, um, if you'll look at this rough drawing of one of them—one chromosome about to divide into two—you'll see that it sort of looks like . . . well actually it's much more complex than this . . . but it reminds us of a couple of *springs* linked together . . . two coiled up pieces of DNA and, if you stretch them out, you'll find they contain certain genes, certain sequences of DNA that help determine how the cells of the body will develop. When researchers looked really carefully at the DNA in chromosomes, though, they were *amazed*—we *all* were—to find that only a fraction of it, maybe 20 to 30 percent, converts into meaningful genetic information. It's *incredible*, at least it was to *me*, but if you . . . if you took away all the DNA that codes for genes, you'd still have maybe 70 percent of the DNA left over . . . That's the so-called "*junk* DNA," though the word "junk" is used sort of tongue in cheek. The assumption is that, even if this DNA doesn't make up any of the *genes*, it must serve some other purpose. Anyway, . . . if we examine the *ends* of these coils of DNA . . . , we'll find a sequence of DNA at each end of every human chromosome . . . called a "telomere."

Now, a *telomere* is a highly *repetitious* . . . and genetically *meaningless* sequence of DNA, what we were calling "junk DNA." But it does have an important purpose. It's sort of like the plastic tip on each end of a shoelace. It may not help you tie your shoe, but that little plastic tip keeps the rest of the shoelace . . . the shoestring . . . from unraveling into weak and useless threads. Well, the telomeres at the ends of chromosomes seem to do about the same thing—protect the genes, the genetically *functional* parts of the chromosome, from being damaged.

Every time the chromosome divides—every time one cell divides into two—pieces of the ends of the chromosome, the telomeres, get broken off. So after each division, the telomeres get shorter; and one of the things that may happen after a while is that pieces of the genes themselves get broken off of the chromosomes . . . so the chromosome is now losing important genetic information and is no longer functional. But as long as the telomeres are a certain length they keep this from happening. So it seems that when the . . . by looking at the length of the telomeres on specific chromosomes, we can actually predict, pretty much . . . how long certain cells can successfully go on dividing.

Now there are *some* cells that just seem to keep on dividing, regardless . . . which may not always be a good thing if it gets out of control . . . , but when we analyze these cells chemically, we find something very interesting—a chemical in them, an enzyme called "*telomerase*."

As bits of the *telomere* break off from the end of the chromosome, this chemical—this "*telomerase*"—can rebuild it . . . can help reassemble the protective DNA, the telomere, that the chromosome has lost. Someday, we may be able to take any cell and keep it alive, functioning and reproducing itself essentially forever, through the use of telomerase. And in the future we may have virtually immortal nerve cells and immortal skin cells or whatever, because this chemical, *telomerase*, can keep the *telomeres* on the ends of the chromosomes from getting any shorter.

TRACK 82 TRANSCRIPT

Narrator
Listen to part of a lecture in a business class.

Professor
OK, as we've talked about, a key aspect of running a successful business is knowing . . . um, getting a good sense of what the customer actually wants. And how they perceive your product. So with that in mind, I want to describe a very simple method of researching customer preference. And it's becoming increasingly common . . . and it's called MBWA, which stands for Managing By Wandering Around.

Professor

Now, MBWA, that's not the most technical-sounding name you've ever heard, but, ah, it describes the process pretty accurately. Here's how it works. Basically, um, the idea is that business owners or business managers just, just go out and actually talk to their customers and ah, to learn more about how well the business is serving their needs. And, and try to see what the customer experiences. Cause that's a great way to discover for yourself how your product is perceived, what its strengths and weaknesses are . . . you know, how you can improve it, that sort of thing. You know Dalton's, they make soup and canned vegetables and such? Well, the head of the company had Dalton's top executives walk around supermarkets, um, asking shoppers what they thought of Dalton's soups, and he used that data to make changes to the company's product. I mean, when Dalton's, of all companies, embraces something as radical as MBWA, it really shows you how popular the theory has become. Yes, Lisa?

Female student

But isn't it dangerous to base decisions on information from a small sample of people? Isn't large-scale market research safer, getting data on a lot of people?

Professor

That's a good question. And, ah, well I don't want to pretend that W, MBWA, uh, is some sort of replacement for other methods of customer research. Now, market research data definitely can give you a good idea of, ah . . . the big picture. But MBWA is, is really useful at kind of filling in the blanks, getting a good on-the-ground sense of how your products are used and how people respond to them. An-and yes, the numbers of opinions you get is small, so, yes, you need to be careful. But, good business managers will tell you that the biggest fear they have, and, and one of the most frequent problems they come across, is, well, becoming out of touch with what their customers really want and need. You know, surveys, and market research . . . stuff like that, they can only tell you so much about what the customers actually want in, in their day-to-day lives. Managing By Wandering Around, on the other hand, well that gets you in there and gives you a good sense of what customers need. So, so when used in combination, then, MBWA and market research, well, there're powerful tools. Oh, here's another example—senior executives for a clothing manufacturer, it was, um ah, Elkin . . . Elkin jeans, you know? They went and worked in a store for a few days selling Elkin's clothes. Now that gave them a very different idea about their product—they saw how people responded to it. They, they could go up to customers in the store and ask them questions about it. Ah, yes, Mike?

Male student
Well, I would think that a lot of customers would be bothered by, you know, if I'm shopping, I don't know if I'd want some business representative coming up to me and asking me questions. It's, it's like when I get phone calls at home from market researchers—I just hang up on them.

