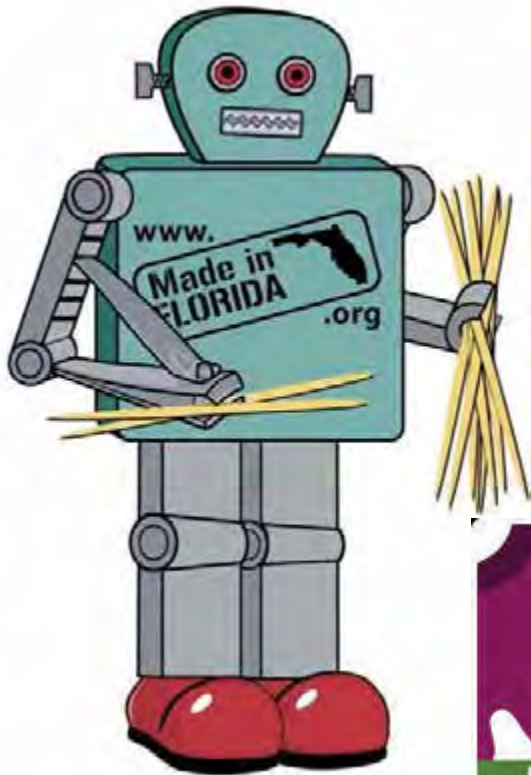


THE TOOTHPICK FACTORY®

A Simulation Game for the Workplace Skills



Marilyn Barger
Executive Director, FLATE



FLATE

**Florida's Advanced Technological
Education Center of Excellence**

NSF Advanced Technological Education



Partners with Industry for a new American Workforce



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Factory



FLATE' s vision



FLATE will be Florida's leading resource for education and training expertise, leadership, projects, and services to promote and support the workforce in the high performance production and manufacturing community.

IMPACT FLORIDA, LEAD NATIONALLY

Outreach ♦ Curriculum Reform ♦ Professional Development



Tell Teach Train

Advancing Excellence in Engineering Technologies



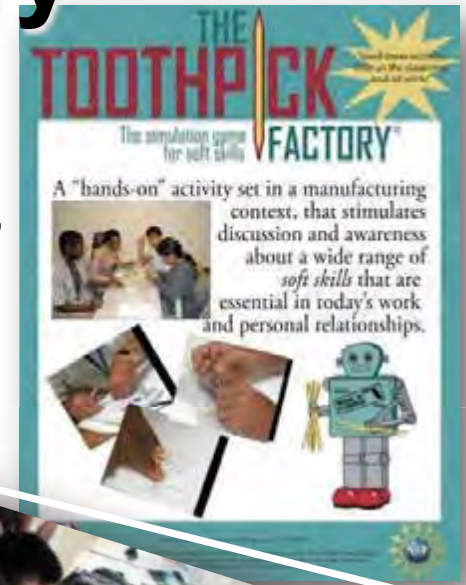
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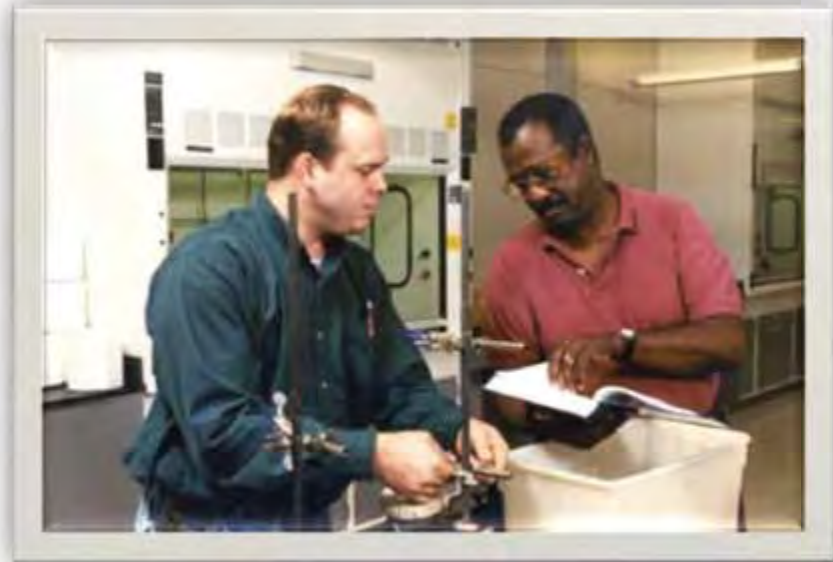
The Toothpick Factory[©]

- **Simulation game to teach workplace skills**
- **Workplace setting**
- **Applicable to many audiences**
- **Active learning/ “practicing”**
- **Self assessment / group discussion**
- **Introductory & advanced modules**



OVERVIEW

- **Workplace Skills - What and why?**
- **The Toothpick Factory - Overview & participation**



SKILLS?

