

As the Moon Turns *The Saga of Luna and Moona Lisa*

As the Moon Turns is a conversation between Luna, a lunar meteorite - once part of the Moon - and Moona Lisa, the Moon herself. Luna is loud and boisterous. Once young and *hot*, Moona Lisa is now cold, old, and lonely – but packed with personality. She is *very excited* about the next visit from her friends on Earth, *and* about telling the thrilling story of her formation and early years.

Have fun with this puppet show! While the script is written for delivery with a Texas accent, give Luna and Moona Lisa over-the-tip personalities and accents from your favorite place!

Scene 1

Luna: Hi, y'all! My name's Luna, like "tuna," but with an "L." I'm a meteorite. Does anyone know what a meteorite is?

Moona Lisa: I do!

Luna: Well, I know *YOU* do, because I "came from" you! But I'm askin' them if *THEY* do! (**face audience**) Do any of *Y'ALL* know what a meteorite is?

Luna: (**depending on children's response**) "Well, that's right!" OR "Well I'll tell you!"

A meteorite is a rock from space that has landed on Earth or a planet. Sometimes they come from planets or moons, but I'm EXTRA SPECIAL, because I came from "YOUR" Moon. (pause; nod in the direction of Moona-Lisa) That's her next to me. I call her MOONA LISA, cuz she's got such a nice smile. Get it!? MO-na Lisa.....MOO-na Lisa.

Moona Lisa: Yes, Luna, we get it.

Luna: Anyway, I used to be *part* of 'ol Moona Lisa, but then I got knocked off by an asteroid and went *sailin'* through space, until I finally landed right here on Earth. In Texas! Can ya tell? But you know what? Moona Lisa has her *own* story about asteroids.....and sailin' through space, and it's a pretty *cool* story, too! Would y'all like to hear it? (**pause for response**)

Well, *OKAY*, then! Moona Lisa.....would you mind tellin' these nice kids all the *gruesome* details of your life (**getting all worked up**) ----- how you got *RIPPED OFF* the Planet Earth - and how all those asteroids and comets *SLAMMED* into you, making *BIG, DEEP*, craters and
(**pause.....Moona Lisa interrupts...**)

Moona Lisa: Luna?

Luna: (startled) Oh. (pausing to collect herself) Yeah. Yeah, Moona-Lisa, what is it?

Moona Lisa: Do you think I could tell my *OWN* story?

Luna: Oh, yeah – yeah, sure, Moona-Lisa. Go right ahead. Be my guest!

Moona Lisa: Thanks, Luna. (pause)

Hi, kids. I'm Moona-Lisa and I certainly *do* have *quite* a story to tell you. So, let me see...hmmm... (pause)

Well.....back in the day.....before I lived all by myself out in space, **I actually used to be part of Earth.** Yep, that's right! But that was a *long* time ago, and when I say long, I mean _ _ _ _ !! That was 4 and a half *BILLION* years ago!. But even back then, I was thinkin' that I might want to leave my Earth home. You know...branch out on my own. Be independent!

Then one day I saw this really *HUGE* rock - and when I say *HUGE*, I mean _ _ _ _ !!! – I mean this chunk of real estate was as big as Mars!! *Doggies!*

Well anyway, when I saw that thing headin' straight for me, I got *all* excited. I thought if it would smack into me *hard* enough, it just *might* knock a piece free and I'd be off! Free to fly and spin in space just like my Mother Earth!

And, sure enough, that's exactly what happened! **That planet-sized rock smacked into Mother Earth so hard that I went *FLYIN'*** alright! Only problem was...I didn't go shootin' off in one nice pretty ball like I had planned. Oh, no. When that big rock hit Earth, it *SPLATTERED!* And some of *it* and some of Mother Earth got flung out into space in all sorts of pieces – some big....and some small. *MAN*, I was a *MESS!*

But then right quick over time – and when I say right quick, I mean _ _ _ _ _ _ _ _ _ _ !! – like maybe only a hundred years (pause) – and in Solar System time, 100 years *IS* right quick! Anyway, after maybe 100 years or so, I finally got all my pieces - big and small - stuck together to form.....*ME!*

And it was cool, because I was *just* far enough away from my Mother Earth that she could still see me going around her – but I was far enough away from home to be really independent. Of course we still pull on each other a bit but I finally had a place of my own!

