

## Scope and Sequence

Unit	Topic	Reading context	Vocabulary	Function
1	Parts of a Factory	Manual	assembly line, break room, control room, factory, factory floor, loading dock, locker room, office, plant, production line, shipping and receiving	Repeating a point
2	Types of Industries	Email	automobile, construction, electronics, factory farming, industry, manufacturing, medical, metalworking, product, textile, woodworking	Asking for more information
3	Common Materials 1	Webpage	alloy, aluminum, concrete, copper, glass, lumber, metal, particle board, rubber, steel, stone	Remembering something
4	Common Materials 2	Note	acrylic, blend, cotton, fiber, nylon, plastic, polyester, silicone, silk, wool	Relaying bad news
5	Properties of Materials	Textbook chapter	brittle, conductor, ductile, hardness, insulator, luster, malleable, natural, synthetic, tensile	Restating an idea
6	Hand Tools	Memo	caliper, clamp, cutter, hammer, hand tool, pliers, saw, screwdriver, tool crib, wrench	Making a promise
7	Fasteners	Email	adhesive, bolt, fastener, nail, nut, rivet, screw, sealant, staple, washer	Making an assumption
8	Machines 1	Report	band saw, chainsaw, drill, drill press, edgebander, honing machine, lathe, machine tool, power nut runner, sander, soldering iron	Expressing concern
9	Machines 2	Webpage	air compressor, boiler, CNC, dryer, forklift, generator, heat sink, kiln, mill, mixer	Asking for an opinion
10	Parts of a Machine 1	Manual	belt, button, calibrate, component, die, gear, housing, mechanism, regulator, switch, valve	Posing an indirect question
11	Parts of a Machine 2	Log	bearing, cam, coolant, engine, feeder, fuel, gasket, intake, motor, sprocket, tooth, wheel	Describing cause and effect
12	Measurements 1	Chart	centimeter, diameter, foot, imperial, inch, kilogram, length, meter, metric, pound, ton, tonne, weight	Expressing confusion
13	Measurements 2	Memo	Celsius, convert, cubic centimeter, degree, Fahrenheit, fluid ounce, gallon, liter, milliliter, temperature, volume	Describing a problem
14	Basic Actions	Manual	adhere, bore, cut, dry, feed, fit, join, monitor, sort, stamp, wire	Correcting someone
15	Assembly Operations	Email	assembly, automated, compensate, jam, manual, mass produce, misalignment, special-purpose machine, variation, workstation	Making a recommendation

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# 1 Parts of a Factory

## Get ready!

- Before you read the passage, talk about these questions.
  - What are some types of jobs in a factory?
  - What are the different areas in a factory?



EMPLOYEE MANUAL



## Welcome!

### Welcome to Carrington Electronics Factory

The **plant's** main entrance leads immediately to the **factory floor**. Most employees work on the **production lines** there. These **assembly lines** are the center of our operations. Most new employees start their jobs here.

Their supervisors manage production from the **control room**. They monitor output and report to the main **office**. This is on the second floor. The offices for payroll and human resources are there, too.

The **break room** and **locker room** are on the third floor. **Shipping and receiving** operates out of the **loading dock**. It is located below the factory floor, in the warehouse.

## Reading

- Read the manual. Then, mark the following statements as true (T) or false (F).

- New employees usually start on the factory floor.
- The locker room is on the same floor as shipping and receiving.
- The main office is on the second floor.

## Vocabulary

- Match the words or phrases (1-5) with the definitions (A-E).

- plant
  - assembly line
  - factory floor
  - control room
  - shipping and receiving
- A a building where products are manufactured  
 B the area of a factory where goods are produced  
 C a room that contains operating equipment, and is used to monitor employee activity  
 D the act of sending and accepting goods by mail or another system of transport  
 E a factory system in which each machine or worker handles a particular part

- Read the sentence pairs. Choose which word or phrase best fits each blank.

- office / locker room**
  - The manager scheduled a meeting in her \_\_\_\_\_.
  - Employees put on their work clothes in the \_\_\_\_\_.
- production line / break room**
  - Work on the \_\_\_\_\_ stopped when the conveyor belt broke.
  - Some factories provide meals for employees in the \_\_\_\_\_.
- factory / loading dock**
  - Packaged products go to the \_\_\_\_\_ before shipping.
  - The \_\_\_\_\_ needs additional workers for the assembly line.