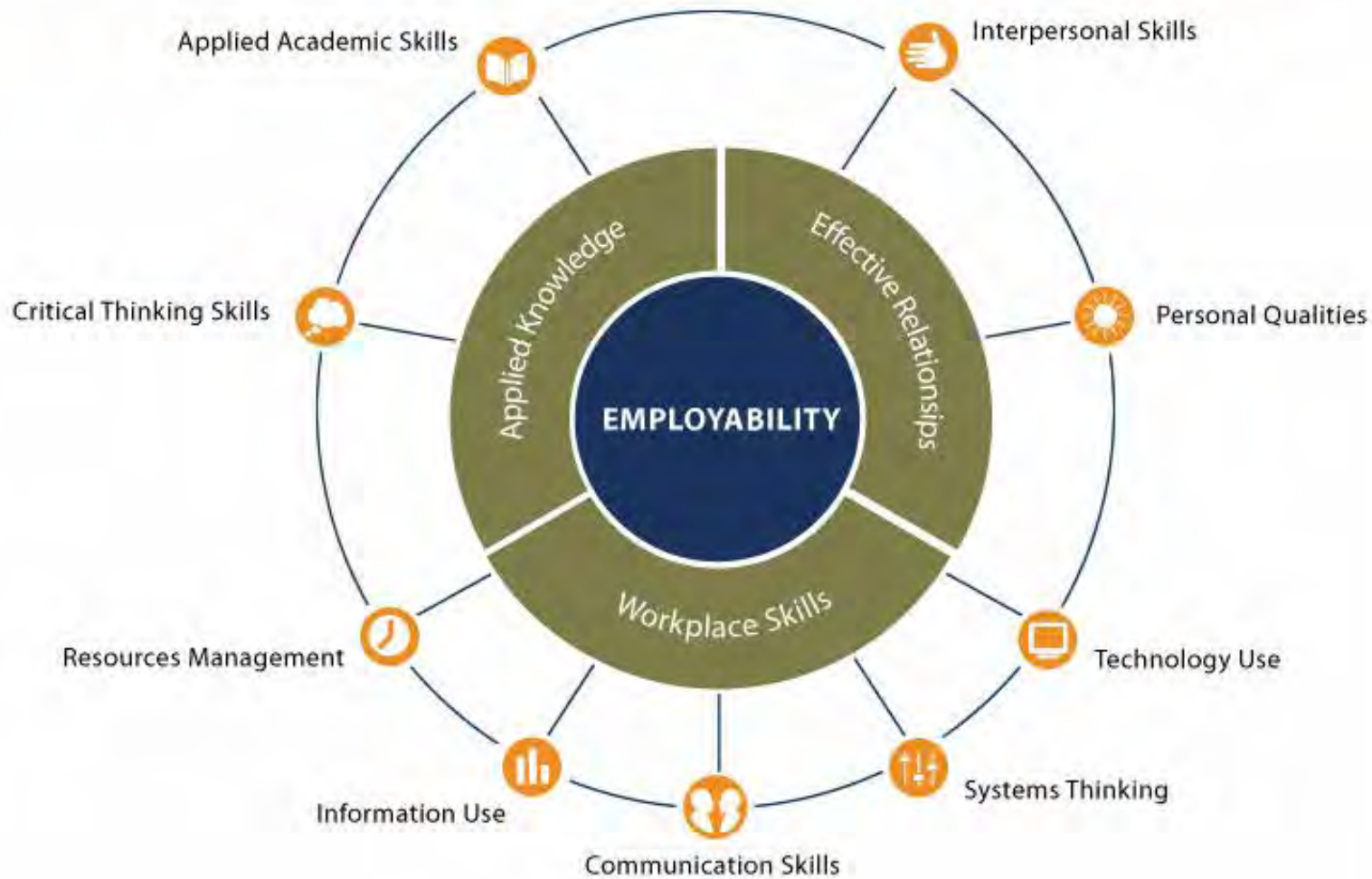
- **“Hard/ Technical Skills**
 - Education and experience
 - What you know
 - What you can do

- **Workplace Skills**
 - Teamwork
 - Communication
 - Listen, learn and lead



Click on pieces of the framework below to learn more about the skills required for employment.

