

Greenman and Rob

by Jesús Padilla Muñoz

A Story about Human
Interest and Light
Pollution

Logline

A Young man named Rob and his pet frog named Greenman are introduced to the wonders of space and its wondrous sight, only to learn about the reality of viewing the night sky in modern communities.

Anticipated Learning Objectives

- Rising barriers to viewing the night sky
- Street Lighting and the effects of Blue Light
- Methods of Viewing the Night Sky
- An introduction to Astrophotography
 - The Milky Way
- The importance of research and initiative in learning.

INT. CAR - MORNING

ROB (12) is sitting in the passenger seat of his Dad's car as they head to Rob's middle school.

Rob looks out the window with all the buildings passing him by. The glaze of the morning sun is still fresh and reflects on all the skyscrapers glass. The family lives close to downtown for his father's corporate job. But have a house.

His dad, BEN (39) wears a navy suit and tie, glasses, and has the radio on to a morning channel. Out of his coat pocket hangs an office ID. On it: BEN VESUVIO, with three bold letters above it: G.E.L, standing for General Electric and Lighting.

RADIO HOST (O.S.)

Today's weather is looking nice and bright here for Denver. Something new this year.



Rob on his way to school with his dad



INT. CLASSROOM - AFTERNOON

Rob sits with his head resting on his crossed arms. Above his field of view, his teacher, MR. SENTENO (35), is walking around the classroom informing everyone of the days lesson.

MR. SENTENO

Alright everybody so I know we haven't really talked about this a lot this year so I want to start this class off by watching a video.

The class murmurs.

MR. SENTENO (cont'd)

It's about Space.

The class explodes, but Rob is still sitting with his head down.

As Mr. Senteno sits to start the video, Greenman ribbets, and Rob's head shoots up.

MR. SENTENO (cont'd)

What was that?

To avoid further questioning:

ROB

(imitating a frog) ribbet

MR. SENTENO

Stop. Please.

Space Video



Rob's parents push him along to his room and close the door behind him.

OLIVIA

He didn't get your sense of humor.

BEN

How so?

OLIVIA

He's funny.

INT. ROB'S ROOM

Rob gets into his pajamas and puts Greenman in his glass tank. He gets into bed, but before falling asleep, he stares out of the window into the darkness for a while.

As he looks out into the window, the dark outside seems to get closer and closer to him. The screen goes dark, and small glimmers of light start to appear. Rob begins to dream.

Bed at Night



He Meets Gorbo

EXT. SPACE

Rob flies out of his window and into the sky. He rises and rises until he is in the vast space surrounding the planet.

The sight of Earth is grand and he begins to circulate it. But as soon as he reaches for his front pocket, he realizes he forgot to bring Greenman. He begins to panic when suddenly, he feels a tap on the shoulder.

Behind him is Gorbo (?). A green being that looks like a Frog but stands like a human. Behind the two is the Planet Earth.

GORBO

Heyo.

ROB

AYO, WHAT THE HECK ARE YOU?! WHERE DID YOU COME FROM?! HOW?!

GORBO

CHILL lil' man chill...I'm Gorbo.

A vast celestial sea of swirls and bright clusters of color loom over the two, drowning them in astronomical splendor.

And they keep floating. The stars reflect in Rob's eyes as he his smile distracts from their view.

ROB

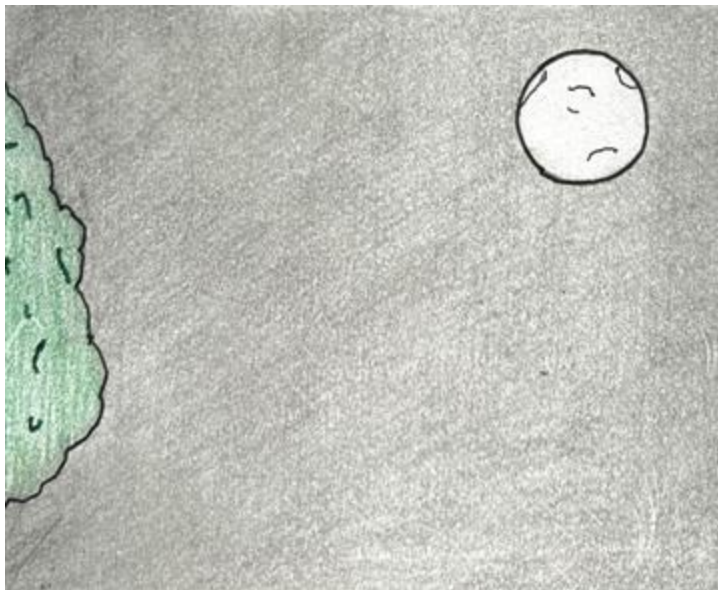
What is all this?

