

The G.R.E.A.T 3D Academy

(Globally Ready Engineering and Technology)

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3D.Engineers.Now


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10.5 %

**(North Carolina's Average
Unemployment Rate)**



The Engineering Dilemma


- ▶ The U.S. is not producing enough engineers.
 - ▶ U.S. companies can hire engineers from foreign countries at $\frac{1}{4}$ the cost.
 - ▶ Most companies require seven years of verifiable education before they will hire an engineer.
 - ▶ $\frac{1}{3}$ of the engineers employed by the U.S. Department of Defense are ready for retirement but cannot retire due to a shortage of qualified candidates.
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So where are these qualified candidates?

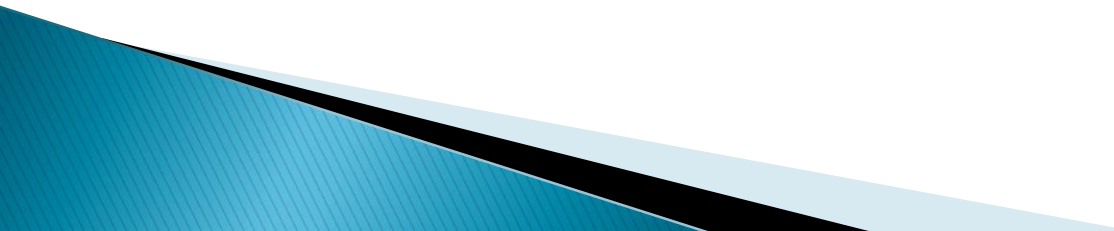
- ▶ They are currently in the 5th Grade.

The G.R.E.A.T 3D Academy Solution

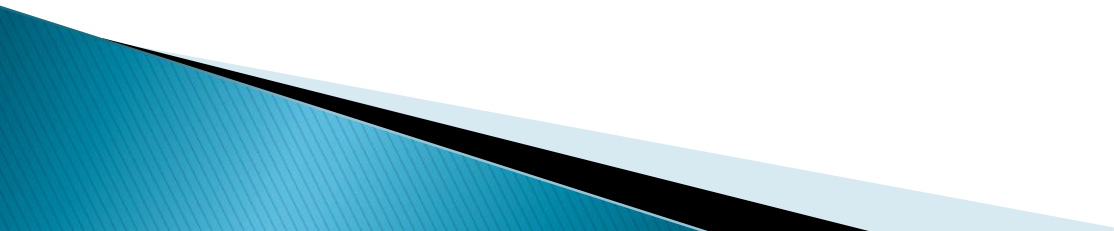
The G.R.E.A.T Engineering Academy:

- ▶ Introduces students to 3D engineering as early as possible. When they graduate, they will have 8 years of exposure to the 3D engineering process if they started in the 5th grade.
 - ▶ Creates a STEM (Science Technology Engineering and Mathematics) culture that is student driven, and rooted in math and science.
 - ▶ Will increase each student's academic performance in math and science.
 - ▶ Prepares students to compete for current jobs and jobs that do not yet exist.
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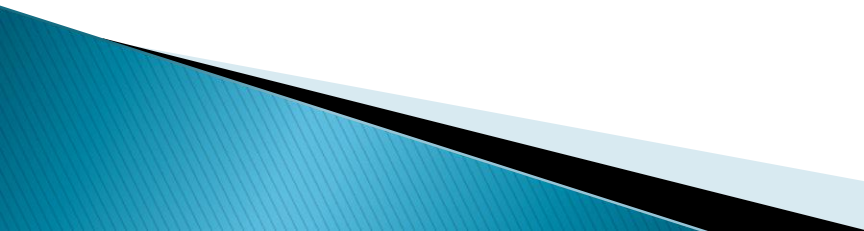
Google SketchUp for Future Ready Engineers

- ▶ 5th grade students will learn the fundamentals of 3D design using Google SketchUp.
 - ▶ The students will visualize their weaknesses in math and science to better prepare them for the end of grade tests.
 - ▶ Students will utilize the engineering process when visualizing the concepts.
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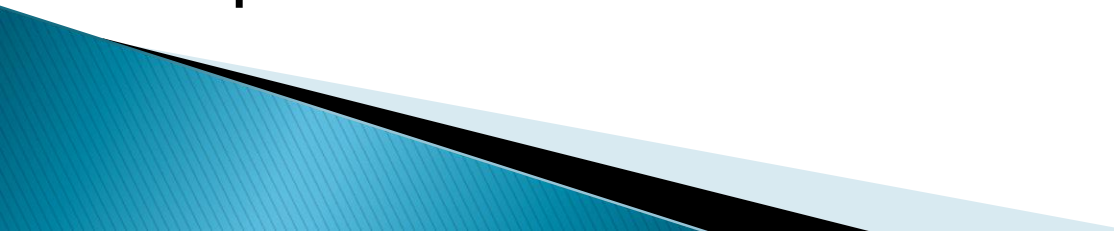
The 3D Aviation Academy

- ▶ At Rohanen Middle School, students learn the fundamentals of flight and 3D design using Autodesk's 3Ds Max software.
 - ▶ Using the engineering process, students will design and model various aircraft.
 - ▶ Students are also challenged to design a futuristic concept aircraft based on what they have learned.
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The Hunger Games Project

- ▶ 9th grade students are reading the book entitled, “The Hunger Games” by Suzanne Collins.
 - ▶ As a group project, they are learning to use Autodesk’s 3Ds Max and Unity 3d software to visualize the arena and immerse the reader into the story.
 - ▶ They plan to have the project completed by March when the movie is released.
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Richmond County Transitional School

- ▶ High school students attend a 3D design course daily.
 - ▶ They learn the fundamentals of 3D design and the engineering process.
 - ▶ Throughout their time in the academy, students will utilize their visualization skills to create 3D simulations that are career specific.
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Conclusion

- ▶ By establishing 3D Academies at each grade level, students will advance to higher levels of math and science, enhance their 3D visualization skills, and increase their knowledge of the engineering process.
 - ▶ Each graduation class will produce a highly skilled workforce that will be ready to compete for jobs and create new ones.
 - ▶ If the high schools can produce the workforce, businesses will be enticed to relocate to the area.
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