Science Fair Topics for 2014-2015 Central Gwinnett High School

1. Which characteristic is most influential in attracting bees to a flower: fragrance, color, or flavor?
2. The effects of gender identity on short-term memory?
3. Do all plants transpire at the same rate under different sources of light?
4. Can plant cloning be used effectively by product growers?
5. How effective is beta carotene in fighting cancer in plants?
6. The effects of electromagnetic fields on *Eremosphaera* Algae Cells.
7. What is the most efficient substance for melting ice?
8. What pH level is most conductive to corrosion in iron and copper?
9. How effective is lobster shell chitin in filtering wastewater metallic ions?
10. How does saltwater mix in an estuary?
11. Can the life span of a soap bubble be extended in different temperatures in atmospheric conditions?
12. What colored dyes are found in powdered drink mix and colored marking pens?
13. Can mathematical patterns be found in Johann Sebastian Bach’s two-movement preludes and fugues?
14. Measuring the brightness of an incandescent light bulb.
15. Which form of insulation is most effective?
16. Can earthworms be used to recycle kitchen wastes into fertile garden soil?
17. The Great American Lawn and pristine water: can they coexist?
18. Do gas stations affect the soil around them?
19. What is the effect of #6 heating oil on *Elodea densa* in an aquatic environment?
20. Can limestone be used to protect pine trees from acid rain?
21. What section of a town has the most pollution in the form of airborne particles?
22. Environmental effects on biodegradability of plastic bags, paper bags, and newspaper.
23. How does acid rain affect the cell structure of *Spirogyra*?
24. The presence of heavy metals in a coastal body of water and their effect on aquatic life.
25. What substance is most effective for cleaning teeth?
26. How effective are various items in protecting against ultraviolet radiation?
27. The wave, the Golden Mean, and $r=\left[\frac{2}{\left(-1+\sqrt{5}\right)}\right]^{θ}$.
28. Are dandelions as effective as commonly prescribed antibiotics against bacteria?
29. What substance is most effective in the breeding of bacteria in waterbeds?
30. How can the amount of bacteria found on kitchen sponges and dishcloths be reduced?
31. An analysis of the bacteria and heavy metal content of sewage before an after treatment at a sewage plant.
32. Are your clams safe to eat?
33. Footwear versus bacteria.
34. The P-Trap: a bacteria cauldron.
35. The P-trap: a continuing dilemma.
36. Improving the antibacterial effects of garlic.
37. Does the period of motion of a pendulum depend on its weight, amplitude, or length?
38. Are composites of wood stronger than solid wood?
39. Which angle of attack generates the most lift?
40. Polarization and stress analysis of airplane windows.
41. Shape and viscous effect.
42. What would happen to climate, weather patterns, and life forms if the earth were cubical?
43. The physics of cheating in baseball.
44. Does a golf ball’s bounciness influence the distance that it will travel?
45. Relaxing the breathing patterns of newly purchased pet fish so they may adapt to a new aquarium.
46. Does the composition of rosin affect the sound a violin produces?
47. Heat of reaction.
48. A study an comparison of the quantity and potency of antioxidants among various teas.
49. Is there a correlation between toilet paper texture/thickness and low-flow toilet bowl clogging?
50. Which vegetable plant has the greatest development of calluses after being cloned?
51. Sight through sound I: Can shape and color e visualized through sound? Phase I – Sighted individuals.
52. Sight through sound II: Can shape and color e visualized through sound? Phase II – Visually impaired individuals.
53. Evaluating peak loud and noise pollution in different types of asphalt.
54. Effect of garlic and vitamin C on high blood pressure in human subjects.
55. The Chladni Effect: Is there a relationship between the frequencies produced and the patterns created using bowed plates of various metals?
56. Natural attic ventilation.
57. Legal tender or criminal evidence?
58. Can mosquitoes be safely and effectively eliminated through identifying the variables that attract them?
59. Does coating metals prevent their corrosion? A study of the effects of corrosion on metals in different environments.
60. Can water hardness be determined through soap bubbles?
61. Can Pascal’s Triangle be found in various graphs and patterns in various situations?
62. Do Aluminum pots, pans, and foil leach aluminum to acidic foods cooked in these mediums?
63. Does killing soil microorganisms result in better plant growth?
64. Which type of flame retardant is most effective in reducing the flammability of an evergreen tree?
65. Electromagnetic emissions: testing and comparing the nonionizing radiation from cellular phones for relative safety.
66. Can acid solutions remove green tones in light-colored hair caused by copper in swimming pools?
67. Which environment harbors the most antibiotic-resistant bacteria?
68. Do earthworms affect the level of nitrates and phosphates found in fertilized soil?
69. Can canker be transmitted to healthy trees through infected soil?
70. What is the growth rate of mold among protein, fat, and carbohydrate food products?
71. Do typology theories on personality apply to handwriting?
72. Which food or beverage provides the most immediate and lasting source of glucose to a hypoglycemic person?
73. Do temperature and humidity affect the sound of notes played on a church organ?
74. Does cooking fruits and vegetables deplete their vitamin C content?
75. Which type of wood resists water absorption the best in a natural state and surface coatings?
76. Which type of non-mercury body temperatures thermometer is the most accurate?
77. A study of the presence of bacteria in moist disposable towelettes and antibacterial wipes.
78. The efficacy of oral rinses on the accumulation of bacteria in the mouth.