



ESL Podcast 605 – Talking About Astronomy

GLOSSARY

honey – sweetheart; a word used when talking to loved ones to show them that one cares

* Honey, could you please take out the garbage?

project – assignment; the study of a particular subject for a period of time, usually resulting in a report or other product that will be evaluated by the teacher or boss

* Sally had to draw a map of the world as part of her geography project.

Earth – the planet that humans live on

* Do you think there is life on other planets, or only on Earth?

universe – the entire world, including all planets, stars, suns, moons, galaxies, and the space between them

* How many planets are in the universe?

report – a written document with information about a particular topic

* Each sales manager has to write a monthly report that explains why sales are increasing or decreasing in his or her region.

model – a small copy of something that looks just like the real, much larger thing

* Architects often build models of their new buildings for clients to look at before their final designs are approved.

telescope – a long, cylindrical object that one looks through at one end, used to see the details of objects that are very far away in outer space

* This telescope lets us see faraway stars that are invisible to the naked eye.

space – outer space; all of the universe except for Earth; the area around planet Earth, including all other planets, stars, suns, moons, galaxies, and more

* Lex wants to become an astronaut so that he can travel through space.

astronomy – the study of the universe; the study of outer space; the study of planets, stars, suns, moons, galaxies, and more.

* We're studying black holes in our astronomy class.



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planet – a very big, round object like Earth, Mars, or Venus that moves around a sun

* When I was a kid, we were taught that Mars, Venus, Earth, Mercury, Jupiter, Saturn, Uranus, Neptune, and Pluto were the only planets in our solar system, but it seems like scientists have discovered many other planets since then.

solar system – the part of outer space that we are most familiar with, including the Sun and the planets that move around it

* How long would it take a spaceship to travel outside of our solar system?

Big Bang – Big Bang theory; the idea that everything in the universe was created with one large explosion and that small pieces are still moving away from each other as a result of that explosion

* Do you think that the Big Bang theory can account for life on Earth?

light years – the distance traveled by light in one year

* How many light years would be needed to travel to Saturn?

star – one of many small points of light in the nighttime sky, actually a very large ball of burning gas

* Have you ever tried to count all the stars in the sky?

asteroid – a rock that moves around the sun, smaller than a planet

* This science fiction movie is about a large asteroid that threatens to hit the Earth and move our planet out of orbit.

galaxy – a large group of stars

* How many galaxies are in the universe?

to set (something) apart from (something) – to make something different or better than other, similar things; to differentiate something from something else

* Some people print their résumés on very expensive paper, hoping to set their application apart from the others.

out of this world – very cool; awesome; extraordinary and very interesting

* Seeing that band perform live would be out of this world!



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COMPREHENSION QUESTIONS

1. Which of these things is not part of a solar system?
 - a) Earth.
 - b) The universe.
 - c) Stars.

2. Why does Mariko's father want her to set her project apart from the others?
 - a) Because it would be the best one.
 - b) Because it would be the biggest one.
 - c) Because it would be the farthest away.

WHAT ELSE DOES IT MEAN?

space

The word "space," in this podcast, means outer space, or the entire universe except for Earth: "He loves looking at pictures of Earth as it is seen from space." The word "space" also describes the amount of room that is available in a container or room: "Do you have enough space in your purse to carry the camera?" A "parking space" is a place for one car to park in a parking lot: "They couldn't find a parking space close to the store's entrance, so they had to park a few blocks away." The phrases "to stare into space" or "to space out into space" mean to look straight ahead without focusing on anything, unaware of what one is seeing, usually because one is thinking about something else: "Teachers can become discouraged when they see their students staring into space during class."

star

In this podcast, the word "star" means one of many small points of light in the nighttime sky, actually a very large ball of burning gas: "Is that point of light a star or a planet?" A "star" is also the actor or actress who has the most important role in a play or movie: "Ever since Craig was chosen as the star of the school play, he has had too high of an opinion of himself." A "star" is also a famous celebrity, usually an actor or musician: "Were any famous Hollywood stars at the party?" Finally, the phrase "to see stars" means to see bright points of light when one closes one's eyes, usually after one has been hit on the head: "The patient is complaining that she has been seeing stars and feeling nauseous ever since the car accident."