Professor
Well, it's certainly true that, well, no one likes getting calls at home from market researchers or, or people like that. But I'll tell you something—most customers have the exact opposite reaction when it comes to MBWA. Now, don't ask me why, because I, I really have no idea, but the fact is that customers tend to respond really well to MBWA, which is the key reason for its success. In fact, the techniques of MBWA work so well, they've actually been extended to all kinds of different contexts. Like politics, for instance. A few years back, the mayor of Baltimore . . . um, ah, I think his name was Schaefer, or something like that . . . anyway, he decided that the best way to serve the people of the city, of his city was to actually get out there and experience the things *they* experienced. So he'd ride around the city, and well, you know, in all parts of it, and he'd see all the potholes, he'd see how trash was sometimes, ah, not picked up off the side of the street, and he'd go back to his office write these memos. They were memos to his staff about the problems he'd seen and how they needed to be fixed, now, that sort of thing. But the thing is he got all this information just by going around, and seeing all the different Baltimore neighborhoods, and talking to people. He called it smart politics. We'd call it MBWA, or just plain good customer service!

TRACK 83 TRANSCRIPT

Narrator
What does the professor imply when she says this:

Professor
I mean, when Dalton's, of all companies, embraces something as radical as MBWA, it really shows you how popular the theory has become.

TRACK 84 TRANSCRIPT

Narrator
Listen to a conversation between a student and a department secretary.

Student
Hi, Miss Hendricks.

Secretary
Hi Brad. How are you?

Student
I'm fine except I have a question about my paycheck.

Secretary
Sure, what's up?

Student
Well, it's already been several weeks into the semester, and my paycheck was supposed to go directly into my bank account, but there haven't been any deposits.

Secretary
That's odd.

Student
Yeah, I thought graduate teaching assistants were automatically put on the payroll at the beginning of the semester.

Secretary
They *are* . . . let's see . . . did you complete all the forms for payroll?

Student
I filled in whatever they sent me, and . . . I returned it, like, at the end of August.

Secretary
Hmm. Well you definitely should've been paid by now. At least two pay periods have passed since then.

Student
I asked at the bank, and they didn't know anything. Who should I talk to about this? Payroll?

Secretary
I'm gonna contact them for you. There was a problem in processing some of the graduate student payroll paperwork, 'cause their computer program crashed after all the information was processed, and some people's information couldn't be retrieved.

Student
Oh . . . but . . . why didn't anyone let me know?

Secretary
I don't know how they work over there, cuz they couldn't even figure out whose information was missing. And this isn't the first time: Seems like something like this happens every semester.

Student
So . . . how do I find out if my information was lost?

Secretary
I'll contact them tomorrow morning to see if you're in the system, but you're probably not.

Student
Well, then what'll I need to do?

Secretary
Sorry, but you'll need to fill out all those forms again, and then I'll fax them over to the payroll office.

Student
And then what? . . . well . . . what I really need to know is . . . how long till I get some money? I'm already a month behind in my bills, and my tuition's due soon.

Secretary
They'll get you into the system the same day they receive your paperwork, so if you do that tomorrow, you'll get paid next Friday.

Student
That's a long time from now. Will that paycheck include all the money I'm owed?

Secretary
It should. I'll double-check with the payroll department.

Student
And another thing: Is there any way I could get paid sooner? I have been teaching all these weeks . . .

Secretary
I know it's not fair but . . . I don't think they can do anything. All the checks are computed automatically in the system. They can't just . . . write checks.

Student
But . . . they're the ones that made a mistake . . . and . . . they never told me.

Secretary
I understand how you feel. If I were you, I'd be upset too . . . I'll tell you what. When I call them, I'll explain the situation and ask if there's any way you could be paid sooner. But I have tell you that, based on past experience, you shouldn't count on it.

Student
I understand. Thanks. I know it's not your fault, and that you're doing everything you can.

Secretary
Well, what I *can* do is make sure that your first check is for the total amount that the university owes you.

Student
That'd be great. Thank you. I'll be on campus about ten tomorrow morning, and I'll come by to see you then.

TRACK 85 TRANSCRIPT

Narrator
Listen to part of a lecture in a music history class. The professor has been discussing opera.

Professor
The word opera means "work." Actually, it means "works." It's the plural of the word "*opus*" from the Latin. And in Italian it refers in general to works of art. "Opera lyrica," or lyric opera, refers to what we think of as opera, the musical drama.

Opera was commonplace in Italy for almost a thousand years *before* it became commercial as a venture. And during those years several things happened primarily *linguistic* or *thematic* and both involving secularization. Musical drama started in the churches. It was an educational tool. It was used primarily as a vehicle for teaching religion and was generally presented in Latin, the language of the Christian church, which had considerable influence in Italy at that time . . . But the language of everyday life was evolving in Europe, and at a certain point in the Middle Ages, it was really only merchants, aristocrats, and clergy who could deal with Latin. The, uh, the vast majority of the population used their own regional vernacular in all aspects of their lives, and so, in what is now Italy, operas quit being presented in Latin and started being presented in Italian.

And once that happened, the themes of the opera presentations also started to change, and musical drama moved from the church to the plaza right outside the church. And the themes, again, the themes changed, and opera was no longer about teaching religion as it was about satire, and about expressing the ideas of society or government without committing yourself to writing and risking imprisonment or persecution or what have you.

Opera, as we think of it, *is*, of course, a resurrected form. It is the melodious drama of ancient Greek theater. The term "melodious drama" being shortened eventually to "melodrama" because operas frequently are melodramatic, not to say unrealistic. And the group that put the first operas together that we have, today even, were . . . well it was a group of men that included Galileo's father, Vincenzo. And they met in Florence, he and a group of friends of the count of Bardi, and they formed what is called the Camerata dei Bardi. And they took classical theater and reproduced it in the Renaissance time. This . . . um . . . this produced some of the operas that we have today.

Now, what happened in the following centuries is very simple. Opera originated in Italy but was not confined to Italy any more than Italians were. And so, as Italians migrated across Europe, they carried theater with them and opera specifically because it was an Italian form.

What happened is that the major divide in opera that endures today took place. The French said opera ought to reflect the rhythm and cadence of dramatic literature, bearing in mind that we are talking about "the Golden Age" in French literature. And so the music was secondary, if you will, to the dramatic cadence of language–to the way the *rhythm* of language was used to express feeling and used to add drama– and of course as a result, *instead* of arias, or solos which would come to dominate *Italian* opera, the *French* relied on what the *Italians* called "recitativo" or "recitative" in English, the lyrics were *spoken* . . . frequently to the accompaniment of a harpsichord.

