

## INNOVATION TAKES PRACTICE. LET'S GET STARTED!

#### The Goal

"If invention is a pebble tossed in the pond, innovation is the rippling effect that pebble causes. Someone has to toss the pebble. That's the inventor. Someone has to recognize the ripple will eventually become a wave. That's the entrepreneur." --- Tom Grasty, PBS Idea Lab

The ultimate goal is to help students understand that innovation is a process and to help every individual find his or her place as a contributor to and leader in that process. Along the way, students will embody the idea that they should have purpose, not just more plastic.

## Scope & Applications

- Enterprise & Innovation Guide: Guide to applying the innovation process to any project. It is included in Student Racing and Rover Challenge curriculum to introduce marketing, project management and business modeling.
- Innovation Space 3-D: An online course that applies the innovation process to a product made through 3-D printing. It is also an introduction to 3-D CAD and printing.

### What is the Innovation Process?

It is a process of purposefully combining these four elements: (1) the engineering process that requires (2) specific content knowledge and skills, the (3) enterprise process which is essentially prototyping a business and (4) leadership principles that are necessary to turn truly innovative ideas into reality.



## Competition Overview (Optional)

The Innovators-in-Training Challenge is a stand-alone series in the National STEM League (NSL). Students work to prepare something for 'market'; economic markets or the marketplace of ideas. The Enterprise & Innovation guide is also included the curriculum for this series and for the Student Racing and Rover Challenge series to help teams manage and market themselves and to maximize their performance in the community outreach and data-driven design categories.

**Get Involved** 

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Prepare for collaboration and competition in the "NSL".





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# **ENTERPRISE & INNOVATION GUIDE**

Innovation is not a flash of genius. It is not something that only extraordinary people make happen. Innovation is a process and it is a process to which EVERYONE can contribute.

This curriculum will provide you important tools for understanding the terms innovation, engineering, enterprise and evidence-based enterprise. It walks you through the process from creative mayhem to focused business decisions.

Units include the engineering design process, business modeling, project management, marketing and business planning. Use this curriculum with any project such as a themed STEM camp or startup of a Student Racing Challenge team. Regardless of the technology you will be using or what you will be developing, this will help you do it the right way.



This online course applies Ten80's Enterprise & Innovation curriculum to 3D CAD and printing. It can be taken asynchronously or with a cohort through Virginia Tech. This course is delivered in partnership with Virginia Tech and developed for the 2015 Distinguished Einstein Fellows.

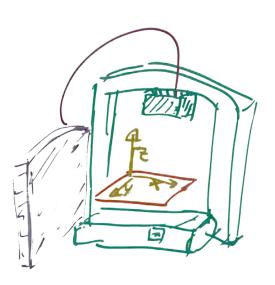
Not all innovations deal with physical things. In fact, many areas ripe for development are focused on minimizing product waste. However, new technology that puts the power to prototype and produce into our hands really does change the way we can approach problems and opportunities.

3D (3D is the same as 3-D, which stands for three-dimensional) printing is one of the most popular tools in this desktop manufacturing revolution. 3D printers are becoming increasingly reliable even as the cost is coming down. Once you have a sense for what is possible with the model you have, and what is possible with more advanced models you could have, the way you think will change.

Contact us for more information and for a course schedule.

Contact us and download the Ten80 2015-16 Catalog for more information on implementation options.







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