The Price is Right: Writing Customer Quotes

Print:

Program Manager, ELA – The Price is Right: Writing Customer Quotes

Industry Sector: Advanced Manufacturing
Content Area: Literacy
Core Topic: Written communication

Expand All | Collapse All

Common Core State Standards

CCSS.ELA-Literacy.CCRA.W.2 Write informative/explanatory texts to examine and convey complex ideas and information clearly and accurately through the effective selection, organization, and analysis of content.
CCSS.ELA-Literacy.WHST.6-8.2/9-10.2/11-12.2 Write informative/explanatory texts, including the narration of historical events, scientific procedures/ experiments, or technical processes.
CCSS.ELA-Literacy.CCRA.L.1 Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.
CCSS.ELA-Literacy.CCRA.L.2 Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.
CCSS.ELA-Literacy.CCRA.L.3 Apply knowledge of language to understand how language functions in different contexts, to make effective choices for meaning or style, and to comprehend more fully when reading or listening.
CCSS.ELA-Literacy.CCRA.L.6 Acquire and use accurately a range of general academic and domain-specific words and phrases sufficient for reading, writing, speaking, and listening at the college and career readiness level; demonstrate independence in gathering vocabulary knowledge when encountering an unknown term important to comprehension or expression.
CCSS.ELA-Literacy.CCRA.SL.6 Adapt speech to a variety of contexts and communicative tasks, demonstrating command of formal English when indicated or appropriate.

Adult Basic Education Standards

Writing/Writing for History/Social Studies, Scientific and Technical Subjects

CCR Anchor 2: Write informative/explanatory texts to examine and convey complex ideas and information clearly and accurately through the effective selection, organization, and analysis of content.

Speaking and Listening

CCR Anchor 6: Adapt speech to a variety of contexts and communicative tasks, demonstrating command of formal English when indicated or appropriate.

Language

CCR Anchor 1: Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.
CCR Anchor 2: Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.
CCR Anchor 3: Apply knowledge of language to understand how language functions in different contexts, to make effective choices for meaning or style, and to comprehend more fully when reading or listening.
CCR Anchor 6: Acquire and use accurately a range of general academic and domain-specific words and phrases sufficient for reading, writing, speaking, and listening at the college and career readiness level; demonstrate independence in gathering vocabulary knowledge when encountering a word or phrase important to comprehension or expression.

Industry Overview

Today's Manufacturing Workplace

A manufacturing renaissance is occurring in the United States. The United States is the largest manufacturing economy in the world, producing 21 percent of the goods manufactured across the globe. In addition to the 12 million Americans working directly in the manufacturing industry, manufacturing supports more than 6.5 million other jobs, thus accounting for nearly 17 percent of all private sector jobs in the United States. In 2010, the average U.S. manufacturing worker earned $77,186, including pay and benefits (the average in all industries was $56,436).[1]

While manufacturing jobs in Massachusetts have declined, as they have nationally, manufacturing is still a critical industry in this state and provides opportunities for good, high-paying jobs. In the Greater Boston area, most of the manufacturing jobs are in computer and electronics companies, and much of the state relies on manufacturing positions in these and other very high-tech areas, such as aerospace and biotechnology.[2]

Advanced manufacturing involves the use of computers and technology in the manufacture of products. While not all manufacturing companies use technological innovations in developing their products or processes, the competitive advantage of the United States in the manufacture of goods relies on technological innovations. This means that today's manufacturing workplace is usually highly technical, which accounts for the high-paying positions many workers in this field receive in compensation for their work. It also means that today's advanced manufacturing workplace is very different from many people's conceptions of factories and mills as dark, dirty, and unsafe. Today's advanced manufacturing facilities are usually bright, clean, and very safe, and the emphasis is on working efficiently—with as little waste as possible.

In the advanced manufacturing industry, there has been a marked shift from the traditional role of line workers to workers who demonstrate creativity and innovation. Innovation is a hallmark of the U.S. manufacturing industry, and key to maintaining its position in the global market since products can often be produced at a lower cost in developing countries. Critical-thinking, problem solving and reasoning are important components of the innovation process. Today's manufacturing workers are expected to formulate solutions to problems using critical thinking and reasoning skills while working independently and/or in teams.