The French said, "You really can't talk about real people who lived, in opera." And they relied on mythology to give them their characters and their plots. Mythology, the pastoral traditions the . . . the . . . novels of chivalry, or the epics of chivalry out of the Middle Ages. The Italians said, "No, this is a great historical tool, and what better way to educate the public about Nero or Attila, or any number of people than to put them into a play they can see and listen to."

The English appropriated opera after the French. Opera came late to England because all theaters, public theaters were closed, of course, during their Civil War. And it wasn't until the restoration in 1660 that public theaters again opened and opera took off. The English made a major adjustment to opera and exported what they had done to opera back to Italy. So that you have this circle of musical influences.

The Italians invented opera. The French adapted it. The English adopted it. The Italians took it back. It came to America late and was considered too elitist for the general public, but Broadway musicals fulfilled a similar function for a great long while.

John J. Chapman wrote about opera, quote, "If an extraterrestrial being were to appear before us and say, 'What is your society like? What is this Earth thing all about?' you could do worse than take that creature to an opera," end quote. Because opera does, after all, begin with a man and a woman and an emotion.

TRACK 86 TRANSCRIPT

Narrator
Why does the professor say this:

Professor
The English made a major adjustment to opera and exported what they had done to opera back to Italy.

TRACK 87 TRANSCRIPT

Narrator
What does the professor imply when he says this:

Professor
John J. Chapman wrote about opera, quote, "If an extraterrestrial being were to appear before us and say, 'What is your society like? What is this Earth thing all about?' you could do worse than take that creature to an opera," end quote. Because opera does, after all, begin with a man and a woman and an emotion.

TRACK 88 TRANSCRIPT

Narrator
Some people believe it's essential for a person's education to learn to play a musical instrument. Others don't believe music education is important. Which view do you agree with? Explain why.

TRACK 89 TRANSCRIPT

Narrator
Read the article about a college radio station. You will have 45 seconds to read the article. Begin reading now.

TRACK 90 TRANSCRIPT

Narrator
Now listen to two students discussing the article.

Male student
What d' you think of the proposal?

Female student
I think it'll work. I mean, the range of the station now is basically limited to the campus and so it's basically just a few programs, mainly for students . . .

Male student
Yeah.

Female student
Well, if this proposal goes through, there will be more programs and it'll give the students more professional experience as they experiment with programming for a much larger . . . you know . . . "real-life" audience. And stuff like that'll give them a better shot at getting a job after they graduate.

Male student
Of course.

Female student
Besides, the whole university will benefit from it.

Male student
What d' you mean?

Female student
Well, you know my friend Tony, right? He told me that the radio station at his university did something like this about five years ago . . .

Male student
And . . .

Female student
Well. It's a success. They are making a lot of money out of commercials and they are using it to offer more scholarships and to help fund projects to renovate the facilities of other programs.

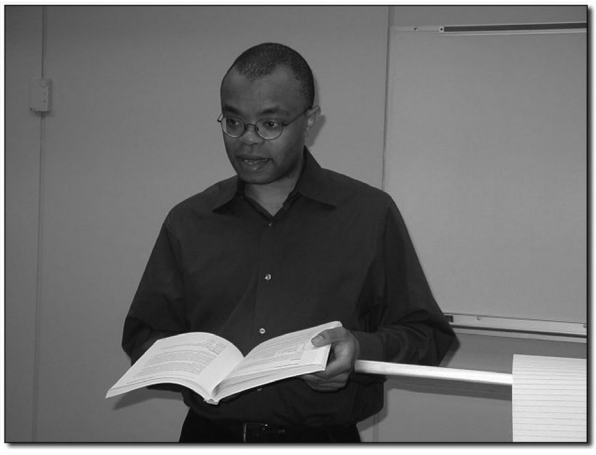
Male student
That sounds really good!

Narrator
The woman supports the proposal described in the article. Explain why she thinks it will achieve the university's goals.

TRACK 91 TRANSCRIPT

Narrator
Now read the passage about subliminal perception. You will have 50 seconds to read the passage. Begin reading now.

TRACK 92 TRANSCRIPT



Narrator
Now listen to part of a lecture on this topic in a psychology class.

Professor
Consider this experiment: two groups of people were asked to watch TV and while they were watching, a picture flashed on the screen, less than a second—very quickly, so it was barely noticeable.

The picture was of a boy with a birthday cake. Now, like I said, there were two groups and each group saw a slightly different version of the picture. One group got the boy looking angry; in fact, he was actually throwing the cake on the floor. The other group got a picture of the boy smiling, happy, holding out the cake like he was offering it. Same boy . . . same cake . . . but different emotions expressed in each picture.

Everyone was then asked to look at a different image—now this is a third image, right? Again it's the boy and the cake, but this time the image stayed on the screen. In this picture, the boy's just holding the cake, basically no emotion on his face—everything very neutral. Now remember, nobody knew they'd already seen a picture of this boy. After a minute, everyone was asked to describe the boy's personality. Those who'd been exposed to image of the angry boy, they generally described the boy's personality negatively. Those who'd earlier seen the happy boy described him, well, positively.

Narrator
Describe what subliminal perception is and explain how the experiment discussed by the professor illustrates this phenomenon.

TRACK 93 TRANSCRIPT

Narrator
Listen to part of a lecture in an economics class.

Professor
So when we talk about the demand for a product, we're referring to *how much* consumers want to buy it, right? And often the demand for a product is influenced by its price—the more expensive it becomes, the less chance that people will want to buy it. OK. But that's not the whole story. Sometimes the *demand* for a product can also be influenced by the price of *other*, *related* products.

