

Primary (k-2)

Students working at the primary level participate in Jr. FLL and the Primary Division of OM. Students use majority rule and consensus to make decisions and students make plans for daily practices.

Students set the foundation for programming using Scratch with WeDo robot systems. Students learn mechanical systems with duplo simple machines kits.



Students learn to make compositions in Anime Studio using layers and 3-D modeling using Lego Digital Designer.

Students learn to sew by hand to make costumes and paint in layers to make sets and props.  
Elementary (3-5)

Students participate in state level



competitions and develop plans with budgets and timelines of a week or more. Students program using Mindstorms and EV3 robots. Students make animations Anime Studio and make games in GameMaker Pro.

Students begin to build structures using PVC and wood with fasteners to make sets and props.  
Middle (6-8)



Students compete at Regional Level competitions and develop month-long plans.

Students develop budgets and make



shopping trips to buy materials. Students use Unity Pro with C# for



programming games and use PID patterns. Students make 3-D models using Sketch-Up and PTC Creo. Students build mechanical and pneumatic circuits for robots. Students start Google Science Fair.

High School (9-11)

Students become independent and manage their own long-term projects.



Students learn to solder and traditional metal shop skills in order to build cell phone controlled aluminum robots. Students program robots using C# in Android Studio. Students use PTC Creo to make 3-D robot simulations



Students make SNL/Monty Python styled skits for OM.

### Awards of TIPS Teams

2013

- \* VT Norwich FLL Qualifier Runner-Up
- \* VT/NH Regional Judges Award
- \* VT State OM Champions D1 "Not So Haunted House"
- \* VT Ranatra Fusca Creativity

2014

- \* VT Norwich Qualifier FLL Champion
- \* VT/NH Regional Robot Mechanical Design Award Winner

2015

- \* VT Regional FLL Champion
- \* VT Global Innovations Award Nominee
- \* Global Innovations Award Semi-Finalists
- \* VT State OM Champions DII "Aesop's Gone Viral"

**For more information,  
[www.tipsvt.org](http://www.tipsvt.org)**



**Teams of Innovative Problem Solvers Inc.**



Summer camp in mechanical design, robot programming, game programming, graphic art, 3-D modeling, music composition, story telling and improvisational thinking.

Small teams (3-7 kids) apply curriculum, with leadership and management training, to solve problems in engineering, performance arts and science in seasonal competitions like FIRST, Odyssey of the Mind and Google Science Fair.

Projects become businesses.