

Some of My Favorite Science Songs

And Why

About Me

- My name is [Monty Harper](#)
- I'm a children's singer/songwriter, and I teach college algebra at Oklahoma State University
- I'm a total songwriting geek
- I write a songwriting column for the Children's Music Network
- I'm a huge fan of science
- My CD [*Songs From the Science Frontier*](#) is full of songs inspired by interviews with local scientists.



I have a dream...

That songs celebrating science and math will one day be as well-loved and ubiquitous as songs about break-ups, first love, and partying.

Criteria For Making My List of Favorite Science Songs

- I'm aware of the song
- The song contains actual scientific content
- I want to hear it over and over again
- Not my own song

What I've Noticed About My Favorite Science Songs

- The music is original, catchy, and well-recorded, the lyrics are well-crafted.
- The purpose of the song is not “Here’s some stuff I want you to know.”
- The lyric uses scientific content to make a human connection.
- The song carries emotional impact.
- The list is rather short.

Without further ado...

Anning, Mary

- By the indie-rock band Artichoke.
- One of 26 songs in an “abecedarium” of songs about historical scientists.
- The song celebrates the first female paleontologist, a pioneer!
- It focuses on her success as a working-class woman in a nobleman’s world (early 19th century), and includes only details supporting that theme.
- The exciting music carries the message: Mary Anning ROCKS!
- The pronunciation of “ichthyosaur” is weird, but I don’t care.

Anning, Mary

by Artichoke

VERSE 1

Do you know Mary Anning
Born on a southern shore
Her father, Richard, was a cabinet maker
And Richard died too early
And left the Annings poor
But lucky Mary Anning
Found an ichthyosaur

VERSE 2

By circa 1820
She ran a fossil store
She put the bones together for the collectors
And science was the product
Of men of noble birth
But I'd take Mary Anning
Over those stuffed white shirts

BRIDGE

Ancient life that sleeps as fossils
She was walking the cliffs on her own by the sea
She was wondering if there were shapes underneath
There were men with the cash but that's not what it took

She could read every line in the ground like a book
She assembled the bones of the past in cement
And she sold them in town for a couple of pence
And she showed all the men how the bones could connect

Though at first, some would scoff, they would grow to respect

VERSE 3

Do you know Mary Anning
Born on a southern shore
Her father, Richard, was a cabinet maker
And Richard died so early
And left the Annings poor
But lucky Mary Anning
Found an ichthyosaur

TAG

How did you get in here?
Show me what you found, dear
Hello, isn't that queer?
Do you have any more? (repeat)

The Elements

- This is a “piggyback” song, or parody, to the tune of “I am the Very Model of a Modern Major General.”
- I don’t usually want to hear parodies - I’d rather hear the original, but this one is exceptional. It fits the original melody like a glove.
- The appeal (and humor) of the original is that it’s a complex list, difficult to sing.
- This parody takes those elements (pun intended) up a notch!
- The content is almost entirely the names of all the elements in the periodic table (at the time).
- The message comes across via the music and the sheer effort required to arrange and sing this list — the elements are worthy of our fascination!

The Elements

by Tom Lehrer, to the melody of The Major-General's
Song from Gilbert and Sullivan's The Pirates of Penzance

There's antimony, arsenic, aluminum, selenium,
And hydrogen and oxygen and nitrogen and rhenium,
And nickel, neodymium, neptunium, germanium,
And iron, americium, ruthenium, uranium,
Europium, zirconium, lutetium, vanadium,
And lanthanum and osmium and astatine and radium,
And gold, protactinium and indium and gallium,
And iodine and thorium and thulium and thallium.
There's yttrium, ytterbium, actinium, rubidium,
And boron, gadolinium, niobium, iridium,
There's strontium and silicon and silver and samarium,
And bismuth, bromine, lithium, beryllium, and barium.
There's holmium and helium and hafnium and erbium,
And phosphorus and francium and fluorine and terbium,

And manganese and mercury, molybdenum, magnesium,
Dysprosium and scandium and cerium and cesium.
And lead, praseodymium and platinum, plutonium,
Palladium, promethium, potassium, polonium,
And tantalum, technetium, titanium, tellurium,
And cadmium and calcium and chromium and curium.
There's sulfur, californium and fermium, berkelium,
And also mendelevium, einsteinium, nobelium,
And argon, krypton, neon, radon, xenon, zinc and
rhodium,
And chlorine, carbon, cobalt, copper, tungsten, tin and
sodium.
These are the only ones of which the news has come to
Harvard,
And there may be many others but they haven't been
discovered.