[View All Skills](#) [Close](#)



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http://cte.ed.gov/nationalinitiatives/employability.cfm?&pass_dis=1



The screenshot shows a web browser window displaying the Perkins Collaborative Resource Network (PCRN) website. The browser's address bar shows the URL http://cte.ed.gov/nationalinitiatives/employability.cfm?&pass_dis=1. The website header features a banner with the PCRN logo and a photograph of four people in a laboratory or workshop setting. Below the banner is a navigation menu with links for Home, Learning Center, Meetings & Webinars, Reports, FAQ, Links, and Contact Us. The main content area is titled "Employability Skills Framework" and contains the following text:

Employability Skills Framework

Employability skills, along with academic and technical skills, are an essential component of college and career readiness. They are the general skills, including applied academics, effective relationships, and workplace skills, that are necessary for success in the labor market – for all industries and at all career levels. The [Employability Skills Framework](#) website is a central clearinghouse of resources on instruction and assessment for employability skills. Using the interactive Framework, policymakers, practitioners in education and workforce training, and others can identify employability skills and compare the skills identified by various instructional standards and assessments, understand key considerations for selecting an employability skills assessment, create a customized assessment comparison worksheet, and view practical examples of employability skills instruction and assessment.

[Visit the Employability Skills Framework website.](#)

Webinar: OCTAE Presents a Common Framework for 21st Century Employability Skills

May 22, 2014 at 2pm - 3pm (EST)

Please join the Office of Career, Technical, and Adult Education (OCTAE) for a webinar to learn about strategies for integrating employability skills into high quality CTE programs. The webinar will address why employability skills matter from the federal and state policy and employer perspectives and demonstrate the potential uses of OCTAE's newly updated [Employability Skills Framework website](#). Implementation strategies, including applications for the workforce system, student organizations, and community colleges, also will be shared.

Invited speakers include: Neil Cassner, SkillsUSA; Stephen DeWitt, Association for Career and Technical Education; Lauren Farley, U.S. Department of Labor; Kimberly Green, National Association of State Directors of Career Technical Education Consortium; Sharon Miller, OCTAE; Grace Sain, IBM Corporation; and a representative from the American Association of Community Colleges.

Please register in advance for the webinar at the following link: <http://tiny.cc/mv9ydwatwz>. After registering, you will receive additional details and a link to the webinar.

Contact Laura Rabinowich-Fisher at RTI International with any questions: laurar@rti.org.

The bottom of the screenshot shows a Windows taskbar with various application icons and a system tray displaying the time as 1:07 AM on 5/22/2014.

WORKPLACE SKILLS

What workplace skills do your industry partners say they are NOT getting?