1. http://www.nam.org/~/media/AF4039988F9241C09218152A709CD06D.ashx
2. http://www.bostonglobe.com/business/2012/05/08/high-end-factory-jobs-boston-paying-high-wages/3gZuNc6GywDGKoYNP2hnaO/story.html?camp=pm

Careers in Advanced Manufacturing

The manufacturing sector includes jobs related to planning, managing, and performing the processing of materials into intermediate or final products and related activities such as production planning and

control, maintenance, and engineering. Thus, this industry includes not only those people who actually produce the manufactured goods, but also managers, maintenance staff, scientists and researchers, analysts, administrative personnel, and IT personnel.

Career Pathways

The manufacturing industry includes six career pathways:

- Production is the construction and assembly of parts and final products. People in these positions work in factories and mills, with machines, to make or assemble parts, construct components of parts (such as plastics), and print materials. Occupations in this pathway range from production helpers who move parts and materials around the factory, to numerical control machine operators who run the computer-controlled machines that modify metal and plastic to create products, to manufacturing production technicians who oversee production.

- Manufacturing production process development occupations are involved in designing products and manufacturing processes. People in these occupations work with production workers to set up the machines and processes to develop new products. These occupations include engineers and production managers.

- Maintenance, installation and repair workers take care of products after they've been sold and delivered to customers—they install the products, perform maintenance on machines, tools, and equipment so that they work properly, and repair systems that are not performing adequately. Workers in this pathway include automotive technicians, automotive electronics installers, building maintenance workers, industrial electronics repairers, industrial machinery mechanics, millwrights, and small engine mechanics.

- Quality assurance is provided by quality control inspectors and technicians, who ensure that products both meet design standards and are of high quality.

- Logistics and inventory control workers ensure that those working in Production have the materials they need to complete their work. Workers in these occupations inventory materials and products, move materials to the line, and pack and ship finished products. Thus, they include production and planning clerks, and operators of moving machinery such as cranes and forklifts, and packers.

- Health, safety and environmental assurance occupations are focused on keeping the workplace safe by ensuring that workers are using equipment safely and that manufacturing processes are as safe as they can be. The also conduct investigations and conduct inspections.

Mathematics and Communication Skills Needed in Advanced Manufacturing

Mathematics and communication are key skills needed for success in today's high-performance advanced manufacturing workplaces. Mathematics is used in the advanced manufacturing industry to measure the amounts and sizes of materials and parts, create "recipes" used to manufacture man-made materials, and analyze data. Data analysis is critical at many levels of a manufacturing organization in order to ensure quality and to continuously improve both quality and processes. Today's manufacturing industry must operate extremely efficiently and produce very high-quality products in order to maintain competitiveness. Many front-line workers are involved in collecting data and working to improve quality and efficiency. Thus, in addition to basic mathematical calculations (which rarely involve simple whole numbers), workers are engaged in mathematical reasoning and solving problems using a variety of mathematical tools.

To succeed and move up the ladder in today's advanced manufacturing workplace, workers need reading skills to understand technical concepts, vocabulary, and to bring together information needed for a particular situation; to locate, organize, and document written information from various sources needed by co-workers and customers; and to locate written information needed by co-workers and customers. They need to use correct grammar, punctuation and terminology to write and edit documents and to develop and deliver formal and informal presentations using appropriate media to engage and inform audiences. In addition, they need to interpret verbal and nonverbal behaviors to enhance communication with co-workers and clients/participants; apply active listening skills to obtain and clarify information; and interpret and use information in tables, charts, and figures to support

written and oral communications. They also must communicate with co-workers and customers using technology tools. As they move up the corporate ladder they will need to explain written organizational policies, rules and procedures to help employees perform their jobs.

Career Opportunities in Advanced Manufacturing with Education from Community Colleges

Massachusetts Community Colleges play an important role in preparing the state's citizens to take advantage of the career opportunities available in advanced manufacturing. Degree and certificate programs prepare students to enter advanced manufacturing occupations, including:

- production occupations, including people who work as assemblers (such as airplane assemblers), machine operators, machinists, systems operators, CNC machine tool operators, machine setters, laminators/fabricators, metal and plastic workers, packers, molders, semiconductor processing operators, welders and solderers, tool and die makers, and other production workers;

- manufacturing production process development occupations, including numerical control tool programmers who write the programs that control machine tools and industrial production managers who plan and oversee production;

- maintenance, installation and repair occupations include automotive, electronics, and biotechnology technicians, industrial machinery mechanics, and millwrights (who install and maintain heavy equipment);

- quality assurance occupations including quality control technicians and inspectors.

