



2018 Middle School Engineering Challenge Camp

Cosponsored by:



Monday

Time	Activity	Place	Led By
8:30 a.m.	Registration/Check In	ESB Atrium	Cate Schlobohm
9:00 a.m.	Icebreaker, Camp Structure, Design Process, explain posters, Intro to Grand Challenges	209 MRB	Counselors
9:30 a.m.	Grand Challenges Research and Group Work	Computer Lab	Counselors
11:00 a.m.	<u>Earthquake Proof Structure</u> - Design a structure that can withstand the shake table! (Grand Challenge: Restore and Improve Urban Infrastructure)	209 MRB	
12:00 p.m.	Lunch	G39 Hallway	Counselors
12:30 p.m.	<u>Altered Reality</u> - How do you adapt when your vision is impaired? (Grand Challenge: Advanced Personalized Learning)	105 MRB/Atrium	Counselors
1:45 p.m.	<u>Radioactive Handling</u> - (Grand Challenge: Prevent Nuclear Disaster)	G114 ESB/Courtyard	Counselors
2:30 p.m.	Snack	MRB Atrium	Counselors
2:45 p.m.	<u>Bridge Designer and Builder</u> - Design a bridge that spans at least 3ft with no support underneath (Grand Challenge: Restore and Improve Urban Infrastructure)	209 MRB	
4:30 p.m.	Clean-up/Blind Synergy	Courtyard/MRB Atrium	Counselors
5:00 p.m.	Pick Up	ESB Atrium	Counselors

Tuesday

Time	Activity	Place	Led By
9:00 a.m.	Morning Icebreaker	G114 ESB	Counselors
9:15 a.m.	<u>Water Desalinization Plant</u> - Build your own device to produce clean water on a large scale (Grand Challenge: Provide Access to Clean Water)	G35 ESB	Counselors
10:45 p.m.	<u>The Nitrogen Cycle</u> - Understanding how nitrogen travels and the solutions to this problem (Grand Challenge: Manage the Nitrogen Cycle)	TBD	Counselors
12:00 p.m.	Lunch	G39 Hallway	Counselors
12:30 p.m.	<u>Virtual Reality Activity</u> - Media Innovation Center (Grand Challenge: Enhance Virtual Reality)	Media Innovation Center/Evansdale Crossing	Counselors
2:30 p.m.	Snack	MRB Atrium	Counselors
2:45 p.m.	<u>Brain Hat / Circuit Quiz Boards</u> - Understanding the different parts of the brain by building your own brain circuit board quiz (Grand Challenge: Reverse-Engineer the Brain)	105 MRB	Counselors
3:45 p.m.	<u>Permeable Pavement</u> - Design a flat surface that can drain the water the fastest (Grand Challenge: Restore and Improve Urban Infrastructure)	Courtyard/G35 ESB	
4:30 p.m.	Clean-up/Giant Tic-Tac-Toe	Courtyard	Counselors
5:00 p.m.	Pick Up	ESB Atrium	Counselors

Wednesday

Time	Activity	Place	Led By
9:00 a.m.	Morning Icebreaker	205 MRB	Counselors
9:15 a.m.	<u>Solar Charging Battery Pack</u> - Create a system with the largest charging capacity (Grand Challenge: Make Solar Energy Economical)	205 MRB	Counselors

10:00 a.m.	Satellite Design- Build your own satellite	105 MRB	Counselors
11:00 a.m.	Digest This!- Develop your own time released medicine (Grand Challenge: Engineer Better Medicines)	109 MRB/Courtyard	
12:00 p.m.	Lunch	G39 Hallways	Counselors
12:30 p.m.	Sphero Warrior- Code the Sphero to complete an obstacle course (Grand Challenge: Secure Cyberspace)	G114 ESB	Counselors
2:00 p.m.	Running a Social Media Start-Up- Protect the data from your social media users (Grand Challenge: Secure Cyberspace)	Computer Lab	
2:30 p.m.	Snack	G39 Hallway	Counselors
2:45 p.m.	Running a Social Media Start-Up- Protect the data from your social media users (Grand Challenge: Secure Cyberspace)	Computer Lab	Counselors
3:15 p.m.	Ocean Acidification- Explore solutions to reduce the ocean CO₂ levels (Grand Challenge: Develop Carbon Sequestration Methods)	G35 ESB	
4:30 p.m.	Clean-up/Camper's Choice	Courtyard	Counselors
5:00 p.m.	Pick Up	ESB Atrium	Counselors

Thursday

Time	Activity	Place	Led By
9:00 a.m.	Morning Icebreaker	205 MRB	Counselors
9:15 a.m.	Solar Powered Tractor Pull- Using the battery pack you made, design the body, tires, and transmission to complete a competition (Grand Challenge: Develop Carbon Sequestration Methods)	205 MRB	Counselors
12:00 p.m.	Lunch	G39 Hallway	Counselors
12:30 p.m.	Mars Rover- Build the control mechanisms for a Mars Rover and complete challenges (Grand Challenge: Engineer the Tools of Scientific Discovery)	209 MRB	Counselors
2:30 p.m.	Snack	MRB Atrium	Counselors
2:45 p.m.	Design a 3-D Image- Build you own 3-D glasses and design your own 3-D image (Grand Challenge: Enhance Virtual Reality)	105 MRB	Counselors
4:30 p.m.	Clean-up /Heads and Tails Tag	Courtyard	Counselors
5:00 p.m.	Pick Up	ESB Atrium	Counselors

Friday

Time	Activity	Place	Led By
9:00 a.m.	Morning Icebreaker	G114 ESB	Counselors
9:15 a.m.	Water Sampling- Build 3 water samplers to analyze 3 different depths of water (Grand Challenge: Provide Access to Clean Water)	G35 ESB	
10:30 a.m.	Rocket Engineers – As a team, build and launch a Rocket (Grand Challenge: Engineer the Tools of Scientific Discovery)	109 MRB/Courtyard	Counselors
12:00 p.m.	Lunch	G39 Hallway	Counselors
12:30 p.m.	Build a City/Project Management Activity	G114 ESB	Counselors
2:40 p.m.	Snack	G114 ESB	Counselors
2:50 p.m.	Create Posters	G39 Hallway	Counselors
4:00 p.m.	Presentations and Award Ceremony	G102 ESB	Cate Schlobohm
5:00 p.m.	Pick Up	ESB Atrium	Counselors

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