

## 2017 FVC Schedule

KEY: white = general, minds-on light gray = general, hands-on medium-gray = topical, minds-on dark-gray = topical, hands-on					
	Monday, Feb. 20	Tuesday, Feb. 21	Wednesday, Feb. 22	Thursday, Feb. 23	Friday, Feb. 24
9:00-9:30 AM	Invention problem strip activity (e, p.2)	Safety First! (e, p. 10) Rules posted. Keep yourself safe. Keep others safe. Keep workspace clutterfree.	Cast a clay model.	Mold the shoe sole prototype.	Test the prototype.
9:30-10:00 AM	Introductions & "What's your favorite invention?" Student-defined "invention." Introduce week's activities.	Biomechanics and movement. (e, s p. 10-12) Why is this biomechanics important to shoe soles?			
10:00-10:30 AM	Safety first! (e, p. 10) Rules posted. Keep yourself safe. Keep others safe. Keep workspace clutterfree.	What is biomimicry? (long video, show 5-10 min)			
10:30-10:40 AM	Break	Break	Break	Break	Break
10:40-11:00 AM	Handout guides. Inventing has its own special language (WORD WALL). Inventing is a cycle, and uses SCAMPER (P8-P9). Reflect on problem strips.	Basic shoe terms. (Handout) Can you find all of these parts on your shoe? Individual research on shoe sole designs. (e, s p. 15-20) Examine your own shoe. (e, s p. 13)	Introduce Scott Portzline, Inventor Advice from Scott: Be creative, Be passionate, Be curious, Be flexible Scott sent 3-D printed shoe soles! (p. 35)	Explore team members' good problems. Who would benefit from a solution and how? Pick top 3-5 problems by clumping similar problems and discarding problems that may be less beneficial. Are there certain problems that students are really interested in?	Prepare for showcase of prototypes and invention worksheets
11:00-11:30 AM	What's an invention? Who's an inventor? (p. P9) Inventing takes skills and knowledge - a team sport! There are 4 types of people on invention teams.	What kind of shoe sole do you want to invent? How will it be useful? How will it be unique? START sketching designs in guidebooks.	Introduce Dr. Sokolowski, Inventor		
11:30 AM-Noon	Lunch	Lunch	Lunch	Lunch	Lunch
Noon-12:30 PM	Tinker Hatfield, Inventor	Describe "scale". CONTINUE to sketch designs and draw several to scale. (e, s p. 21-24)	SKYPE with Dr. Sokolowski 15-20 minutes + 10 minutes of Q&A	Rank problems based on students' interest in a possible solution. Focus on the beneficiary. Research possible solutions. Brainstorm & sketch solutions for top 3-5 problems. SCAMPER (p. 43-44) Choose ONE problem.	Showcase of Winter Camp with special guests (LMIT, BC, Clarks, parents); Balloon Challenge to end the showcase w/ visitors - FUN!
12:30-1:00 PM	Design a cell phone stand. (e, p. 2-3, s, p. 3) Draw first. Reintroduce SCAMPER for considering design options. Make your stand.	Select one design that you want to sculpt in clay and present to team for consideration of molding and casting a prototype of it.	Scott Portzline & Susan Sokolowski Students individually brainstorm how Scott and Susan are different and alike. Discuss in teams.		
1:00-1:30 PM	Think about your stand. Share your design / process. Did you get someone else's opinion? What would you do the same or differently?	Students individually sculpt clay models (seated as teams) (e, s, p. 25-26)	Purposeful & Unique Inventions: Introduce empathy. What does empathy have to do with invention? (p. 36-38) Are you empathetic? (5 question hand-out)	Select 1 Problem and draw multiple solutions; use readily available materials to make models (grab bag inventing, recycle bin)	
1:30-2:00 PM	Introduce Invention as a cycle to solve a problem to make someone's life easier, healthier, more engaging [Kid President]		David Sengeh, Inventor (TED talk)	MIT Class 2.009 How Orange became Orange (Video)	
2:00-2:30 PM	Inventing is a team sport. Four Corners-Teams selected for the week (p.7)		Invention Worksheet for David Sengeh work in pairs; discuss in teams	Complete Invention Worksheet for one problem. Continue to research and draw possible solutions.	Reflection and feedback
2:30-3:00 PM	Summarize the day, go over key terms, set the stage for tomorrow by introducing biomechanics and biomimicry. We'll sit with our teams tomorrow. Exit Slips	In teams, each student describes the purpose / intended use of their sole and shows their clay model. As a team, 1 clay model is selected to be molded tomorrow. Teams can vote on which they will mold. Exit Slips	Students collect 10 good problems to solve (now & HW) Say, "Look around your home, ask family and friends, and be empathetic." Students should practice saying, "What's your problem? I'm an inventor." Exit Slips	Teams present Invention Worksheet. Besides their shoe sole, students will create a table display of their Invention Worksheet and drawings for tomorrow's showcase. Exit Slips	Presentation of certificates to all inventors! Exit Slips