



Maximizing
Language
Development
During Integrated
ENL Classes
(Grades 6-12)

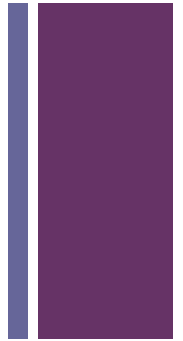
April 24, 2017
8:30 AM -2:30 PM

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NYU/Steinhardt
NYS Statewide Language
RBE-RN at the
Metropolitan Center for
Research and Equity

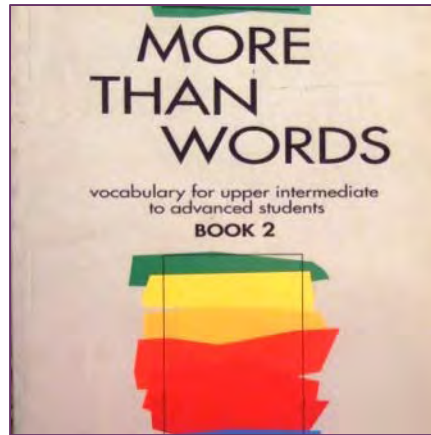
+ Agenda

- **Create instructional profiles for your EL students to plan responsive language development for each ELL**
- **Analyze secondary science and social studies textbook chapters to identify language demands and language learning opportunities**
- **Tie instruction to city and state learning standards and to the bilingual progressions**
- **Plan to include appropriate supplemental materials for students who represent a range of proficiency and literacy levels**
- **Acquire strategies for actively engaging ELLs in language practice within integrated ENL/content area settings**
- **Discuss the use of the native language in integrated ENL Science and Social Studies classes**
- **Collaborate across ENL and content area partners during the workshop day in planning integrated ENL instruction that focuses on language learning and content area learning**





It's All About Instructional Planning and Delivery



Advance
Language
Proficiency

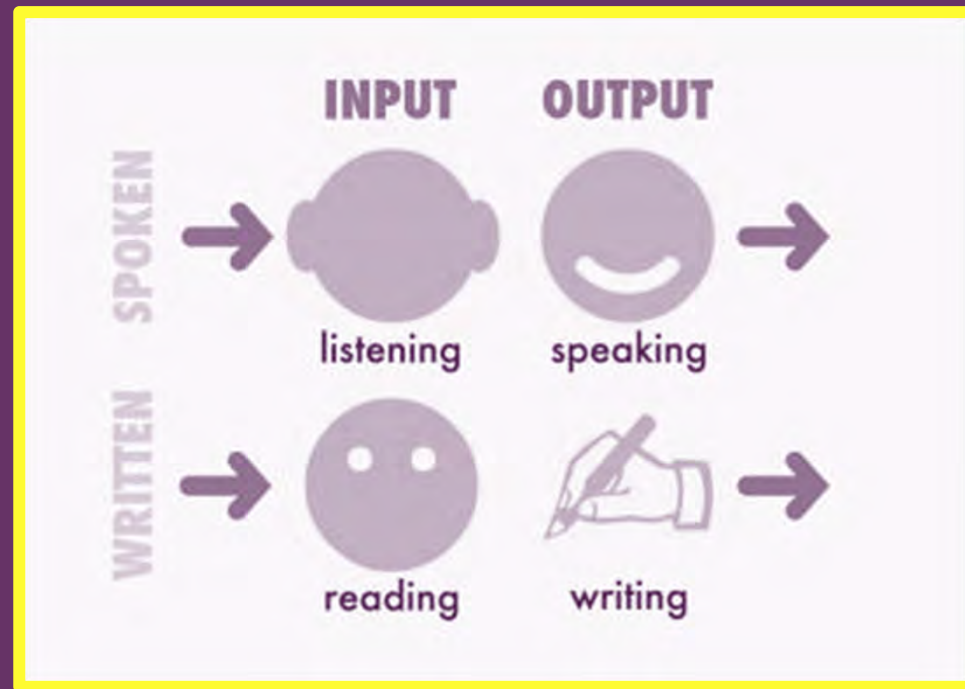
Learner-
Centered
Classrooms



L, S, R, W

**Maximizing Language
Development in an
Integrated ENL Class**

+



Understanding the Proficiency Profiles of
your English Learners: *Creating Instructional
Profiles for ELLs to Plan Responsive Language
Development for Each ELL in Your Integrated
Content Area Class*

School Year:
Jun 30, 2016

Gr	Last Name, First Name	ID Number	Listening		Speaking		Writing		Reading		Total Score*	
			Score	Code	Score	Code	Score	Code	Score	Code	Score	Code
08			15	--	17	--	5	--	10	--	245	3
08			21	--	16	--	8	--	19	--	278	4
08			18	--	21	--	10	--	23	--	305	4
08			11	--	21	--	6	--	11	--	259	4

10			8	--	14	--	5	--	15	--	245	3
							3	--	14	--	242	3
							8	--	20	--	280	4
							6	--	15	--	270	4

ATTACHMENT E

Grades 7–8 NYSESLAT 2016
Raw to Scale Score Conversion Chart

Grades 7–8 Listening		Grades 7–8 Speaking		Grades 7–8 Writing		Grades 7–8 Reading	
Raw	Scale	Raw	Scale	Raw	Scale	Raw	Scale
2	41	4	44	4	52	4	52
3	43	5	47	5	55	5	55
4	45	6	49	6	59	6	59
5	47	7	50	7	63	7	63
6	49	8	52	8	67	8	67
7	50	9	54	9	72	9	72
8	52	10	55	10	76	10	76
9	53	11	57	11	82	11	82
10	54	12	58	12	86	12	86
11	56	13	59	13	90	13	90
12	57						
13	58						
14	60						
15	61						
16	63						
17	64						
18	66						
19	68						
20	71						
21	74						
22	80						
23	86						
24	90						

How Can This Analysis
Help You Plan?

ATTACHMENT F

Grades 9–12 NYSESLAT 2016
Raw to Scale Score Conversion Chart

1. Choose Grade 8 or 10.
2. Convert the Scores.
3. Create a **Profile of Performance** by listing best to worst skill (modality) areas (L, S, R, W)
4. Note the **Overall Level** of the Student (Entering, Emerging, etc.)
5. Note if they fall in the **low, mid or high range** of the level they are in.
6. Note if they are developing the 4 **skills/modalities evenly or unevenly.**

ATTACHMENT G
NYSESLAT 2016
SCALE SCORE RANGES FOR DETERMINING
ENGLISH LANGUAGE PROFICIENCY

To determine a student's overall proficiency level, find the student's total scale score in the scale score ranges on this chart.

Grade	Entering	Emerging	Transitioning	Expanding	Commanding
	Scale Score	Scale Score	Scale Score	Scale Score	Scale Score
K	120–212	213–244	245–263	264–315	316–360
1	120–170	171–215	216–251	252–295	296–360
2	120–180	181–227	228–264	265–307	308–360
3	120–170	171–216	217–258	259–303	304–360
4	120–181	182–228	229–265	266–310	311–360
5	120–172	173–214	215–257	258–300	301–360
6	120–180	181–219	220–258	259–300	301–360
7	120–169	170–212	213–249	250–299	300–360
8	120–169	170–212	213–249	250–305	306–360
9	120–175	176–220	221–262	263–317	318–360
10	120–175	176–220	221–262	263–317	318–360
11	120–178	179–220	221–262	263–317	318–360
12	120–178	179–220	221–262	263–317	318–360



Potential Proficiency Bands*

Scaled Scores	Proficiency Level
30-42	Entering
43-54	Emerging
55-66	Transitioning
67-78	Expanding
79-90	Commanding

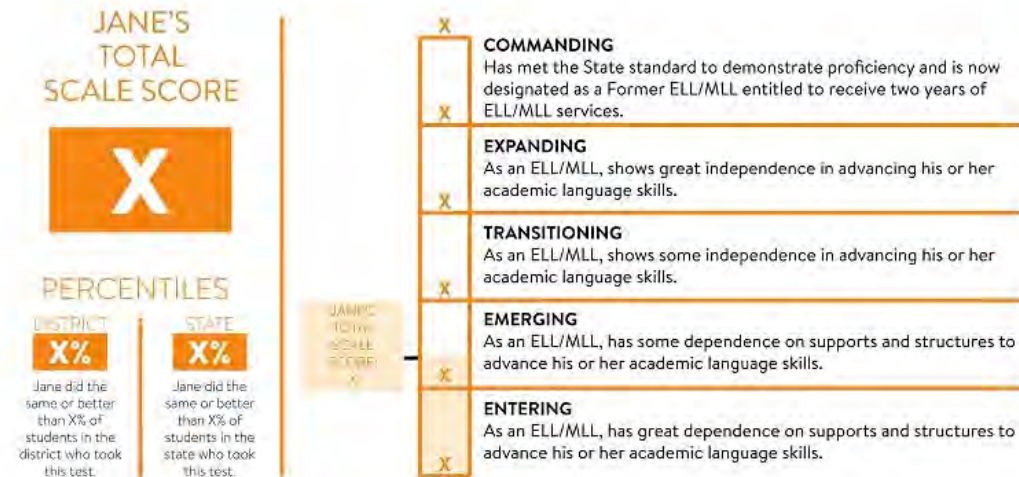
*These are not confirmed ranges; they are very rough estimates, just breaking the total point spread from 30-90 into regular intervals for the 5 proficiency levels—**USE WITH EXTREME CAUTION!**

Dear Parent/Guardian of Jane,

We are pleased to provide you this report about Jane's performance on the New York State English as a Second Language Achievement Test (NYSESLAT) that was administered in the spring of 2016 to all English Language Learners/Multilingual Learners (ELLs/MLLs). The scores from this test provide one way to understand student English Language development. However, these scores do not tell the whole story about what Jane knows and can do.