First, there are those products called *substitute goods*. If products can be *substituted* for one another, then, um, well, then they're called substitute goods. They're similar enough to be interchangeable. And, uh, an increase in the price of one means an increase in the demand for the other. Like, uh, like butter and margarine. They're pretty much used for the same purposes. Margarine's a butter substitute. And you can bake equally well with either. Well, when the price of butter goes up, it becomes less affordable, and so what do people do? They buy margarine instead, right? So, uh, you see, an increase in the price of *butter* increases the demand for *margarine*.

Now, another instance where the price of one product can influence the demand of another is, uh, is when you have two products that *can't* be *used* without each other. Those products we call *complement goods*. They complement, or, uh, complete, each other, if you will. Like compact discs and compact disc players. You need *both* products in order to use either. So if the price of either

product increases, demand for *both* is likely to decrease. And if the price of CDs goes up, well, demand for them will go down, right? And because CDs and CD players complement each other, what'll *also* happen is that the demand for *CD players* will go down too.

Narrator
Using the points and examples from the talk, explain how substitute goods and complement goods influence demand for a particular product.

TRACK 94 TRANSCRIPT

Narrator
Now listen to part of a lecture on the topic you just read about.

Professor
The evidence linking this portrait to Jane Austen is not at all convincing. Sure, the painting has long been somewhat loosely connected to Austen's extended family and their descendants, but this hardly proves it's a portrait of Jane Austen as a teenager. The reading's arguments that the portrait is of Austen are questionable at best.

First, when the portrait was authorized for use in the 1882 publication of her letters, Jane Austen had been dead for almost *70* years. So the family members who asserted that the painting was Jane had never actually seen her themselves. They couldn't have known for certain if the portrait was of Austen or not.

Second, the portrait could very well be that of a *relative* of Austen's, a fact that would explain the resemblance between its subject and that of Cassandra's sketch. The extended Austen family was very large, and many of Jane Austen's female cousins were teenagers in the relevant period, or had children who were teenagers. And some of these teenage girls could have resembled Jane Austen. In fact, many experts believe that the true subject of the portrait *was* one of those relatives, Mary Ann Campion, who was a distant niece of Austen's.

Third, the painting has been attributed to Humphrey only because of the style, but other evidence points to a later date. A stamp on the back of the picture indicates that the blank canvas, you know, the actual piece of cloth on which the picture was painted, was sold by a man named William

Legg. Records show that William Legg did not sell canvasses in London when Jane Austen was a teenager. He only started selling canvasses when she was 27 years old. So, it looks like the canvas was used for the painting at a time when Austen was clearly older than the girl in the portrait.

TRACK 95 TRANSCRIPT

Narrator
Summarize the points made in the lecture, being sure to explain how they respond to the specific arguments made in the reading passage.

TRACK 104 TRANSCRIPT

Narrator
Listen to a conversation between a student and his psychology professor.

Professor
Good afternoon, Alex. Can I help you with something?

Student
Well, I wanted to talk with you about the research project you assigned today. I, um, hoped you could clarify a few things for me.

Professor
I'll certainly try.

Student
OK, all we have to do is do two observations and take notes on them, right?

Professor
That's a start—but you'll need to do some research, too. Then you'll write a paper that's not so much about the *observations*, but a synthesis of what you've observed and read.

Student
OK . . . and what about the children I'm supposed to observe?

Professor
Not 'children'—a single child, observed twice.

Student
Oh! OK. So I should choose a child—with the permission of the child's parent, of course—and then observe that child a couple of times and take good notes. Then?

Professor
Actually, after your *first* observation, you'll go back and look through your textbook or go to the library and find a few sources concerning the stage of development this particular child is in. And then with *that knowledge*, you'll make a *second* observation of the same child to see if the expected developmental behaviors are exhibited.

Student
Can you give me an example?

Professor
Well, um, if you observed a four-year-old child—uh, for example, my daughter is four years old—you might read up on Piaget's stages of cognitive development. We covered those in class.

Student
Uh-huh.

Professor
Most likely, what stage would a child of that age be in?

Student
Um . . . the preoperational stage?

Professor
Exactly. If that's the case, her language use would be maturing, and her memory and imagination would be developed.

Student
So she might play pretend! Like, she can pretend when driving her toy car across the couch that the couch is actually a bridge or something.

Professor
That's right. In addition, her thinking would be primarily egocentric.

Student
So she'd be thinking mostly about herself and her own needs and might not be able to see things from anyone else's perspective.

Professor
Um hmm.

Student
But . . . what if she doesn't? I mean, what if she doesn't demonstrate those behaviors?

Professor
That's fine. You'll note that in your paper. See, your paper should compare what is expected of children at certain stages of development with what you actually observe.

Student
OK. I have one more question, though.

Professor
And what's that?

Student
Where can I find a child to observe?

Professor
Um, I'd suggest you contact the education department secretary. She has a list of contacts at various schools and with certain families who are somehow connected to the university. Sometimes they are willing to help out students with projects like yours.

Student
OK, I'll stop by the education department office this afternoon.

Professor
And if you have any trouble or any more questions, feel free to come by during my office hours.

TRACK 105 TRANSCRIPT

Narrator
Listen again to part of the conversation. Then answer the question.

Student
OK, all we have to do is do two observations and take notes on them, right?

Professor
That's a start.

Narrator
What does the professor mean when she says this:

Professor
That's a start.

TRACK 106 TRANSCRIPT

Narrator
Listen to part of a lecture in a city planning class.

Professor
In the last 50 years or so, many American cities have had difficulty in maintaining a successful retail environment. Business owners in the city centers, or, uh, the downtown areas, have experienced some financial losses because of a steady movement of people out of the cities and into the suburbs. In general, downtown areas just don't have that many residential areas; uh, not that many people *live* there. So, what have city planners decided to do about it? Well, one way they've come up with some ways to attract more people to shop downtown was by creating *pedestrian malls*.

Now, what *is* a pedestrian mall? It's a pretty simple concept, really. It's essentially, um, an outdoor shopping area designed just for people on foot. And—uh, well, unlike many other shopping malls that are built in the suburbs nowadays—these pedestrian malls are typically located in the downtown area of the city and, well, they have features like wide sidewalks, comfortable outdoor seating, and, uh, maybe even fountains and, you know, art.

