**Physics Christmas Carols**

**GRAVITY (sung to “Jingle Bells”)**

**by Alvin Lee, Wakefield High School, Arlington VA, 1982**

**A comet hits the earth, it’s made of methane ice,**

**it makes a giant force, now isn’t that so nice?**

**So, what made it come here? What made it hit the earth?**

**The answer’s very clear, my friend, it fills you up with mirth!!**

**GRAV-I-TY, GRAV-I-TY, keeps us on the ground.**

**An apple fell on Newton, he said, “What goes up comes down.”**

**GRAV-I-TY, GRAV-I-TY, mass time nine point eight.**

**Remember, travel very fast if earth you must escape.**

**Walk around the earth, keep a steady pace.**

**If gravity twern’t here, you’d float away in space.**

**Call it what you want, call it any name, But this force us a heavy**

**weight, attraction is its game, OHHHHHH…**

**NODAL LINES” (sung to “Jingle Bells)**

**by the physics students of Frankfurt American High School, Frankfurt, Germany, 1977**

**A day or two ago, I thought I’d check out light,**

**to see if what I’d heard was absolutely right.**

**I held two pencils up, and put them to my eye,**

**and when I looked into the light I knew it was no lie!!**

**Ohhhhhh,**

**Nodal lines, nodal lines, shifting all in phase.**

**Oh what fun it is to watch the pattern formed by rays.**

**Nodal lines, nodal lines, caused by bending light.**

**Oh what fun diffraction is unless the light’s too bright!!**

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**“TO THE JUDGE” (sung to “Jingle Bells)**

**by Cliff Hall, Wakefield High School, Arlington VA, 1985**

**Dashing though the snow in a four door Chevrolet,**

**O’er the curb we go, sliding all the way.**

**Honking at the boy who is on the sled.**

**Will an icy crash we see complete with flattened head?**

**Ohhhhh,**

**To the judge, to the judge, to the judge we say,**

**“Inertia is that property that kept us on our way.”**

**To the judge, to the judge, to the judge we say,**

**“It’s not our fault, blame Newton’s Laws,**

**they made us go that way!!”**

**“PHROSTY THE PHOTON” (sung to “Frosty the Snowman)**

**Phrosty the Photon was quite a quantum sight,**

**with a zero mass and an endless life,**

**and a speed approaching light.**

**There must have been some magic in a physics lab one year,**

**for when they studied X-ray beams**

**ole Phrosty did appear, Ohhhhhh,**

**Phrosty the Photon says he knows he’s not that large,**

**but he said one day if he comes this way,**

**he’ll give us all a charge.**

**Thumpity thump thump, thumpity thump thump, moving fast as light.**

**Thumpity thump thump thumpity thump thump, Phrosty’s out of sight!!**

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**“OH ENERGY” (sung to “Oh Christmas Tree”)**

**by Will Wicker, Wakefield High School, Arlington VA, 1986**

**Oh, en-er-gy, oh, en-er-gy, conserving you’s not up to me.**

**Some people say, “Don’t waste a Watt!!” They say it’s true, I say it’s not!**

**Oh, en-er-gy, oh, en-er-gy, conserving you’s not up to me.**

**Oh, en-er-gy, oh, en-er-gy, con-ser-va-tion, that’s the key.**

**What’s the big deal, what’s the fuss? Electric bills are fooling us.**

**Oh, en-er-gy, oh, en-er-gy, con-ser-va-tion, that’s the key.**

**Oh, en-er-gy, oh, en-er-gy, you are conserved in spite of me.**

**Your conservation is the law, you’re not used up, just changed, that’s all.**

**Oh, en-er-gy, oh, en-er-gy, you are conserved in spite of me.**

**“GOD REST YE MERRY PHYSICIST” (sung to “God Rest Ye Merry Gentlemen”)**

**by the physics students of Frankfurt American High School, Frankfurt Germany, 1978**

**God rest ye merry phys-i-cist, let nothing you dismay,**

**Our brand new physics books we have received this very day.**

**To save us all from grief and pain that comes next testing day,**

**REFRAIN: Ohhhh, pages of graphs and nodal lines, nodal lines,**

**Ohhh pages of graphs and nodal lines.**

**The onslaught of our physics test is terrible to hear,**

**But armed with our new physics book we’ve nothing more to fear.**

**The vector graphs that horrified now to our hearts are dear,**

**REFRAIN**

**The wonders and the mys-ter-ies of light we never knew,**

**The wave form needs a med-i-um, the particle model’s through.**

**Diffraction and refraction and diffuse reflection, too,**

**REFRAIN**

**“SPEEDY THE VISIBLE LIGHT RAY”, by Inaam Algayed, Wakefield High School, 1984**

**(sung to “Rudolph the Red-nosed Reindeer")**

[**http://www.haverford.edu/physics/songs/carols/speedy\_music.htm**](http://www.haverford.edu/physics/songs/carols/speedy_music.htm)

 **Speedy the Visible Light Ray, travels through space real quick.
And if you try to touch him, you’ll find out that he's not thick.
All other E M wavelengths, were left out in the dark to cry,
While Speedy the Visible Light Ray was really lighting up the sky.**