GORBO

Well all this...the Milky Way, haven't you seen it before?

ROB

The candy?



INT. ROB'S ROOM

Rob's eyes spring open as a car alarm goes off outside his window. He is shaken. He looks around unfamiliar and confused. And his eyes meet Greenman's tank.

He jolts up and goes to take out Greenman. When he has him in his hand. Greenman stares at Rob with his big bold eyes.

Rob stares back, and after a second he runs out of his room.

EXT. BACKYARD - MIDNIGHT

Rob runs out as the back sliding door swooves behind him.

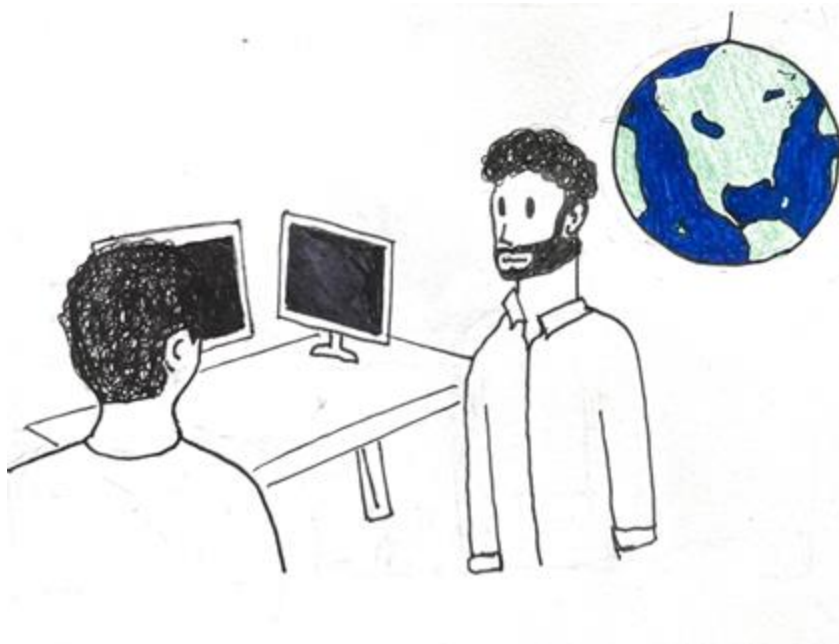
Without an instance's pass, he shoots his stare upward, expecting to see the mystical lights above. But instead, his gaze was met with a flat orange-gray layer of darkness in the sky.

Rob's eyes go from excited, to almost terrified, and he looks down at Greenman resting in his hands.

ROB

What?

The Dark Sky with no Stars



ROB
What's wrong with the sky?

Mr. Senteno pauses from chewing his apple.

MR. SENTENO
Hm?

ROB
Why can't we see everything how you
showed us in the video?

MR. SENTENO
Well that was a documentary.

Rob stares at 'em. Expecting a response.

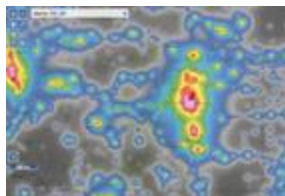
MR. SENTENO (cont'd)
Well you know...a bunch of stuff...
we're in the city, lots of lights...
you need equipment..cameras...and
there's light pollution.

ROB
Light Pollution?

MR. SENTENO
Yeah.

Senteno Confrontation

Research Session



INT. HOME LIVING ROOM - EVENING

Rob sits on the couch with a laptop open on his lap. He has the list Mr. Senteno wrote on his phone.

A montage:

He first looks up [sight darksky.org](http://darksky.org), the header, "What is light pollution?".

He has an article open with the header: "Light Pollution and Impact of Light Pollution?"

