THE TOOTHPICK FACTORY

A Simulation Game for the Workplace Skills

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FLATE
Florida’s Advanced Technological Education Center of Excellence
NSF Advanced Technological Education

Partners with Industry for a new American Workforce
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.
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
“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.

- Applied Academic Skills
- Interpersonal Skills
- Critical Thinking Skills
- Personal Qualities
- Workplace Skills
- Technology Use
- Resources Management
- Systems Thinking
- Information Use
- Communication Skills

**Employability**
PCRN
PERKINS COLLABORATIVE RESOURCE NETWORK
for Programs and Workforce Quality

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 systems, student organizations, and community colleges, will also be shared.

OCTAE invites a distinguished faculty of practitioners to share insights. Among them will be National Association of State Directors of Career Technical Education Directors; Sharon Mills, OCTAE; Grace Sub, IBM Corporation; and representatives from the American Association of Community Colleges.

Featured speakers include: Niki Clausen, SkillsUSA; Stephen DelWit, Association for Career and Technical Education; Lauren Polley, U.S. Department of Labor; Georgia Smith, National Association of State Directors of Career Technical Education Directors; Sharon Mills, OCTAE; Grace Sub, IBM Corporation; and a representative from the American Association of Community Colleges.

For more information on this webinar, visit: http://d5.admin.ed.gov/register.asp

Contact Laura Robinson Foster at RTI International with any questions (lrobinson@rti.org)
WORKPLACE SKILLS

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

Teamwork

Leading

Listening

Adapting

Speaking
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
WORKING in TEAMS

Good communication

Flexibility

Time management

Respect

Common goals
Empowerment

Increases *promotion potential*

WHY?
WHY?

1. Company reputation
2. Team oriented employees
3. Morale builders
4. Well-rounded employee
PRACTICE

You are **ALL** now employed at the

![The Toothpick Factory logo]

HELP WANTED
Setting the stage ...
**ROLES / JOBS**

**Client Team**
- Set Criteria
- Place Orders
- Final Inspection tips, length

**Production Team**
- Pre-Production
- Quality Control
- Production
- Finishing
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.

**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.

<table>
<thead>
<tr>
<th>Order #</th>
<th>Accepted</th>
<th>Rejected</th>
<th>Wasted</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Client Card**

**Order:** 8 Custom toothpicks

**Length:** 1 1/2 inches

**Spots:** 8 Spots

**Tip:** 1 Sharp Tip

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**Finished Order Tracking**

Team name __________________________

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**Client Response Card**

<table>
<thead>
<tr>
<th>TEAM NAME: __________________________</th>
</tr>
</thead>
</table>

**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.

<table>
<thead>
<tr>
<th>Order #</th>
<th>Accept</th>
<th>Reject</th>
<th>Reason sent back</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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**Market Response**

The specifications for the last order have changed. Your client now needs you to make the toothpick an inch shorter.

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**Adapt Innovation**

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

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The Toothpick Factory
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)
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.
SOFT SKILLS SCORECARD

Be honest
Use for discussion
<table>
<thead>
<tr>
<th>Clusters</th>
<th>Actions</th>
<th>How often did you practice the actions today?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Not much</td>
</tr>
<tr>
<td>Listening</td>
<td>Listen to and understand instructions.</td>
<td>•</td>
</tr>
<tr>
<td></td>
<td>Listen to someone’s request, comment, or question before responding.</td>
<td>•</td>
</tr>
<tr>
<td></td>
<td>Receive feedback in appropriate way.</td>
<td>•</td>
</tr>
<tr>
<td></td>
<td>Listen to the needs and ideas of others with respect.</td>
<td>•</td>
</tr>
<tr>
<td>Working in</td>
<td>Work with peers to establish goals, tasks, and processes.</td>
<td>•</td>
</tr>
<tr>
<td>Teams</td>
<td>Value everyone’s input.</td>
<td>•</td>
</tr>
<tr>
<td></td>
<td>Encourage cooperation between peers.</td>
<td>•</td>
</tr>
<tr>
<td></td>
<td>Work collaboratively with others.</td>
<td>•</td>
</tr>
<tr>
<td></td>
<td>Work with peers to resolve conflicts.</td>
<td>•</td>
</tr>
<tr>
<td>Leading</td>
<td>Influence others to accomplish quality.</td>
<td>•</td>
</tr>
<tr>
<td></td>
<td>Motivate others through positive affirmations.</td>
<td>•</td>
</tr>
<tr>
<td></td>
<td>Encourage collective agreements.</td>
<td>•</td>
</tr>
<tr>
<td></td>
<td>Provide praise and recognition.</td>
<td>•</td>
</tr>
<tr>
<td></td>
<td>Provide timely feedback to improve results.</td>
<td>•</td>
</tr>
<tr>
<td>Adapting</td>
<td>Express receptivity to input from peers.</td>
<td>•</td>
</tr>
<tr>
<td></td>
<td>Quickly accommodate to changing conditions.</td>
<td>•</td>
</tr>
<tr>
<td></td>
<td>Change production and inspection methods to improve quality.</td>
<td>•</td>
</tr>
<tr>
<td>Speaking</td>
<td>Ask adequate and timely questions.</td>
<td>•</td>
</tr>
<tr>
<td></td>
<td>Makes clear and specific requests.</td>
<td>•</td>
</tr>
<tr>
<td></td>
<td>Makes clear and specific promises or commitments.</td>
<td>•</td>
</tr>
<tr>
<td></td>
<td>Communicate with a clear voice.</td>
<td>•</td>
</tr>
<tr>
<td></td>
<td>Presents ideas calmly and clearly.</td>
<td>•</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Add the points in each column</th>
<th>Add all three columns.</th>
<th>TOTAL SCORE</th>
</tr>
</thead>
</table>

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Soft Skills Scorecard
FLATE – www.fl.ate.org
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
# TEAM CHART - example

<table>
<thead>
<tr>
<th>Team Name</th>
<th>Order #</th>
<th>Completed</th>
<th>Rejected</th>
<th>Wasted</th>
<th>Used</th>
<th>% Complete</th>
</tr>
</thead>
<tbody>
<tr>
<td>Team 1</td>
<td>1</td>
<td>8</td>
<td>3</td>
<td>2</td>
<td>10</td>
<td>80.00%</td>
</tr>
<tr>
<td>Team 1</td>
<td>2</td>
<td>8</td>
<td>4</td>
<td>3</td>
<td>11</td>
<td>72.73%</td>
</tr>
<tr>
<td>Team 1</td>
<td>3</td>
<td>8</td>
<td>5</td>
<td>4</td>
<td>12</td>
<td>66.67%</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>24</td>
<td>12</td>
<td>9</td>
<td>33</td>
<td>72.73%</td>
</tr>
</tbody>
</table>

**TOTAL COMPLETED** 24  **TOTAL USED** 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.
MARTKET RESPONSE CARDs (MRC)

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

CROSS TRAIN

ADAPT

Market Response

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

INNOVATE

CHANGE

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

The Toothpick Factory
What do they add to the game?

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

... what they say...

- "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%

- "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