Science Synergy Competition, May 1st, 2015

***Overview***

Science Synergy Invitational is part of a collaboration between iPraxis, a longstanding 501c3 nonprofit that partners with Philadelphia schools to support their science programs through STEM mentors and innovative programs at no charge to the school or participants, and a nonprofit formed by high school students from Harriton High School in Lower Merion. During the competition, teams of 6th-8th grade students compete in various science and engineering challenges. Please see below for a description of the various challenges. At the end of the competition, winning students, teams, and schools will be announced and everyone’s efforts will be recognized.

***Anticipated attendance***: approximately 80 people

iPraxis staff members

2 STEM volunteer mentors

35 Harriton High School with 1 teacher

Philadelphia 6th-8th graders

* Northwood Academy Charter School, 20 students with 2 teachers
* Cook Wissahickon Elementary, 20 students with 1 teacher

***Tentative time frame:***

8:45/9-9:30 set up in Cook Wissahickon gym with Harriton high school students and iPraxis

9:15 – Northwood arrives (projected)

9:30 or earlier – all Northwood and Cook Wiss students are at competition  
9:20/9:30-9:45 - Intro to the day and handing out of tshirts

9:45-11:20 - Different challenges, please see below for descriptions

* 9:45-10:05
  + Cook-Wissahickon – Tin Foil Challenge
  + Northwood – ½ students at Design and Create (describing part); ½ students at Egg Drop
* 10:10-10:30
  + Cook-Wissahickon – ½ Students at Design and Create(describing part); ½ students at Egg Drop
  + Northwood – Tin Foil Challenge
* 10:35-10:55
  + Cook-Wissahickon – Pictionary
  + Northwood - ½ Students at Design and Create (making part); ½ students at Egg Drop
* 11:00-11:20
  + Cook-Wissahickon – ½ students at Design and Create (making part); ½ students at Egg Drop
  + Northwood – Pictionary
* 11:25-12:10 – Science relay – both schools compete simultaneously
* 12:15-12:30\*\* – Awards and wrap up - All students will gather to hear top placing individuals, teams, and schools.
* 12:30-1/1:10\*\* – Lunch in cafeteria – brown bag or provided pizza and drinks
* 1:15 – Middle school students leave
* 1:15-2 (or sooner) – clean up with Harriton students and iPraxis
  + This includes the gym and cafeteria

\*\* Lunch cannot start before 12:30 but we can push the awards back until after lunch if the competition runs over.

***Challenges:***

**Science Pictionary**: Four to eight students sit around a table. One student at a time draws a vocabulary word while team mates guess the specific word. Each student takes turns as the drawer.

**Tin Foil Tower Challenge**: Teams of four students stand around a table to build the tallest tower made of tin foil.

**Egg Drop Challenge:** Students created containers from toothpicks and hot glue to protect an egg from a drop from increasing heights. Half the students from a school gather around a ladder and an adult drops each team’s container from increasing heights until the egg inside the container cracks. *Note: Preferably this would take place outside. A large dropcloth will be placed where the egg may lay and we have not had an issue with any spills or damage on hardwood or carpeted floors.*

**Make It, Write It:** Half the students from a school sit at a table write a detailed description of a previously unseen premade structure generally made of toothpicks, uncooked spaghetti, Styrofoam, and other small supplies. The other students attempt to recreate the structure based on the description alone from a pile of available parts.

**Science Trivia Relay Races**: All students participate in this event at the same time. Students line up by school in groups of ten. Each round, the first person in line has a specific physical challenge, such as tossing a Frisbee, dribbling a soccer ball, etc. After successful completion of the physical challenge, the students try to answer a science trivia question before running back to their team mates. If a student answers incorrectly or runs out of time they must crab walk back to their team mates. Upon return the next team mate has their turn until all the team members have competed. *Note: This could take place inside or outside.*