



**How will you, similar to an engineer, make things happen?**

**“I have been impressed with the urgency of doing. Knowing is not enough; we must apply. Being willing is not enough; we must do.” – Leonardo da Vinci**

**Will It Stand? Move? Fly?**

**Phelps Center for Gifted Education (WINGS)  
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**Essential Questions**

• When given a problem or issue, how do engineers approach and solve it?  
• How can you “make things happen”?

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**Will It  
Stand?  
Move?  
Fly?**

**Engineering MU**

**Spring 2020**

Jonna Bird & Alex Wiley

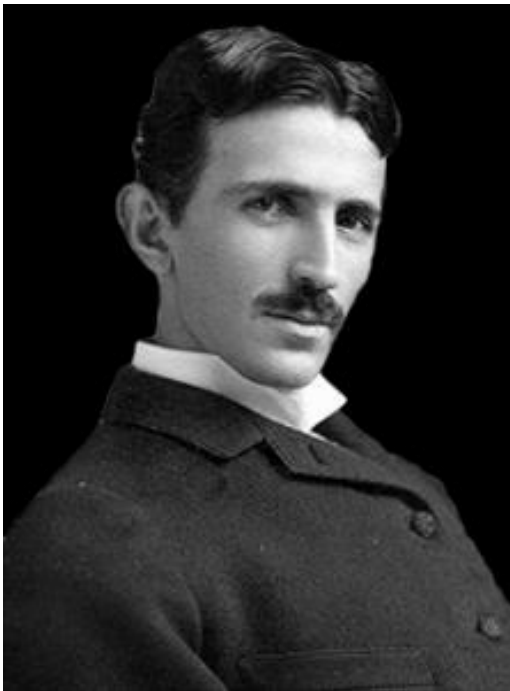
WINGS Resource Teachers

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## Description of Major Unit

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- What does an engineer do? How do engineers problem solve? Explore the vocabulary and skills of engineers, the influence of engineers on mankind, and the future implications of engineers.



"I do not care they stole my idea....I care that they don't have any of their own."

- Nikola Tesla (1856 – 1943) was from Croatia.

<https://www.smithsonianmag.com/innovation/extraordinary-life-nikola-tesla-160967758/>



Sir Mokshagondam Visveswarayya, popularly known as Sir MV, was an Indian civil engineer and statesman. He received India's highest honor, in 1955, the Bharat Ratna. The Bharat Ratna is the "recognition of exceptional service/ performance of the highest order."

[https://en.wikipedia.org/wiki/M.\\_Visvesvaraya](https://en.wikipedia.org/wiki/M._Visvesvaraya)

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## What will you do in the major unit?

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Examine, manipulate, and interact with various engineering tools and structures; items include planes, springs, vehicles, towers, and beyond. From catapults to noodle towers to rubberband cars to newspaper structures to many more, you will explore the world of engineering. Participate in competitions, visits, and challenges all along the journey into the analytical mind of an engineer. The overall question is: How will you, similar to an engineer, make things happen?

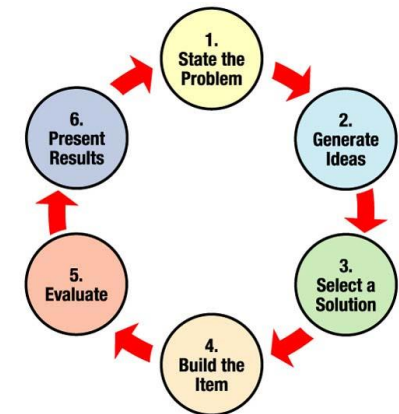
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## Be bold! Bring excitement!

"Failure is the opportunity to begin again more intelligently." – Henry Ford

## Unit Rationale:

Engineering is a course of study designed for third and fourth grade gifted students to meet the following needs: their need to share ideas verbally and in depth, their need to develop higher level thinking skills, their need for self regulation, their need for creative expression, their need for challenging curriculum, their need to interact with gifted peers, their need for developing self-efficacy, their need to network with professionals, their need to develop college and career competencies.



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## Engineering Process

<http://teachers.egfi.k12.org/design-process/>