After that, he looks up a light pollution map of Denver at lightpollutionmap.info

After viewing the three sights, Rob closes the computer and goes to his room.

INT. ROB'S ROOM

Rob goes to grab Greenman from his tank.

ROB

Dude, did you know that the sky is cooked?

Greenman looks at Rob.

INT. BIG 5 SPORTING GOODS

A big overlay on the screen: 34 MOWED LAWNS LATER

Rob stands in front of a clerk as he stares around at the array of microscopes. Greenman on his shoulder.



ROB
Ehhhhh...that one.

GREENMAN
Ribbet.

BEN
Alright.

ROB
Need some light filters too.

EXT. BIG 5 SPORTING GOODS

As the two walk out Ben seems to fall back.

BEN
Hey big guy, can I ask why all the sudden interest in space?

ROB
What do you mean?

BEN
Well, it just kind of came out of the blue is all.

Rob stands seemingly puzzled.

ROB
I thought it was good to have interests. Either way it's not like it matters all that much. The universe is so big. I just wanna' look at it all, that's all.



EXT. FAMILY BACKYARD - NIGHT

Ben, Olivia, and Rob stand in the backyard basking in the darkness of the light.

OLIVIA

You sure you don't even want the lights on for setting up?

ROB

NO. Gotta keep it legit. I got it.

GREENMAN

Ribbet.

OLIVIA

Right.

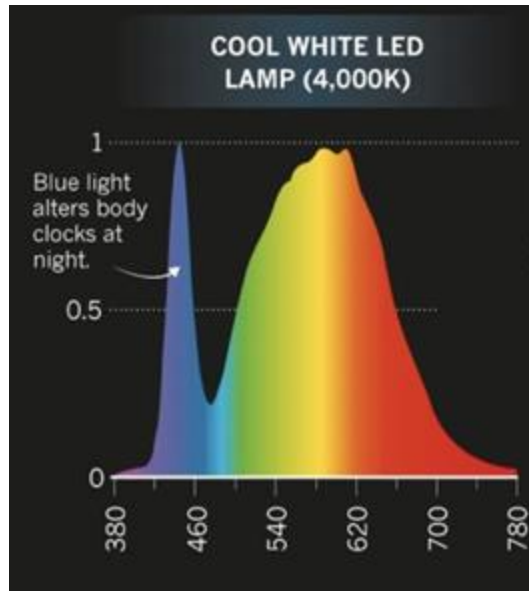
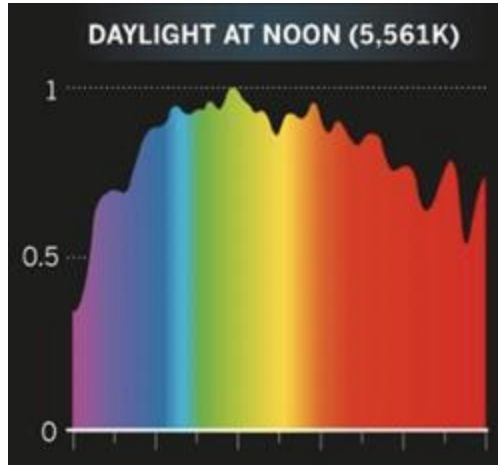
After a second of Rob sitting on the grass setting up the telescope, and his parents watching, they seemingly disappear and Rob reshuffles on the ground, because hours have passed.

Rob sits with his phone out, he is googling a bunch of stuff about the telescope.

GREENMAN

Ribbet.

Backyard session



ROB

So how do I choose the filter?

BEN

Well the problem is bud, even with all the filters we got, they probably won't do too much around here. And it's cuz' blue light isn't something we can really filter out.

ROB

What? Then why didn't you say anything before?

BEN

Well I'm happy you have an interest and I wanna' help you-

ROB

Why is there so much blue light? Your graph says daytime color spectrum and it's night.

BEN

It's because...all the lights we use in the light posts now, they're really bright white, so they have a lot of blue light.

Light Temp Charts

Mr. Senteno is off in the distance. He is on the basketball court balling up with some students in his dress shirt, pants, and shoes. He sees Rob sitting alone in the distance, and walks over.

