GLOSSARY

lab – laboratory; a place where scientists and engineers work, conducting experiments and tests
* Students have to wear protective eyeglasses whenever they go into the lab.

colleague – co-worker; a person whom one works with, usually in the same business or organization
* How often do you eat lunch with your colleagues?

daycare – a type of business that provides childcare services for young children during the day while their parents are at work
* Ania plans to send her son to daycare once he's four months old so that she can go back to work.

research – the process of learning new information by studying phenomena and testing new ideas
* They're conducting research to learn about the effects of a high-sodium diet.

toddler – a one-, two-, or three-year-old child; a young child who is learning how to walk
* How many words do most toddlers know?

microscope – a device used to see things that cannot normally be seen because they are too small, often used for biological research
* Today we're going to use a microscope to look at the cells in human hair.

beaker – a glass cup with small marks for measuring, used in chemistry and other sciences to measure and pour liquids
* Please pour 100 ml of ethanol into the beaker and heat it to 85 degrees.

test tube – a small glass container that is shaped like a tube that is rounded at one end and open on the other end, used to measure, store, and pour small amounts of liquid
* The doctor put her blood sample into three small test tubes and sent them away for testing.

reach – the area around oneself in which one can touch something by extending one's arm, hand, and fingers
* Please put the breakable objects on the highest shelf, out of the children's reach.

to tip over – to knock something over; to hit something, usually accidentally, and make it fall over
* When Piet accidentally hit the table, he tipped over the vase, but fortunately it didn't break.

Petri dish – a small, very short, round glass or plastic dish with a lid, used by scientists for research
* The bacteria will grow more quickly if you put the Petri dish in a warm, damp location.

experiment – a scientific test to see what will happen under certain conditions, or to test whether one's hypothesis (idea) is correct
* In our physics class, we conducted an experiment to measure the force of gravity.

chemical – a liquid or gas used in chemistry or produced through a chemical reaction
* Some women want to buy all-natural makeup that is made without any chemicals.

to collect – to gather; to get something, usually by taking it from many different places
* Hal collects small rocks of all types from every country he visits.

data – information; facts; quantitative or qualitative information, often gathered through an experiment, that hasn't yet been processed or analyzed
* According to the data we've collected, our customers prefer colored cameras over black or grey cameras.

to empty – to remove the contents of a bag or container so that nothing is left inside it
* Khaled emptied all his jacket pockets, but he still couldn't find his keys.

solution – a liquid that is a mixture of two or more substances
* Arthur made a solution of sugar and water to feed to the hummingbirds.

lab coat – a long, usually white jacket worn by scientists who work with dangerous chemicals in a laboratory, worn to protect their skin and clothing
* Troy accidentally spilled acid all over his lab coat, but fortunately it didn't hurt his skin.

silly goose – an informal name for a person, usually a child, who has done something silly, slightly foolish, and unexpected, making one laugh
* Brook is always doing funny things like wearing huge hats or painting butterflies on her cheeks. She's such a silly goose!
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COMPREHENSION QUESTIONS

1. Which of these would <u>not</u> be used to hold a solution?
a) A microscope.
b) A beaker.
c) A test tube.

2. What does Tony believe his son is doing?
a) Trying to help Gale with her research.
b) Trying to make a mess.
c) Trying to find a way to have fun.
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WHAT ELSE DOES IT MEAN?

to tip over
The phrase "to tip over," in this podcast, means to knock something over or to accidentally hit something, making it fall over: "Be careful! If that candle tips over, it could start a fire." The phrase "to tip (something) up" means to put something in a leaning position so that one end is higher than the other: "When Sheila got a nosebleed, the nurse told her to tip her head up and hold a tissue under her nose." The phrase "to tip (someone) off" means to give someone secret information, especially about a crime: "Thank goodness someone tipped off the police about the terrorists' plans." Finally, the phrase "to tip the scales" is used to talk about someone or something weighing a particular amount: "Ingrid was horrified to see that she was tipping the scales at 200 pounds."

to collect
In this podcast, the verb "to collect" means to gather something or to get something, usually by taking it from many different places: "Rocio enjoys collecting stamps, but she doesn't have very many valuable ones." The phrase "to collect (one's) thoughts" means to try to calm down and think logically: "Jose Luis was very angry, but he took a breath and tried to collect his thoughts before speaking." Finally, when talking about money, "to collect" means to ask for and receive the money that one is owed: "The landlord came to the door to collect

last month's rent." The verb "to collect" can also mean to request money for a particular cause: "Each December, employees from the Salvation Army stand in front of stores to collect money for low-income families and homeless people."

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CULTURE NOTE

Many scientific researchers are "engaged" (involved) in "animal testing," or the process of conducting experiments and other tests in ways that affect animals. They argue that their work is necessary and that many of the tests that they "perform" (conduct; do) on animals could not be performed on humans, either because of "ethical" (related to what is right and wrong) reasons, or because it would be too "time-consuming" (requiring too much time).

