

PREPARE.

PREPARE.

EXCEL.

SUCCEED.

SUCCEED.

EXCEL



SUCCESS... PLAN ON IT!

Have A Great School Year By Planning Successfully.
These Important Features Will Help!

Current school week, complete with days and dates, are at the top of each page. A convenient monthly calendar is on the left page.

Goals are important! Ample space is available to record weekly goals.

Weekly focus on vocabulary with words often found in college testing.

Questions and facts on every week will help improve standardized test scores.

Structured after-school planning area to schedule all extra-curricular activities.

Subjects can easily be seen across the page for a full, weekly view. Extra space is provided for your unique subjects.

Check off completed homework in these designated spaces.

Keep important parent/teacher communication ties strong. This area is available to record important signatures.

This planner belongs to:

Name: _____

School: _____

Homeroom: _____ Grade: _____

Phone Number: _____

Email: _____



STUDY TIPS

How can you make the most of your free time?

Plan ahead! If you get organized and plan a specific time to study each day, you'll get more done in less time, earn better grades, and have more time to spend with friends.

Manage Your Time Wisely

Managing your time isn't always easy! Your planner will help you use your time efficiently and effectively. By organizing your time and planning ahead, you will actually save time.

Do you need some pointers on how to get started? Follow these time management tips and discover that time is really on your side!

- Use your planner to plan ALL of your commitments—not just your homework.
- Arrange your time in manageable blocks. Be realistic. Allow more time for subjects where you have difficulty or want to improve.
- When is your best time of day? Try to study then. You'll do your very best work during this time.
- Balance is the key to time management. Balance your extracurricular activities with academics. Don't try to do too much, as it could negatively affect your grades.
- Follow up on the priorities you have set for yourself, and don't let other people or other interests distract you from your goals.

Record Success Just Like Assignments

When you complete an assignment, test, etc., check it off when finished. There is nothing more satisfying than seeing concrete evidence of your accomplishments!

Don't Rely On Your Memory

For each subject line, record the assignments that are given. Write the due date in the proper area(s)—even if it's due tomorrow! This will help build planning skills by forcing you to develop habits by repetition. If you forget a day or two, don't get discouraged, jump back into the routine!

Plan Ahead

- Set aside time each day to read through class notes, complete homework assignments, and plan for the next day.
- You will remember more information and need less time to study for tests because the information will be more familiar to you.

Homework Tips

- Have a scheduled time to do your homework in a place that is free from distractions.
- Have all the supplies you need to complete your work, including pencils, paper, laptops, calculators, etc.
- Prioritize your assignments. Get in the habit of doing the most difficult assignments first before you get too tired. This way your homework gets easier as you go.
- Be neat and complete and check your work for errors.
- Study with someone else. You can help each other.
- Keep contacts in your planner in case you have any questions or missing assignments.

SOAR into the Achievement Zone!

Follow this easy 4-step plan to make sure you do all the work and meet all the commitments that are expected of you at school and after school.

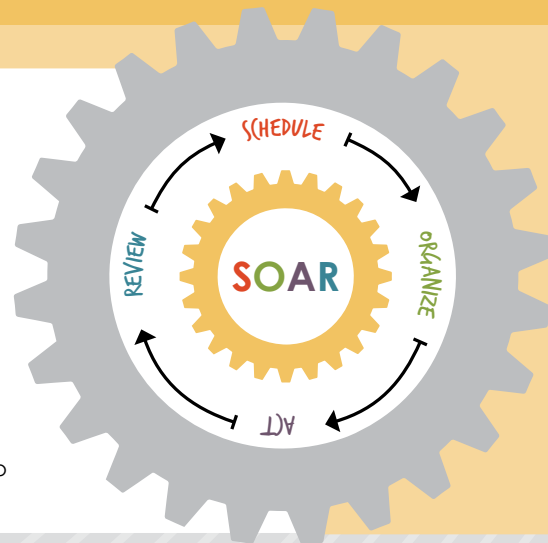
SCHEDULE, ORGANIZE, ACT, REVIEW

1) Schedule every commitment by writing it in this planner on the date it is assigned or the date you'll be completing it. This includes homework, after school activities, social activities, family events, and all other tasks.