Science is Real

- *Here Comes Science*, by They Might be Giants is one of the most widely-known collections of science songs.
- It isn't my favorite TMBG album, though - many of the songs are of the "Here's some stuff I want you to know" variety.
- Stand-out songs on the CD include "Science is Real," "I Am a Paleontologist" and "My Brother the Ape"
- "My Brother the Ape" uses metaphor to call out human-kind for not embracing our role as part of the family of life on earth.
- "I Am a Paleontologist" uses first person POV to deliver an infectious celebration of paleontology.
- "Science is Real" opens the album with an impassioned call for using science as a source of truth in our world.

Science is Real

by They Might be Giants

Science is real

From the Big Bang to DNA

Science is real

From evolution to the Milky Way

I like the stories

About angels, unicorns and elves

Now I like those stories

As much as anybody else

But when I'm seeking knowledge

Either simple or abstract

The facts are with science

The facts are with science

Science is real

Science is real

Science is real

Science is real

From anatomy to geology

Science is real

From astrophysics to biology

A scientific theory

Isn't just a hunch or guess

It's more like a question

That's been put through a lot of tests

And when a theory emerges

Consistent with the facts

The proof is with science

The truth is with science

Science is real

Science is real

Science is real

Science is real

The Galaxy Song

- From Monty Python's *The Meaning of Life*.
- This song contains many details about the size of the galaxy, how fast we move through space, etc.
- The song is tongue-in-cheek, so not all the details are strictly accurate, but it's fun to fact-check.
- In the movie the song is used to console a woman who just lost her husband by giving her some new perspective.
- The point of the song is not to teach the stats of the galaxy, but to make us feel part of something much bigger than ourselves.

The Galaxy Song

by Monty Python, from the movie *The Meaning of Life* – [video](#)

INTRO

Whenever life gets you down, Mrs. Brown,
And things seem hard or tough,
And people are stupid, obnoxious or daft,
And you feel that you've had quite enough,

VERSE 1

Just remember that you're standing on a planet that's
evolving
And revolving at 900 miles an hour.
It's orbiting at 19 miles a second, so it's reckoned,
The sun that is the source of all our power.
Now the sun, and you and me, and all the stars that
we can see,
Are moving at a million miles a day,
In the outer spiral arm, at 40,000 miles an hour,
Of a galaxy we call the Milky Way.

VERSE 2

Our galaxy itself contains a hundred billion stars;
It's a hundred thousand light-years side to side;
It bulges in the middle sixteen thousand light-years
thick,
But out by us it's just three thousand light-years wide.

We're thirty thousand light-years from Galactic Central
Point,
We go 'round every two hundred million years;
And our galaxy itself is one of millions of billions
In this amazing and expanding universe.

VERSE 3

Our universe itself keeps on expanding and
expanding,
In all of the directions it can whiz;
As fast as it can go, at the speed of light, you know,
Twelve million miles a minute and that's the fastest
speed there is.
So remember, when you're feeling very small and
insecure,
How amazingly unlikely is your birth;
And pray that there's intelligent life somewhere out in
space,
'Cause there's bugger all down here on Earth!

I'm Your Moon

- My #1 favorite science song.
- Beautiful melody — I could hear it a million times.
- There is no scientific content in the lyric — and yet there is!
- This can be seen as a song about a human relationship, and when I listen that way, it brings tears to my eyes.
- Let's hear part of it, then talk about what it's really about.