For example, scientists might want to test whether a drug is an "effective" (able to do something well) "cure" (solution; something that fixes an illness) for cancer. They might want to test the drug by giving it to people with cancer, but this would be unethical, because the untested drug might "do more harm than good" (be more damaging than beneficial). Also, because humans cannot "reproduce" (have children) until they are at least in their "teens" (13-19 years old), the scientists would have to wait a long time to find out whether the drug had harmful effects on the next "generation" (a group of people born at the same time). By testing the drug on animals with a shorter "life cycle" (the number of years needed to reproduce), the scientists can find answers more quickly.

However, many people think that animal testing is "cruel" (mean; not nice) and unethical. They think that animals have "rights" (abilities to do or have things) and that humans should not be able to "harm" (hurt, damage) them. Animal testing is especially "controversial" (with strong opinions for and against something) when the animals are killed in the experiments, often so that they can be examined "internally" (on the inside). It is not unusual to hear about "protestors" (people who are against something) who enter laboratories to "free" (let loose) the animals.

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Comprehension Questions Correct Answers: 1 – a; 2 – a

COMPLETE TRANSCRIPT

Welcome to English as a Second Language Podcast number 564: Working in a Laboratory.

This is English as a Second Language Podcast episode 564. I'm your host, Dr. Jeff McQuillan, coming to you from the Center for Educational Development in beautiful Los Angeles, California.

Our website is eslpod.com. Go there to download a Learning Guide for this episode to help you improve your English even faster. You can also take a look at our other ESL courses on the website.

This episode is called "Working in a Laboratory." It's a dialogue between Tony and Gale using vocabulary you would find in a scientific laboratory. Let's get started.

[start of dialogue]

I was working in the lab, as usual, when my colleague brought his three-year-old son into work.
…

Tony: Hi, Gale. This is my son, Philippe. There was a problem with his daycare today, so he'll be spending the day here with me. I'll teach him all about doing research.

Gale: I'm not sure this is a good place for a toddler. Should he be playing with the microscope like that?

Tony: Oh, he'll be fine. I'll just keep the beakers and test tubes out of his reach and he'll be all right.

Gale: Whoa, he almost tipped over that tray of Petri dishes. I'm using those for the experiment I'm running, and there are some pretty dangerous chemicals in them.

Tony: Good thing you saw him before he could do any real damage. I think he just wants to help, right? You just want to collect some data for Gale, right?

Gale: Don't look now but he's emptying those solutions into the pockets of your lab coat.

Tony: Oh, you silly goose! You're just trying to make work more fun and interesting for us, aren't you?

[end of dialogue]

The title of this dialogue is "Working in a Laboratory," the word is spelled (laboratory); most people pronounce it "*lab-ratory*," as if there were no "o" in the middle. You will hear some people say "*laboratory*." There is also a different pronunciation that you can definitely hear the "o" in: "*la-bo-ratory*," but that's not a very common one, at least an American English. A laboratory is a place where scientists and others do experiments. Most Americans who have gone through high school, at least many of them, have taken chemistry classes, and chemistry classes in an American high school are usually held – they usually take place in a laboratory, or least a room that has things you would find in a laboratory to do experiments with.

This story begins with the woman, Gale, saying that she was working in the lab – "lab" is just a short form for a laboratory – as usual, when my colleague brought his three-year-old son into work. Your "colleague" is your coworker, a person with whom you work, usually at the same business or organization but not always.

Tony, her colleague, says, "Hi, Gale. This is my son, Philippe. There was a problem with his daycare today, so he'll be spending the day here with me." "Daycare" (daycare – one word) is a type of business that takes care of young children for parents who need to work; they have to put their children somewhere. This is more common when the woman, especially, has to work – the mother, but it could be for either the mother or the father. If there are two parents in the family and they are both working, the children who are too young to go to school, under six years old for example, would need to be placed typically in some sort of daycare, literally care during the day, during the time they are working.

Poor Tony had a problem with his daycare, and so he decided instead of staying home with his son, he brought him into work. Tony says he's going to teach his son all about doing research. "Research" is the process of learning new information. In a laboratory it would involve doing experiments, typically. Gale says, "I'm not sure this is a good place for a toddler." Normally, laboratories have

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dangerous chemicals or dangerous things for young children. So Gale says, "I'm not sure (meaning I think) this is a good place for a toddler." Notice although she says, "I'm not sure," that's just a polite way of saying this is my opinion. A "toddler" is a one-, two-, or three-year-old child, usually a child who is learning to walk; we call them a toddler (toddler).