Recent Career Opportunities in Massachusetts

The following is a sample of advanced manufacturing job listings in Massachusetts that require associate's degree or certificate:

- Manufacturing Engineering Technician, Randstad Corporation, Framingham, MA, [show]
- Quality Control Technician, QD Vision, Lexington, MA [show]
- Manufacturing Technican, Hologic, Marlborough, MA [show]

Employment Outlook for Advanced Manufacturing

Advanced manufacturing continues to be a high-growth industry, given the knowledge capital in the United States. However, the work in this industry is increasingly technical and requires far fewer workers as more tasks are automated. Entry-level positions in this industry require the same skills that only a select group of highly-experienced and well-paid workers once had. Unfortunately manufacturers find it difficult to fill these high-skill positions. A 2011 survey found that there is a persistent skills gap between the skills that are needed in the today's manufacturing workplace and the skills that candidates bring to the workforce.

Most of the advanced manufacturing companies in Massachusetts are small to mid-sized operations that employ smaller numbers of workers and rely on computer-operated machinery for production. While the numbers of workers are smaller than in the past, the more highly-skilled nature of the work means that these are high-paying jobs and provide workers with opportunities to grow through training and education and to be part of the effort to innovate.

Resources:

Advanced Manufacturing Industry

- National Council for Advanced Manufacturing
- Advanced Manufacturing
- Brookings: "Why Does Manufacturing Matter? Which Manufacturing Matters?" (2012)
- National Association of Manufacturers: "A Manufacturing Renaissance: Four Goals for Economic Growth" (2012)

Advanced Manufacturing Industry Outlook Information

- Bureau of Labor Statistics: Manufacturing Industry at a Glance
- Massachusetts Labor Market Data
- Massachusetts Career Information System

Careers in Advanced Manufacturing

- Massachusetts Career Information System
- Manufacturing Career Opportunities
- Manufacturing Career Pathways
- Industry Competency Model for Advanced Manufacturing shows the skills and knowledge needed to work in this industry
- National Association of State Directors of Career Technical Education Consortium's Common Career Technical Core
- National Association of State Directors of Career Technical Education Consortium's Knowledge and Skills: Manufacturing
- O*NET
- WorkKeys Occupational Profiles
- Manufacturing's Missing Generation
- A Career in Toolmaking or Machining Technologies: The Right Choice for Students, Community, & Country

Workplace Scenario (8th Grade Level)

You are a Program Manager for a plastics manufacturing company in Western Massachusetts. Your company specializes in changing metals to plastic. This means that it makes parts from plastic that used to be manufactured from metal. Plastic parts weigh less and are stronger. They can be manufactured more quickly and cheaply.

One of your main jobs is to prepare price quotes for clients who are considering placing orders with the company. A client usually has a specific product in mind and contacts your team to discuss the details. You then prepare a price quote listing the materials, costs and decoration, and any packaging fees. You need to write a clear and detailed description of each portion of the price quote so the client understands what your company is offering. If current clients place repeat orders, you may also need to do some research to compare previous price quotes to check if costs for materials or labor have gone up since their previous order. You then need to document the reason for any price increase.

If the job is ordered, you must see the product through all the steps of its development. Your company must build the tools and be sure that the parts meet the specifications. You need to be able to communicate with the client, the engineers and workers to be sure the specifications for the product are clear. This requires effective speaking and listening skills as well as writing skills for email and other computer documentation.

Workplace Scenario (High School Level)

You are a Program Manager for a mid-size plastics manufacturing company in Western Massachusetts. Your company specializes in metals to plastic conversion, meaning that it makes parts from plastic that previously were manufactured from metal. Converting from metal to plastic has many benefits, including lighter-weight components, cost savings, improved efficiency and structural strength improvement.

A key responsibility as Program Manager is to prepare price quotes for clients who are considering placing orders with the company. A client typically has a specific product in mind and contacts your team to discuss the details. You then prepare a price quote detailing the materials required for assembly, costs for assembly and decoration, and any packaging fees. You need to write a clear and detailed description of each portion of the price quote so the client understands what your company is offering. With existing clients placing repeat orders, you may also need to do some research to compare previous price quotes to check if costs for materials or labor have gone up since their previous order. You then need to document the reason for any price increase.

If the job is awarded, then it becomes your responsibility to see the product through all the phases of its life cycle, from tool build to parts qualification to delivery to the client. You need to be able to communicate knowledgeably with both the client and the engineers and workers to be sure the specifications for the product are clear and are being met. This requires effective oral communication skills as well as writing skills for email correspondence and other electronic documentation.