- 5 Listen and read the manual again. Where do supervisors manage production from?

## Listening

- 6 Listen to a conversation between a supervisor and an employee. Choose the correct answers.

- 1 Where is the man working?  
 A the control room  
 B the factory floor  
 C the loading docks  
 D the break room
- 2 What will the man likely do next?  
 A look at a map of the factory  
 B move boxes to the storage room  
 C call a supervisor for advice  
 D consult his training manual

- 7 Listen again and complete the conversation.

**Supervisor:** Well, you're just assisting workers at the 1 \_\_\_\_\_ today.

**Employee:** So I won't 2 \_\_\_\_\_ to other departments?

**Supervisor:** No, not yet. Like I said, you're just 3 \_\_\_\_\_.

**Employee:** Okay. So do I just put the boxes in the 4 \_\_\_\_\_?

**Supervisor:** Yes, someone else will take them to the 5 \_\_\_\_\_ later.

**Employee:** Sounds good. I'll start 6 \_\_\_\_\_ right away!

## Speaking

- 8 With a partner, act out the roles below based on Task 7. Then, switch roles.

### USE LANGUAGE SUCH AS:

*How is ...?*

*Like I said ...*

*Do I ...?*

**Student A:** You are a supervisor. Talk to Student B about:

- different areas of the factory
- his/her responsibilities

**Student B:** You are an employee. Talk to Student A about your responsibilities on your first day.

## Writing

- 9 Use the conversation from Task 8 to fill out the email from a factory owner to a manager.

Hi Jane,

I have some ideas for the new factory design. I think we'll put the \_\_\_\_\_ on the \_\_\_\_\_ floor. The \_\_\_\_\_ are located \_\_\_\_\_, so we'll put \_\_\_\_\_ for convenience. I think the employees will be happy with the designs for \_\_\_\_\_ and \_\_\_\_\_. This building will be a great place for our new plant!

Best,  
Eric

# Glossary

- acrylic** [N-COUNT-U4] An **acrylic** is a lightweight synthetic material that is used in the manufacture of clothing, paints, and many other products.
- adhesive** [N-COUNT-U7] An **adhesive** is a product that holds two materials together, such as a glue or sealant.
- air compressor** [N-COUNT-U9] An **air compressor** is a type of generator that creates power by applying pressure to air.
- alloy** [N-COUNT-U3] An **alloy** is mixture of two metals, or a mixture of a metal and a non-metal.
- aluminum** [N-UNCOUNT-U3] **Aluminum** is a strong, lightweight metal that is used to make cans and many other products.
- assembly** [N-UNCOUNT-U15] **Assembly** is the process of putting together the parts of something.
- assembly line** [N-COUNT-U1] An **assembly line** is a system for making products in which each machine or worker adds or checks a particular part.
- automated** [ADJ-U15] If something is **automated**, it is performed by machines instead of by people directly.
- automobile** [N-COUNT-U2] An **automobile** is a machine, such as a car or truck, that is used for transportation and is usually powered by an engine.
- band saw** [N-COUNT-U8] A **band saw** is a machine tool with steel blade that runs over wheels, and is used to cut various materials.
- bearing** [N-COUNT-U11] A **bearing** is a part of a machine that holds a moving or rotating part.
- belt** [N-COUNT-U10] A **belt** is a part of a machine with a flexible surface that moves along wheels, and is used to transport or move something else.
- blend** [N-COUNT-U4] A **blend** is something that is made from two or more materials.
- boiler** [N-COUNT-U9] A **boiler** is a device that produces power by applying heat to water, creating steam.
- bolt** [N-COUNT-U7] A **bolt** is a round piece of metal with a ridge wrapping around it in a spiral, and is often used with a nut to hold two things together.
- bond** [V-T-U14] To **bond** two things is to hold them together with a glue or sealant.
- bore** [V-T-U14] To **bore** something is to create a hole in it with a tool.
- break room** [N-COUNT-U1] A **break room** is a room in a factory or other workplace where employees may relax and eat meals when they are not working.
- brittle** [ADJ-U5] If something is **brittle**, it breaks or cracks easily when it is bent or stretched.
- button** [N-COUNT-U10] A **button** is a part of a machine that an operator presses in order to start or stop a process.
- calibrate** [V-T-U10] To **calibrate** something is to adjust it so that it functions at a particular rate or in a precise way.
- caliper** [N-COUNT-U6] A **caliper** is a device that measures the distance from one side of an object to the opposite side.
- cam** [N-COUNT-U11] A **cam** is a machine part that converts movement traveling in a circle into movement traveling in another direction.
- Celsius** [ADJ-U13] If a measurement is **Celsius**, it uses the temperature scale in which water boils at 100 degrees and freezes at 0 degrees.
- centimeter** [N-COUNT-U12] A centimeter is a metric unit of length or distance equal to 1/100 of a meter or about 0.40 inches.
- chainsaw** [N-COUNT-U8] A **chainsaw** is a handheld machine tool with a toothed chain that moves rapidly in a circular motion, and is used to cut various materials.
- clamp** [N-COUNT-U6] A **clamp** is a device that locks around something in order to hold it firmly in a particular place or position.
- CNC** [ADJ-U9] If a machine is **CNC** (computer numerically controlled), the user operates it through an interface on a computer.
- compensate** [V-I-U15] To **compensate** is to make adjustments to something in order to balance or offset changing conditions.
- component** [N-COUNT-U10] A **component** is one part of a larger machine or process.