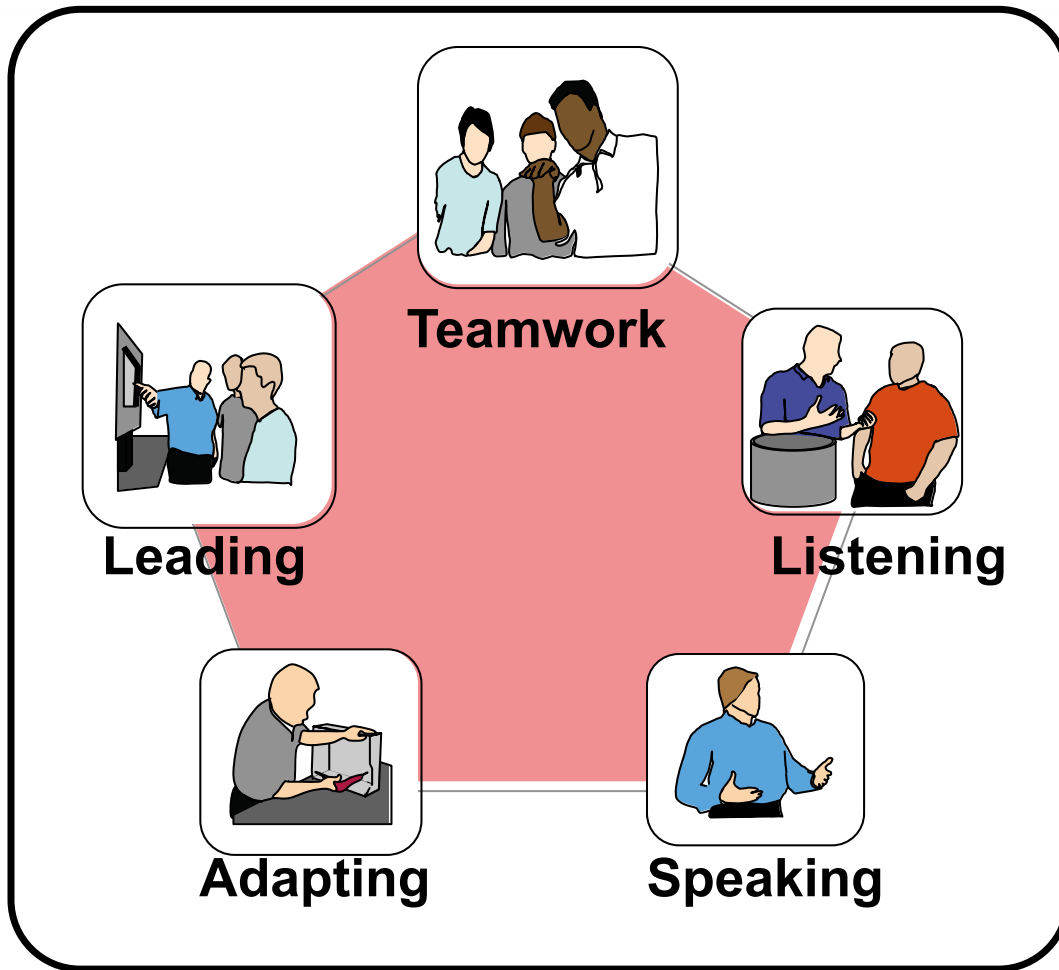


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WORKPLACE SKILLS



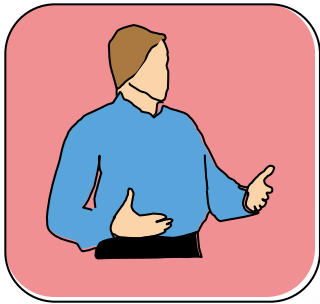
LISTENING

- **NOT** the same as hearing
- **Implies understanding**
- **Passive listening**
- **Active listening**

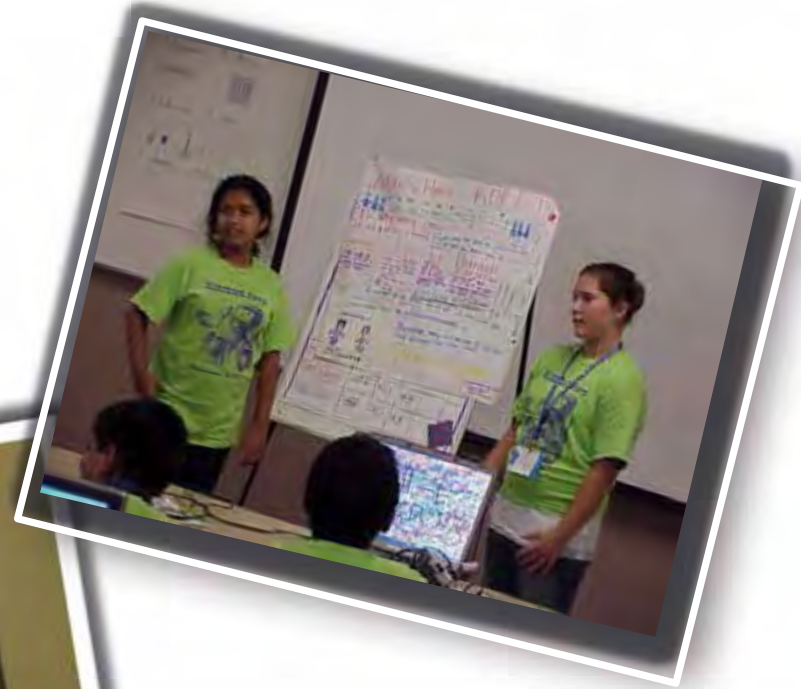


SPEAKING

SPEED



TONE



LEVEL



CLARITY

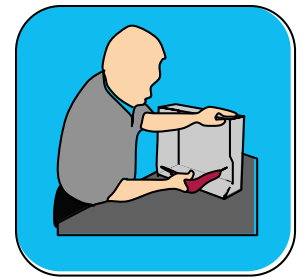


ADAPTING

change - the **ONLY** constant

requires new skills

increases stress



impacts job satisfaction



LEADING

influencing

mentoring

coaching

education

experience



ANYONE can be a leader



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WORKING in TEAMS

good communication

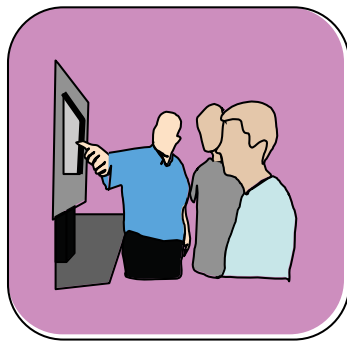
flexibility

time management



respect

common goals



WHY?

empowerment

NEW opportunities



Increases *promotion potential*



WHY?