Uh, there are variations on this model, of course, but the common denominator is always the idea of-of creating a shopping space that will get people to shop in the city without needing their cars. So I'm sure you can see how having an area that's off-limits to automobile traffic would be ideal for a heavily populated city, where, uh, well, the streets would otherwise be bustling with noisy, unpleasant traffic congestion.

Now, the concept, which originated in Europe, was adopted by American city planners in the late 1950s. And since then, a number of United States cities have created pedestrian malls, and many of them have been highly successful. So what have city planners learned about making these malls succeed? Well, there are two critical factors to consider when creating a pedestrian mall: *location* and *design*. Both of which are equally important.

Now, let's start with the location. In choosing a specific location for a pedestrian mall, there are, in fact, two considerations: proximity to potential customers—uh, that's we would call a "customer base"—and accessibility to public transportation, which we'll get to in just a moment. Now, for a customer base, eh, the most obvious example would be a large office building—since the employees could theoretically go shopping after work or during their lunch hour, right? Uh, another really good example is a convention center, which typically has a hotel and large meeting spaces to draw visitors to the city for-for major business conferences and events. Uh, but ideally, the pedestrian mall would be used by local residents, not just people working in the city or-or visiting the area. So that's where access to public transportation comes in. Either, um, either the designers plan to locate the mall near a central transportation hub—uh, like a bus terminal, a major train, or subway station *or* they work with city officials to create sufficient parking areas not too far from the mall. W-Which makes sense, because if people can't drive into the mall area, well, then they need to have easy access to it.

OK. So that's location, but-but what about design? Well, design doesn't necessarily include things like sculptures, or decorative walkways, or-or even eye-catching window displays—you-you know—art . . . Although, I'd be the first to admit those things are *aesthetically* appealing . . . However, visually pleasing sights, well, they're *not* a part of the pedestrian mall design that-that matter the most. The key consideration is *a compact and convenient layout*—uh, one which allows pedestrians to walk from-from one end of the mall to the other in just a few minutes . . . so they can get to the major stores, restaurants, and-and other central places, eh, without having to take more than one or two turns. Now, this takes careful and creative planning.

Eh, but, now, what if one ingredient to this planning recipe is missing? There could quite possibly be long-lasting effects. And, eh, I think a good example is the pedestrian mall in Louisville, Kentucky, for instance.

Now when the Louisville mall was built, oh, it had lots of visual appeal. It was attractively designed right in a small part of downtown, and it pretty much possessed all of the other design elements for success. But, uh, now here's where my point about location comes into play . . . there wasn't a convention center around to-to help draw in visitors, and, uh, well, the only nearby hotel eventually closed down for that same reason. Well, you can imagine how this must've affected local and pedestrian mall business owners. Sort of, what we call, a chain reaction. It wasn't until a convention center and a parking garage were built, uh, about decade later that the mall started to be successful.

TRACK 107 TRANSCRIPT

Narrator
What does the professor mean when she says this:

Professor
Well, design doesn't necessarily include things like sculptures, or decorative walkways, or-or even eye-catching window displays—you-you know—art . . . Although, I'd be the first to admit those things are *aesthetically* appealing . . .

TRACK 108 TRANSCRIPT

Narrator
Listen to part of a lecture in an ecology class.

Professor
So—uh, continuing our discussion of ecological systems, whole systems . . . the main thing to keep in mind here is the *interrelationships*. The species in a system, uh—and even the landscape itself—they're interdependent. Let's take what you read for this week, and see if we can't apply this interdependence idea. Mike?

Male student
Well, um, how about *beavers*—ecosystems with beavers and waterways.

Professor
Good, good. Go on.

Male student
Like—well, you can see how it's so important, 'cause if you go back before Europeans settled in North America, like before the 1600s, back when Native Americans were the only people living here—well, back then there were a lot of beavers. But later on, *after* Europeans—

Professor
OK, wait—I see where you're heading with this, but before we go into how European settlement affected the ecosystem, tell me this: what kind of environment do beavers live in? Think about what it was like *before* the European settlers came. We'll come back to where you were headed . . .

Female student
OK, well, beavers live near streams and rivers . . . And they *block up* the streams and rivers with, like, logs, and sticks, and mud, you know, they build *dams*, that really slow down the flow of the stream. So then the water *backs up* and creates, like, a pond that floods the nearby land.

Professor
And that creates *wetlands*. OK, tell me more.

Female student
Well, with wetlands it's like there's more *standing* water, more *still* water around. And that water's a lot *cleaner* than swiftly flowing water because the dirt and sediment and stuff has a chance to sink to the bottom.

Professor
More important for our discussion: Wetland areas support a lot more varieties of life than swiftly flowing water. For example, there are more varieties of fish, of insects, lots of frog species. And then species that rely on *those* species start to live near the wetlands, too.

Female student
Yes. Like birds and mammals that eat the fish and insects. And you get trees and plants that begin to grow near the standing water that can't grow near running water. Oh, and there's something about wetlands and groundwater, too . . .

Professor
OK. Good. Wetlands have a big effect on groundwater—the amount of water *below* the surface of the land. Think of wetlands as . . . um, like a giant sponge. The earth soaks up a lot of this water that's continually flooding the surface, which increases the amount of water below. So, where there are wetlands, you get a lot of groundwater. And *groundwater* happens to be a big source of our *own* drinking water today. All right. So back to the beavers. What if the beavers weren't there?

Male student
You'd just have a regular running stream, 'cause there's no dam. So the ecosystem would be completely different—there'd be fewer wetlands.

Professor
Exactly. So, now let's go back where you were headed before, Mike. Uh, you mentioned a change that occurred after Europeans came to North America . . .

Male student
Yeah—well, there used to be beavers all over the place . . . um, something like 200 million beavers, just in the continental United States. But when Europeans came, they started hunting the beavers for their fur . . . 'cause beaver fur, it's really warm—and it was really popular for making hats in Europe. So the beavers were hunted a lot, overhunted—they were almost extinct by the 1800s. So . . . that meant fewer wetlands—less standing water.