MR. SENTENO

What's good man how you doing? How's the stargazing.

Rob doesn't say a word. Doesn't react.

MR. SENTENO (cont'd)

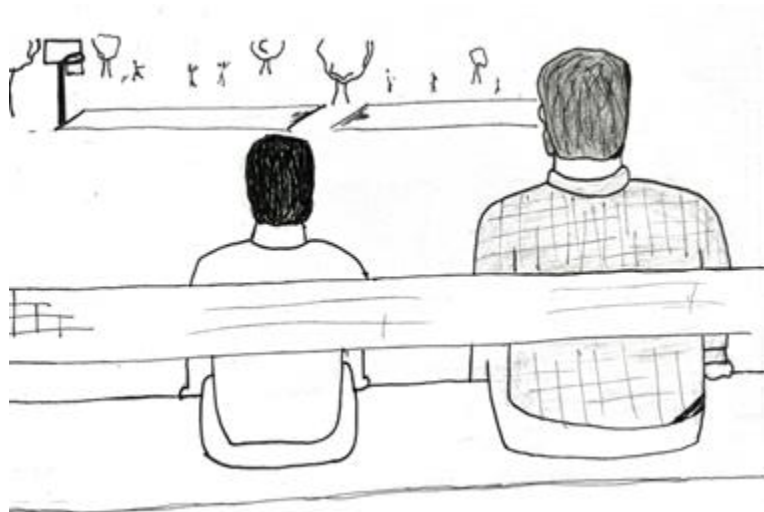
I started thinking a bunch about the sky and everything again. I kinda' got used to showing you guys videos and lessons and moving on, but I'm happy somebody took interest this time around. I like that stuff too.

Rob nods a slight yes, his chin goes up and slightly bounces down and up.

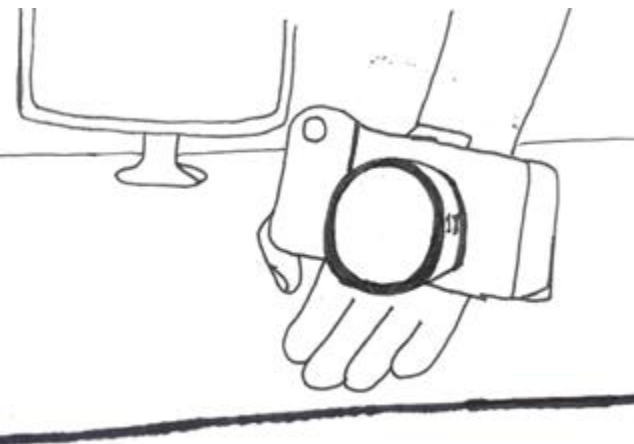
MR. SENTENO (cont'd)

What's up with you man? You've been like this for weeks. Is the sky not as cool as you thought?

Rob looks in reaction at Mr. Senteno, but jaded, unresent.



Schoolyard



MR. SENTENO

I mean...look man. I'm old and whatnot. So I have the right to give up on stuff. But you? You're gonna' have to live another 20 years, AT LEAST, before you start giving up so easy....Come with me.

Mr. Senteno gets up and walks away. After a beat of thought, Rob gets up and walks with him.

INT. CLASSROOM.

Mr. Senteno walks in and heads to his desk.

ROB

Am I in trouble...

MR. SENTENO

What? No. Look. You remember those pics I showed you? The old Nikon?...I dug it up.

Mr. Senteno pulls out the old Nikon camera with the 18mm lens. Rob stands there. Speechless.

Camera



EXT. MOUNT BIERSTADT HIKING TRAIL - MIDNIGHT

The three hop off the car and look at the sign in front of the trail. A sign reads: "TYPICAL TRAIL COMPLETION TIME: 2 HOURS"

BEN

You guys ready?

OLIVIA

Nope.

ROB

Don't think we have to. It's about the Milky Way...It's April, right?

EXT. HIKING TRAIL - LATER

Rob proceeds to walk with his phone out while on a Astronomers app. He is using it to look at the constellations and where the Milky Way should be. The sky is clear and the stars shimmer.

ROB

It's supposed to be rising after midnight.

They walk the trail for a while. The sky above them is unmoved as they step, universal in its presence.