Luna: Gee, Moona Lisa. That must have been a pretty wild ride! Having pieces flyin' all over space – tryin' to catch up with yourself, and get all your pieces together. Kinda like 'ol Humpty Dumpty! Well, what happened after you finally got your act back together? Anything excitin'?

Moona Lisa: Oh yes, Luna, a lot of exciting things happened after that. When I was a young Moon - I was *HOT!* – and when I say, “Hot,” I mean ___ !! – like about *ten thousand degrees* hot! All those pieces running into each other and recollecting to make me – and all those asteroids and comets hitting me – created a lot of HEAT. Just try smackin’ your palm with your hand again and again – it’ll get hot!

So anyway, I got soooooo hot that part of me actually MELTED! Yup – my outer surface was just ONE THICK, HOT, MAGMA OCEAN! Would any of ya’ll like to take a cruise on a hot magma ocean?? I don’t think so!!! Well *then*, after a few hundred million years or so, I cooled off enough to form a *lovely* surface – my crust!

Luna: Uh...Moona Lisa...I’m not sure I would call your surface *lovely* – it looks sorta patchy to me!

Moona Lisa: Well!! *That’s* certainly not a very nice thing to say! The reason my face is so uneven is because something happened that was so terrible – so *horrible* – that it scarred me for life! Oh, my goodness! It was awful!

And it all started when just a few asteroids and comets (those are dirty ice balls) smashed into me. *That* was not so bad. No big deal. I could handle it. *But...* it JUST KEPT HAPPENING!! It seemed like GA-JILLIONS of asteroids – big and small – and comets from space all kept smacking me – right in the *face!!* It was terrible! And it lasted for a *long* time – and when I say “long,” I mean ___ !! – like about *six hundred MILLION* years!! Then things quieted down a bit. **But because all those asteroids and comets smacked into me, my face has more craters and dimples than your daddy’s golf ball!**

Luna: Wow, Moona Lisa! But some of your craters are filled with big oceans, aren’t they?

Moona Lisa: No, silly! I don’t have any water flowing on my surface.

Luna: Oh... But don’t people *think* you have oceans and seas?

Moona Lisa: Well, yes they do. And that’s because a *long* time ago when people looked at me without telescopes, and before they visited me with space craft, they saw bright patches that they thought were land, and dark patches they thought must be water.

And they even named them....the Sea of Dreams, the Ocean of Storms, the Sea of Tranquility. Even after those scientists discovered the dark spots weren’t *really* seas and oceans they kept those pretty names. **(pause)**

Kids, do you want to know what my seas *really* are? **(audience response)** Well, after I formed, I began coolin’ off. But even though I was cooler on the outside, I was still all HOT and full of magma – melted rock – on the inside!

And sometimes that hot magma would rise to the surface and SPEW out! And this melted, SPEWING rock filled in some of the craters made before by those comets and asteroids. The lava – that’s what ya call magma that’s flowin’ around on the surface – **the lava cooled in the craters, and then it got all dark and hard and *looked* a little like seas or oceans** to those folks on Earth.

Of course, that was a long time ago – I’m pretty much cool on my inside now. But my *outside* gets a little hot because of our Sun ... **in fact, on my sunny side I can go all the way up to 250 degrees!** Whew – that’s hot! That’s hotter than Texas! And **on the side that doesn’t face the Sun, I can get really cold – like 240 degrees below zero!** That’s colder than Antarctica! I get so hot and so cold because I don’t have an atmosphere. Not that *I* need one ... But *people* need one with the right stuff to breathe!

Luna: Yeah, yeah, so you’re really hot and really cold ... back to the oceans or seas – of which you don’t have any. Just a bunch of craters filled with dark rock.

Moona Lisa: Well, even though I don’t have any *real* seas and oceans of water, I do have something *very* special.

Luna: What’s that, Moona Lisa?!

Moona Lisa: Well, every now and then I get smacked by a comet. What are comets made of kids? (audience response) Either “You Bet! – Ice! – and some rock and gas and other stuff.” OR “Comets are made of ice – and some rock and gas and other stuff.” **Some of those comets may actually have brought *ice* to my surface!**

Luna: But wouldn’t ice melt and water evaporate from your hot surface?

Moona Lisa: You betcha! But there are some places where the Sun never reaches my surface - like the bottoms of some of my deep craters near my north and south poles. These craters are always cold - and when I say “cold” I mean ___ _ _!! **Almost 400 degrees below zero!** If there is comet ice in there, it would not melt!