## Scope and Sequence

Unit	Topic	Reading context	Vocabulary	Function
1	Workstation layout	Memo	buffer, configure, flow, incoming, line layout, part bin, productivity, progressive, tooling bin, tote pan, transfer, workstation layout	Showing agreement
2	Motion Systems	Encyclopedia article	arm, axis, extended-work-area robot, horizontal, intricate, linear table, motion system, robotic, rotational table, turret, vertical, work tool	Asking for an opinion
3	Transportation Systems	Email	AVGS, carousel, dispatcher, diversion gate, groove, metallic stripe, overhead, parallel, power and free conveyor, return conveyor, totebox, track, transportation, transporter	Discussing pros and cons
4	Electrical Systems	Course description	antenna, battery, capacitor, circuit, diode, electricity, fuel, magnetic, power source, resistor, semiconductor, transistor	Expressing confusion
5	Storage	Manual	AS/RS, bin, CS/RS, digital, inventory, platform, post-assembly, pre-assembly, retrieve, storage, track, warehouse	Showing disapproval
6	Assembly Processes: Preparation	Blog entry	assembly operations parts list, assembly process summary, assembly work instructions, bill of materials, call-out, documentation, parts fabrication, receive, routing, special design, unit, visual aid	Expressing agreement
7	Assembly Processes: Assembly	Manual	drying time, finishing, labeling, packaging, posting clerk, pricing, self-contained, short-storage, subassembly, system breakdown, system house, top assembly	Making an apology
8	Assembly Processes: Testing	Email	defect, delay, design tolerance, dimensions, function testing, nest location, position, presence, reject, reliable, sensor	Identifying a problem
9	Automation 1	Textbook chapter	asymmetry, critical tolerance, detect, geometry, link, nest, network, orientation, redesign, symmetry, tangle, track design, vibratory feeder	Showing understanding
10	Automation 2	Article	consistent, costly, downtime, flexibility, floor space, installation, material handler, obsolescence, operator error, reconfiguration, savings, shutdown	Asking for clarification
11	Shipping	Memo	act of god, breakage, cargo, delivery, FOB, guarantee, insurance, letter of credit, liable, on file, packing, shipping	Expressing gratitude
12	Working Conditions	Report	alternate, drop delivery, effort, ergonomic, fixed, foot-operated, gravity-feed container, lighting, maximum, minimum, motion economy, point of use, reach, rhythm, surface height	Giving assurance
13	Workers Health	Poster	break, call in sick, checkup, contagious, diet, exercise, fitness, in shape, overweight, overworked, precaution, stretch, time off	Delivering results
14	Health Hazards	Webpage	exposure, fatigue, fracture, heavy lifting, inhale, injury, laceration, muscular, posture, repetitive strain injury, respiratory, strain, vision	Expressing concern
15	Scheduling	Annual review	24-hour, evening, flex hours, full-time, graveyard, hourly, morning, overtime, part-time, shift, shrinkage, sick leave, staffing, vacation, weekend	Giving praise

