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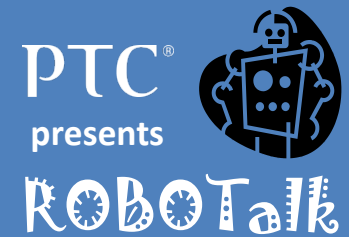
ROBOTalk

Hosted by David Price, the voice of FTC

How to build a
robot from
concept to
competition

October 1st, 2014

WELCOME



- Thank You for joining us!
- PTC Experts on this webinar



Jordan Cox
Director, PTC K12
Programs



Scott Morris
Windchill & Creo
Expert



Mark Cheli
Creo Expert &
Webex Technical
Assistance



Todd Kraft
Creo & Mathcad
Expert



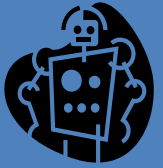
**Kari
Karwedsky**
PTC FIRST
Program Manager

- Our host,

David Price



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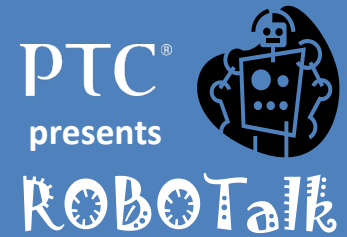
ROBOTalk

WHAT CITY ARE YOU
LISTENING TO
ROBOTALK FROM?

Text **1036136** and your message
to **22333**

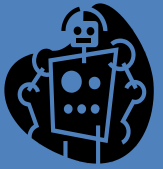
Poll
Everywhere

AGENDA



- **Brainstorming, Tips for Making it Fun!**
 - **David Price & Kari Karwedsky**
- **Poll Everywhere**
 - **What one word best describes Dean Kamen?**
- **Creating Concept Models, Sketches and 3D Models**
 - **Jordan Cox**
- **A Basic Scissor Lift in 15 minutes – Mark Cheli**
- **Design Challenge– Mark Cheli**
- **Questions & Answers**

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BRAINSTORMING, TIPS FOR MAKING IT FUN!

David Price
& Kari
Karwedsky

TIPS FOR BRAINSTORMING YOUR NEXT ROBOT

- 1. Make Sure you Have A Moderator



TIPS FOR BRAINSTORMING YOUR NEXT ROBOT

- 2. Identify Goals
 - They Should be S.M.A.R.T.
 - Specific
 - Measurable
 - Attainable
 - Relevant
 - Time-Bound