 **Then one foggy physics eve, Roemer came to say,
"Speedy with your light so bright, let me time your speed tonight."
Then all the other wavelengths, said with all their energy,
Speedy the Visible Light Ray, we'll see you in the lab-'ra-tor-Y!!**

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**“DECK THE PHYSICS LAB” (sung to “Deck the Halls”)**

**by the physics students of Frankfurt American High School, Frankfurt Germany, 1976**

**Deck the physics lab with lenses, fa, la, la, la la, la, la, la, la;**

**Light bends more when they are densest, fa, la, la, la la, la, la, la,la;**

**We can now observe reflection, fa, la, la, la la, la, la, la, la;**

**Not to mention its direction, fa, la, la, la la, la, la, la, la.**

**Stroboscopes are swiftly turning, fa, la, la, la la, la, la, la, la;**

**While our eager minds are learning, fa, la, la, la la, la, la, la, la;**

**Light diffraction we can now see, fa, la, la, la la, la, la, la, la;**

**See how FUN our physics can be? Ha, ha, ha, ha, ha, ha, ha, ha, ha!!**

**“STATIC EQUILIBRIUM” (sung to “Winter Wonderland”)**

**by Alvin Lee, Wakefield High School, Arlington VA, 1983**

**All my moments have cancelled,**

**sum of forces is equal,**

**I’m fully inert, and doing no work,**

**here in sta-tic e-qui-lib-ri-um.**

**Every push meets another,**

**every pull has a counter,**

**the state I allude is true lassitude,**

**here in sta-tic e-qui-lib-ri-um.**

**All my forces balance out exactly,**

**you can even put me to the test.**

**Push me out in any ole direction,**

**And you’ll find I’ll no longer be at rest.**

**Can’t you see that I’m happy?**

**Sitting here, calm and mellow?**

**Don’t want to go home,**

**So leave me alone,**

**here in sta-tic e-qui-lib-ri-um.**

**“PHYSICS WONDERLAND” (sung to “Winter Wonderland")
by Brendan Holland, Washington-Lee HS, 1990**

[**http://www.haverford.edu/physics/songs/carols/wonderland\_music.htm**](http://www.haverford.edu/physics/songs/carols/wonderland_music.htm)

 **Steel balls drop, they're in motion, why they fall, not a notion.
But thanks to New-ton, its all lots of fun, learning in a physics wonderland.
Gone away is the Chem-stry, here to stay is the mys-try.
Dynamics at play, the knowledge will stay, learning in a physics wonderland.**

 **In the labroom we will build with LEGO, making cars that run by grav-i-ty.
Accelerating masses, we can time them, and find their vert-i-cal vel-oc-ity.**

 **Later on, we will rewrite, to keep our grades from dropping outta sight.
To face unafraid the grades that we made, learning in a physics wonderland!!**

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**“PAUL FELL OUT” (sung to “Deck the Halls)**

**by Brendan Holland, Washington-Lee High School, Arlington VA, 1990**

**Paul fell out a flying airplane, fa, la, la, la la, la, la, la, la;**

**Somewhere off the coast of South Maine, fa, la, la, la la, la, la, la, la;**

**As he hurtled toward the ocean, fa, la, la, la la, la, la, la, la;**

**Paul reviewed projectile motion, fa, la, la, la la, la, la, la, la.**

**When he finally solved for distance. fa, la, la, la la, la, la, la, la;**

**Paul decreased his air resistance, fa, la, la, la la, la, la, la, la;**

**He was fine’ly going to see, fa, la, la, la la, la, la, la, la;**

**Ter-min-al Ve-loc-i-ty, fa, la, la, la la, la, la, la, la.**

**“OH PHYSICS PROBLEM SET OF MINE” (sung to “Oh Little Town of Bethlehem”)**

**by the physics students of Frankfurt American High School, Frankfurt Germany, 1978**

**Oh physics problem set of mine you always seems so rough.**

**I don’t know why light bends in glass -- I guess I’ve had enough.**

**Yet questions of refraction cover one whole page.**

**My hopes and fears have added years to my once youthful age.**

**Oh physics problem set of mine, I thought I had it made.**

**I worked all night to get you done and got a perfect grade.**

**Yet with my perfect paper I'm heading for a ledge,**

**Although I had all problems right, I did not sign the pledge!!**

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**“THE TWELVE DAYS OF PHYSICS” (sung to “The 12 Days of Christmas)**

**by the physics students of Frankfurt American High School, Frankfurt Germany, 1977**

**On the 1st day of Physics my teacher gave to me, a proton with a small charge.**

**2nd day…2 static charges**

**3rd day…3 cathode ray tubes**

**4th day…4 nodal lines**

**5th day… 5 falling rocks**

**6th day…6 wheels a-turning**

**7th day…7 solar systems**

**8th day…8 oscillations**

**9th day…9 nimble newtons**

**10th day…10 virgin vectors**

**11th day…11 leapin’ light beams**

**12th day…12 physics students**