I'm Your Moon

by Jonathan Coulton

VERSE 1

They invented a reason
That's why it stings
They don't think you matter
Because you don't have pretty rings
I keep telling you I don't care
I keep saying there's one thing they can't change

CHORUS

I'm your moon
You're my moon
We go round and round
From out here, it's the rest of the world that looks
so small
Promise me
You will always remember who you are

VERSE 2

Let them shuffle the numbers
Watch them come and go
We're the ones who are out here

Out past the edge of what they know

We can only be who we are
It doesn't matter if they don't understand

CHORUS

BRIDGE

Who you were
Long before
They said you were
No more

VERSE 3

Sad excuse for a sunrise
It's so cold out here
Ice and silence and dark skies
As we go round another year
Let them think what they like, we're fine
I will always be right here next to you

CHORUS

I'm Your Moon

- Did we get it?
- This is Charon, singing to Pluto!
- This song could start a conversation with students about what makes a planet a planet...
- As well as what makes a moon a moon, since Pluto and Charon are often referred to as a double dwarf-planet system, and the song evokes this aspect quite clearly.

Acrocanthosaurus

- Here's one of my own songs.
- I wrote this for a gig at the Museum of the Red River in Idabel, OK, where lives Fran, the Acrocanthosaurus fossil.
- The song focuses on the mystery of her neural spines, a rarity for a carnivore. Why did she need them?
- I think it's more interesting to write about a mystery than to present a bunch of facts. Of course one day we may know the answers, then this song will become obsolete.

Acrocanthosaurus

by Monty Harper

VERSE 1

Acrocanthosaurus buried underneath the ground
One hundred twenty million years you waited to be
found

Your bones reveal the tale
Of claws that would impale
And jaws that would avail a predatory carnivore
Still you keep your secrets
My Oklahoma dinosaur

VERSE 2

Acrocanthosaurus with your vertebrae so unique
A scientific mystery, they give you your mystique
Like dominoes in a row
Were they more than just for show?
We'd very much like to know what you evolved to grow
them for
Still you keep your secrets
My Oklahoma dinosaur

BRIDGE

Swing your mighty tail bone
Snap your toothy jaws
Stomp your plodding foot bone
Spring your sharpened claws

Shake your spiny back bone
Sing your lonesome roar
Acrocanthosaurus
My Oklahoma dinosaur

VERSE 3

Acrocanthosaurus with your headdress down your
spine
We formed a few hypotheses about your cool design
Maybe it kept you warm?
Maybe it made you strong?
Maybe we're right or wrong but we'll continue to
explore
As long as you keep your secrets
My Oklahoma dinosaur

BRIDGE

Swing your mighty tail bone
Snap your toothy jaws
Stomp your plodding foot bone
Spring your sharpened claws
Shake your spiny back bone
Sing your lonesome roar
Acrocanthosaurus
My Oklahoma dinosaur

It's Not Fair

- Here's one of my own songs.
- The scientific content comes from the research of Dr. Jennifer Byrd-Craven who looked at whether rumination over problems with friends was stressful for teens. It was.
- The song imagines what it would be like if you were a teen whose mom did that sort of research.
- All the scientific details from the research are used to illuminate the relationship between the teen and the mom.

It's Not Fair

by Monty Harper

VERSE 1

My mother says she thinks I probably ought to stop talking
to my very best friend
She says it stresses me out. She calls it - Co-rumination
I told her that I really couldn't see how it could hurt me to be
talking to a friend
In fact it makes me feel good. I call it - Someone to listen
Then Mama said, "One of us may be right. Good old science
will shed some light."

1st CHORUS

It's not fair when your mother is a scientist
It's even worse when your mother is a developmental
psychologist
We never have a normal argument
Cause she'll just run an experiment
She gathers up data and evidence
And who ever comes to my defense?
It's not fair when your mother is a scientist.

VERSE 2

My mother ran a study using pairs of volunteers she put in
two different groups
The controls did a task. The others did - Co-rumination
She took before and after sample spit from each participant
in each of the groups
To measure cortisol scores, cause that's a - Stress

indication

When the cortisol charts came back from the lab, all I could
say was, "Dag-nab!"

REPEAT 1st CHORUS

BRIDGE

But Mom, I told her, you know you haven't proven a thing
Your study isn't published. It hasn't been reviewed by your
peers
You can't say for certain if co-rumination is - a cause of
stress
Your results have not been duplicated, and that could take
many years

2nd CHORUS

Mom said, "It's not fair when your kiddo knows about
scientists
It's even worse when your kiddo is a teenage know-it-all
smarty pants
I never win a single argument
Cause even when I run an experiment
And gather up data and evidence
My kid still invents a brilliant defense
It's not fair when your kiddo knows about scientists"
Well, it's not fair when your mother is a scientist!