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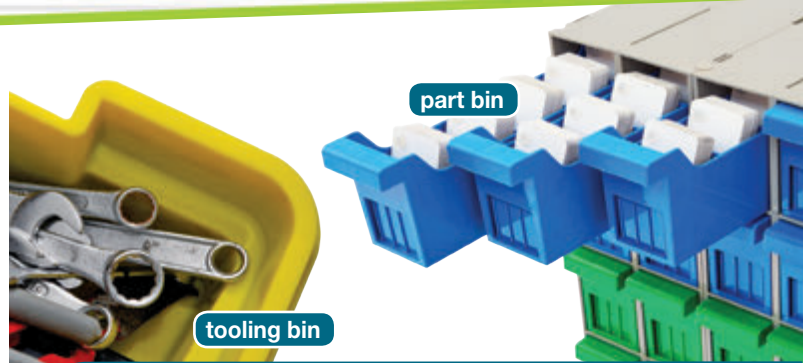
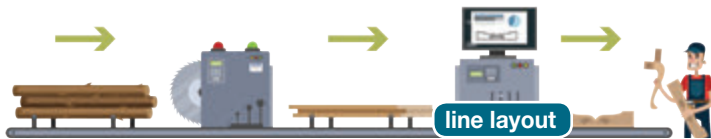
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# 1 Workstation Layout

## Get ready!

1 Before you read the passage, talk about these questions.

- 1 What is the importance of the proper workstation layout?
- 2 How do materials move through a workstation on a manual assembly line?



## memo

### ATTENTION: LINE WORKERS

This month, we are making some changes on the factory floor. Our goal is to improve **productivity** and increase **work flow**. Primarily, we are adjusting the **workstation layout**. With some research, we found a better way to **configure** your space. A few changes will affect the overall **line layout** as well. We hope to make it smoother and more **progressive**. Here are the major changes that will affect your workspace:

- We are adding larger **tote pans**. This will decrease the required number of trips for parts **transfer**. Also, workers will not wait for **incoming work** as frequently.
- We are reversing the positions of the **tooling bin** and **part bin**. We think this will improve your access to both.
- The **buffer** between each worker will be smaller. Less buffer space means more work space. Also, tote pans will move more quickly between stations.

Contact your supervisor if you have any questions.

The Management

## Vocabulary

3 Match the words or phrases (1-6) with the definitions (A-F).

- |                 |                          |
|-----------------|--------------------------|
| 1 ___ flow      | 4 ___ tooling bin        |
| 2 ___ configure | 5 ___ productivity       |
| 3 ___ part bin  | 6 ___ workstation layout |

- A a container that is used to store parts  
 B a container that is used to store tools  
 C to arrange something in a particular way  
 D the arrangement of the place where someone works  
 E the progression or movement of something  
 F the state of creating something in an efficient manner

## Reading

2 Read the memo. Then, mark the following statements as true (T) or false (F).

- 1 \_\_\_ The company conducted research on workstation layouts.
- 2 \_\_\_ One change will increase the number of tote pans.
- 3 \_\_\_ The company plans to reduce buffers between workers.



**4** Read the sentence pairs. Choose which word or phrase best fits each blank.

**1 incoming / progressive**

- A The worker adds adhesive to \_\_\_\_\_ subassemblies.  
 B The line is organized in a(n) \_\_\_\_\_ manner.

**2 line layout / transfer**

- A An effective \_\_\_\_\_ organizes stations in a logical order.  
 B The factory uses large containers for parts \_\_\_\_\_.

**3 tote pan / buffer**

- A Each \_\_\_\_\_ moves from one station to the next station.  
 B The \_\_\_\_\_ is too small, so workers are too close together.

**5** Listen and read the memo again. What is the consequence of less buffer space between each worker?

## Listening

**6** Listen to a conversation between two line workers. Mark the following statements as true (T) or false (F).

- 1 \_\_\_ The conversation is about a possible problem with the factory's line layout.  
 2 \_\_\_ The speakers plan to suggest a new configuration to their supervisor.  
 2 \_\_\_ The speakers have materials missing from the tooling bins.