For more information about this test, the New York State standards, and how you can help Jane, go to:
www.p12.nysed.gov/biling/bilinged/parent-information/home.html

JANE'S ENGLISH LANGUAGE PROFICIENCY LEVEL IS EMERGING



ENGLISH LANGUAGE PROFICIENCY AREAS/MODALITIES



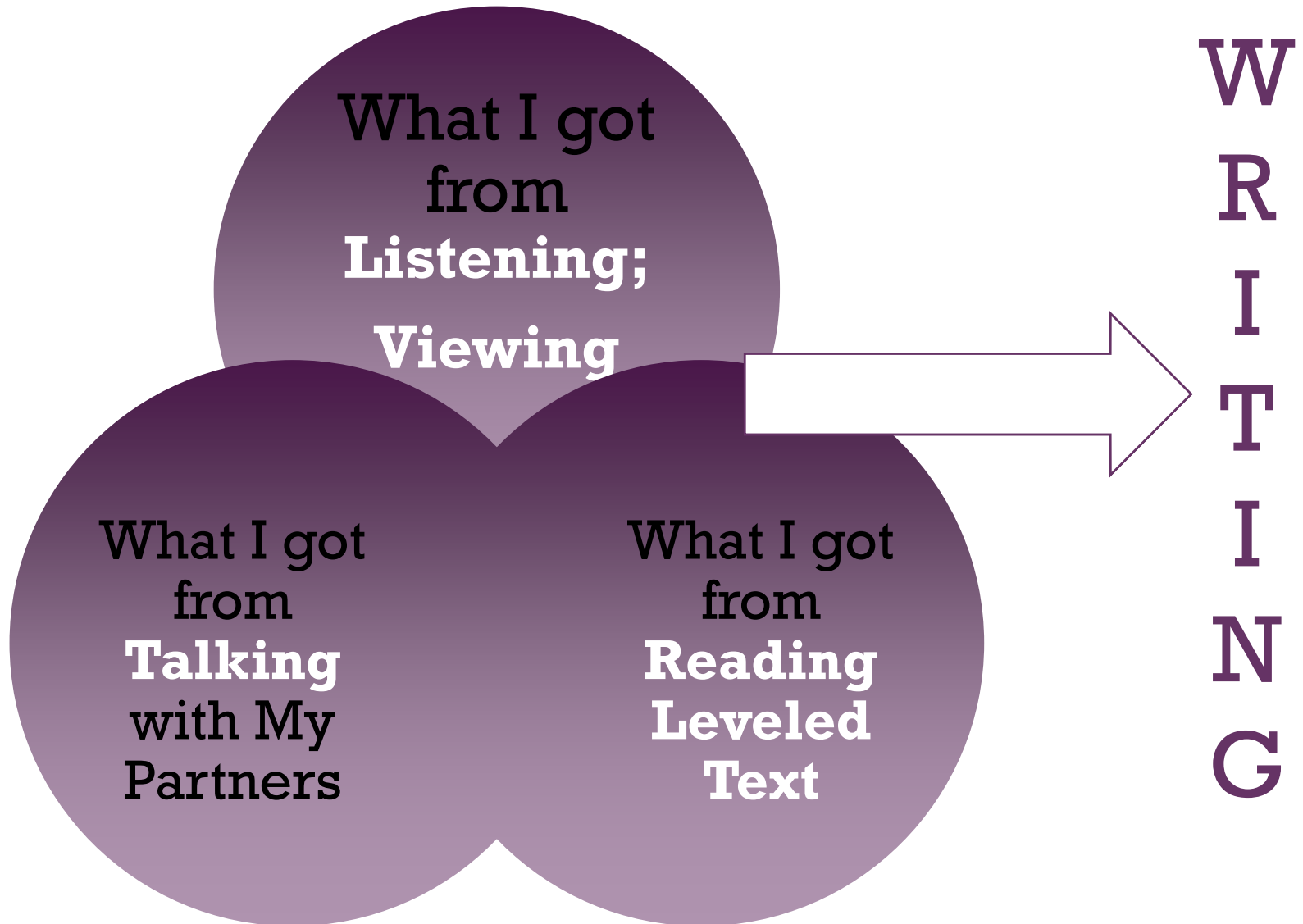
These scale scores range from 30-90

+ Balance the Four Skills in the Integrated ENL Class

- Don't favor Reading and Writing Over Listening and Speaking
- According to Saunders, Goldenberg and Marcelletti (2013) "ELD Instruction Should Incorporate Reading and Writing But Should Emphasize Listening and Speaking"



Create Units with Connected Listening, Reading, Speaking, Writing



Analyzing **Secondary Science**
and **Social Studies** Texts to
Identify Language Demands
+ and Language Learning
Opportunities





Types of Language Objectives



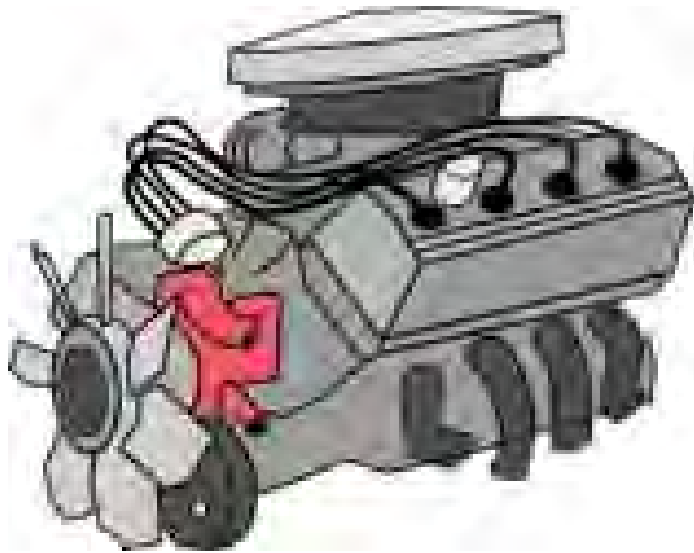
Linguistic

vs.

Communicative

- Pronunciation
- Vocabulary
- Grammar (Word, Sentence Structure)
- Discourse/Genre (Passage Structure)

- Communicative functions
- Developmental Sequence of Output Expectations (Bilingual Progressions)



Grammar



Vocabulary

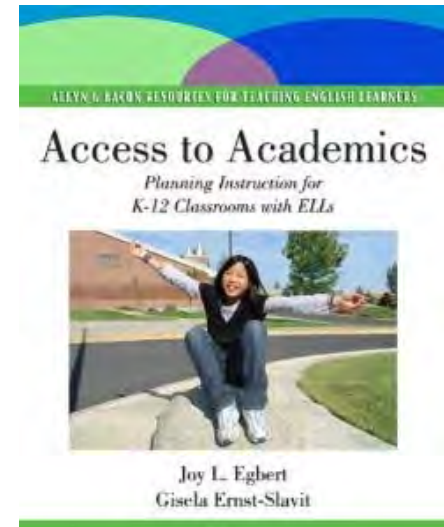
Source: Dee Gardner, RITELL Conference, Fall 2015

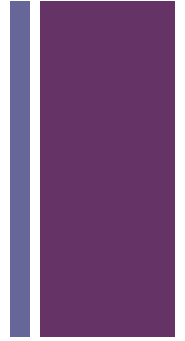
Finding language objectives in our texts

Grammar	Vocabulary	Functions	Discourse	Strategies
The forms of language you will target (sounds, word parts, sentence structure)	The content compatible vocabulary you will target (key vocab. Is taught to all)	The “Can Do” indicators; communicative functions appropriate to proficiency level	Organization of speech; writing	Tactics student will use to support successful communication

ELLs need more than just the key content vocabulary!

We will use this framework





Differentiate Your Language Objectives

- Choose language that matches the proficiency of the learner
- For early proficiency students—basic vocabulary, basic sentence patterns, not much complexity
- For later proficiency students-advanced vocabulary, complex sentence patterns, demonstrate how to achieve greater sentence length and complexity

Differentiated Grammar Teaching

Beginner

Entering/Emerging

Intermediate

Transitioning

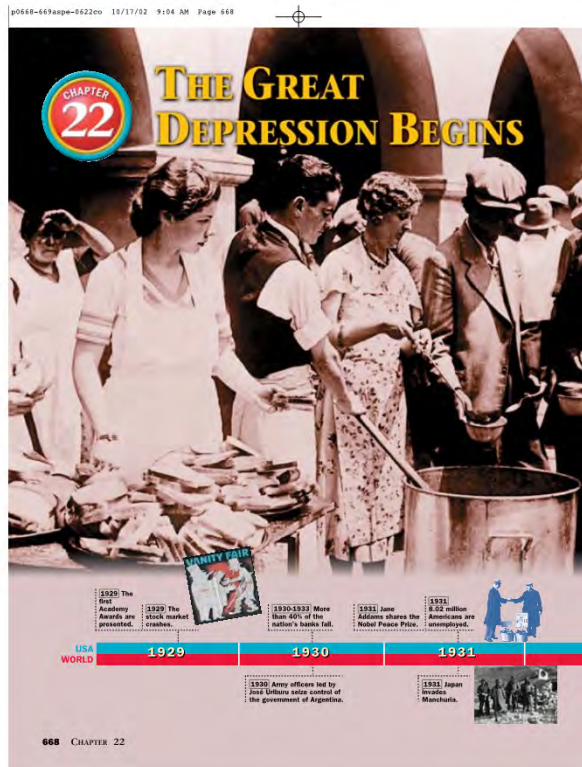
Advanced

Expanding/Commanding



Let's Read Our Sample Social Studies and Science Texts

Stock Market Crash



Cell Structure and Function

7-2 Eukaryotic Cell Structure

Guide for Reading

- Key Concept**
- What are the functions of the major cell structures?

Vocabulary

organelle
cytoplasm
nuclear envelope
chromatin
chromosome
nucleolus
ribosome
endoplasmic reticulum
Golgi apparatus
lysosome
vacuole
mitochondrion
chloroplast
cytoskeleton
centriole

Reading Strategy:

Building Vocabulary

Before you read, preview the vocabulary by skimming the section and making a list of the boldface terms. Leave space to make notes as you read.

At first glance, a factory is a puzzling place. A bewildering variety of machines buzz and clatter, people move quickly in different directions, and the sheer diversity of so much activity can be confusing. However, if you take your time and watch carefully, before long you will begin to identify patterns. What might at first have seemed like chaos begins to make sense.

Comparing the Cell to a Factory

In some respects, the eukaryotic cell is like a factory. The first time you look at a microscope image of a cell, such as the one in **Figure 7-5**, the cell seems impossibly complex. Look closely at a eukaryotic cell, however, and patterns begin to emerge. To see those patterns more clearly, we'll look at some structures that are common to eukaryotic cells, shown in **Figure 7-6**. Because many of these structures act as if they are specialized organs, these structures are known as **organelles**, literally "little organs."

Cell biologists divide the eukaryotic cell into two major parts: the nucleus and the cytoplasm. The **cytoplasm** is the portion of the cell outside the nucleus. As you will see, the nucleus and cytoplasm work together in the business of life.