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CULTURE NOTE

A “planetarium” is a special theater with a “domed” (rounded) roof. Most planetariums are in museums and are used to present shows about astronomy, or just to teach people the names of objects in the “night sky” (the sky as it is seen at nighttime). Most planetarium shows let people see how objects move across the sky over time. They use a combination of special lights, “lasers” (electronic beams of light), videos, music, and “narration” (a voice explaining what is happening or what one is seeing).

There are many planetariums throughout the United States. Here is a list of four of the most “notable” (noteworthy) ones.

The Samuel Oschin Planetarium at the Griffith “Observatory” (a place where one can view outer space through photographs) is in Los Angeles, California. It was “renovated” (improved and substantially rebuilt) in 2006 and its 75-foot dome is one of the largest. It uses “state-of-the-art” (very modern; high-tech) technology in its shows.

Adler Planetarium in Chicago, Illinois was “founded” (created) in 1930 and is the oldest planetarium. It has two domes: one “remains” (continues to be) very similar to the original planetarium dome, and the other uses newer digital technology.

Hayden Planetarium in New York City is not just a dome, but a “sphere” (globe; a three-dimensional circle). The top half of the sphere “serves as” (is used as) a traditional dome for planetarium shows. The bottom half of the sphere has a program called “The Big Bang Theater.”

Finally, Morehead Planetarium at the University of North Carolina is the first planetarium that was built on a college “campus” (the land and buildings owned by a university). It is “open to the public,” meaning that anyone can go there – not just students and “faculty” (teachers; professors).

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



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COMPLETE TRANSCRIPT

Welcome to English as a Second Language Podcast number 605: Talking About Astronomy.

This is English as a Second Language Podcast episode 605. I'm your host, Dr. Jeff McQuillan, coming to you from the Center for Educational Development in the beautiful city of Los Angeles, in the state of California, on the North American continent.

This episode, as all our episodes, has a Learning Guide. It's an 8- to 10-page guide that gives you a complete transcript of everything we say, as well as additional cultural notes, and vocabulary definitions – lots of fun stuff! Go to our website at eslpod.com and download it.

This episode is about the stars, about “astronomy,” which is the study of stars and planets and all of that good stuff up there. Let's get started.

[start of dialogue]

Dad: What are you working on, honey?

Mariko: It's a project for school about the Earth and its place in the universe. I have to write a report and build a model of what scientists can see with a telescope in space.

Dad: I can help you with that. I was always good in science, especially astronomy.

Mariko: Okay, Dad. If I need help, I'll ask you.

Dad: Is that the report you're writing right now?

Mariko: Yes.

Dad: Make sure you include all of the planets in the solar system.

Mariko: I plan to, Dad.



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Dad: Don't forget to talk about the Big Bang. Oh yeah, and talk about traveling through space and how many light years it would take. Are you going to include stars, asteroids, and other galaxies in your model?

Mariko: No, the teacher didn't say we had to.

Dad: Yes, but including some of those would set your project apart from the others, don't you think?

Mariko: Sure, Dad.

Dad: It would be out of this world!

Mariko: Right, Dad.

[end of dialogue]

Dad begins by saying to his daughter Mariko, "What are you working on, honey?" "Honey" is a word that you would use for someone you love. It means the same as sweetheart or darling. It could be a husband saying it to his wife; it could be a father saying it to daughter, as is the case here; it could be a mother saying it to her son.

Mariko says, "It's a project for school about the Earth and its place in the universe." A "project" is an assignment. When we are talking about a school project, we're usually talking about something that would take several days to complete. It's very common in American grade schools, in perhaps seventh or eighth grade, to have a science project; sometimes it is an astronomy project. When I was in school we had an astronomy project where we had to use a telescope, which I'll explain in a moment, and write a long report about the different planets.