**7** Listen again and complete the conversation.

**Line Worker 1:** I'm really frustrated! I can't seem to meet my performance goals.

**Line Worker 2:** I know how you feel. I'm really trying to **1** \_\_\_\_\_. But I just can't do it!

**Line Worker 1:** Hmm. I wonder if **2** \_\_\_\_\_ our line layout.

**Line Worker 2:** What do you mean?

**Line Worker 1:** Well, think about it. We spend a lot of time waiting for **3** \_\_\_\_\_, right?

**Line Worker 2:** I guess that's true. And **4** \_\_\_\_\_ that.

**Line Worker 1:** Exactly. We're **5** \_\_\_\_\_ from the other side of the factory floor.

**Line Worker 2:** I see what you're getting at. The layout **6** \_\_\_\_\_.

## Speaking

**8** With a partner, act out the roles below based on Task 7. Then, switch roles.

**USE LANGUAGE SUCH AS:**

*I can't seem to ...*  
*I know how you feel.*  
*I see what you're getting at.*

**Student A:** You are a line worker. Talk to Student B about:

- a problem with productivity
- a possible problem with factory configuration
- a suggestion for improving productivity

**Student B:** You are a line worker. Talk to Student A about improving productivity.

## Writing

**9** Use the conversation from Task 8 to complete the email.

Mr. Scott,

My coworkers and I are having trouble meeting our performance goals. We think a new line layout might help.

Here's one problem: \_\_\_\_\_

Here's a suggestion to resolve the problem: \_\_\_\_\_

Here's another problem: \_\_\_\_\_

Here's a suggestion to resolve the problem: \_\_\_\_\_

Let us know what you think.

Tina Givens

# Glossary

- 24-hour** [ADJ-U15] If something is **24-hour**, it occurs or operates throughout the entire day and night.
- act of god** [PHRASE-U11] An **act of god** is an event with an undesirable outcome, which is caused by uncontrollable factors rather than any person's error or misjudgment.
- alternate** [V-I-U12] To **alternate** between two things is to switch repeatedly from one thing to the other.
- antenna** [N-COUNT-U4] An **antenna** is an electrical component that sends or receives radio waves for communication.
- arm** [N-COUNT-U2] An **arm** is a moving part of a machine that extends outwards and is used to transfer or manipulate something.
- AS/RS** [ABBREVIATION-U5] An **AS/RS** (automated storage and retrieval system) is a method for moving and storing products. It includes a platform that travels through a storage space, removes the desired items, and transports the products to their destinations.
- assembly operations parts list** [N-COUNT-U6] An **assembly operations parts list**, or bill of materials, is a list of all the parts and materials that are required to make a particular product.
- assembly process summary** [N-COUNT-U6] An **assembly process summary**, or routing, is an overview of an assembly process, indicating each step or station that the product will travel through.
- assembly work instructions** [N-COUNT-U6] **Assembly work instructions** are detailed directions for preparing and assembling parts during each step of an assembly process.
- asymmetry** [N-UNCOUNT-U9] **Asymmetry** is the property of having two sides that are different, so that the sides do not mirror each other.
- AVGS** [ABBREVIATION-U3] An **AVGS** (automated guided vehicle system) is a transportation system in which a vehicle travels along the floor of the factory in order to deliver materials.
- axis** [N-COUNT-U2] An **axis** is a straight line that something rotates on or around.
- battery** [N-COUNT-U4] A **battery** is a type of power source that contains energy within a device, and does not require an attachment to a land-based electrical system.
- bill of materials** [N-COUNT-U6] A **bill of materials**, or assembly operations parts list, is a list of all the parts and materials that are required to make a particular product.
- bin** [N-COUNT-U5] A **bin** is a container for storing something.
- break** [N-COUNT-U13] A **break** is a period of time when someone stops working and rests.
- breakage** [N-UNCOUNT-U11] **Breakage** is a measure of the number of units that are damaged during shipping of a product.
- buffer** [N-COUNT-U1] A **buffer** is a barrier or area of separation between people or things.
- call in sick** [PHRASE-U13] To **call in sick** is to contact one's employer and request time off because of illness, generally on the same day that the illness occurs.
- call-out** [N-COUNT-U6] A **call-out** is an important notification about the parts or processes involved in making a product, and may be included with the assembly operations parts list or assembly work instructions.
- capacitor** [N-COUNT-U4] A **capacitor** is an electrical component that collects and stores electricity before releasing it.
- capital asset** [N-COUNT-U6] A **capital asset** is a product that is used to make another product.
- cargo** [N-UNCOUNT-U11] **Cargo** is something that is being transported from one place to another in a shipping container or vehicle.
- carousel** [N-COUNT-U3] A **carousel** is a machine with a conveyor belt that transports products around a vertical or horizontal loop.
- checkup** [N-COUNT-U13] A **checkup** is a visit to a doctor in which the doctor examines the patient for general health and fitness, rather than a specific illness.
- circuit** [N-COUNT-U4] A **circuit** is a loop along which an electrical current travels.
- configure** [V-T-U1] To **configure** something is to organize its parts in a particular way.
- consistent** [ADJ-U10] If something is **consistent**, it exists or occurs in the same way repeatedly, without variation.