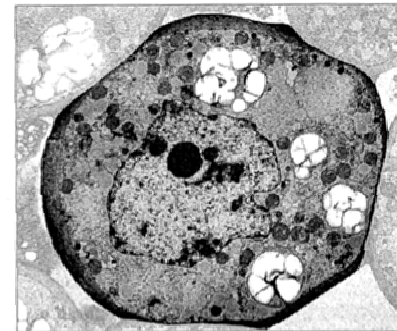
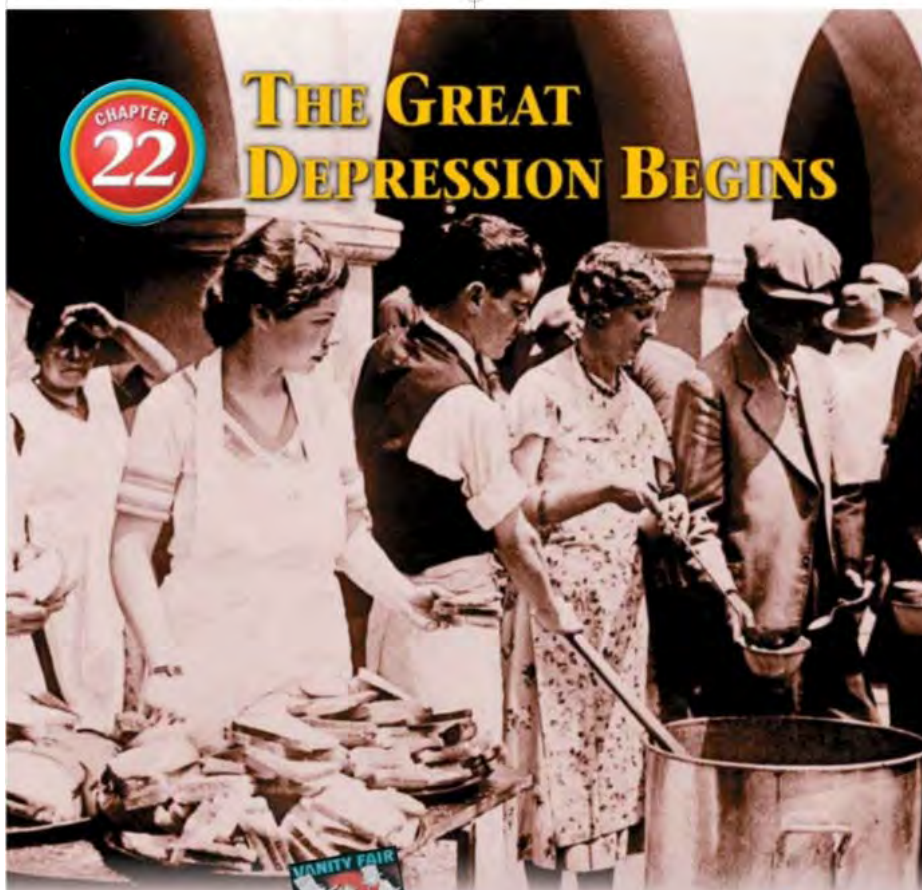


Figure 7-5 This electron micrograph of a plant cell shows many of the different types of structures that are found in eukaryotic cells. The cell has been artificially colored so that you can distinguish one structure from another.



CHAPTER 22

THE GREAT DEPRESSION BEGINS

1929 The first Academy Awards are presented.

1929 The stock market crashes.

1930-1933 More than 40% of the nation's banks fail.

1931 Jane Addams shares the Nobel Peace Prize.

1931 8.02 million Americans are unemployed.



USA
WORLD

1929

1930

1931

1930 Army officers led by José Uriburu seize control of the government of Argentina.

1931 Japan invades Manchuria.



See Section We Will Focus On

INTERACT WITH HISTORY

The year is 1929. The U.S. economy has collapsed. Farms, businesses, and banks nationwide are failing, causing massive unemployment and poverty. You are out of work with little prospect of finding a job.

What would you do to feed your family?

Examine the Issues

- What groups of people will be most hurt by the economic crash?
- What can you do to find a paying job?
- What can unemployed and impoverished people do to help each other?

RESEARCH LINKS CLASSZONE.COM

Visit the Chapter 22 links for more information related to The Great Depression Begins.

Women serve soup and slices of bread to unemployed men in an outdoor breadline in Los Angeles, California during the Great Depression.

1932 The Bonus Army arrives in Washington, D.C.

1932 Franklin Delano Roosevelt is elected president.

1932 Ibn Sa'ud becomes king of newly-united Saudi Arabia.

1932 From prison, Mohandas K. Gandhi leads a protest against British policies in India.



1933 "Century of Progress" Exposition begins.

1933 The Twenty-first Amendment ends Prohibition.

1933 More than 13 million Americans are unemployed.

1933

1934

1933 Adolf Hitler takes power in Germany.

1933 Japan withdraws from the League of Nations.



SECTION 1

The Nation's Sick Economy

MAIN IDEA

As the prosperity of the 1920s ended, severe economic problems gripped the nation.

WHY IT MATTERS NOW

The Great Depression has had lasting effects on how Americans view themselves and their government.

Terms & Names

- price support
- credit
- Alfred E. Smith
- Dow Jones Industrial Average
- speculation
- buying on margin
- Black Tuesday
- Great Depression
- Hawley-Smoot Tariff Act

One American's Story

Gordon Parks, now a well-known photographer, author, and filmmaker, was a 16-year-old high school student in the fall of 1929. He supported himself as a busboy at the exclusive Minnesota Club, where prosperous club members spoke confidently about the economy. Parks, too, looked forward to a bright future. Then came the stock market crash of October 1929. In his autobiography, Parks recalled his feelings at the time.

A PERSONAL VOICE GORDON PARKS

"I couldn't imagine such financial disaster touching my small world; it surely concerned only the rich. But by the first week of November . . . I was without a job. All that next week I searched for any kind of work that would prevent my leaving school. Again it was, 'We're firing, not hiring.' . . . I went to school and cleaned out my locker, knowing it was impossible to stay on. A piercing chill was in the air as I walked back to the rooming house."

—A Choice of Weapons

The crash of 1929, and the depression that followed, dealt a crushing blow to the hopes and dreams of millions of Americans. The high-flying prosperity of the 1920s was over. Hard times had begun.

Economic Troubles on the Horizon

As the 1920s advanced, serious problems threatened economic prosperity. Though some Americans became wealthy, many more could not earn a decent living. Important industries struggled, and farmers grew more crops and raised more livestock than they could sell at a profit. Both consumers and farmers were steadily going deeper into debt. As the decade drew to a close, these slippages in the economy signaled the end of an era.

MAIN IDEA

Identifying Problems

A What industrial weakness signaled a declining economy in the 1920s?

INDUSTRIES IN TROUBLE The superficial prosperity of the late 1920s shrouded weaknesses that would signal the onset of the Great Depression. Key basic industries, such as railroads, textiles, and steel had barely made a profit. Railroads lost business to new forms of transportation (trucks, buses, and private automobiles, for instance).

Mining and lumbering, which had expanded during wartime, were no longer in high demand. Coal mining was especially hard-hit, in part due to stiff competition from new forms of energy, including hydroelectric power, fuel oil, and natural gas. By the early 1930s, these sources supplied more than half the energy that had once come from coal. Even the boom industries of the 1920s—automobiles, construction, and consumer goods—were weakened. One important economic indicator that declined during this time was housing starts—the number of new dwellings being built. When housing starts fall, so do jobs in many related industries, such as furniture manufacturing and lumbering.

FARMERS NEED A LIFT Perhaps agriculture suffered the most. During World War I, prices rose and international demand for crops such as wheat and corn soared. Farmers had planted more and taken out loans for land and equipment. However, demand fell after the war, and crop prices declined by 40 percent or more.

Farmers boosted production in the hopes of selling more crops, but this only depressed prices further. Between 1919 and 1921 annual farm income declined from \$10 billion to just over \$4 billion. Farmers who had gone into debt had difficulty in paying off their loans. Many lost their farms when banks foreclosed and seized the property as payment for the debt. As farmers began to default on their loans, many rural banks began to fail. Auctions were held to recoup some of the banks' losses.

Congress tried to help out farmers with a piece of legislation called the McNary-Haugen bill. This called for federal **price supports** for key products such as wheat, corn, cotton, and tobacco. The government would buy surplus crops at guaranteed prices and sell them on the world market.

President Coolidge vetoed the bill twice. He commented, "Farmers have never made money. I don't believe we can do much about it."

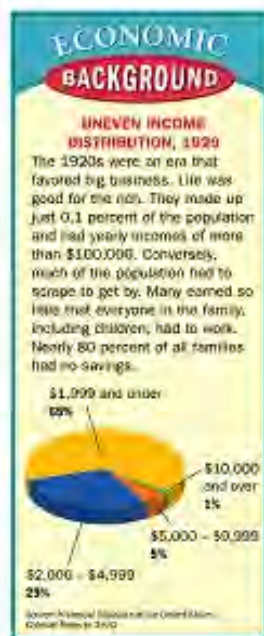
CONSUMERS HAVE LESS MONEY TO SPEND As farmers' incomes fell, they bought fewer goods and services, but the problem was larger. By the late 1920s,



Gordon Parks, shown here in 1958 discussing the movie version of his autobiographical novel, *The Learning Tree*.



Farm equipment is auctioned off in Hastings, Nebraska.



Americans were buying less—mainly because of rising prices, stagnant wages, unbalanced distribution of income, and overbuying on credit in the preceding years. Production had also expanded much faster than wages, resulting in an ever-widening gap between the rich and the poor.

LIVING ON CREDIT Although many Americans appeared to be prosperous during the 1920s, in fact they were living beyond their means. They often bought goods on **credit**—an arrangement in which consumers agreed to buy now and pay later for purchases. This was often in the form of an installment plan (usually in monthly payments) that included interest charges.

By making credit easily available, businesses encouraged Americans to pile up a large consumer debt. Many people then had trouble paying off their growing debts. Faced with debt, consumers cut back on spending.

UNEVEN DISTRIBUTION OF INCOME During the 1920s, the rich got richer, and the poor got poorer. Between 1920 and 1929, the income of the wealthiest 1 percent of the population rose by 75 percent, compared with a 9 percent increase for Americans as a whole.

More than 70 percent of the nation's families earned less than \$2,500 per year, then considered the minimum amount needed for a decent standard of living. Even families earning twice that much could not afford many of the household products that manufacturers produced. Economists estimate that the average man or woman bought a new outfit of clothes only once a year. Scarcely half the homes in many cities had electric lights or a furnace for heat. Only one city home in ten had an electric refrigerator.

This unequal distribution of income meant that most Americans could not participate fully in the economic advances of the 1920s. Many people did not have the money to purchase the flood of goods that factories produced. The prosperity of the era rested on a fragile foundation.

MAIN IDEA
Analyzing Events
How did speculation and margin buying cause stock prices to rise?

START

Hoover Takes the Nation

Although economic disaster was around the corner, the election of 1928 took place in a mood of apparent national prosperity. This election pitted Republican candidate Herbert Hoover against Democrat **Alfred E. Smith**.

THE ELECTION OF 1928 Hoover, the secretary of commerce under Harding and Coolidge, was a mining engineer from Iowa who had never run for public office. Smith was a career politician who had served four terms as governor of New York. He was personable and enjoyed being in the limelight, unlike the quiet and reserved Hoover. Still, Hoover had one major advantage: he could point to years of prosperity under Republican administrations since 1920. Many Americans believed him when he declared, "We in America are nearer to the final triumph over poverty than ever before."

It was an overwhelming victory for Hoover. The message was clear: most Americans were happy with Republican leadership.