Professor
And what does that mean for the ecosystem? Kate.

Female student
Well, if there's *less standing* water, then the ecosystem can't support as many species, because a lot of insects and fish and frogs *can't live* in *running* water. And then the *birds and animals* that eat *them* lose *their* food supply.

Professor
Precisely. So the beaver, in this ecosystem, is what we call a *keystone species*.

The term "keystone" kind of explains itself: in architecture, a *keystone* in an archway or doorway is the stone that holds the whole thing together, and keeps it from collapsing. Well, that's what a keystone species does in an ecosystem—it's the crucial *species* that keeps the system going.

Now, beaver populations are on the rise again, but there's something to think about: consider humans as part of these ecosystems. You've probably heard about water shortages or, uh, restrictions on how much water you can use, especially in the summertime, in recent years. And remember what I said about groundwater. Imagine if we still had all those beavers around, all those wetlands. What would our water supply be like *then?*

TRACK 109 TRANSCRIPT

Narrator
Listen again to part of the lecture. Then answer the question.

Professor
So the beaver, in this ecosystem, is what we call a *keystone species*.

The term "keystone" kind of explains itself: in architecture, a *keystone* in an archway or doorway is the stone that holds the whole thing together, and keeps it from collapsing.

Narrator
Why does the professor say this:

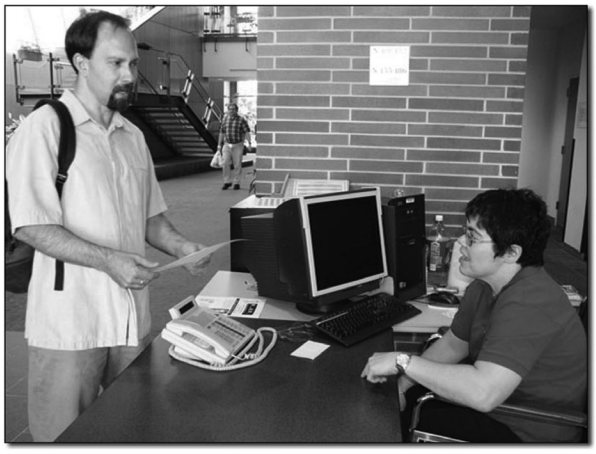
Professor
The term "keystone" kind of explains itself: in architecture, a *keystone* in an archway or doorway is the stone that holds the whole thing together, and keeps it from collapsing.

TRACK 110 TRANSCRIPT

Narrator
What does the professor imply when she says this:

Professor
Imagine if we still had all those beavers around, all those wetlands. What would our water supply be like *then?*

TRACK 111 TRANSCRIPT



Narrator
Listen to a conversation between a student and the language lab manager.

Student
Hi. I'm not sure but . . . um, is this the Carter Language Lab?

Manager
Yes, it is. How can I help you?

Student
I'm taking first-year Spanish this semester. Our professor says we need to come here to view a series of videos. I think it's called *Spanish: Working on Your Accent*.

Manager
Yes, we have that . . . Um, they're on the wall behind you.

Student
OK, so . . . I can just take . . . can I take the whole series home? I think there are three of them . . .

Manager
I guess you haven't been here before . . .

Student
No, no I haven't.

Manager
OK, well, you have to watch the videos here. You need to sign in to reserve an open room, and sign out the video you need. Just start with the first one in the series—each video's half an hour long.

Student
So it's a video *library*, basically?

Manager
Yes, but unlike the library, you can't take any videos out of the lab.

Student
OK, so, how long can I use the video room for?

Manager
You can sign up for two hours at a time.

Student
Oh good. So I can watch more than one video when I come up here. Is the lab pretty busy all the time?

Manager
Well, rooms are usually full right after dinnertime. Uh, but you can sign up *the day before* to reserve a room if you want . . .

Student
Hmmm, *the day before* . . . But I can just *stop in* too . . . to see if there're any rooms open, right?

Manager
Sure. Stop in anytime.

Student
Um, what about copies of the videos? Is there just one copy of each in the series? I don't want to miss out if everyone comes in at once.

Manager
Oh, no. Uh, we have several copies of each tape in the Spanish accent series. We usually have multiple copies of everything for *each* video collection.

Student
Super. So, how many rooms are there in total in the lab?

Manager
Twenty. They're pretty small, so we normally get one person or no more than a small group of people in there watching a video together. Actually, someone else from your class just came in and took the first Spanish video in to watch. You could probably run in there and watch it with him. Of course, you're welcome to have your own room, but sometimes students like to watch with a classmate so they can review the material with each other afterwards . . . for example, if there was some content they didn't *really* understand.

Student
I guess I'd prefer my own room. I concentrate better by myself . . . and I don't want to miss anything . . . hmm, and he's probably already started watching it . . .

Manager
No problem—we've got a lot of rooms open right now. When you come in, you sign your name on the list and are assigned a room number. Or if you call in advance, the attendant will tell you your room number. If you forget, just come in and take a look at the list. The videos are over there.

Student
Great. Thanks.

TRACK 112 TRANSCRIPT

Narrator
Listen again to part of the conversation. Then answer the question.

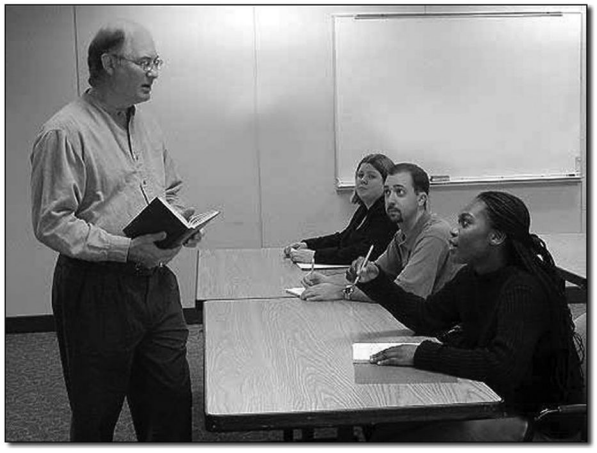
Student
OK, so . . . I can just take . . . can I take the whole series home? I think there are three of them . . .