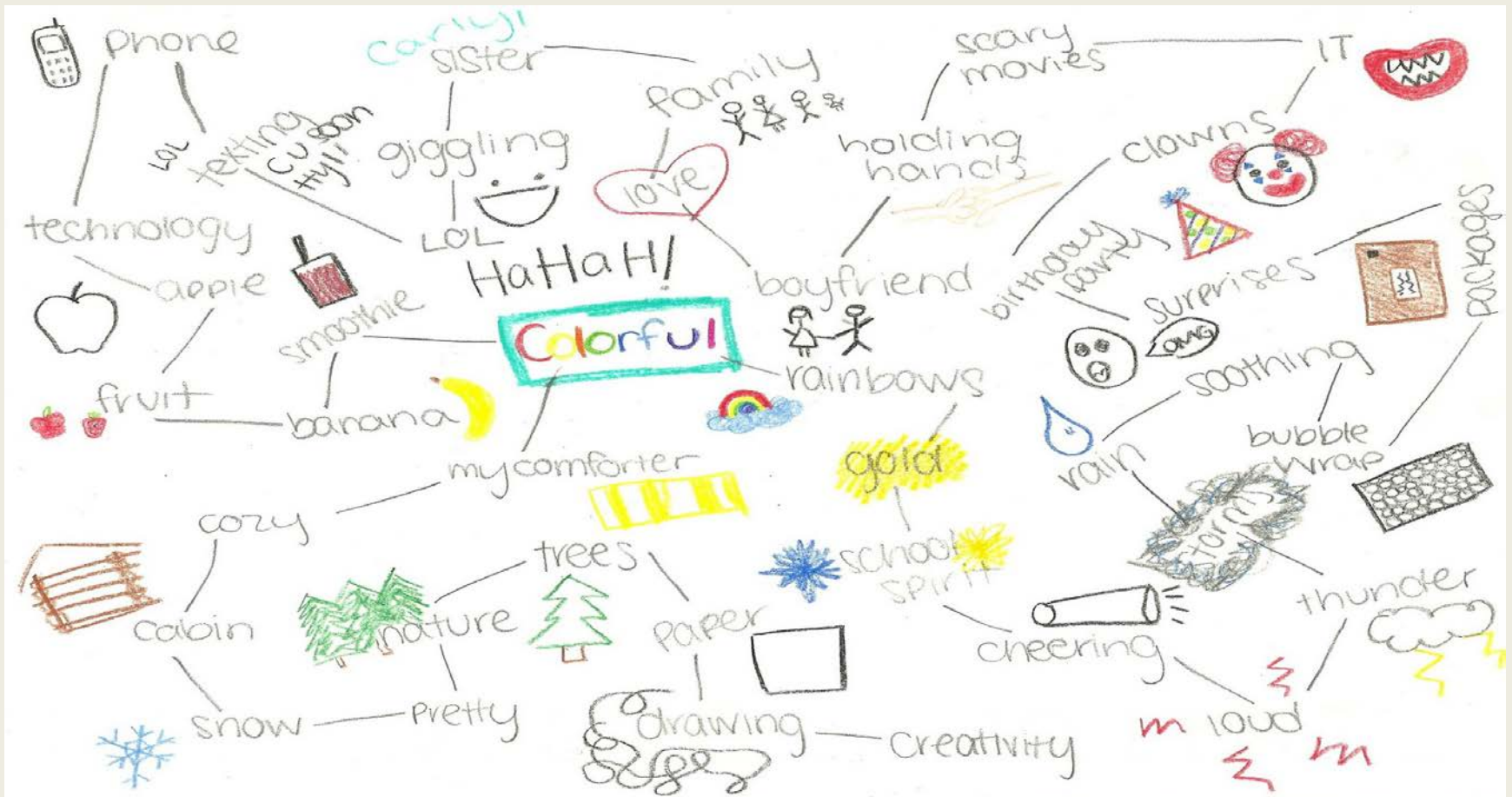
TIPS FOR BRAINSTORMING YOUR NEXT ROBOT

- 3. Set a Time Limit



TIPS FOR BRAINSTORMING YOUR NEXT ROBOT

4. Write Down or Sketch Everything!!



TIPS FOR BRAINSTORMING YOUR NEXT ROBOT

- 5. Don't Judge



TIPS FOR BRAINSTORMING YOUR NEXT ROBOT

- 6. Embrace the Ridiculous



TIPS FOR BRAINSTORMING YOUR NEXT ROBOT

- 7. Start General, End Specific



TIPS FOR BRAINSTORMING YOUR NEXT ROBOT

- 8. Look for Synergy Potential



TIPS FOR BRAINSTORMING YOUR NEXT ROBOT

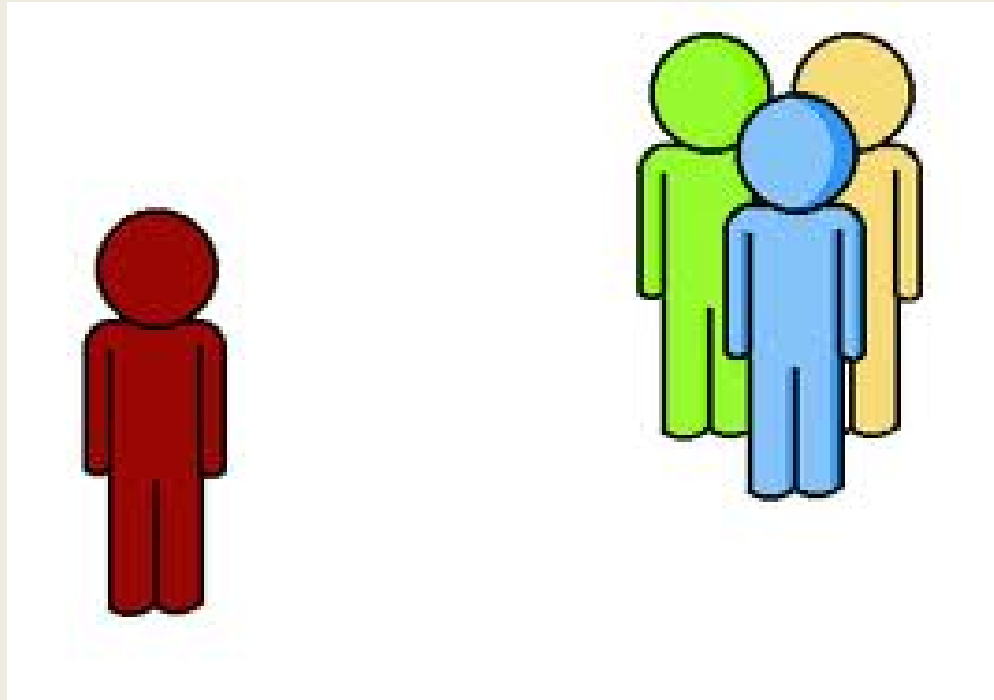
- 9. Avoid Group Think

WHEN ALL **THINK** ALIKE,
THEN NO ONE IS THINKING
-WALTER LIPPMAN-

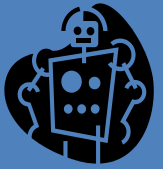


TIPS FOR BRAINSTORMING YOUR NEXT ROBOT

- 10. Include an Outsider



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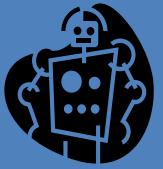
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WHAT ONE WORD BEST DESCRIBES DEAN KAMEN?

**Text 1036094 and your
message to 22333**

Poll
Everywhere

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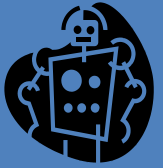


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CREATING CONCEPT MODELS, 2D SKETCHES & 3D MODELS

Jordan Cox

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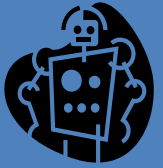


ROBOTalk

A BASIC SCISSOR LIFT IN 15 MINUTES

Mark Cheli

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DESIGN CHALLENGE

Mark Cheli

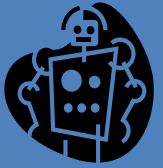
DESIGN CHALLENGE – OCT 1ST, 2014

- Design a conceptual model of a robot with a lift mechanism (i.e. scissor, slider, etc.) that can lift a wiffle ball 120 cm
- The starting conditions for the robot are that it has to fit in a cube 18in x 18in x 18 in

- Post a picture of your concept model and a short description to the PTC Community site
- <http://communities.ptc.com/community/academic-program/first>

- The best entry this week will get a PTC give-away!

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ROBOTalk

**ASK THE EXPERTS...
QUESTIONS?**