DREAMS OF RICHES IN THE STOCK MARKET By 1929, some economists had warned of weaknesses in the economy, but most Americans

Vocabulary
stock: a share of ownership in a company

maintained the utmost confidence in the nation's economic health. In increasing numbers, those who could afford to invested in the stock market. The stock market had become the most visible symbol of a prosperous American economy. Then, as now, the **Dow Jones Industrial Average** was the most widely used barometer of the stock market's health. The Dow is a measure based on the stock prices of 30 representative large firms trading on the New York Stock Exchange.

Through most of the 1920s, stock prices rose steadily. The Dow had reached a high of 381 points, nearly 300 points higher than it had been five years earlier. Eager to take advantage of this "bull market"—a period of rising stock prices—Americans rushed to buy stocks and bonds. One observer wrote, "It seemed as if all economic law had been suspended and a new era opened up in which success and prosperity could be had without knowledge or industry." By 1929, about 4 million Americans—or 3 percent of the nation's population—owned stocks. Many of these investors were already wealthy, but others were average Americans who hoped to strike it rich.

However, the seeds of trouble were taking root. People were engaging in **speculation**—that is, they bought stocks and bonds on the chance of a quick profit, while ignoring the risks. Many began **buying on margin**—paying a small percentage of a stock's price as a down payment and borrowing the rest. With easy money available to investors, the unrestrained buying and selling fueled the market's upward spiral. The government did little to discourage such buying or to regulate the market. In reality, these rising prices did not reflect companies' worth. Worse, if the value of stocks declined, people who had bought on margin had no way to pay off the loans.

The Stock Market Crashes

In early September 1929, stock prices peaked and then fell. Confidence in the market started to waver, and some investors quickly sold their stocks and pulled out. On October 24, the market took a plunge. Panicked investors unloaded their shares. But the worst was yet to come.

Analyzing Political Cartoons

DAY OF WRATH

After the apparent prosperity of the 1920s, virtually few were prepared for the devastating effects of the stock market crash. This cartoon by James N. Rosenberg, which shows Wall Street crumbling on October 29, 1929, is titled *Dies Ira*. Latin for "day of wrath."

SKILLBUILDER Analyzing Political Cartoons

1. What does the cartoonist suggest will happen to individuals because of the crash?
2. How does the cartoonist convey the sense of fear and shock?
3. What do the looks on people's faces indicate about the impact of the crash?

SEE SKILLBUILDER HANDBOOK, PAGE R24.



"We in America are nearer to the final triumph over poverty than ever before."
HERBERT HOOVER

BLACK TUESDAY On October 29—now known as **Black Tuesday**—the bottom fell out of the market and the nation's confidence. Shareholders frantically tried to sell before prices plunged even lower. The number of shares dumped that day was a record 16.4 million. Additional millions of shares could not find buyers. People who had bought stocks on credit were stuck with huge debts as the prices plummeted, while others lost most of their savings.



A Pen and Paper Operation

In the 1920s, orders to buy or sell a stock arrived at brokers' telephone booths, located around the edge of the trading floor. The orders were then passed by hand or sent by pneumatic tube to the floor where the stock would be traded.



The trading floor in 1929

and human interaction, the exchange has computer technologies to keep up. Now, members now receive stock bids through an electronic delivery system known as E-Trade. They can make a trade in less than 12 seconds. Communications networks now allow individuals to buy and sell stocks themselves over the Internet at a fraction of what it would cost to use a specialist. Such innovation has prompted some to insist that all future trading will be done via computers, thus eliminating the need for physical exchanges such as the NYSE.

SKILLBUILDER

1. **Hypothesizing** What scenarios can you imagine that might prompt someone to submit a market order on a certain stock?
2. **Comparing** How has technology on the trading floor changed since the 1920s?

The trading floor in 2000.



Just Review the Pictures Here To Understand the Subtitle “Then and Now”

By mid-November, investors had lost about \$30 billion, an amount equal to how much America spent in World War I. The stock market bubble had finally burst. One eyewitness to these events, Frederick Lewis Allen, described the resulting situation.

A PERSONAL VOICE FREDERICK LEWIS ALLEN

“The Big Bull Market was dead. Billions of dollars' worth of profits—and paper profits—had disappeared. The grocer, the window cleaner, and the seamstress had lost their capital [savings]. In every town there were families which had suddenly dropped from showy affluence into debt. . . . With the Big Bull Market gone and prosperity going, Americans were soon to find themselves living in an altered world which called for new adjustments, new ideas, new habits of thought, and a new order of values.”

—*Only Yesterday*

Financial Collapse

The stock market crash signaled the beginning of the **Great Depression**—the period from 1929 to 1940 in which the economy plummeted and unemployment skyrocketed. The crash alone did not cause the Great Depression, but it hastened the collapse of the economy and made the depression more severe.

BANK AND BUSINESS FAILURES After the crash, many people panicked and withdrew their money from banks. But some couldn't get their money because the banks had invested it in the stock market. In 1929, 600 banks closed. By 1933, 11,000 of the nation's 25,000 banks had failed. Because the government did not protect or insure bank accounts, millions of people lost their savings accounts.

The Great Depression hit other businesses, too. Between 1929 and 1932, the gross national product—the nation's total output of goods and services—was cut nearly in half, from \$104 billion to \$59 billion. Approximately 90,000 businesses went bankrupt. Among these failed enterprises were once-prosperous automobile and railroad companies.

As the economy plunged into a tailspin, millions of workers lost their jobs. Unemployment leaped from 3 percent (1.6 million workers) in 1929 to 25 percent (13 million workers) in 1933. One out of every four workers was out of a job. Those who kept their jobs faced pay cuts and reduced hours.

Not everyone fared so badly, of course. Before the crash, some speculators had sold off their stocks and made money. Joseph P. Kennedy, the father of future president John F. Kennedy, was one who did. Most, however, were not so lucky or shrewd.

WORLDWIDE SHOCK WAVES The United States was not the only country gripped by the Great Depression. Much of Europe, for example, had suffered throughout the 1920s. European countries trying to recover from the ravages of World War I faced high war debts. In addition, Germany had to pay war reparations—payments to compensate the Allies for the damages Germany had caused. The Great Depression compounded these problems by limiting America's ability to import European goods. This made it difficult to sell American farm products and manufactured goods abroad.

Image not for use on this CD-ROM. Please refer to the image in the textbook.

This British election poster shows that the Great Depression was a global event.

Depression Indicators

Economic indicators are measures that signal trends in a nation's economy. During the Great Depression several trends were apparent. Those indicated at the right are linked—the conditions of one can affect another. For instance, when banks fail **1**, some businesses may have to close down **2**, which can cause unemployment to rise **3**. Thus, people have less money and spending declines **4**.

SKILLBUILDER Interpreting Graphs

1. In what year did the biggest jump in bank failures occur?
2. What measure on the graphs seems to indicate an improvement in the U.S. economy during the Depression? What might explain this?



Distraught men try to withdraw their savings from a failing bank.

END

MAIN IDEA

Summarizing

- E** How did the Great Depression affect the world economy?

Just Read Box to Right if You Finish Early

by keeping interest rates low, thereby allowing companies and individuals to borrow easily and build up large debts. Some of this borrowed money was used to buy the stocks that later led to the crash.

At first people found it hard to believe that economic disaster had struck. In November 1929, President Hoover encouraged Americans to remain confident about the economy. Yet, the most severe depression in American history was well on its way.

WORLD STAGE

GLOBAL EFFECTS OF THE DEPRESSION

As the American economy collapsed, so too did Europe's. The world's nations had become interdependent; international trade was important to most countries. However, when the U.S. economy failed, American investors withdrew their money from European markets.

To keep U.S. dollars in America, the government raised tariffs on goods imported from other countries. World trade dropped. Unemployment rates around the world soared. Germany and Austria were particularly hard hit. In 1931 Austria's largest bank failed. In Asia, both farmers and urban workers suffered as the value of exports fell by half between 1929 and 1931. The crash was felt in Latin America as well. As U.S. and European demand for Latin American products like sugar, beef, and copper dropped, prices collapsed.



ASSESSMENT

- 1. TERMS & NAMES** For each term or name, write a sentence explaining its significance.

- price support
- credit
- Alfred E. Smith
- Dow Jones Industrial Average
- speculation
- buying on margin
- Black Tuesday

MAIN IDEA

2. TAKING NOTES

In a diagram like this, record the causes of the 1929 stock market crash.



Which do you see as the biggest cause? Why?

CRITICAL THINKING

3. MAKING INFERENCES

How did the economic trends of the late 1920s help cause the Great Depression? **Think About:**

- what happened in industry
- what happened in agriculture
- what happened with consumers

4. DRAWING CONCLUSIONS

Judging from the events of the late 1920s and early 1930s, how important do you think public confidence is to the health of the economy? Explain. **Think About:**

- what happened when overconfidence in the stock market led people to speculate and buy on margin
- how confidence affects consumer borrowing

Record (list); explain

Analyze the language demands of the questions



Hardship and Suffering During the Depression

MAIN IDEA

During the Great Depression Americans did what they had to do to survive.

WHY IT MATTERS NOW

Since the Great Depression, many Americans have been more cautious about saving, investing, and borrowing.

Terms & Names

- shantytown
- soup kitchen
- bread line
- Dust Bowl
- direct relief

One American's Story

Ann Marie Low lived on her parents' North Dakota farm when the stock market crashed in 1929 and the Great Depression hit. Hard times were familiar to Ann's family. But the worst was yet to come. In the early 1930s, a ravenous drought hit the Great Plains, destroying crops and leaving the earth dry and cracked. Then came the deadly dust storms. On April 25, 1934, Ann wrote an account in her diary.

A PERSONAL VOICE ANN MARIE LOW

"[T]he air is just full of dirt coming, literally, for hundreds of miles. It sifts into everything. After we wash the dishes and put them away, so much dust sifts into the cupboards we must wash them again before the next meal. . . . Newspapers say the deaths of many babies and old people are attributed to breathing in so much dirt."

—Dust Bowl Diary

The drought and winds lasted for more than seven years. The dust storms in Kansas, Colorado, New Mexico, Nebraska, the Dakotas, Oklahoma, and Texas were a great hardship—but only one of many—that Americans faced during the Great Depression.