1. company reputation

2. team oriented employees

3. morale builders

4. well-rounded employee



PRACTICE

You are ALL now employed at the



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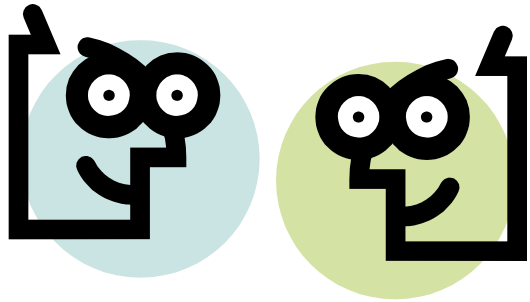
Setting the stage ...



ROLES / JOBS

Client Team

Production Team



- Set Criteria
- Place Orders
- Final Inspection tips, length



SIMULATION TOOLS

Client Card



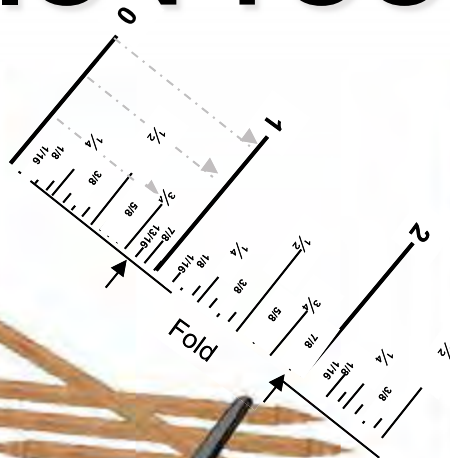
Order: 8 Custom toothpicks
Length: 1-5/8 inch long
Specs: All with one sharp tip



Client Card



Order: 8 Custom toothpicks
Length: 1.5 inches long
Specs: All with one sharp tip

Production Scorecard

TEAM NAME:

Instructions

Your Quality Control Representative will use this scorecard to track your team's production record. The goal of the game is to work effectively and produce the greatest number of orders with minimum rejects.

Order #	Accepted	Rejected	Wasted

Quality Control Representative

Your primary job is remeasuring products, tracking accepted/rejected toothpick, and delivering the finished product to the Client.

Production Technician

Your primary job is to cut the pre-measured units to client specification.



Market Response

Adapt

The specifications for this order has changed. You now need you to produce toothpicks 1 inch long.



Market Response

Innovation

Your client's company has entered a custom toothpick competition. They need you to design a custom toothpick, using your current order specifications, half your order.

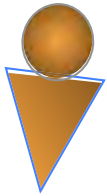



“PRODUCTION” TOOLS

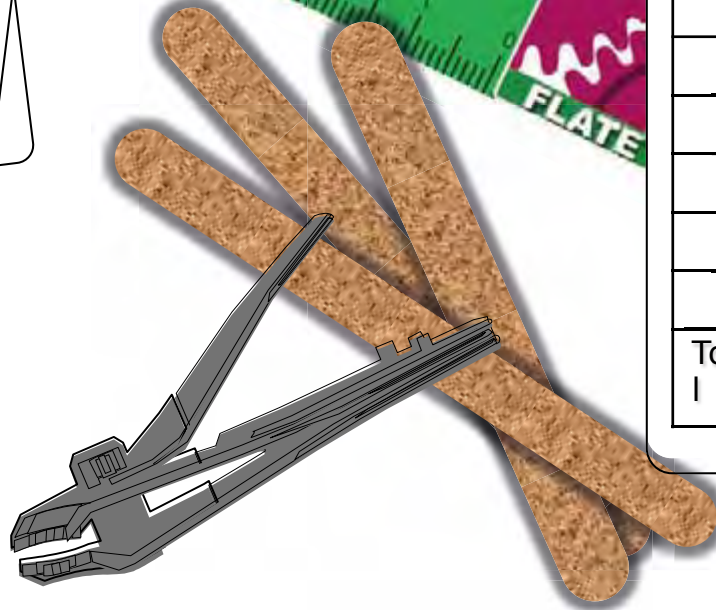
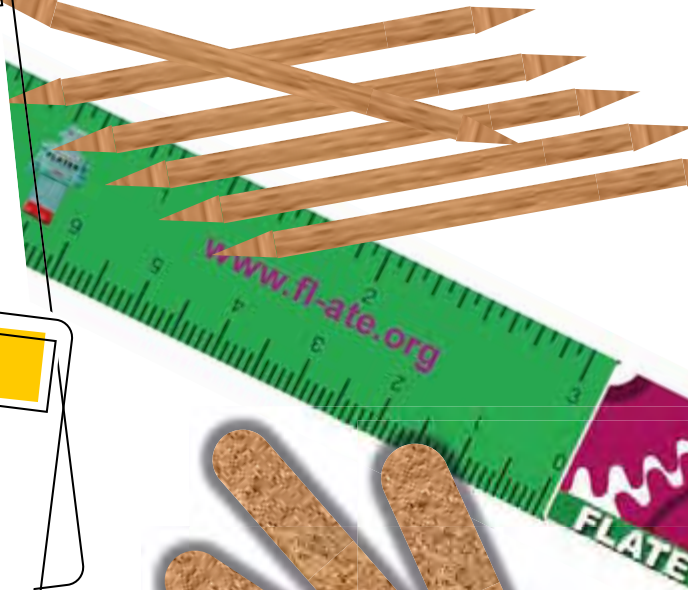
Finishing Technician