Core instructional context

Building Vocabulary and Background Knowledge
In order for students to raise their reading proficiency, they need repeated exposure to new words. Encourage students to skim the assigned text and identify unknown words prior to reading and provide descriptions or an explanation of a new term or word for students. One helpful resource to support this is Innovativocab. Students should make notes of unknown words to review and learn by reusing the word in an original sentence and practicing the word orally. They can also provide their own description for the word and attempt to connect the word to a picture or make a personal anecdotal connection to the word.

Another way to help students build vocabulary is to help them build semantic maps, placing the word to be defined in the center and brainstorming ideas about the word. As students identify words that define the main word or mean the same, draw the semantic map to show relationships. The website Visuwords is an online thesaurus that provides semantic maps for words. Once words are entered, rolling over the words in the semantic map provides the definition. Using this website is one way for students to build knowledge about families of words.

Students can also be encouraged to learn Greek and Latin prefixes, suffixes and common root words. Point out to students that they can unlock the meaning of a significant number of new words by knowing these word forms. One resource students might use is "Root Words, Roots and Affixes" or the list "English Language Roots". One strategy the instructor can use is to identify roots and affixes of word that may be unknown to students during a vocabulary lesson. For example, the word "auditor," contains the root aud- meaning to hear or listen and the suffix -tor meaning "one who" or "one who hears or listens."

Finally, have students keep their own vocabulary journal to record unknown words, especially academic words. The Academic Word List is a resource to help with identifying academic words. Have students record graphics and definitions in their own words as this can help students to better retain words over time.

Writing
Lack of writing skills presents significant challenges to students' career and college readiness and the need for improvement is great. In response to a 2006 survey, 72% of employers stated that they considered high school graduates to be deficient in writing and 80.9% deemed high school graduates deficient in written communication skills (Conference Board, 2006).

Writing is typically considered to be a five-step process: pre-writing, drafting, revising, editing and publishing. It's important to keep in mind that writing is a recursive process in which good writers move back and forth between pre-writing, drafting and revising many times during the course of creating a single document.

For many adult writers, pre-writing may actually be a pre-thinking stage before any writing is started. In this pre-thinking stage various ideas are considered about the topic. If the topic has not been assigned by the instructor, this is the time the writer chooses and narrows the topic. According to Purdue Online Writing Lab, the writer then needs to ask questions about the writing project such as:

- Who is the audience?
- Are they interested in the topic? Why or why not?
- What does your audience need to know about this topic?
- What experiences has your audience had that would influence them on this topic?
- What do you hope the audience will gain from your text?

To kick off the pre-writing process, lead students in brainstorming, clustering or questioning to generate ideas about the topic. This is also the time to gather any additional information required to

write about the topic. Mind mapping is a brainstorming technique that helps build connections between ideas. The Brain is a website that provides free tools including one for mind mapping.

One way for students to identify the additional information they need is to use a KWL chart to identify what they need to know. Groups of students can work on KWL charts together to guide their research.

In the drafting stage, the writer's goal is to use the pre-writing outcomes to help build the content. In this stage, the writer can use various strategies to get started, including free writing, listing and outlining both to develop the topic and get started. During the drafting stage, students should concentrate on organizing information logically and developing the topic with enough detail for the audience and purpose. At this stage, it is a good idea for students to work with a partner to discuss the early draft versions and to get another point of view about the organization and sequencing of the content.

Revision is the process of refining the draft by evaluating it and making changes in order to improve the draft. Revising is a critical stage of the writing process and for most writers it is the most difficult. This stage is a good time for students to work in peer review groups. Peer reviewers need preparation for this role. The Conducting Peer Reviews section of the Writer's Handbook website from University of Wisconsin-Madison provides guidance for peer reviewers. For more information on guiding peer reviewers, visit the resource Using Peer Review to Help Students Improve Their Writing from Washington University at St. Louis.

Editing and proofreading are stages distinct from revision and should be done after the revision process is completed. During this stage, the writer takes a close look at the piece of writing with an eye to correcting sentence structure or composition, errors in grammar, punctuation and spelling as well as word choice. During this stage, the focus is on correctness and clarity. Common errors to look for while editing are listed in the Twelve Common Errors section of the Writer's Handbook website from University of Wisconsin-Madison.