The Depression Devastates People's Lives

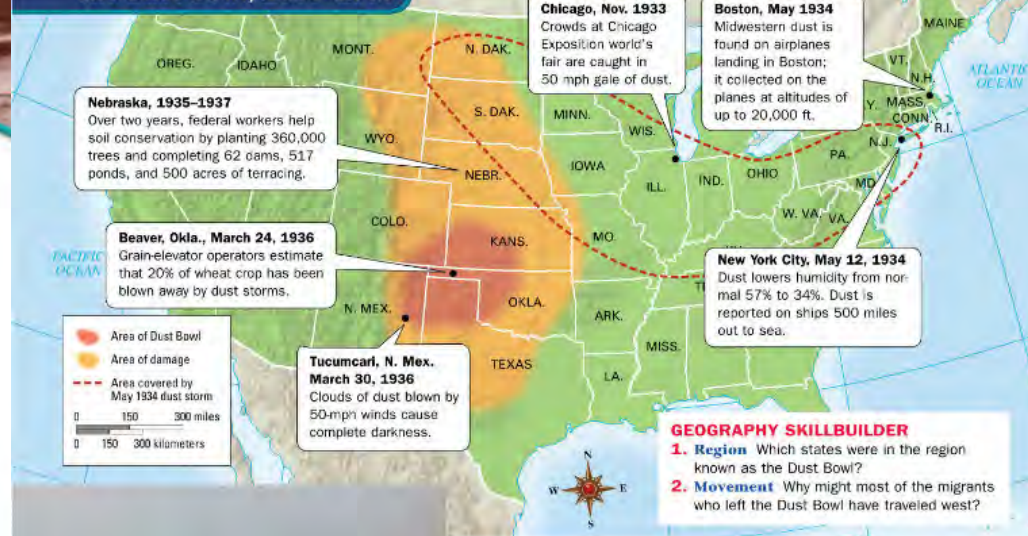
Statistics such as the unemployment rate tell only part of the story of the Great Depression. More important was the impact that it had on people's lives: the Depression brought hardship, homelessness, and hunger to millions.

THE DEPRESSION IN THE CITIES In cities across the country, people lost their jobs, were evicted from their homes and ended up in the streets. Some slept in parks or sewer pipes, wrapping themselves in newspapers to fend off the cold.



Unit Goes on to the Dust Bowl and New Deal

The Dust Bowl, 1933–1936



THE DUST BOWL The drought that began in the early 1930s wreaked havoc on the Great Plains. During the previous decade, farmers from Texas to North Dakota had used tractors to break up the grasslands and plant millions of acres of new farmland. Plowing had removed the thick protective layer of prairie grasses. Farmers had then exhausted the land through overproduction of crops, and the grasslands became unsuitable for farming. When the drought and winds began in the early 1930s, little grass and few trees

oil down. Wind scattered the topsoil, exposing sand and grit traveled hundreds of miles. One windstorm in 1934 picked dust from the plains and carried it to East Coast cities. was the hardest hit, including parts of Kansas, Oklahoma, and Colorado, came to be known as the **Dust Bowl**. Plagued victims, thousands of farmers and sharecroppers left their picked up their families and few belongings and headed west, California. Some of these migrants—known as Okies (a

term that originally referred to Oklahomans but came to be used negatively for all migrants)—found work as farmhands. But others continued to wander in search of work. By the end of the 1930s, hundreds of thousands of farm families had migrated to California and other Pacific Coast states.

Background

The most severe storms were called "black blizzards." They were said to have darkened the sky in New York City and Washington, D.C.

Effects on the American Family

In the face of the suffering caused by the Great Depression, the family stood as a source of strength for most Americans. Although some people feared that hard times would undermine moral values, those fears were largely unfounded. In gen-



Cell Structure and Function

7-2 Eukaryotic Cell Structure

Guide for Reading

Key Concept

- What are the functions of the major cell structures?

Vocabulary

organelle
cytoplasm
nuclear envelope
chromatin
chromosome
nucleolus
ribosome
endoplasmic reticulum
Golgi apparatus
lysosome
vacuole
mitochondrion
chloroplast
cytoskeleton
centriole

Reading Strategy:

Building Vocabulary

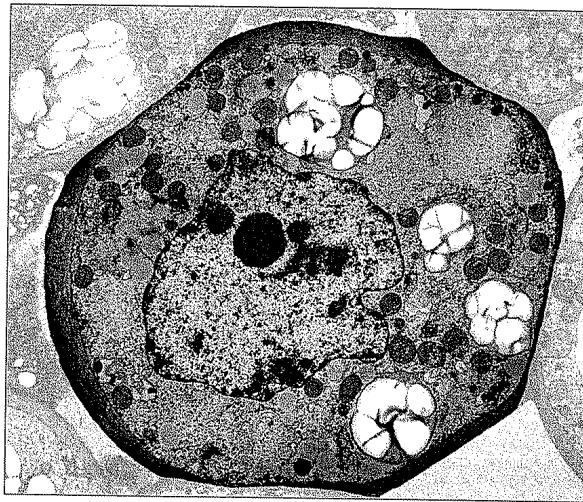
Before you read, preview the vocabulary by skimming the section and making a list of the boldface terms. Leave space to make notes as you read.

START

Comparing the Cell to a Factory

In some respects, the eukaryotic cell is like a factory. The first time you look at a microscope image of a cell, such as the one in **Figure 7-5**, the cell seems impossibly complex. Look closely at a eukaryotic cell, however, and patterns begin to emerge. To see those patterns more clearly, we'll look at some structures that are common to eukaryotic cells, shown in **Figure 7-6**. Because many of these structures act as if they are specialized organs, these structures are known as **organelles**, literally "little organs."

Cell biologists divide the eukaryotic cell into two major parts: the nucleus and the cytoplasm. The **cytoplasm** is the portion of the cell outside the nucleus. As you will see, the nucleus and cytoplasm work together in the business of life.

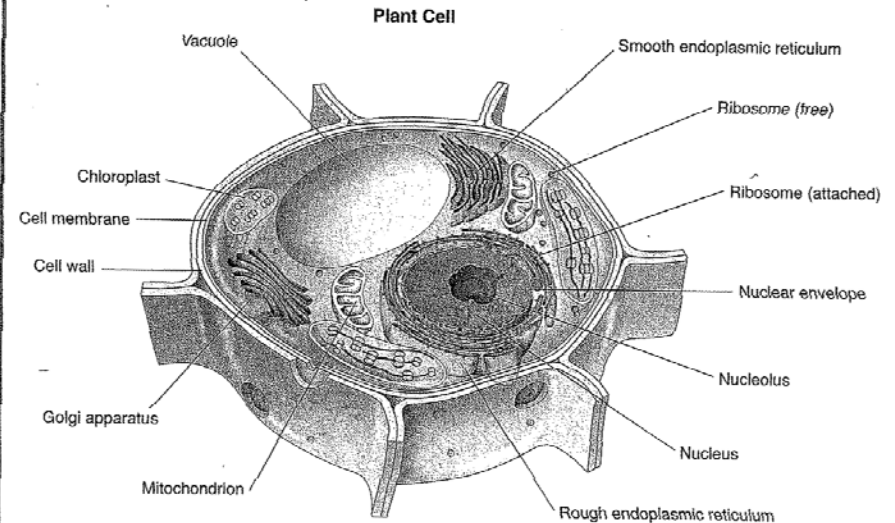


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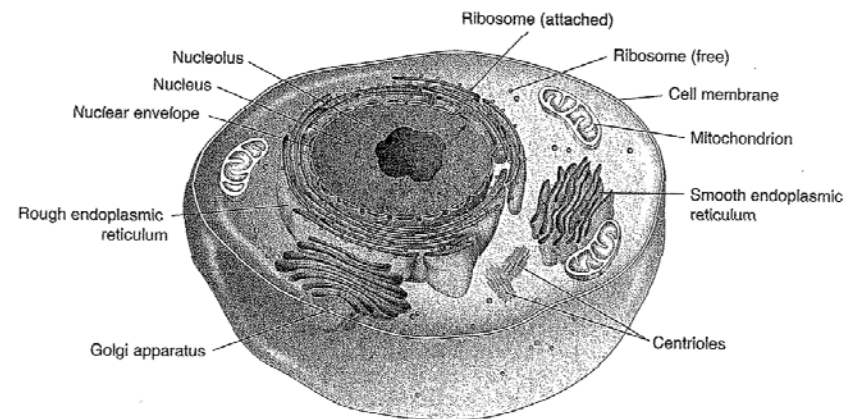
Review Entire
Chapter—Just
Scan Visuals

ANIMAL CELLS

ity of organelles. Some structures are specific
Interpreting Graphics What structures do
not?



Animal Cell



► **Figure 7-5** This electron micrograph of a plant cell shows many of the different types of structures that are found in eukaryotic cells. The cell has been artificially colored so that you can distinguish one structure from another.

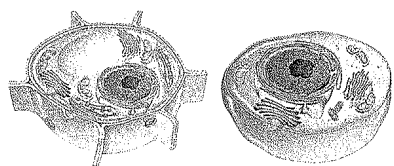
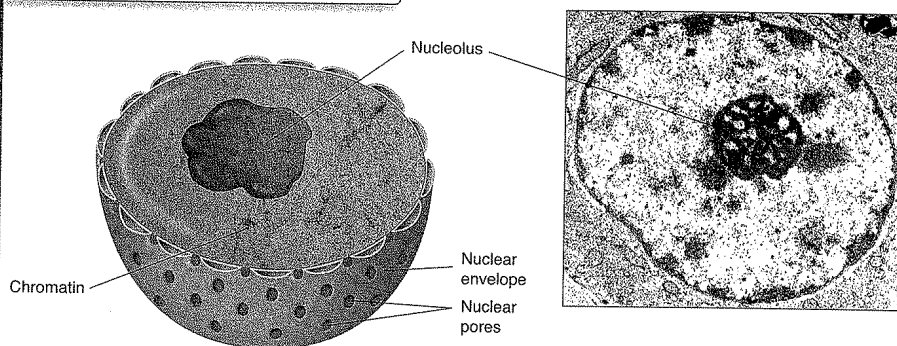


FIGURE 7-7 THE NUCLEUS

The nucleus controls most cell processes and contains the hereditary information of DNA. The DNA combines with protein to form chromatin, which is found throughout the nucleus. The small, dense region in the nucleus is the nucleolus.



Nucleus

In the same way that the main office controls a large factory, the nucleus is the control center of the cell. The nucleus contains nearly all the cell's DNA and with it the coded instructions for making proteins and other important molecules. The structure of the nucleus is shown in Figure 7-7.

The nucleus is surrounded by a **nuclear envelope** composed of two membranes. The nuclear envelope is dotted with thousands of nuclear pores, which allow material to move into and out of the nucleus. Like messages, instructions, and blueprints moving in and out of a main office, a steady stream of proteins, RNA, and other molecules move through the nuclear pores to and from the rest of the cell.

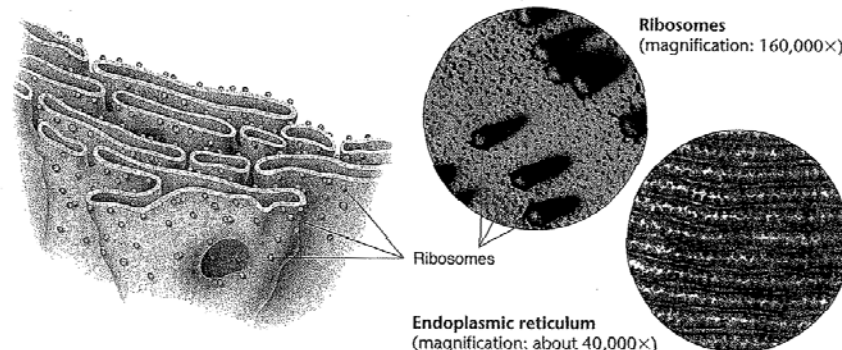
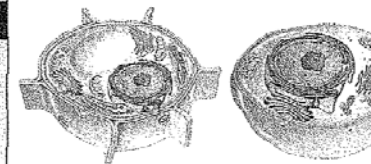
The granular material you can see in the nucleus is called **chromatin**. Chromatin consists of DNA bound to protein. Most of the time, chromatin is spread throughout the nucleus. When a cell divides, however, chromatin condenses to form **chromosomes** (KROH-muh-sohms). These distinct, threadlike structures contain the genetic information that is passed from one generation of cells to the next. You will learn more about chromosomes in later chapters.