Pre-production Technician



Your primary job is to obtain orders from the client, measure and mark where the orders need to be cut.



Production Scorecard

TEAM NAME: _____

Instructions

Your Quality Control Representative will use this scorecard to track your team's production record. The goal of the game is to work effectively and produce the greatest number of orders with minimum rejects.

Order #	Accepted	Rejected	Wasted
1			
2			
3			
4			
5			
6			
7			
8			
Total			



“CLIENT” TOOLS

Client Card



Order: 8 Custom toothpicks
 Length: 1.5 inches long
 Specs: All with one sharp tip

Client Card



Order: 8 Custom toothpicks
 Length: 1.5 inches long
 Specs: All with one sharp tip

Client Response Card

TEAM NAME: _____

Instructions

Use this card to keep track of the team's production. If you "reject" an order, be specific on "why" the order was rejected.

Order # Accept Reject Reason sent back

Order #	Accept	Reject	Reason sent back
1			
2			
3			
4			
5			
6			
7			
8			
Total			



Finished Order Tracking

Team name _____

Market Response

Adapt

The specifications of last order has changed. Your client now requires you to make the toothpick shorter.



Market Response

Innovation

Your client's company has entered a custom toothpick competition. They need you to design a custom toothpick, using your current order specifications, half your order.



RECORD KEEPING

- **Number of toothpicks completed**
 - **Completed = # finished that passed quality inspection**
- **Number rejected and why**
 - **how many had to be re-worked?**
- **Total # stock toothpicks used during production**
- **Percent productivity (# completed/# used)**



GAME RULES

Goal : you have ___ minutes to complete as many orders as possible, with the least amount of wasted materials.

START NOW 😊



TIME IS UP!



Turn in ALL orders, even if they are not complete.



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SOFT SKILLS SCORECARD

be honest
use for discussion

TOOTHPICK FLATE

Soft Skills Scorecard
FLATE – www.flate.org

Clusters	Actions	How often did you practice the actions today?			
		Not much	A little	A lot	
Listening	Listen to and understand instructions.	11	11	11	
	Listen to someone's request, comment, or question before responding.	11	11	11	
	Receive feedback in appropriate way.	11	11	11	
	Listen to the needs and ideas of others with respect.	11	11	11	
Working in Teams	Work with peers to establish goals, tasks, and processes.	11	11	11	
	Value everyone's input.	11	11	11	
	Encourage cooperation between peers.	11	11	11	
	Work collaboratively with others.	11	11	11	
Leading	Work with others to set goals and create plans.	11	11	11	
	Encourage others to contribute ideas.	11	11	11	
	Work with others to solve problems.	11	11	11	
	Use inspection methods to improve quality.	11	11	11	
Adapting	Ask appropriate and timely questions.	11	11	11	
	Makes clear and specific requests.	11	11	11	
	Makes clear and specific promises or commitments.	11	11	11	
	Communicate with a clear voice.	11	11	11	
Speaking	Presents ideas calmly and clearly.	11	11	11	
	Add the points in each column.				
	Add all three columns.				
	TOTAL SCORE				