And now Luna, what do you think about seeing how much these brilliant future explorers have learned about me and my history?

Luna: Oh, boy! It’s a TEST, isn’t it? I *LOVE* tests...’cuz they show everyone how *smart* I am!!

Moona Lisa: (exasperated) Luuuuuuuunaaaaaaaaaaaaaaaaaaaaa! We’re gonna see how much they remember! Are ya up for it pardners? (audience response)

Optional: Play the Moon Pie Game ([URL](#))

Scene 2

Luna: Wow! They sure learned a lot!

Moona Lisa: They sure did!

Luna: Now where were we ... you were tellin' us that your deeeeeeeeeeeep daaaaaaaark polar craters may have ice. So what?

Moona Lisa: SO WHAT?! I'll tell ya what! Water – or water from ice - is a very important resource. And this is one reason those NASA scientists are *really, really* interested in me – I may have water ice that can be used by people who will live in lunar outposts in the future.

Luna: When will that happen?

Moona Lisa: Well, I heard through the “shine line” - that's like your grapevine – that around the year twenty eighteen, some humans are coming to visit me from Mother Earth! And I am so excited!!

But **before they send *people*** to visit me, **they are going to send something called an LRO**. At first I was havin' kind of a hard time pronouncing LRO, but then I heard LRO *stands for something* – something important! The “L” stands for “Lunar”. **(pause for an interruption from Luna).....**

Luna: Hey! That sounds kinda like my name! Luna!

Moona Lisa: Yes, it does. I named you “Luna” because you came from me. You are a “lunar” meteorite.
So, Luna, would you like to know what LRO stands for?

Luna: Yeah, Moona Lisa! Tell us what it means!!

Moona Lisa: Okay, Luna. But ya know what? I'm so happy about that LRO comin' to see me, it just makes me wanna CHEER!! Would you like to do a cheer for us?

Luna: Oh, I'd *like* that!! Gives me an excuse to be loud. **(addressing the audience)**
But kids, if you help me, together we could be a LOT louder!! So, let's go for it!!
Ready.....O – KAY!!

GIVE ME AN L! **(pauses for audience response)**

Moona Lisa: “L” stands for “lunar,” which means “moon”,

Luna: GIVE ME AN R! **(pauses for audience response)**

Moona Lisa: “R” stands for “reconnaissance,” which means to **gather information**,

Luna: GIVE ME AN O! (pauses for audience response)

Moona Lisa: “O” stands for “orbiter,” which is something that goes around something. And that “something” will be *me!*

L R O – Lunar Reconnaissance Orbiter! In **2008**, **NASA** will **send the LRO** to orbit around me **for one year...**just to *check me out(!)* and get information about me. Woohoo! I haven’t been *checked out* in a long time! They’re gonna take pictures of me – *lots* of pictures. They wanna **see all my different kinds of rocks** ...where on my surface I get the most **radiation** from the Sun...and they wanna **find out where I might have some ice!** They’re even gonna take my **temperatures!** I have all *different* temperatures; from really *hot* to really *cold!* Pretty cool, huh?

Luna: Well, why do they wanna learn so much about YOU, Moona Lisa?

Moona Lisa: Because, Luna, **they want to find the safest place to land – one that has lots of resources like water - and one that will help them explore my history even more.** Learning more about living and working on ME will help people plan for exploration on my good friend Mars – and other places in space! **They are planning to build a lunar outpost when they send humans back to visit me in person!** So *that’s* what I’m *really* charged about!! And I think it’s way cool!

Luna: So do I!

Moona Lisa: Well, kids, now you are going to learn a little more about NASA’s LRO mission and how they’re gonna come back and check me out so that Mother Earth can send some folks back to set up an outpost here. (pause ... slowly and deliberately) As a matter of fact.....when y’all get all grown up (pause), one of those folks just might (pause) be (pause) **Y O U !!**

So that’s the end of my story for now – but stay tuned ‘cuz I’ll have another excitin’(!) chapter to add to it after that LRO comes to check me out! And in just a minute you’re gonna get to make a cool LRO of your very own! Well, thanks for havin’ us ya’ll.

Luna: It’s been fun!! Carpe Noctum!!

Moona Lisa: That means “siezze the night!!!” Bye ya’ll!!!

Luna: Bye!!

Optional: Build an LRO (URL)