Most nuclei also contain a small, dense region known as the **nucleolus** (noo-KLEE-uh-lus). The nucleolus is where the assembly of ribosomes begins.

CHECKPOINT What kind of information is contained in chromosomes?

FIGURE 7-8 ENDOPLASMIC RETICULUM

The endoplasmic reticulum synthesizes proteins for export from the cell. The rough endoplasmic reticulum, shown here, gets its name from the "rough" appearance of the ribosomes on its surface.



Ribosomes

One of the most important jobs carried out in the cellular "factory" is making proteins. Proteins are assembled on **ribosomes**. Ribosomes are small particles of RNA and protein found throughout the cytoplasm. They produce proteins by following coded instructions that come from the nucleus. Each ribosome, in its own way, is like a small machine in a factory, turning out proteins on orders that come from its "boss"—the cell nucleus. Cells that are active in protein synthesis are often packed with ribosomes.

Endoplasmic Reticulum

Eukaryotic cells also contain an internal membrane system known as the **endoplasmic reticulum** (en-doh-PLAZ-mik rih-TIK-yuh-lum), or **ER**. The endoplasmic reticulum is the site where lipid components of the cell membrane are assembled, along with proteins and other materials that are exported from the cell.

The portion of the ER involved in the synthesis of proteins is called **rough endoplasmic reticulum**, or **rough ER**. It is given this name because of the ribosomes found on its surface. Newly made proteins leave these ribosomes and are inserted into the rough ER, where they may be chemically modified.

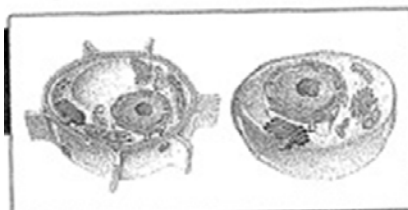
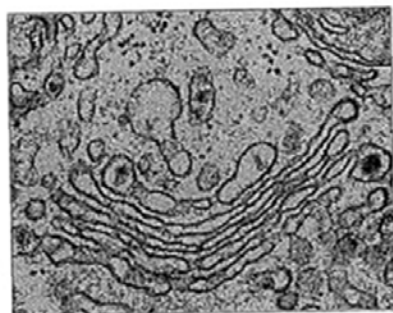


FIGURE 7-9 GOLGI APPARATUS

☛ The Golgi apparatus modifies, sorts, and packages proteins. Notice the stacklike membranes that make up the Golgi apparatus in this transmission electron micrograph.



(magnification: about 45,700×)

Proteins that are released, or exported, from the cell are synthesized on the rough ER, as are many membrane proteins. Rough ER is abundant in cells that produce large amounts of protein for export. Other cellular proteins are made on “free” ribosomes, which are not attached to membranes.

The other portion of the ER is known as smooth endoplasmic reticulum (smooth ER) because ribosomes are not found on its surface. In many cells, the smooth ER contains collections of enzymes that perform specialized tasks, including the synthesis of membrane lipids and the detoxification of drugs. Liver cells, which play a key role in detoxifying drugs, often contain large amounts of smooth ER.

Golgi Apparatus

Proteins produced in the rough ER move next into an organelle called the **Golgi apparatus**, discovered by the Italian scientist Camillo Golgi. As you can see in **Figure 7-9**, Golgi appears as a stack of closely apposed membranes. ☛ The function of the Golgi apparatus is to modify, sort, and package proteins and other materials from the endoplasmic reticulum for storage in the cell or secretion outside the cell. The Golgi apparatus is somewhat like a customization shop, where the finishing touches are put on proteins before they are ready to leave the “factory.” From the Golgi apparatus, proteins are then “shipped” to their final destinations throughout the cell or outside of the cell.

Lysosomes

Even the neatest, cleanest factory needs a cleanup crew, and that's what lysosomes (LY-suh-sohmz) are. **Lysosomes** are small organelles filled with enzymes. One function of lysosomes is the digestion, or breakdown, of lipids, carbohydrates, and proteins into small molecules that can be used by the rest of the cell.

Lysosomes are also involved in breaking down organelles that have outlived their usefulness. Lysosomes perform the vital function of removing “junk” that might otherwise accumulate and clutter up the cell. A number of serious human diseases, including Tay-Sachs disease, can be traced to lysosomes that fail to function properly.

✓**CHECKPOINT** What is the role of lysosomes?

Vacuoles

Every factory needs a place to store things, and cells contain places for storage as well. Some kinds of cells contain saclike structures called **vacuoles** (VAK-yoo-ohlz) that store materials such as water, salts, proteins, and carbohydrates. In many plant cells there is a single, large central vacuole filled with liquid. The pressure of the central vacuole in these cells makes it possible for plants to support heavy structures such as leaves and flowers.

Vacuoles are also found in some single-celled organisms and in some animals. The paramecium in **Figure 7-10** contains a vacuole called a contractile vacuole. By contracting rhythmically, this specialized vacuole pumps excess water out of the cell. The control of water content within the cell is just one example of an important process known as homeostasis. Homeostasis is the maintenance of a controlled internal environment.

Mitochondria and Chloroplasts

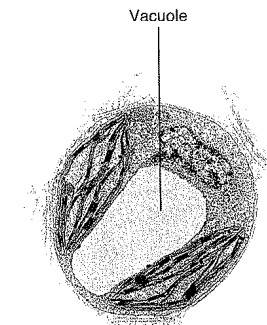
All living things require a source of energy. Factories are hooked up to the local power company, but what about cells? Most cells get energy in one of two ways—from food molecules or from the sun.

Mitochondria Nearly all eukaryotic cells, including plants, contain **mitochondria** (myt-oh-KAHN-dree-uh; singular: mitochondrion). ☛ **Mitochondria are organelles that convert the chemical energy stored in food into compounds that are more convenient for the cell to use.** Mitochondria are enclosed by two membranes—an outer membrane and an inner membrane. The inner membrane is folded up inside the organelle.

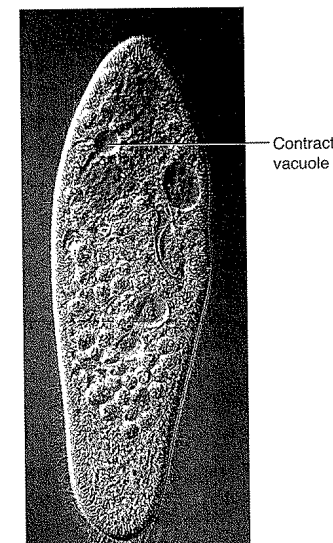
One of the most interesting aspects of mitochondria is the way in which they are inherited. In humans, all or nearly all of our mitochondria come from the cytoplasm of the ovum, or egg cell. This means that when your relatives are discussing which side of the family should take credit for your best characteristics, you can tell them that you got your mitochondria from Mom!

END

Figure 7-10 Vacuoles have a variety of functions. In the *Coleus* plant cell (top), the large blue structure is the central vacuole that stores salts, proteins, and carbohydrates. The paramecium (bottom) contains contractile vacuoles that fill with water and then pump the water out of the cell. **Applying Concepts** How do vacuoles help support plant structures?



(magnification: about 3000×)



How can you make a model of a cell?

Materials variety of craft supplies, index cards

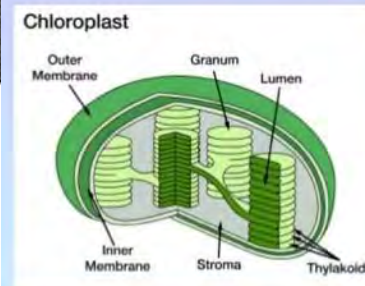
Procedure

1. Your class is going to make a model of a cell. Using the whole class, make a model of a cell in a small group. Organize the groups into 7-6 groups. The relative positions of the organelles in a typical plant cell is 50 micrometers wide. Calculate the scale of your classroom cell model. (Hint: Divide the width of the classroom by the width of a cell, making sure to use the same units.)
2. Using materials of your choice, make a three-dimensional model of the cell part or organelle you chose. Make the model as complete and as accurate as you can.
3. Label an index card with the name of your cell part or organelle and list its main features and functions. Attach the card to your model.
4. Attach your model to an appropriate place in the room. If possible, attach your model to another related cell part or organelle.

Ignore Lab



Chloroplasts



- Found only in **plant cells**
- Chloroplasts contain a green pigment called **chlorophyll**
- Chlorophyll is essential for photosynthesis, the process by which plants make food

**SKIM TO END;
SUBHEADINGS**

Go Online

PHSchool.com

For: Cell structure activity

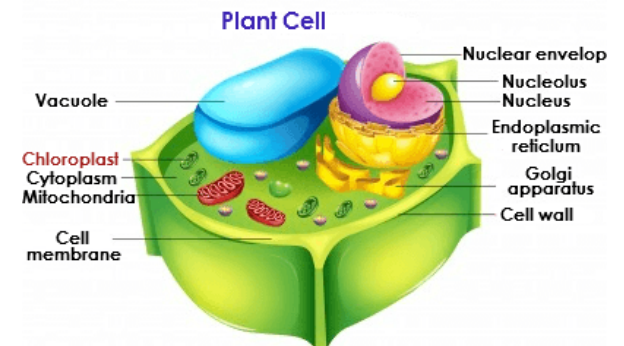
Visit: PHSchool.com

Web Code: cbd-3072

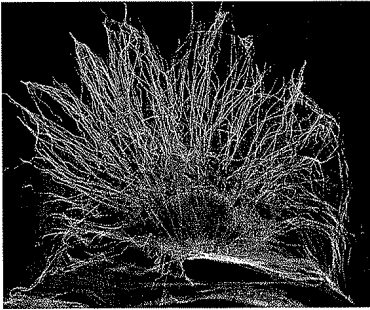
Chloroplasts Plants and some other organisms contain chloroplasts. Chloroplasts are organelles that capture the energy from sunlight and convert it into chemical energy in a process called **photosynthesis**. Chloroplasts are the biological equivalents of solar power plants. Like mitochondria, chloroplasts are surrounded by two membranes. Inside the organelle are large stacks of other membranes, which contain the green pigment chlorophyll.