Gale says, "Should he be playing with the microscope like that?" A "microscope" is a device used to see things that are very, very small, that you can't normally see just with your eyes. It's often used in biological research, but also other types of research. Tony says, "Oh, he'll be fine." He doesn't think it's a problem that his young son is playing with this microscope. He says, "I'll just keep the beakers and test tubes out of his reach and he'll be all right." A "beaker" (beaker) is a glass cup that has small markings in it for measuring. It's used especially in chemistry, when you are pouring or putting liquids into something smaller; the beaker has the liquid material inside of it. A "test tube" (two words) is a small glass container; it is round, like a tube. Usually, it is rounded at one end, so it's open at one end and it's closed at the other, and you pour things into it, chemicals for example, when you are doing your experiments. When I was in high school, our chemistry teacher was called "Beaker" by the students. Well, we didn't say that to her, we said it to each other sort of as a joke.

Tony says that he's going to keep the beakers and test tubes out of his son's reach. "Reach" here would be the area around you that you can touch by putting out your hand. "Out of reach" means that it is too far away from you. So, if I'm sitting at one end of a table and the newspaper is four feet away, it is out of reach; I cannot reach it, I cannot touch it. Of course, I could just get up and walk over and get it, but I'm too lazy!

Tony says that he'll be all right – he'll be okay, his son. Gale says, "Whoa, he almost tipped over that tray of Petri dishes." "Whoa," spelled (whoa), is an expression that we use when something is falling, or something is about to go wrong, or something is surprising. Gale says that Philippe, the young toddler, almost tipped over something. "To tip over (something)" or "to tip (something) over" is a phrasal verb that means to knock something over; to hit something, usually accidentally, and make it fall over. For example: "I hit the glass of milk accidentally, I tipped it over and all the milk came out of it." Actually, that used to happen to me all the time when I was a child. My mother was very careful about giving me too much milk because I would always tip over the glass – by mistake, of course! On farms in Minnesota, where there are animals, the high school students like to tip over cows that are sleeping – completely different idea!

Gale says that Philippe almost tipped over a tray – a group of, in this case, Petri dishes. A "Petri dish" is a small, very short, round glass or plastic dish that has a top on it that scientists use for certain kinds of research. Gale says that "I'm using those (those Petri dishes) for an experiment I'm running (I'm doing), and there are some pretty dangerous chemicals in them." An "experiment" is a scientific test of something to see whether you are right about your ideas. Gale is "running," conducting or doing, an experiment, and there are some dangerous chemicals involved. A "chemical" is a liquid or a gas used in chemistry for some experimental reason, or for some other reason; chemicals are used in many different things.

Tony says, "Good thing you saw him before he could do any real damage," meaning it is fortunate – it is lucky you saw him and stopped him from doing any "damage," any harm. "I think he just wants to help, right?" He then talks to his son and says, "You just want to collect some data for Gale, right?" "To collect" means to gather, to get something, some information, or physical thing together in one place. "Collect" has a couple of different meanings in English, as does the word "tip" that we talked about earlier. Take a look at the Learning Guide for both of these words, and some additional explanations of them.

Gale is collecting "data" (data), which is information, facts. Technically, the word "data" is plural; the singular is "datum," but most people use "data" nowadays for both singular and plural. Gale says, "Don't look now but he's emptying those solutions into the pockets of your lab coat." "Don't look now" means you should look; "don't look now" means there is something surprising that is going on – that is happening. In this case, the young Philippe is emptying solutions into the pockets of his father's lab coat. "To empty" means to remove the contents of something so there is nothing left inside. When you come home from your trip, you empty your luggage; you empty your suitcase, you take everything out of it. A "solution" is a chemical term, usually it's a liquid that is a mixture of two different other liquids. A "lab coat" is a special piece of clothing, usually white, that is worn by scientists who are working in a laboratory, like the one in our dialogue.

Tony says, "Oh, you silly goose!" again talking to his young son. The expression "silly goose" is something you would say to a young child who has done something funny that has made you laugh. A "goose" is, you probably know, a kind of animal, it's a bird; but "silly goose" is a term we use with children to say they've done something funny, not something dangerous. Tony obviously doesn't understand how dangerous it is for his son in the laboratory. He says, "You're just trying to make work more fun and interesting for us, aren't you?" He

thinks that Philippe is funny. Gale thinks the young Philippe is dangerous, or at least should not be in the laboratory. This is what happens sometimes when you take your children to work.

Now let's listen to the dialogue at a normal speed.

[start of dialogue]

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Tony: Oh, you silly goose! You're just trying to make work more fun and interesting for us, aren't you?

[end of dialogue]

The script for this episode was written by my wonderful colleague, Dr. Lucy Tse.

From Los Angeles, California, I'm Jeff McQuillan. Thank you for listening. Come back and listen to us next time on ESL Podcast.

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