Manager
I guess you haven't been here before . . . ?

Narrator
What does the woman imply?

TRACK 113 TRANSCRIPT

Narrator
Listen to part of a lecture in a poetry class. The professor is discussing medieval poetry.



Professor
OK, so, the two poems we're looking at today fall into the category of, uh, medieval times, which was how long ago?

Female student
Almost a thousand years ago, right?

Professor
Yes, that's right—

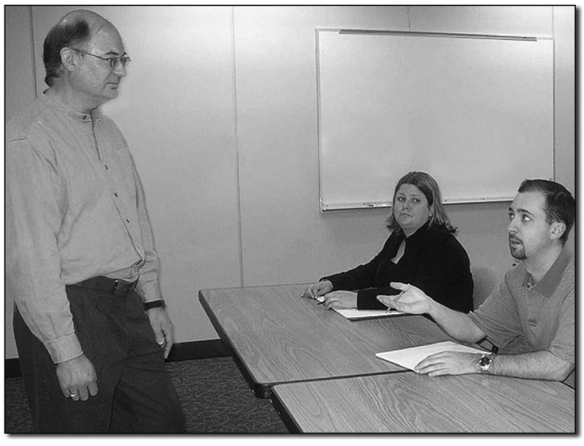
Female student
But professor, are you sure these are poems? I mean, I thought poems were shorter. These are more like long stories. I mean, one of 'em was all about love, but the other one, the chan—chan—whatever it's called, that other one, well, it was all about fighting and battles. I mean, can both of them be considered poems?

Professor
Well, think back to the very beginning of this course.

Female student
Uh-huh.

Professor
Remember how w-w-we defined poetry? In the very broadest sense, we said it's written to evoke, uh, to make *you*, the audience, have some kind of emotional experience through the use of imagery, uh, some kind of predictable rhythm, and-and usually, but not always, there's more than one meaning implied with the words that are used. Let's start with chanson poetry first. That's chanson.

Chanson poems became popular in Europe, particularly in France, and the term is actually short for a longer French phrase that translates to, uh, *songs* of *deeds*. Ah, now, they were called songs of deeds because, strangely enough, they were written to describe the heroic deeds or actions of . . . of warriors, the knights during conflicts. We don't know a lot about the authors . . . it's still contested somewhat, but we're pretty sure about *who* the chanson poems were written *for*. That is, they were written for knights and the lords, the, uh, nobility that they served. The poems were sung, uh, performed by a minstrel, a singer who traveled from castle to castle, singing to the local lord and his knights . . . Well, would, uh, would someone summarize the main features of the chanson poem you read?



Male student
Well, there's a hero, a knight, who goes to battle, and he's admired for his courage, bravery, and loyalty, loyalty to the lord he serves, his country, and his fellow warriors in the field. He's—he has . . . uh, he's a, he's a skilled fighter willing to face the most extreme dangers, uh, sacrificial, uh, willing to sacrifice anything and everything to protect his king and country.

Professor
OK, now, given that the intended audience for these poems were knights and lords, what can we say about the purpose of chanson poetry? What kinds of feelings was it meant to provoke?

Female student
Well, I guess they must've been really appealing to those knights and lords who were listening to them, hearing the songs probably made 'em feel more patriotic, made 'em feel like it was a good and noble thing to serve their countries in whatever way they could.

Professor
Good. We've got a pretty good picture of what the chanson hero was like. Now let's compare that to the hero in the *other* poem. The other poem is an example of what's called romance poetry. And the hero in the romance poem was also a knight. But what made the knight in romance poetry different from the knight in chanson poetry?

Well, first, the *purpose* of the hero's actions was different. The hero in romance poetry is independent, purely solitary in a way, not like the chanson poet who was always surrounded by his fighting companions. He doesn't engage in conflict to protect his lord or country. He does it for the sake of adventure, to improve himself, to show he's worthy of respect and love from his lady. He's very conscious of the particular rules of social behavior he has to live up to somehow, and-and all of his actions are for the purpose of proving that he is an-an upright, moral, well-mannered . . . well-behaved individual. You may have noticed that in chanson poetry there isn't much about the hero's feelings . . . the focus is on the actions, the deeds. But the romance poetry describes a lot of the inner feelings, the motivations, uh, psychology, you could say, of a knight trying to improve himself, to better himself so that he's worthy of the love of a woman.

What explains this difference? Well, digging into the historical context tells us a lot. Um, romance poetry emerged a few generations after chanson and its roots were in geographic regions of France that were calmer, where conflict wasn't central to people's lives. More peaceful times meant there was more time for education, travel . . . more time for reflection. Another name for romance poetry that's often synonymous with it is *troubadour* poetry.

Troubadours were the authors of these new romance poems. And we know a lot more about the troubadours than we do about the chanson authors because they often had small biographical sketches added to their poems that gave pretty specific information about their social status, geographical location, and a small outline of their career. This information wasn't particularly reliable because they were sometimes based on fictitious stories of great adventure, or scrapped together from parts of different poems, *but* there is enough there to squeeze, mmm, *infer* some facts about their social class.

The political climate had settled down enough so that troubadours had the luxury of being able to spend most if not all of their time creating, crafting, or, uh, composing their love songs for their audiences. And yes, these poems were also sung. Many troubadours were able to make a living being full-time poets, which should tell you something about the value of that profession during medieval times.

TRACK 114 TRANSCRIPT

Narrator
Listen again to part of the lecture. Then answer the question.

Female student
But professor, are you sure these are poems? I mean, I thought poems were shorter. These are more like long stories. I mean, one of 'em was all about love, but the other one, the chan—chan—whatever it's called, that other one, well, it was all about fighting and battles. I mean, can both of them be considered poems?