Organelle DNA Unlike other organelles that contain no DNA, chloroplasts and mitochondria contain their own genetic information in the form of small DNA molecules. Lynn Margulis, an American biologist, has suggested that mitochondria and chloroplasts are actually the descendants of ancient prokaryotes. Margulis suggests that the prokaryotic ancestors of these organelles evolved a symbiotic relationship with early eukaryotes, taking up residence within the eukaryotic cell. One group of prokaryotes had the ability to use oxygen to generate ATP. These prokaryotes evolved into mitochondria. Other prokaryotes that carried out photosynthesis evolved into chloroplasts. This idea is called the endosymbiotic theory.

Visuals added to aid students in having visual support



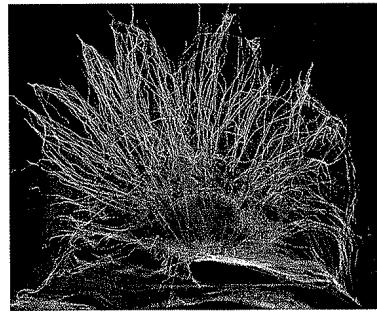
Cytoskeleton

A supporting structure and a transportation system complete our picture of the cell as a factory. As you know, a factory building is supported by steel or cement beams and by columns that support its walls and roof. Eukaryotic cells have a structure—the **cytoskeleton**—that helps support the cell.  The cytoskeleton is a network of protein filaments that helps the cell to maintain its shape. The cytoskeleton is also involved in movement. Microfilaments and microtubules are two of the principal protein filaments that make up the cytoskeleton.

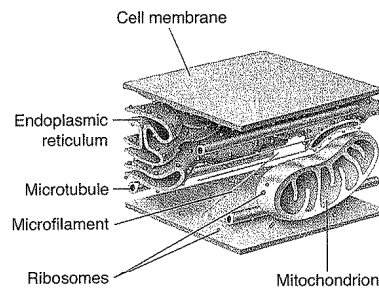
Microfilaments are threadlike structures made of a protein called actin. They form extensive networks in some cells and produce a tough, flexible framework that supports the cell. Microfilaments also help cells move. Microfilament assembly and disassembly is responsible for the cytoplasmic movements that allow cells, such as amoebas, to crawl along surfaces.


Microtubules, as shown in **Figure 7-11**, are hollow structures made up of proteins known as tubulins. In many cells, they play critical roles in maintaining cell shape. Microtubules are also important in cell division, where they form a structure known as the mitotic spindle, which helps to separate chromosomes. In animal cells, tubulin is also used to form a pair of structures known as centrioles. **Centrioles** are located near the nucleus and help to organize cell division. Centrioles are not found in plant cells.

Microtubules also help to build projections from the cell surface, which are known as cilia (singular: cilium) and flagella (singular: flagellum), that enable cells to swim rapidly through liquids. Cilia and flagella can produce considerable force; and in some cells they move almost like the oars of a boat, pulling or pushing cells through the water. You will learn more about cilia and flagella in later chapters.




(magnification: 1000×)



▲ **Figure 7-11**  The cytoskeleton is a network of protein filaments that helps the cell to maintain its shape and is involved in many forms of cell movement. The micrograph shows the microtubules of kidney cells. Microtubules are part of the cytoskeleton that help maintain cell shape.

7-2 Section Assessment

1.  **Key Concept** Describe the functions of the endoplasmic reticulum, Golgi apparatus, chloroplast, and mitochondrion.
2. Describe the role of the nucleus in the cell.
3. What are two functions of the cytoskeleton?

4. How is a cell like a factory?
5. **Critical Thinking Inferring** You examine an unknown cell under the microscope and discover that the cell contains chloroplasts. What type of organism could you infer that the cell came from?

Writing in Science

Persuasive Writing

Imagine that you are Lynn Margulis. Write a persuasive letter to the editor of a magazine, explaining your idea. Your explanation should be clear to people who do not have a biology background. *Hint:* Review the concept of symbiosis in Section 4-2.

Analyze the language demands of the questions

Describe
Name
Explain
Infer and justify your response

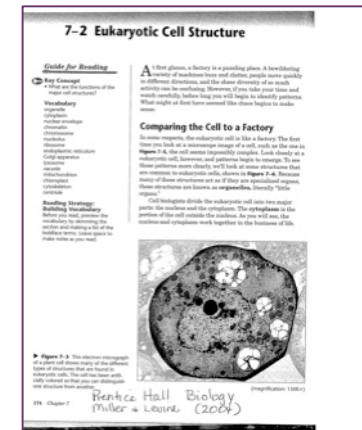
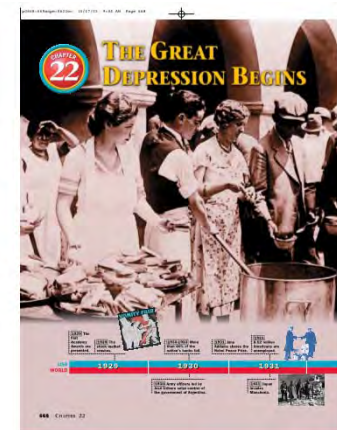


Planning Instruction for ELLs in Integrated Content Area Classes

Background Knowledge to Build	
Academic Vocabulary to Develop	
Forms of Language (Grammar) to Practice	
Text Structure to Support (Discourse Structure)	
Reading Skills and Strategies to Practice	
Map/Graphic Skills to Practice	
Communicative Functions Expected (Bilingual Progressions; with Differentiation for ELLs of Varied Proficiency Levels)	

Based on Access to Academics: Planning Instruction for K-12 Classrooms with ELLs (Egbert + Ernst-Slavit, 2011, Pearson)

Instructional Planning for Integrated ENL Instruction



Planning Instruction for ELLs in Integrated Content Area Classes

Background Knowledge to Build	
Academic Vocabulary to Develop	
Forms of Language (Grammar) to Practice	
Text Structure to Support (Discourse Structure)	
Reading Skills and Strategies to Practice	
Map/Graphic Skills to Practice	
Communicative Functions Expected (Bilingual Progressions; with Differentiation for ELLs of Varied Proficiency Levels)	

Based on Access to Academics: Planning Instruction for K-12 Classrooms with ELLs (Egbert + Ernst-Slavit, 2011, Pearson)



Background
Knowledge

+ Background Knowledge

Stock Market Crash

- Dow Jones
- Stock Market
- Stocks
- Borrow/Buy on margin
- Speculate
- Credit (vs. Savings)
- Bankruptcy

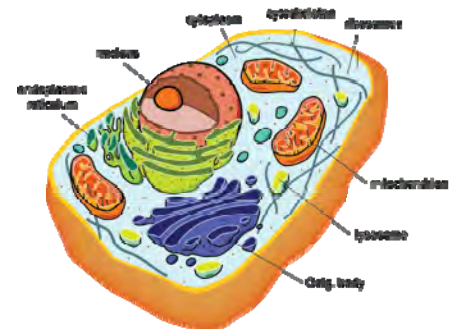
Cell Structure

- Factory (for metaphor); jobs, tasks, functions, shipping
- Biologists
- DNA/RNA
- Molecules
- Protein, Carbohydrates
- Digestion
- Disease
- Power/Force/Pressure



Using Video to Frontload Background Information Prior to Reading

- Watch rate of speech
- Look at visual support while audio plays—helpful in explaining content shared?
- Length of video (2-3 minutes optimal)
- Play several times using active listening activities (focus students' viewing; stop to discuss in 1 minute segments; use supplemental visuals as needed)
- OK for Transitioning /Expanding ELLs enrolled in integrated ENL content classes?



The Stock Market Crash



<https://www.youtube.com/watch?v=ehy2jEeNuWk>

Corporation, stock, stock exchange/stock market;
Dow Jones Industrial Average, index, economic growth,
economic analyst, trading, investor, economy, bankruptcy

+ Focused Viewing

A. List 3 things cells have in common

B. What are the two major categories of cells? How do they differ?

C. What are organelles? What does the nucleus do?

Let's Try A Focused Viewing Activity!

Preview
Video:
Frontloading
of Information
will Read in
Text

How Did Focused
Viewing Change
Your Listening and
Capturing of
Information?

+ Cell Structure Video: Frontloading

<https://www.youtube.com/watch?v=URUJD5NEXC8>



Same
Information
in Spanish

+ Spanish Version: Overview
https://www.youtube.com/watch?v=JwXrDyiN_SM

19:28 minutes

Planning Instruction for ELLs in Integrated Content Area Classes

Background Knowledge to Build	
Academic Vocabulary to Develop	
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Map/Graphic Skills to Practice	
Communicative Functions Expected (Bilingual Progressions; with Differentiation for ELLs of Varied Proficiency Levels)	

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**Academic
Vocabulary**

1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 2679, 26

Dee Gardner,
Academic
Vocabulary
List (AVL)

Examples of AVL Word Families

14	level	79201	level (n) 78162 level (j) Edu 3119 level (v) 1145 high-level (j) 917 leveling (n) 76 leveling (j) 46 leveler (n) 21 leveled (j) 12 levelly (r) Soc 1
15	process	78679	process (n) 66382 process (v) 6739 processing (n) 5558 processor (n) Sci 3072 processed (j) Med 535 unprocessed (j) Med 85 reprocess (v) Law 41
16	culture	77470	culture (n) 42561 cultural (j) 34239 culturally (r) Edu 3586 cross-cultural (j) Edu 1176 subculture (n) 670 intercultural (j) Edu 398 cultured (j) 284 subcultural (j) 81 uncultured (j) 38
17	history	77164	history (n) 53474 historical (j) 19615 historian (n) His 7700 historically (r) 4075 historic (j) 3441 prehistory (n) 259 historicity (n) Hum+Rel 184 historicism (n) Hum 165
18	active	76010	activity (n) 55151 active (j) 14938 activist (n) 4067 actively (r) 4000 activism (n) 1419 inactive (j) 502 inactivity (n) Med 286 active (n) Med 39

■ **Depression**⁴⁰⁸

■ **Economy**³⁷ (economist)

■ Prosperity

■ Election

■ Stock Market

■ Disaster

■ Stocks; Bonds

■ Price(s)

■ Company/Firm/Business

■ Worth

■ Savings; Bank/Banking

■ **Unemployment**²⁰³

■ Prosper

■ Invest

■ Rise

■ Own

■ Borrow

■ Buy/Sell (Dump)

■ **Decline**⁴⁶¹ (crash, plunge)

■ **Increase**¹²

■ Lose (a job; savings)