Some strategies to suggest that students use during the proofreading process are:

1. Allow a little time to pass before tackling the proofreading or editing process, a few days, overnight or at least several hours. Doing so allows you to review the work with a fresh eye.
2. Take the time to read carefully since rushing leads to overlooking errors.
3. Read from the point of view of the audience to be sure the material makes sense.
4. Ask a friend or collaborator to read for errors you might have overlooked.
5. If the teacher or collaborator points out an error, be sure you understand why it is an error and learn how to avoid the same error in the future. Writers often make the same errors over and over. Keep a list of the errors you make frequently and learn to self-correct before or after making these errors.

A helpful resource is Editing and Proofreading Strategies from Writing@CSU (http://writing.colostate.edu/guides/pdfs/guide45.pdf).

Publishing takes place when a piece of writing is shared with its intended audience. Ideally students will write for an authentic audience (beyond the instructor) such as for the whole class or others outside class through a class website or other means. A student wiki or blog or other free online platform is another excellent way for students to share their writing beyond the classroom.

Speaking and Listening
Brainstorm with students why they think communication skills are important in the workplace. Capture these ideas by creating a graphic organizer such as a semantic map. Show the video "Oral Communication" by Jeff Kavanaugh, Consulting Managing Partner for Manufacturing and High-Tech at Infosys. Ask students to take notes during the video and to compare and contrast the ideas mentioned in the video with those listed on the semantic map.

Point out that speaking and listening are at the heart of much human interaction and good communication skills are an important aspect of employability in most professions. A person working with clients must listen carefully to identify the clients' wishes and needs, and they must also be able to translate that information to their colleagues and staff. Poor listening skills may lead to missing key pieces of information, and poor speaking skills will lead to others not fully understanding their tasks. Good listening and speaking skills are particularly important in customer service as described in the scenario if the person is to fulfill his or her role as a contributing member of the team.

Adults typically view speaking and listening as areas of strength because of the level of experience they bring to these activities. They may be used to speaking with ease and confidence and reporting information in a logical sequence. The more challenging aspects of speaking and listening are related to their previous experiences since many adults must unlearn poor habits in both areas. Speaking and listening are skills we learn in the first year of life, which means that each individual may have spent a lifetime learning poor habits that must be unlearned. For example, few adults listen attentively enough to be able to fully comprehend, analyze and synthesize what they have heard and to recall and apply it later in critical situations. In addition, most adults have learned poor speaking habits that need to be replaced with good ones, including the use of filler words or phrases or using nonstandard language in formal situations such as working with clients, colleagues or staff.

Since speaking and listening skills are so important in customer relationships, staff must develop these skills to do their jobs effectively. Fortunately, these are skills that can be improved with practice.

Poor listening skills contribute to poor comprehension and the ability to apply knowledge. In order to comprehend, analyze, and synthesize information, students must listen effectively.

A good listener uses the following techniques:

- maintains eye contact with the speaker;
- avoids distractions in the surroundings;
- avoids interrupting;
- sits or stands still;
- nods his or her head or uses other nonverbal cues to show understanding;
- maintains focus by avoiding internal distractions or thoughts;
- takes brief notes;
- listens for subtext but tests assumptions;
- tests his or her understanding by repeating instructions or key details; and
- asks clarifying or other appropriate questions when the speaker has finished.

Good speaking skills are critical to good communication and require the speaker to organize his or her thoughts before speaking. Good speakers ask themselves: Who is the audience? What vocabulary is appropriate for the audience? What is my goal? What are the important details that I need to share? What is the most logical sequence?

A good speaker

- organizes his or her thoughts before speaking;
- is clear and concise without including extraneous information;
- delivers main ideas and supporting details in a logical sequence;
- speaks clearly and practices good enunciation;
- uses correct pronunciation;
- uses correct standard English;
- uses appropriate volume – speaks neither too loudly nor too softly for the environment;
- speaks confidently and avoids filler sounds, words or phrases; and
- maintains appropriate level of eye contact with the listener.