PARTICIPANT
self-reflection





Soft Skills Scorecard

FLATE – www.fl.ate.org

Clusters	Actions	How often did you practice the actions today?		
		Not much	A little	A lot
Listening	Listen to and understand instructions.		f	
	Listen to someone’s request, comment, or question before responding.		f	
	Receive feedback in appropriate way.		f	
	Listen to the needs and ideas of others with respect.		f	
Working in Teams	Work with peers to establish goals, tasks, and processes.		f	
	Value everyone’s input.		f	
	Encourage cooperation between peers.		f	
	Work collaboratively with others.		f	
	Work with peers to resolve conflicts.		f	
Leading	Influence others to accomplish quality.		f	
	Motivate others through positive affirmations.		f	
	Encourage collective agreements.		f	
	Provide praise and recognition.		f	
	Provide timely feedback to improve results.		f	
Adapting	Express receptivity to input from peers.		f	
	Quickly accommodate to changing conditions.		f	
	Change production and inspection methods to improve quality.		f	
Speaking	Ask adequate and timely questions.		f	
	Makes clear and specific requests.		f	
	Makes clear and specific promises or commitments.		f	
	Communicate with a clear voice.		f	
	Presents ideas calmly and clearly.		f	
Add the points in each column				
Add all three columns.				TOTAL SCORE

WHAT DID WE LEARN?

- **What did your team do well?**
- **Not so well? Why?**
- **What Skills did you use?**
- **What were some obstacles you faced?**
- **Do you have a better understanding of Workplace Skills?**



TEAM RESULTS



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TEAM CHART- example

Team Name	Order #	Completed	Rejected	Wasted	Used	% Complete
Team 1	1	8	3	2	10	80.00%
Team 1	2	8	4	3	11	72.73%
Team 1	3	8	5	4	12	66.67%
Total		24	12	9	33	72.73%

$$\frac{\text{TOTAL COMPLETED}}{\text{TOTAL USED}} = \frac{24}{33} = 72.73\%$$



REVIEW

- **What are workplace skills?**
- **Why are they important?**
- **How do they benefit you?**
- **Why do employers care about them?**
- **What did the Toothpick Factory teach us about using them?**



Workplace Skills

- Teamwork
- Listening
- Speaking
- Adapting
- Leading

Employers

- Want employees who work well with others
- Company reputation
- Moral builders
- Well-rounded employee

Importance

- Increases your promotion potential
- Empowerment
- Creates opportunities



ROUND 1

Questions?

Comments?

Discussion?



ROUND 2

***Or, out of the
training room
and ... onto the
production floor!***



ROUND 2:

You have ___ **minutes** to complete as many orders as possible, with the least amount of wasted materials.

START NOW 😊



TIME IS UP!



Turn in ALL orders, even if they are not complete.



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MARKET RESPONSE CARDS (MRC)

- What are they?
- Different types?
- Why are they important?
- How to implement?
- Facilitator challenge



REAL WORLD SCENARIOS

CROSS TRAIN



INNOVATE

ADAPT

Market Response

Adapt

The specifications for your last order has changed. Your client now needs you to make the toothpicks 1 inch shorter.



Market Response

Change

Time to learn other aspects of the business. All members of the team should switch positions.



CHANGE



WHAT DO THEY ADD TO THE GAME?

Creates change
Increases stress
Tests adaptability
Challenges creativeness
Requires use of workplace skills



IMPLEMENTATION

Who is responsible for delivering the MRC?

- **Client Team OR Facilitator**

Ways to implement Market Response Cards (MRC)

- **Implement 1 MRC for all the teams.**
- **Implement 2 MRCs not all teams will have the same card.**
- **Implement multiple MRCs (randomly distributed)**



WHAT DID WE LEARN?

- What did your team do well?
- Not so well? Why?
- What Soft Skills did you use?
- What obstacles you faced?
- Do you have a better understanding of Workplace Skills?

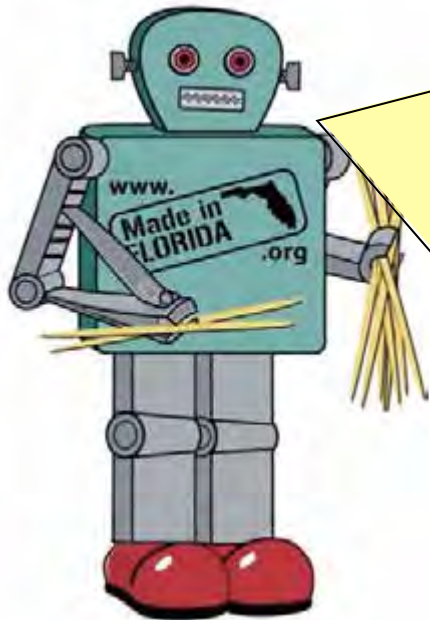


REVIEW

- **What was the impact of the MRCs?**
- **Round 1 vs. Round 2**
- **Improving workplace skills**
- **Productivity calculations**



FACILITATOR CHALLENGE – Group Activity



- How do you teach workplace skills?
- How do reinforce their practice?
- How would you implement the Toothpick Factory?
- Ideas for extensions?
- Ideas for additional MRC?