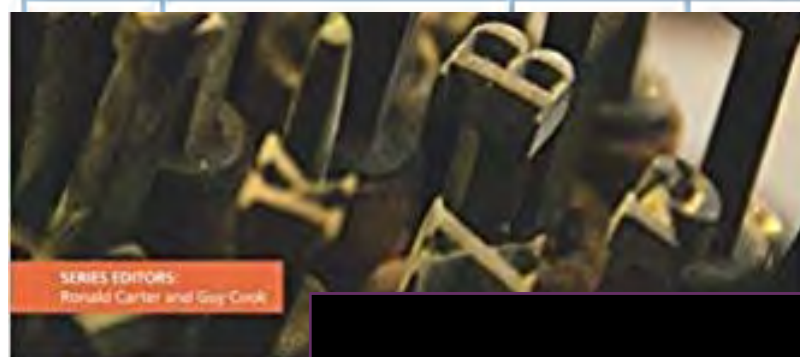
■ **Recover**¹⁵⁷⁶

Superscript denotes an
AVL word frequency

- **Rich**
- **Poor**
- **Shrewd**
- **Lucky/unlucky**
- **Bankrupt**

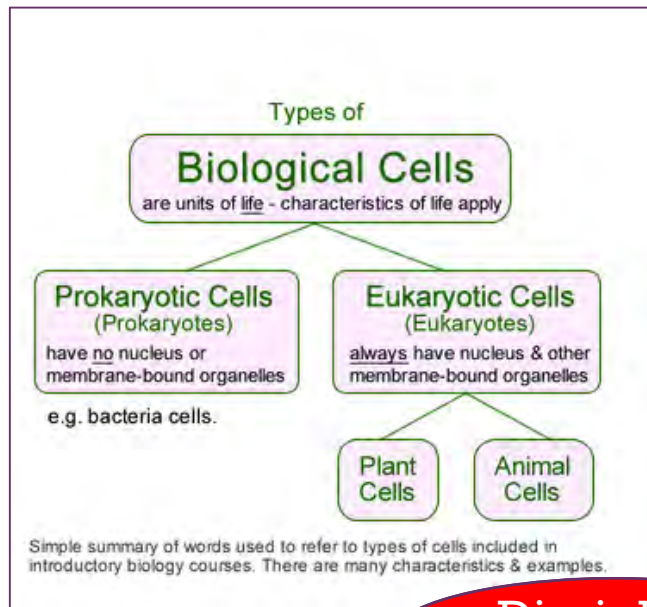


37	economy	60070	<u>economic</u> (j) 52368 economy (n) 23059 <u>economics</u> (n) 4885 economist (n) 2346 <u>economically</u> (r) 2817 economical (j) 538 economize (v) 741 <i>uneconomic</i> (j) Law 43 <i>uneconomical</i> (j) 30
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Dee Gardner, Academic Vocabulary List (AVL)

+ Cell vocabulary



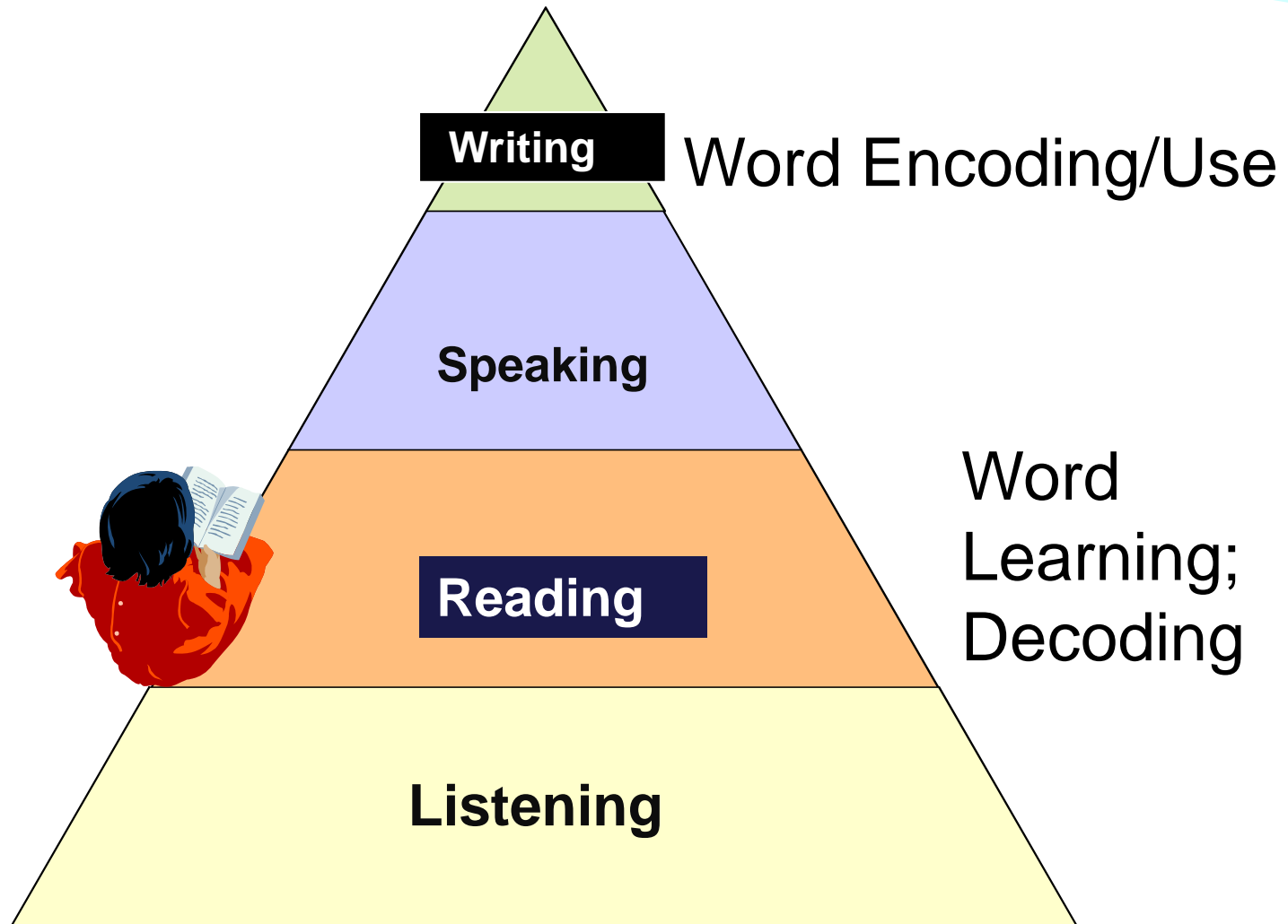
Discipline:
Technical

- Identify⁶³
- Pattern¹⁶³
- Controls²⁶
- Processes¹⁵
- Contains¹⁷⁷
- Combines³⁰⁹
- Condenses¹⁴⁶⁴
- Synthesizes⁷⁵³
- Convert⁵³²
- Function¹¹⁴

AVL Cross-Discipline Words

- | | | |
|--------------------|-------------------------|--------------------|
| ■ Eukaryotic cell | ■ Endoplasmic reticulum | ■ DNA |
| ■ Organelle | ■ Golgi apparatus | ■ RNA |
| ■ Cytoplasm | ■ Lysosome | ■ <i>Disease</i> |
| ■ Nuclear envelope | ■ Vacuole | ■ <i>Digestion</i> |
| ■ Chromatin | ■ Mitochondrion | |
| ■ Chromosome | ■ Chloroplast | |
| ■ Nucleolus | ■ Cytoskeleton | |
| ■ Ribosome | ■ Centriole | |

Actively Build All of the Vocabulary Sets As
You Teach Reading and Writing!



4 Vocabulary Sets

Montgomery

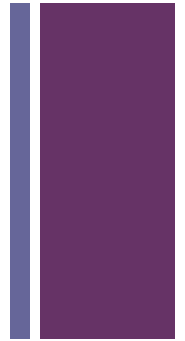


+ Trying It Out

Choose Vocabulary to Teach

**Choose only 6-8 Words to
Teach Intensively**

+ Frontloading Vocabulary



SELECTING VOCABULARY TO TEACH

INSURING COMPREHENSION

PROVIDING PRACTICE



- +
- **Depression**⁴⁰⁸
 - **Economy**³⁷ (economist)
 - Prosperity
 - Election
 - Stock Market
 - Disaster
 - Stocks; Bonds
 - Price(s)
 - Company/Firm/Business
 - Worth
 - Savings; Bank/Banking
 - **Unemployment**²⁰³

■ Prosper

■ Invest

■ Rise

■ Own

■ Borrow

■ Buy/Sell (Dump)

■ **Decline**⁴⁶¹ (crash, plunge)

■ **Increase**¹²

■ Lose (a job; savings)

■ **Recover**¹⁵⁷⁶



- **Rich**
- **Poor**
- **Shrewd**
- **Lucky/unlucky**
- **Bankrupt**

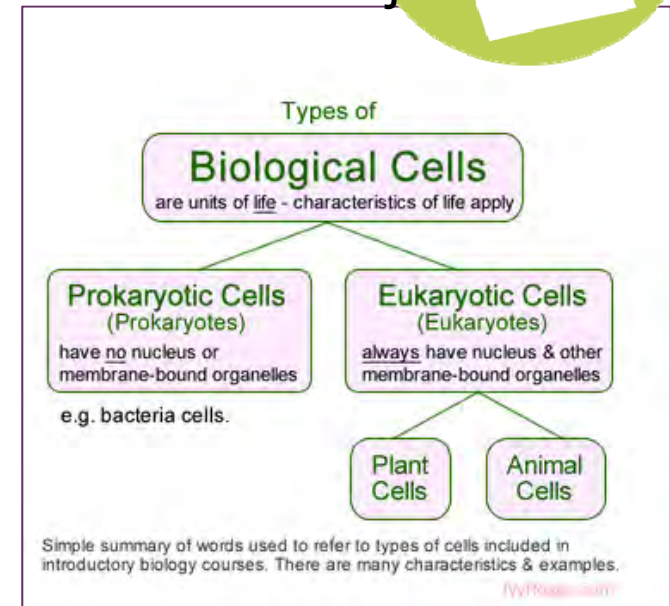
+ Cell vocabulary



- Biologists
- Structures
- Protein
- Carbohydrate
- Membrane
- Molecule
- Pressure
- Power
- Force
- Bound



- Identify⁶³
- Pattern¹⁶³
- Controls²⁶
- Processes¹⁵
- Contains¹⁷⁷
- Combines³⁰⁹
- Condenses¹⁴⁶⁴
- Synthesizes⁷⁵³
- Convert⁵³²
- Function¹¹⁴



- | | | |
|--------------------|-------------------------|--------------------|
| ■ Eukaryotic cell | ■ Endoplasmic reticulum | ■ DNA |
| ■ Organelle | ■ Golgi apparatus | ■ RNA |
| ■ Cytoplasm | ■ Lysosome | ■ <i>Disease</i> |
| ■ Nuclear envelope | ■ Vacuole | ■ <i>Digestion</i> |
| ■ Chromatin | ■ Mitochondrion | |
| ■ Chromosome | ■ Chloroplast | |
| ■ Nucleolus | ■ Cytoskeleton | |
| ■ Ribosome | ■ Centriole | |

Vocabulary Self-Awareness

VOCABULARY IN CONTEXT

[illegible]

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STOCK MARKET CRASH

Meaning Making

Word Builder



Name: _____

Date: _____

[illegible]