

TRINITY AREA SCHOOL DISTRICT

EDUCATION COMMITTEE MEETING

September 12, 2016

Board Room – Trinity Hall 5:00PM

AGENDA

I. Call to Order

II. Technology/STEAM Overview – Mr. Snoke discussed the district's vision pertaining to the infusion of technology to allow the students to “think like an engineer to solve problems”.

III. Kindergarten and 1st Grade iPads – Mrs. O’Neal presented the Kindergarten’s experience with the iPads. The list of APP and programs affords students the opportunity for independent learning with a focus on remediation, reinforcement and extension activities. The 1st Grade iPads will initially have all of the programs that the Kindergarten iPads are presently using. By the end of September or early October the 1st Grade iPads teacher leaders will meet and examine additional APPs and programs. A complete list of current APP and programs is included in section

IV. Elementary Science – Robotic Arm/Edison Robots and Microscope Kits – Mr. Snoke presented videos demonstrating the Robotic Arm and Edison Robots in action. Each elementary school received 1 Robotic Arm and a set of 30 Edison Robots. The arm and robots have lesson plans and manipulative included in the package. The microscope kits were free and given to TASD by the Washington School District. They are plastic and have petri dishes and experiments/lesson plans. The arm is for grades K-5 and the Edison Robots will be mainly used in 5th Grade Science.

V. Trinity Middle School – Fab Lab, Phantom 3 Drone, Robotic Arm/EVR 3 Robots, Zulama, Expanded Television Studio and Microscope Kits - Mrs. Senneway demonstrated an EVR3 Robot and several simple tasks. She also discussed the transformation of the industrial technology area into a rudimentary Fab Lab. Mr. Snoke showed video of the Phantom 3 Drones and their impressive capabilities.

VI. Trinity High School - Fab Lab, Fixed Wing Drone, Phantom 3 Drones, Robotic Arm/VEX Robots, Zulama, Hydroponics Research Growth Lab, Farmbot, 1-1 Chromebooks, FlowHive, and Library Makerspace - Mr. Todd Crissman, Mr. Botzer, Mr. Tom Samosky, Mr. Donald Snoke. Mr. Crissman demonstrated the Vex

Robotic capabilities and discussed the THS competition team in a version of Battle Bots. Mr. Crissman had two THS students who discussed the value of the manipulative/hands-on application of physics and engineering principles. He also discussed the Fab Lab's abilities and the endless possibilities moving forward, including making prototypes and circuit boards. Mr. Botzer discussed the connection of the Fixed-Wing Drones and the AP Physics 2 curriculum. He explained that approximately 80% of the AP curriculum can be addressed through the fixed-wing drone projects. Additionally he discussed the future possibilities through the use of the Fab Lab. Mr. Samosky discussed the conversion of a portion of the THS Library into a STEAM-based Makerspace and the usage of the Chromebooks in the 9-12 classrooms. Additionally he discussed the gaming curriculum of Zulama. Mr. Snoke discussed the potential for a technology explosion. He showed a video of the Farmbot Genesis, a CNC based farming machine and the Flowhive, a state of the art bee keeping and honey production option.

VII. Potential Initiatives – Mr. Snoke showed a video of Freight Farm and Makyu Formbox. The Freight Farm is the focus of a partnership with the Washington County Foodbank to procure the 2017 LSA Grant to begin producing food for the needy populations in our community. The Freight Farm has the potential to produce as much as 1200 heads of lettuce every week. The Makyu Formbox is an inexpensive version of a 3D printer. The Makyu Formbox allows molds to be created which allow consistent production to occur. Finally he highlighted the expansion of Environmental Science Programming and Expanding Television Production – Mr. Donald Snoke

VIII. CIP Programming Changes and Additions – Mr. Donald Snoke discussed the intention to examine the alignment of the current Trinity High School courses and curriculum with the Pennsylvania requirements in the CIP Codes. Industrial technology and business technology will be examined and if possible the Trinity Area School District will apply for certification of the eligible CIP coursework. Successful certification attainment could result in additional subsidy per student from the Commonwealth of Pennsylvania. Finally students from other school districts could apply for admission to the approved TASD CIP Courses and the sending district would be required to pay tuition and transportation. A list of hyperlinks for videos demonstrating the new technologies is included in Section XIII.

IX. Public Comment (None)

X. New Business – Future Pilots and Agricultural Mechanics (Small Engine) Mr. Snoke informed the committee that the district is included in the Future Pilots Program and completion through California University of Pennsylvania.

The students will receive technology and instruction on developing a flight plan and then successfully completing the flight plan utilizing a flight simulator. The addition of Agriculture Mechanics provides the possibility for a team of student from the T ASD to compete with students from other school districts at the state level troubleshooting and fixing a small gasoline engine. Mr. Snoke concluded by reiterating the technology and STEAM initiatives presented this evening have been based upon grant funding.

Dr. Lucas pointed out the extensive influx of STEAM based curriculum and technologies. Additionally Dr. Lucas commended the T ASD teaching staff's courage for embracing the challenges of exploring and utilizing new technology. The Board members concurred with Dr. Lucas' statement. Mrs. Morgan stated the amount of change was very impressive.

XI. Adjournment 5:57 PM

Chairperson: Mrs. Jennifer Morgan

dls 9-8-2016 education committee agenda

XII. Kindergarten and 1st Grade current APPs and Software Programs

BrainPop Jr
ABCya.com Alphabet Order
Word Aliens Sight Words
ToDo Math
Starfall
Splash Math for K and 1
ABC Mouse
Discovery Kids
Flash Apps Sight Word Flash Cards
Reading Eggs
I Trace
Word Wizard
Mickey's Magical Math World
Sentence Builder
Skybrary
Seesaw

XIII. Links to Websites for technology based programs and actions.

Edison Robots Link

<https://edisonwww.youtube.com/watch?v=skmVeFYgHCs>

Farmbot Genesis

<https://farmbot.io/>

Freight Farm

<http://www.foxbusiness.com/features/2016/03/10/future-farming-may-live-inside-this-box.html>

Phantom 3 Drone

https://www.youtube.com/watch?v=P_orBj4eBc0

Makyu Formbox

<http://www.solidsmack.com/fabrication/the-349-formbox-brings-all-in-one-vacuum-forming-to-your-desktop/>

Robotic Arm

<https://www.youtube.com/watch?v=LivkkLzf82c>

Hydroponics Growth Research Lab

<http://www.greenhousemegastore.com/product/hydroponic-reasearch-growth-chamber/propagation-chambers>

EVR 3 Robots

<http://www.lego.com/en-us/mindstorms/videos/the-ev3-experience-cc93a9be19b24dbbadb02bbd73582043>

Vex Robots

<http://www.vexrobotics.com/vexedr/competition>

Ultimaker 2+ 3 D Printer

<https://ultimaker.com/en/products>

Shopbot 4X8 Gantry Alpha Spindle Router

<http://www.shopbottools.com/mSupport/projects.htm>

EpiLog Laser 12 x 24

<https://www.epiloglaser.com/products/legend-laser-series.htm>

FlowHive

<https://www.honeyflow.com/>

Vinyl Cutter

<https://www.youtube.com/watch?v=MMMydDwluRM>

T-Shirt Press

<http://www.heatpressnation.com/>