ROB

Learned on the way home today. I have to shoot with a long exposure so more light is absorbed by the camera sensor. and also opening up the lens as much as possible, which means I gotta use a the lowest f/stop, which is a 1.4 on this one.

Walk to Mt Bier



Sky of Mt Bierstadt

Rob sets the shot up. He has been extremely hyperfocused since they got to the hiking trail. It has been pitch black ever since, but his eyes are starting to adjust. So are his parents'.

GREENMAN

Ribbett?

ROB

Wha?

Rob finally looks up from his camera. And for the first time. With his own eyes. A huge cluster of stars and what seemed like a cloud of glowing dust was in the sky.

Rob's eyes were frozen onto the sky. Greenman hops out of his pocket and onto the camera.

The camera is set to 30 second exposure, and Greenman hits the record/capture button.

On the screen of the camera, a beautiful still of the Milky Way.

Ben and Olivia stand slightly behind Rob.

OLIVIA

That is...incredible.

BEN

More than that I think.

A beat.

BEN (cont'd)

I'm gonna' talk to Rob. Help 'em write to the decision board about lighting choices.

Olivia smiles and puts her arm over his shoulders. They look out at the stars.

OLIVIA

Thanks Rob.

INT. CLASSROOM

The wall is illuminated by photos of the view from Mount Bierstadt. The stars, the galaxy, the mountain.

Rob is presenting to the class everything he learned in order to take the pictures.

Mr. Senteno is sitting in his chair behind his desk. When more pictures of the Milky Way come up, he simply nods.

From the top of the desk:

GREENMAN

Ribbet

MR. SENTENO

Yup.

Rob's voice rings in the classroom, but slowly becomes indiscernable.

ROB

In order for us to do a good job with protecting the night sky and getting to a point where we can see the sky like this again, we can write to our local city counsel and decisions committee

FADE TO BLACK



Rob Presenting

Sources

References

Falchi, F., Cinzano, P., Duriscoe, D., & Kyba, C. (n.d.). *World Atlas 2015*. Light Pollution Map.

[https://www.lightpollutionmap.info/#zoom=6.97&lat=39.7035&lon=-](https://www.lightpollutionmap.info/#zoom=6.97&lat=39.7035&lon=-105.0103&state=eyJiYXNlbWFWIjoiTGFSZXJCaW5nUm9hZCIsIm92ZXJsYXkiOiJ3YV8yMD)

[105.0103&state=eyJiYXNlbWFWIjoiTGFSZXJCaW5nUm9hZCIsIm92ZXJsYXkiOiJ3YV8yMD](https://www.lightpollutionmap.info/#zoom=6.97&lat=39.7035&lon=-105.0103&state=eyJiYXNlbWFWIjoiTGFSZXJCaW5nUm9hZCIsIm92ZXJsYXkiOiJ3YV8yMD)

[E1Iiwib3ZlcmxheWNvbG9yIjpmYWxzZSwib3ZlcmxheW9wYWNPdHkiOiJ3YV8yMD](https://www.lightpollutionmap.info/#zoom=6.97&lat=39.7035&lon=-105.0103&state=eyJiYXNlbWFWIjoiTGFSZXJCaW5nUm9hZCIsIm92ZXJsYXkiOiJ3YV8yMD)

[lc29wYWNPdHkiOiJ3YV8yMD](https://www.lightpollutionmap.info/#zoom=6.97&lat=39.7035&lon=-105.0103&state=eyJiYXNlbWFWIjoiTGFSZXJCaW5nUm9hZCIsIm92ZXJsYXkiOiJ3YV8yMD)

Hollan, J. (2009). What is light pollution, and how do we quantify it. In *Workshop paper at Darksky 2007 conference*(pp. 1-12).

Statement from Legislative Committee Advocating for Better LED Streetlights. (n.d.). Sierra

Club. <https://www.sierraclub.org/missouri/thomas-hart-benton/blog/2021/05/statement->

[legislative-committee-advocating-for-better-led](https://www.sierraclub.org/missouri/thomas-hart-benton/blog/2021/05/statement-legislative-committee-advocating-for-better-led)

(2010). Light Pollution and Impact of Light Pollution. *International Journal of Science and*

Research (IJSR).

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