## Scope and Sequence

Unit	Topic	Reading context	Vocabulary	Function
1	Workplace Attire	Poster	apron, business attire, comfortable, coveralls, dress code, enforce, fit, glove, goggles, hairnet, hood, loose, PPE, uniform	Expressing confusion
2	Materials Safety	Email	chemical, cleanup, designated, handle, hazardous, label, MSDS, reaction, spill, sterilize, toxic, volatile, waste hopper	Identifying a problem
3	Machine Safety	Manual	alert, amputate, blind, burn, crush, emergency procedure, emergency shutdown, first aid, get caught in, guarding, moving part, power surge, react, training	Expressing gratitude
4	Maintenance	Email	document, lubricate, maintain, qualified, regular, repair, replace, report, sanitize, sharpen, technician, worn out	Making a realization
5	Quality Control	Article	acceptability, conformance, eliminate, latent defect, manifest, minimize, quality control, reliability, risk, specification, test planning, testing, tight, tolerance	Asking for clarification
6	Inspections	Memo	acceptance testing, bench inspection, final acceptance inspection, first article inspection, incoming inspection, nondestructive inspection, process inspection, roving inspection, sampling, self-check, setup inspection, shipping inspection	Expressing dissatisfaction
7	Factory Management	Course description	capacity, continuous flow manufacturing, deployment, goal, job shop, major activity planning, MPS, policy, product variety, product volume, repetitive manufacturing, synchronized	Describing a job possibility
8	Efficiency	Article	continuous, cross-train, do, efficiency, JIT, lead time, lean manufacturing, make-ready, nonproductive, people issues, put-away, waste	Asking for an example
9	Work Measurement	Email	activity-based system, element-based system, engineered standard, estimate, guess, historical data, metrics, motion-based system, non-engineered standard, overestimate, PMTS, self-reporting, work measurement, work sampling	Expressing certainty
10	Production Strategies	Textbook chapter	allocate, infrastructural, lag strategy, lead strategy, middle management, objective, order winner, process focus, product focus, resource, strategy, structural, tracking strategy, upper management	Asking for an opinion
11	Manufacturing Engineering	Textbook chapter	cost-effective, design, drafting, HVAC, manufacturing engineer, material requirements planning, mathematics, mechanics, multimedia, physics, process plan, thermodynamics	Describing the order of events
12	Robotics	Cover letter	actuator, dexterity, enabling device, end-effector, flow line, hydraulic, joint, manipulator, payload, pendant, pneumatic, robotics, serial robot, work envelope	Discussing a work experience
13	Computer-Aided Systems	Webpage	2-D, 3-D, CAD, CAPP, CIM, exploded view, interface, model, modify, operating system, photorealistic rendering, retrieve, translate	Asking for information
14	Training and Development	Manual	advancement, certification, entry-level, equipment procedures, experienced, on-the-job, performance evaluation, probationary period, shadow, skilled, unskilled, versatile, workmanship standards	Making an assumption
15	Careers	Webpage	accounting, analyst, assembler, buyer, clerical, CNC operator, fabricator, foreperson, HR, line worker, machine operator, operations manager, quality controller, R&D, sales	Making an introduction

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# 1 Workplace Attire



hairnet

goggles

glove

## Parcol Foods Inc. PROPER WORK ATTIRE

The proper clothing is an important part of safety and efficiency in the workplace. At Parcol Foods, we do not have a company-wide **uniform**. However, each department does have a particular **dress code**. Please follow it, as your supervisor will **enforce** it.