IMPACT

1. Standard Workshop

- Delivered to over 200 students.
- Audience = from educators to workforce personnel.



2. Train the Trainer Workshop

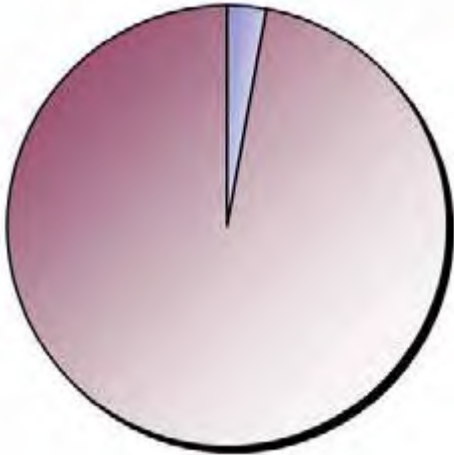
- Presented to over 350 faculty.
- Audience = Post secondary, secondary educators and industry.
- Train attendees how to facilitate the workshop in their classroom/training center.



IMPACT

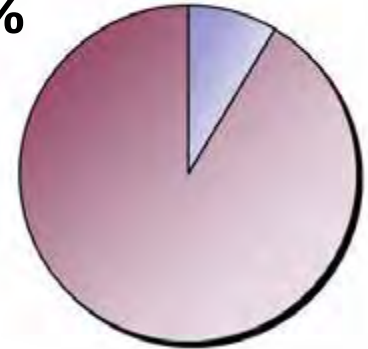
I see the value in using this activity.

Strongly Agree ... 97%
Agree ... 3%

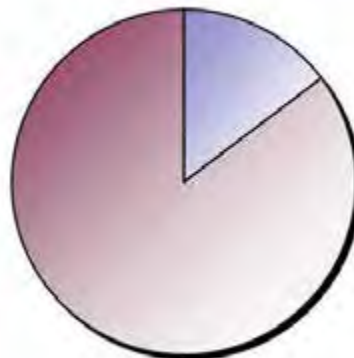


I would recommend this activity to others.

Strongly Agree ... 91%
Agree ... 9%



... what they say...



The activity was engaging.

Strongly Agree ... 85%
Agree ... 15%

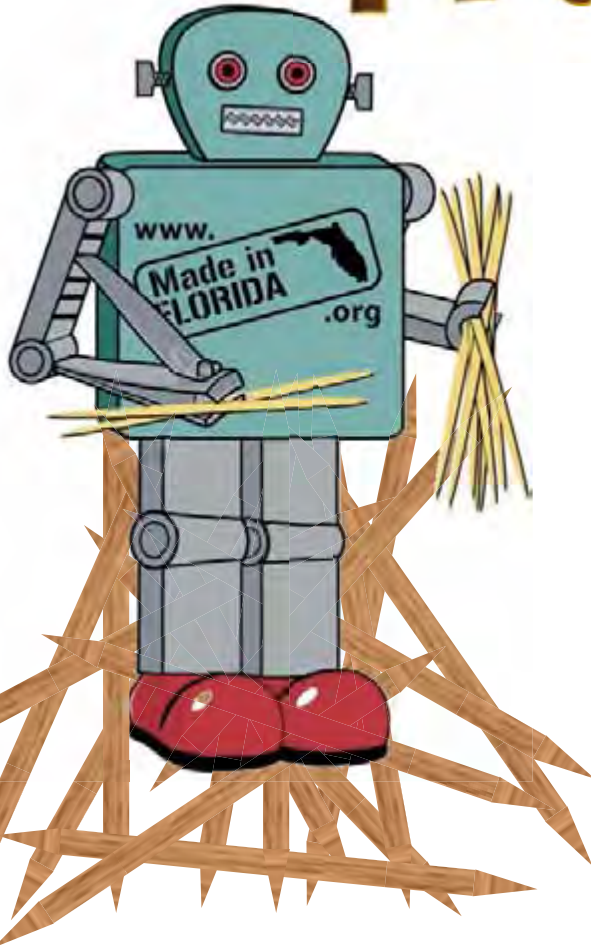


KIT CONTENTS

- Participant Instructions
- Job Function Cards
- Production Record Card
- Soft skills Scorecard
- Nail clippers
- Nail files
- Toothpicks
- Measuring tools
- Client Response Cards
- Client Cards
- Market Response Cards
- Facilitator Guide
- Soft Skills Presentation



THANK YOU



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