Professor
Well, think back to the very beginning of this course.

Narrator
Why does the professor say this:

Professor
Well, think back to the very beginning of this course.

TRACK 115 TRANSCRIPT

Narrator
When looking for information for a research project, some students prefer to get their information mainly from the Internet. Others prefer to mainly use printed materials such as books and academic journals. Which do you prefer, and why?

TRACK 116 TRANSCRIPT

Narrator
The university is considering building a new athletic stadium. Read the article in the student newspaper. You will have 45 seconds to read the article. Begin reading now.

TRACK 117 TRANSCRIPT

Narrator
Now listen to two students discussing the article.

Male student
So, what do you think of the university's new plan?

Female student
Oh, I don't know. I don't think it's gonna work.

Male student
No?

Female student
I mean, I can't imagine top students being too thrilled about some of the conditions on this campus.

Male student
What do you mean?

Female student
Like, the science laboratories having such old, outdated equipment, and the library needing more books, and the student center being so small. I think that the two million could be spent in better places if the university is really serious about achieving its goal.

Male student
OK. But what about the other reason for building the stadium? I mean, right now, we have so little contact with the town . . .

Female student
Yeah, but this won't help relations. Look, people from town hardly ever come to games because our teams always lose and they're not suddenly going to improve overnight. Besides, adding seats won't make a difference. I mean, if people from town didn't come before, they won't come now just because the place is bigger.

Narrator
The woman expresses her opinion about the university's plan. State her opinion and explain the reasons she gives for holding that opinion.

TRACK 118 TRANSCRIPT

Narrator
Now read the passage from a psychology textbook. You have 50 seconds to read the passage.

TRACK 119 TRANSCRIPT

Narrator
Now listen to part of a lecture on this topic in a psychology class.

Professor
Let's take an everyday example, an ordinary round plate like you'd find in a kitchen. If you hold the plate directly in front of your face and look at it, what shape do you see? A perfect circle, right? Suppose you tilt the plate to a different angle, to a horizontal position—like you're planning to put food on it. Still a perfect circle? No. The circle is now stretched out, flattened into an oval. Do you

conclude the plate has actually changed shape? Or—that it's a different object, not the same plate? Of course not. It looks different, but we perceive it as still being the same.

Here's a different example. This classroom we're in . . . it's fairly large, right? Now, from up close, from the front row, I appear to be relatively big—bigger than if you were in the last row, right? But let's say you're sitting in the front row today, but tomorrow you're sitting in the back row. From back there I'm going to look smaller, but you don't think I've actually gotten smaller. You don't think you're seeing a different professor, a guy who looks like me except he's smaller. No matter where you are—up close or far away, you understand, without even thinking about it, that I'm the same size, the same person.

Narrator
Explain what is meant by perceptual constancy, using the examples provided by the professor.

TRACK 120 TRANSCRIPT

Narrator
Now listen to part of a lecture in a biology class.

Professor
Now, many sea animals, in order to hide from predators, have over time, developed different kinds of *camouflage* to help them blend in with their environment and avoid detection by predators.

Picture the surface of the seafloor—it's as varied as the land we live on. It's got peaks and valleys, vegetation, rocky areas. And some sea animals have developed permanent colors or shapes to resemble these environmental features. This camouflage helps disguise them from predators by enabling them to blend into a-a *specific part* of the sea. For instance, take a kind of fish like the *leafy sea dragon*. Well, the name says it all: it resembles a small green dragon, with leaf-like protrusions sticking out like arms. Now, because of its color and shape, it blends in extremely well with green sea plants. So when the leafy sea dragon is swimming through these plants, predators have trouble seeing it. But when it enters other environments, without these green plants, its camouflage doesn't work anymore.

Now, other sea animals are difficult to spot *anywhere* in the sea because their type of camouflage enables them to change color. Take the cuttlefish, a fish that's closely related to the squid and octopus. Unlike leafy sea dragons, cuttlefish have not developed any particular shape to hide from predators, but, uh, they have a lot more mobility because their camouflage allows them to blend into any environment. Because cuttlefish have shifting pigments that allow them to change color in a matter of seconds. And so they can almost instantaneously match the color of their surroundings. If they're swimming by green sea plants, they'll turn green and if they're swimming over the brown seafloor, they'll turn brown.

Narrator
Using the examples of the leafy sea dragon and the cuttlefish, describe two kinds of camouflage and the benefits they provide.

TRACK 121 TRANSCRIPT

Narrator
Now listen to part of a lecture on the topic you just read about.

Professor
Of course there's some negative consequences of selling fossils in the commercial market, but they've been greatly exaggerated. The benefits of commercial fossil trade greatly outweigh the disadvantages.

First of all, the public is likely to have *greater* exposure to fossils as a result of commercial fossil trade, not *less* exposure. Commercial fossil hunting makes a *lotta* fossils available for purchase. And as a result, even low-level public institutions, like-like public schools and libraries, can now routinely buy interesting fossils and display them for the public.

As for the idea that scientists will lose access to really important fossils, that's not realistic either. Before anyone can put a value on a fossil, it needs to be scientifically identified. Right? Well, the only people who can identify fossils—who can really tell what a given fossil is or isn't—are *scientists*, by performing detailed examinations and tests on the fossils themselves. So, even if a fossil's destined to go to a private collector, it has to pass through the hands of scientific experts first. This way, the scientific community is not gonna miss out on anything important that's out there.

Finally, whatever damage commercial fossil collectors sometimes do, if it weren't for them, many fossils would simply go undiscovered, because there aren't that many fossil collecting operations that're run by universities and other scientific institutions. Isn't it better for science to at least have *more* fossils being found—even if we don't have all the scientific data we'd like to have about their location and surroundings—than it is to have many fossils go completely undiscovered?

TRACK 122 TRANSCRIPT

Narrator
Summarize the points made in the lecture, being sure to explain how they oppose specific points made in the reading passage.