### Machine Operators

- All operators must wear a plain, long-sleeved shirt and long pants. If your arms or legs are exposed, you may *not* be on the factory floor.
  - Please ensure that your clothes **fit** properly. **Loose** clothing is a major hazard. It can easily get caught in machines. We want employees to be both **comfortable** and safe.
- Depending on your job, you may need **goggles**. Check with your supervisor for requirements.
- Machine maintenance workers frequently handle hazardous substances. When performing maintenance, workers should wear the following **PPE**:
  - Coveralls** with a hood
  - Company-issued work **gloves**

### Food Packaging Staff

- Many of our line workers come into contact with food products. If so, they must wear **aprons** and **hairnets**.

### Management

- Supervisors on the floor should follow the guidelines for employees in their department. They should *not* wear ties or other items that can become caught in machines.
- Office managers should wear **business attire**. This includes clean, pressed dress shirts and trousers.



coveralls

## Get ready!

1 Before you read the passage, talk about these questions.

- What types of clothes should factory workers wear around food?
- What types of clothes should factory workers wear around machines?

## Reading

2 Read the poster. Then, complete the table.

Type of clothing	Policy
Long-Sleeved Shirts	1 _____ _____
2 _____	Workers must wear it while handling dangerous materials
Aprons	3 _____ _____
Ties	4 _____ _____

## Vocabulary

3 Match the words or phrases (1-8) with the definitions (A-H).

- |            |                      |
|------------|----------------------|
| 1 __ PPE   | 5 __ uniform         |
| 2 __ hood  | 6 __ coveralls       |
| 3 __ loose | 7 __ comfortable     |
| 4 __ apron | 8 __ business attire |

- a head covering with a clear panel in front of the face
- a protective garment worn over regular clothing, usually covering just the front of the body
- a protective garment that a worker wears over his/her whole body
- safety gear worn to protect workers from heat, chemicals, or other hazards
- feeling physically good
- not fitting tightly or closely to the body
- a standard type of clothing worn by people within a company or group
- the typical type of clothing that people wear in professional offices

**4** Read the sentence pairs. Choose which word or phrase best fits each blank.

**1 goggles / gloves**

- A If \_\_\_\_\_ are too big, workers have trouble grabbing and holding items.  
 B Welders protect their eyes with \_\_\_\_\_.

**2 fits / enforces**

- A Most people prefer to wear clothing that \_\_\_\_\_.  
 B The supervisor \_\_\_\_\_ company policy for everyone's safety.

**3 dress code / hairnet**

- A Each department has a different \_\_\_\_\_, depending on the workers' tasks there.  
 B A \_\_\_\_\_ is a common part of a cafeteria worker's uniform.

**5** Listen and read the poster again. What is a common dress code requirement in a factory?

## Listening

**6** Listen to a conversation between a supervisor and a line worker. Mark the following statements as true (T) or false (F).

- \_\_\_ The man forgot to wear an apron.
- \_\_\_ The man's shirt has loose sleeves.
- \_\_\_ The woman will not allow the man to work in his current clothes.

**7** Listen again and complete the conversation.

**Supervisor:** It's your shirt. It doesn't have **1** \_\_\_\_\_ sleeves.

**Line Worker:** Wait, I thought we were supposed to **2** \_\_\_\_\_. These sleeves go all the way down.

**Supervisor:** Actually, that's the problem. They extend down too far, and **3** \_\_\_\_\_ your hands.

**Line Worker:** And that's bad?

**Supervisor:** Yes, it is. The ends could easily **4** \_\_\_\_\_ a machine. Or, they might come into contact with the food.