Mariko is doing a project about Earth – that's the planet we live on; I live on anyway, I'm not sure where you live – and its place in the universe. The "universe" is the entire existence – physical existence: all of the planets, stars, suns, moons everything is included in the universe. Mariko says, "I have to write a report (a written document) and build a model of what scientists can see with a telescope in space." A "model" here means a small copy of something that looks just like the original. When I was a young boy, my brother used to build model airplanes. He would get these kits – these special packages and he would put together the little parts, and when he was finished it looked like a little airplane –



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a model airplane. I think he enjoyed doing that, or he liked the glue! Not sure which. The “glue” is the liquid that holds things together in this case.

Well, Mariko is not building a model because she likes the smell of the glue; she’s building a model because she’s required to for school. She has to make a model of what scientists – astronomers in this case, who study the stars and space – can see with a telescope in space. A “telescope” is a long, what we would call cylindrical, round object that you look through. It has special lenses – special pieces of glass that make things bigger, they magnify, and you can see very far into the distance, even up into the sky, even other planets. Scientists – astronomers have these large telescopes they use, and they have, more recently, put telescopes into space. “Space” is sometimes called outer space; it’s all of the universe except for Earth. Sometimes it’s used to mean outside of a planet’s atmosphere; that is, outside of the area that is immediately around a planet. In general, however, it’s used to refer to everything in the universe but planet Earth. The word “space,” as you know, has many different meanings in English. Well, if you didn’t know, take a look at the Learning Guide for them.

Dad says, “I can help you with that. I was always good in science, especially astronomy,” which, of course, is the study of the universe. Mariko says, “Okay, Dad. If I need help, I’ll ask you,” meaning she doesn’t want his help right now. Dad, however, insists; he says, “Is that the report you’re writing right now?” Mariko says, “Yes.” Dad says, “Make sure you include all of the planets in the solar system.” A “planet” is a large object that moves around a sun in the middle. The Earth is a planet; Mars is a planet; Venus is a planet; Pluto might be a planet, it depends on who you talk to. The “solar system” is the part of the universe that is closest to us. It includes the sun and the 9 or 10 planets that move around it.

Mariko says to her father, “I plan to,” meaning I am going to include all of the planets in the solar system. Dad does not understand that Mariko does not want his help right now, but he continues. He says, “Don’t forget to talk about the Big Bang.” The “Big Bang” (bang), or the “Big Bang theory” is the idea that everything physical in the universe was created or was started with one large explosion, and that small pieces of that explosion are still moving away from each other, billions and billions of years later. Dad says, “Oh yeah, and talk about traveling through space and how many light years it would take.” A “light year” is the distance that could be traveled by light in one year. You often see or hear that term in watching science fiction movies. It’s also used to mean a very long distance, or a point in the future that is very far from today. For example: “We are light years ahead of our competition,” meaning we are very much



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advanced, way ahead of them. Astronomers talk about light years in measuring distance in space, and that's what Dad is referring to, how long it would take to get from, say, one part of the universe to another. He continues, "Are you going to include stars, asteroids, and other galaxies in your model?" A "star" is basically a point of light. It's typically a very large ball of burning gas that is somewhere up in the sky – in space. "Star" has many other meanings as well, and those can be found in – all together now – the Learning Guide. Dad also mentions asteroids. An "asteroid" (asteroid) is a rock that moves around the sun but is much smaller than a planet. A "galaxy" (galaxy) is a large group of stars and the planets that may be around them. Earth is located in the Milky Way galaxy.

Dad is, of course, giving suggestions that are unwanted, so Mariko says, "No, the teacher didn't say we had to," the teacher didn't say we had to include stars, asteroids, and other galaxies. The father says, "Yes, but including some of those would set your project apart from the others, don't you think?" "To set (something) apart from (something else)" is to make something different or better so that people will notice it. He wants Mariko to make her model different from the other children, and that would give her perhaps a higher or better grade.

Mariko says, "Sure, Dad," but you can tell she doesn't really want to. Dad says, "It would be out of this world!" "To be out of this world" in this case means to be very cool, to be very interesting, to be awesome. It's also sort of a joke, since "out of this world" can also refer to things that are in space that are far away from here, a long distance from Earth.

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

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[end of dialogue]

I think our scripts are out of this world, and that's because they're written by our wonderful scriptwriter and producer, 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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