STEAM Program Introduction
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STEAM is a curriculum based on the idea of educating students in four specific disciplines — science, technology, engineering arts and mathematics — in an interdisciplinary and applied approach. Rather than **teach the four disciplines as separate and discrete subjects, STEAM integrates them into a cohesive *learning paradigm based on real-world applications.***

With the paradigm based on real–world applications how do we apply that application where it becomes comprehensible to blended learning students? By utilizing magic! We now have given our audience an experience in the birth of innovative thinking approach which we call STEAM.

Ladies and gentlemen, boys and girls what you are about to witness is all created by the four principals of science.

The complete breakdown

The Science of Theatrical Magic – How does magic relate to science? **Scientists** often describe **the relationship between magic and science**. In this view, magicians break the laws of physics. They can change the world in ways ordinary people cannot…Magicians use **science** to create the illusion of magic and scientists study magicians and their audiences.

Magicians present theatrical illusions that seemingly breach the laws of the physical sciences, but often deploy the principles of these and other sciences to create these illusions**. Scientists** are interested in magic because they seek to understand this unique performance **art better.**

Although chemistry is not a verbal portion of steam it still plays its role in the overall process for example - there is another state people go into when they are amused, amazed, and brought to laughter - endorphins are released for less stress with the reactions from your performance. There is a positive chemical reaction that often inspires more creativity not just for children.

Phase One

Let's start with ***Science***- We start off our program explaining to the children and teachers that everything your about to witness is all created by the four principals of science, but in order for everything to work we have to put on our lab coats as scientist to create the right formula together.

Phase Two

Technology - The technology portion involves new innovative ways of doing magic tricks, just as there are with science project as well. Computer Aided Design - you conceive and design the full process of the illusion you are about to design; your mind has to act like a computer step by step, so the design is executed as planned and the right views are made for audiences.

Phase Three

Engineering – This phrase is when the illusion goes from the original drawing to now the construction phrase; where the illusion now comes to life as the building of the illusion is completed. Laws of physics are used including gravity, time and motion, and use of space. There is a phrase in engineering that's called "stress tests" you likely do that without thinking about it - the rehearsals, testing out every step for safety and right execution when we build the illusions for our stage and touring shows through the engineering process.

Phase Four

Arts - The "A" is an Integral *part* of *STEM* The "A" in *STEAM* is a term that represents liberal *arts*, language *arts*, social studies, physical *arts*, fine *arts*, and music. *STEAM* education is about applying creative thinking to *STEM* projects, igniting students' imagination and creativity through the *arts*

Phase Five

Math - Geometry - Angles are used all the time, Calculus and Algebra comes into play when you are planning through execution so your assistants' size, weight, etc., Works within the illusion. I'm sure you pay attention to the stage/platform being used so you center or place everything for the light, space, so the audience really gains the complete depth needed.

The Magic of STEAM Program

What Fabian Christopher Enterprise has managed to do after years of research is the find an answer to a problem? That problem is how do to capture, and keep the attention span of children. The answer is ***MAGIC"*** it's one of the most astonishing forms of attention getting forms of entertainment in the world. The lab brings all this to life through our magic presentation combine with blended learning

<u>The Lab</u> – The lab is our ***miracle project***, where the ***impossible meets possible***, its where **no"** magically turns into **YES" WE CAN DO IT TOGETHER**.

Teamwork and communications are a major focus. Throughout the program, students have the freedom to think critically, creatively, and innovatively, as well as opportunities to fail and try again in this program, because it's an interpersonal approach and lots of children involvement in this program. Everyone wins in this program**"**

As we learn to leave the failures in the lab.

In the **lab** we all learn the importance of together we all win as a team ***of scientist working*** in the **lab** to create a better world. It's where we use different magic effects together worked out with the children ***interactively*** to bring about the ***Magic of STEAM"***

It's where the magic of **science –Technology-Engineering-Arts and Math** blends together into a wonderful journey of modern-day spelling binding chemistry, of turning everyday objects into thought proving art forms of blended learning. This specially blended balance unfolds in our presentation to become an unforgettable experience for

all to see learn and enjoy in a whole new area never explored to get and hold the attention span of our children. Once we have captured their attention, we can teach them the importance of STEAM based learning.

The importance of STEM education

All of this effort is to meet a need. According to a report by the website STEMconnector.org, by 2018, projections estimate the need for 8.65 million workers in STEM-related jobs. The manufacturing sector faces an alarmingly large shortage of employees with the necessary skills — nearly 600,000. The field of cloud computing alone will have created 1.7 million jobs between 2011 and 2015, according to the report. The U.S. Bureau of Labor Statistics projects that by 2018, the bulk of STEM careers will be:

- Computing – 71 percent
- Traditional Engineering – 16 percent
- Physical sciences – 7 percent
- Life sciences – 4 percent

- Mathematics – 2 percent

STEM jobs do not all require higher education or even a college degree. Less than half of entry-level STEM jobs require a bachelor's degree or higher. However, a four-year degree is incredibly helpful with salary.

Blended learning

What separates our **program the magic of STEM** from the traditional science and math education is our approach to get the attention of any group of the blended learning environment and showing students how the scientific method, we use in our magic and illusions show can be applied to everyday life. It teaches students computational thinking and focuses on the real-world applications of problem solving. As mentioned before, STEM education begins while students are very young:

- **Elementary school** — STEM education focuses on the introductory level STEM courses, as well as awareness of the STEM fields and occupations. This initial step provides standards-based structured inquiry-based and real-world problem-based learning, connecting all four of the STEM subjects. The goal is to pique students' interest into them wanting to pursue the opportunities of STEM, we make a table float in midair, followed by producing a bird from the bust of a balloon etc., what this does is allow the student to witness the power of steam right before their eyes, and at the same time their experiencing all four groups of the STEM program in action.

- **Middle school** — At this stage, the courses become more rigorous and challenging. Student awareness of STEM fields and occupations is still pursued, as well as the academic requirements of such fields. For the middle school programs the magic and illusions portion of our show grows as to the nature of the audience, so we do more advanced illusions in our show to always keep our audience attention, as well as having the children participate in the magic.

- **High school** — The program of study focuses on the application of the subjects in a challenging and rigorous manner. More emphasis is placed on bridging in-school and out-of-school STEM opportunities. For this program we would actually produce one of the student teachers etc. While giving the student and on hand lesion as how the whole illusions came in to play by utilizing science, technology, engineering and math.

The cost factor associated with this program is $550.00 per presentation.

Presentation time limit: 35 minutes: If there happens to be larger schools, we offer a ***discount for two shows of $100.00 off bring the total to $1,000.00 the cost is higher if large illusions are applied to the show.***

Thanks for your time and consideration.

CEO – Mr. Gilbert Wright

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