**Line Worker:** Oh, I see. I guess **5** \_\_\_\_\_ a different shirt.

**Supervisor:** Yes. And actually, **6** \_\_\_\_\_ on the line until you do.

## Speaking

**8** With a partner, act out the roles below based on Task 7. Then, switch roles.

**USE LANGUAGE SUCH AS:**

*You're violating ...*

*Wait, I thought ...*

*I'll ... right away.*

**Student A:** You are a supervisor. Talk to Student B about:

- his/ her clothing
- a violation of the dress code
- what he/she must do next

**Student B:** You are a line worker. Talk to Student A about your clothing.

## Writing

**9** Use the poster and the conversation from Task 8 to write a memo to the staff about appropriate workplace attire. Include: recent violations that you observed, the possible consequences of the violation, and the proper way to dress at work.

# memo

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# Glossary

- 2-D** [ADJ-U13] If an image is **2-D**, or two-dimensional, it is displayed on a flat surface, like a piece of paper or a computer screen.
- 3-D** [ADJ-U13] If an image is **3-D**, or three-dimensional, it has or appears to have height, width, and depth.
- acceptability** [N-UNCOUNT-U5] **Acceptability** is a determination about whether a product meets the standards for distribution or sale.
- acceptance testing** [N-UNCOUNT-U6] **Acceptance testing** is the act of testing incoming materials to determine whether they are suitable for use in the manufacturing process.
- accounting** [N-UNCOUNT-U15] **Accounting** is a department that maintains a company's financial records.
- activity-based system** [N-COUNT-U9] An **activity-based system** is a type of PMTS that includes models for the sequences of actions required to move something from one location to another.
- actuator** [N-COUNT-U12] An **actuator** is a device that supplies power to a robotic manipulator.
- advancement** [N-UNCOUNT-U14] **Advancement** is the process of moving to a higher level of responsibility or authority within a company.
- alert** [V-T-U3] To **alert** someone is to provide him or her with important information about an urgent situation.
- allocate** [V-T-U10] To **allocate** something is to split its parts in a particular way and designate them for particular people or purposes.
- amputate** [V-T-U3] To **amputate** a limb is to completely remove it from a person's body.
- analyst** [N-COUNT-U15] An **analyst** is someone who assesses the processes in a work environment and identifies ways to improve them.
- apron** [N-COUNT-U1] An **apron** is a protective garment that covers the front of a person's body and is worn over the clothes.
- assembler** [N-COUNT-U15] An **assembler** is a worker who attaches parts in order to build a product.
- bench inspection** [N-COUNT-U6] A **bench inspection** is the act of examining products when they reach a certain point along the production line, and is generally conducted at a designated inspection station.
- blind** [V-T-U3] To **blind** someone is to prevent him or her from seeing, usually by damaging his/her eyes.
- burn** [N-COUNT-U3] A **burn** is an injury, usually resulting in a discoloration of the skin, that is caused by direct contact with fire, heat, acid, or oil.
- business attire** [N-UNCOUNT-U1] **Business attire** is a type of clothing that is typical in offices, and often refers to suits and ties for men, and blouses and skirts or trousers for women.
- buyer** [N-COUNT-U15] A **buyer**, also known as a purchasing manager, is someone who finds and purchases raw materials for a factory.
- CAD** [ABBREV-U13] **CAD** (computer-aided design) is the process of using a computer to design the features and functions of something.
- capacity** [N-COUNT-U7] A **capacity** is the maximum amount of work that a factory can complete at a time, based on the available space, equipment, and staff.
- CAPP** [ABBREV-U13] **CAPP** (computer-aided process planning) is the act of using software to create a detailed, organized set of instructions for creating a particular product.
- certification** [N-UNCOUNT-U14] **Certification** is the process of becoming officially qualified or allowed to do something.
- chemical** [N-COUNT-U2] A **chemical** is a substance with particular properties or behaviors, and may be dangerous under certain conditions.
- CIM** [ABBREV-U13] **CIM** (computer-integrated manufacturing) is the process of using computers throughout the different stages of manufacturing, including product design, work planning, implementation, and distribution.
- cleanup** [N-UNCOUNT-U2] **Cleanup** is the process of removing dirt and waste from something.
- clerical** [ADJ-U15] If something is **clerical**, it involves general office duties such as maintaining records, sending communications, and managing schedules.
- CNC operator** [N-COUNT-U15] A **CNC** (computer numerical control) **operator** is a machine operator who runs his/her equipment from a computer.