Contextualized learning activities

1. Research and report. If desired, divide students into small groups or pairs to research the use of plastics in manufacturing. For background information and examples, review these sites:

a. An Introduction to Plastics
http://www.plastiquarian.com/userfiles/file/plasticbook.pdf
(Note: This document uses British spellings that may not be familiar to students, for example, *mould* for *mold* and *defence* for *defense*. The instructor may want to point these words out to students and explain the differences.)
b. Life Cycle of a Plastic Product
http://plastics.americanchemistry.com/Life-Cycle
c. A Brief History of Plastic
http://www.brooklynrail.org/2005/05/express/a-brief-history-of-plastic

d. Building & Construction Solutions
http://www.spartech.com/product_transformations/construction.html
e. Metal replacement at Fakuma: PolyOne, BASF, EMS, Evonik, DuPont, and Sabic
http://www.plasticstoday.com/articles/metal-replacement-fakuma-polyone-basf-ems-evonik-dupont-and-sabic
f. 10 Polymer-based Products You Use Everyday
http://dsc.discovery.com/tv-shows/curiosity/topics/polymer-based-products-you-use-every-day.htm

Direct students to select a common product made from plastic and research its history. Working in small groups, pairs or individually, students will create a PowerPoint or other presentation with information on their selected products.

An alternate activity is to direct students to research types of plastics used in manufacturing: natural plastics, semi-synthetic plastics, synthetic plastics, thermoplastics, thermosetting plastics. Students should then write a report comparing and contrasting two or more of these types of plastics. As part of the pre-writing activity, have students complete a Venn diagram or other graphic to organize their ideas.

2. Research and Report 2. If desired, divide students in small groups or pairs. Direct them to research one of the following:

a. the life cycle of a plastic product
b. the process of injection molding
c. major types of plastics in use today

Lead students in the writing process. During the prewriting stage, students will research their topic, take notes and note bibliographic information. Diagrams help students organize their ideas. Using Thinking Notes or Cornell Notes will help them gather information and graphic organizers help them organize their ideas. During the drafting process, students will write the content using the notes made during the pre-writing stage.

At the revision stage, students will benefit from a peer review partner to help discover places in the document that need rewriting for clarity, information that is missing or questions that are not answered.

Students should then proofread carefully and publish their material by sharing with the instructor, the class or on a class website.

3. Write an email. Written communication with coworkers or customers is an important part of the program manager's job. In this activity, students will write an email to a customer explaining why prices have changed since the last time the company produced a product.

Some helpful resources are:

- 10 Tips on How to Write a Professional Email
http://grammar.about.com/od/developingessays/a/profemails.htm
- How to Write a Business Email
http://www.tv411.org/writing/writing-work-ged/how-write-business-email
- Can Excellent Customer Service Really Be Delivered Over Email?
https://www.helpscout.net/blog/excellent-customer-service/
- Customer Service Email from Clinique: The Bad and the Ugly
http://ewriteonline.com/tag/customer-service-email/

Direct students to imagine that they have received the following email from a customer. After reading it carefully, students will write an email in response explaining the price increase. Point out to students that customer relations are an important part of the job. They should not only explain the price increase but also be sure the customer understands that they apologize for the misunderstanding and offer to take the parts back and refund the price or other solution to the problem, such as providing some additional parts free of charge.

From: John Williams jwilliams@nomail.com
CC: Judy Thomas jthomas@nomail.com
To: Jane Smith jsmith@nomail.com
Date: January 15, 2014

Dear Ms Smith:

Re: Product Number: A42037568

On December 3, my company bought plastic hinges through a telephone order after speaking with you about the specifications for the product, which were identical to our last order in June 2013.

Unfortunately, I was billed the wrong amount at .27 cents per part even though the last time I ordered these products, the price was .18 cents a part. This seems to me to be a very large price increase and I don't think I was adequately informed of the large increase.

To resolve the problem, I would appreciate your adjusting the invoice to the correct price. I've attached a copy of the invoice I received for the incorrect price.

I look forward to your reply and a resolution to my problem. Please contact me at the above email address or by phone.

Sincerely,

John Williams
jwilliams@nomail.com
978-555-3049

4. Role Play. Divide students into pairs and direct them to plan a role play activity with one person playing the customer and one the program manager. The goal in the role play is to come to a solution that works for both the company and the customer. In this role play activity, the two people will discuss one of the following situations:

a. a billing error for hinges as described in the previous activity
b. specifications and a quote for production of plastic handles for metal cups (or other products, such as toy car shells or handles for kitchen pans)
c. a product does not meet specifications

As one person role plays the program manager, he or she should keep in mind the importance of good customer relationships for the company. These resources about customer service may be helpful:

- 8 Rules for Good Customer Service
  http://sbinfocanada.about.com/od/customerservice/a/custservrules.htm
- 10 Tips for Providing Great Customer Service to Your Clients
  http://sixrevisions.com/project-management/10-tips-for-providing-great-customer-service-to-your-clients/
- Six Steps to Dealing with Customer Complaints
  http://www.eonetwork.org/knowledgebase/specialfeatures/Pages/SixStepstoDealingwithCustomerComplaints.aspx

Use a role playing rubric for assessment. You may want to adapt an existing rubric or create your own. These resources may be helpful:

- Role Play Rubric, Alberta Education
  http://education.alberta.ca/physicaleducationonline/edmonton2001/pdf/7-12/%28Q%29AssessmentSuggestionsp51-56.pdf
- ESL Role Play Performance Test Rubric
  http://www.rcampus.com/rubricshowc.cfm?sp=true&code=HA22WA

- Create your own rubric:
  http://rubistar.4teachers.org/

5. Building Vocabulary. Manufacturing terminology is rich in Latin and Greek roots and affixes; thus, a study of these word parts provides an opportunity to develop students' knowledge of roots and affixes that will be helpful in other contexts.

Some resources include:

- Root Words and Prefixes: Quick Reference
  https://www.learnthat.org/pages/view/roots.html#t
- Greek and Latin Roots
  http://www.sightwordsgame.com/spelling/greek-latin-roots/
- Greek and Latin Roots, Prefixes and Suffixes
  http://talibiddeenjr.files.wordpress.com/2009/04/la_roots-resource-pack.pdf
- Memidex
  http://www.memidex.com/

Words to select for word study include:

a. thermoplastic
b. polymer
c. extrude
d. biodegradable
e. manufacture
f. petrochemical

One tip for learning about the parts of words is to consult an etymological dictionary or use the search string "etymology + word." For example, search for "etymology extrude." Have students complete a chart such as the one below, providing the meanings of roots and affixes for each word below or for other words selected by the instructor:

Word	Root & Definition	Prefix & Definition	Suffix & Definition	Word Meaning
Polymer	mer- Definition: parts	Poly- Definition: many		Made up of many parts

Contextualized test items

1. Write a paragraph describing the types of duties and responsibilities of a program manager. (Answer: Draw from the scenario.)

Revise for customer service purposes and proofread the following email to a customer. Then rewrite the letter, making revisions and corrections as required (Errors are highlighted for the instructor.):

From: Jane Smith jsmith@nomail.com
To: John Williams jwilliams@nomail.com
CC: Judy Thomas jthomas@nomail.com

Date: January 17, 2014

Dear Mr. Williams:

I was surprise to recieve your're email, because I remember our conversation specifically and I send you an email showing the correct price so you owe the amount shown on the invoice.

We can't take the product back because the hinges were built to your specifications; and will not be suitible for other clients.

Jane Smith

3. Match roots, prefixes and suffixes with their meanings (Matches are shown. The instructor should scramble one of the lists before using with students. Examples are provided for instructors.)

• poly-	1. many	(example: polymer)
• thermo-	2. heat	(example: thermosetting)
• –ex	3. push out	(example: extrude)
• manu-	4. by hand	(example: manufacturing)
• fac-	5. make	(example: manufacturing)
• –trude	6. push, thrust	(example: extrude)
• -ject	7. To drive or push	(example: injection)

Contextualized project

Research the costs of products. In small groups, students should choose a product that is today made of plastic and research the costs over the past 50 years. Using this information, they should and create a chart or graph showing results of research (i.e. products such as thermos, automobile, glasses frame and lenses, a particular toy – dolls or trains – or water bottles). They will then prepare a PowerPoint or other presentation to the class on the history of the product and reasons for the price increase (or decrease) over the years.

Additional or extension activities, multimedia, readings and/or resources

- Have students watch short videos about jobs in advanced manufacturing, such as this one: http://www.today.com/video/today/51674446#51674446 (focuses on workers under 25 but gives a good overview of the entry level opportunities in the industry in MA).
- Plastic Manufacturing Process: This video describes the plastic extrusion process.
- Career Videos for Manufacturing: View this site for more information about careers in manufacturing.

Please contact ETLO to report any broken links or other problems with this page.

Massachusetts Community Colleges and Workforce Development Transformation Agenda (MCCWDTA) is 100% funded by a $20 million grant from the U.S. Department of Labor, Employment & Training Administration TAACCCT. Grant Agreement #TC-22505-11-60-A-25.