2) Organize all resources needed to complete each commitment you have recorded. Don't wait until the last minute. Make sure you have everything you need to fulfill your commitments whether it is printer ink to print a report or cookies you promised to bring to an after school meeting.

3) Act. Do each commitment to the best of your ability. It is easy to do less than your best, especially when you are busy, but you will be more pleased with yourself if you know you did your best.

4) Review the work you have done and what you accomplished by completing all of your commitments. Continually look for ways to improve!



Copyright © 2024–25 Success by Design, Inc. • 2025D

READING AND TECHNOLOGY

Integrating Print and Digital Technologies

Our Brains are Amazing and Complex!

The way the brain learns from paper and printed material/books is different than how it learns from reading on screens such as phones and tablets.¹

I remember reading about pandas at the bottom of the right-hand page...



Since books have text that is set in a stationary place, the brain can latch on to that physical space and remember it better. For example, sentences and paragraphs are set in size, shape and location. A book has set left and right pages that give 8 total physical corners that our minds can remember.¹

Students in the U.S. report:²

85% multitask when reading DIGITALLY

only 26% multitask when reading in PRINT

When asked which platform contributes to their best success for reading (print, tablet, e-reader, phone, or computer), 92% of students said they concentrated best when reading in ...

PRINT!

Integration Tips!

However, using technology is important for well-rounded growth. Here are some tips as to how you may integrate your paper planner with technology!

STEP 1: In your digital calendar set alerts for events that you will be attending—games, work, family activities, etc. Also, note the time you set aside to do your homework. When you are alerted to do your homework, then you can refer to your Success by Design Student Planner.

STEP 2: Your Student Planner may have preprinted subjects, or you may be able to write in your specific subjects. In this paper planner, you will have the space to **write all the details**

Screen Reading

- Most reading on a screen is scrolling and moving continuously so your brain doesn't have anything to latch on to and remember as easily!¹
- Another reason your teacher may have you read or write with paper (and not review and type on screen) is to help your concentration and focus.³
- **It has been proven that students are most likely to skim, browse and jump around in an article on screen.**¹ Most screen devices have many distractions—alerts and notifications, other programs, Internet interests, music, etc.—all of which pull attention away from the reading.⁴

and information you need to know in order to accomplish your assignments successfully and completely.

For example: Alert yourself digitally, "Do homework from 6–8 p.m.," and then in your planner have written, "Math, pages 76–77, numbers 1–10. Use the new formulas."

See page 21 for in-text citation sources.

Copyright © 2024–25 Success by Design, Inc. • 2025D

DIGITAL AWARENESS

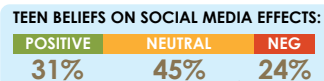
Stay Alert!

With the advancement of technology today, browsing the internet is at our fingertips. Smartphones and tablets are equipped with apps that make communication instant—so instant that texting, checking emails, browsing the internet, messaging, and scrolling social media have become ingrained within our everyday lives.

Social media can be a great way for people to communicate and stay connected online—whether they are within the same household, or across the globe! However, with this amazing ability comes a hefty responsibility. Being connected can be a mix of positive—and sometimes negative outcomes. **Learn how to balance online life safely!**

WHAT EFFECT DOES SOCIAL MEDIA HAVE ON YOUR LIFE?

"A plurality of teens (45%) believe social media has neither a positive nor negative effect on people their age. Meanwhile, roughly three-in-ten teens (31%) say social media has had a mostly positive impact, while 24% describe its effect as mostly negative."¹



Technology & Social Media—A Balancing Act

POSITIVES (THE GOOD)

Some positive effects teens listed about social media include:

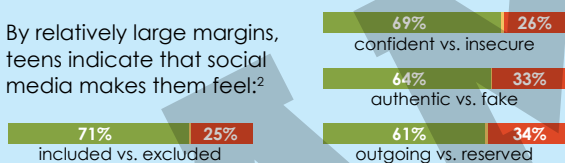
- Connecting with friends and family
- Convenient news / info source
- Meeting new people with similar interests
- Entertainment
- Self expression
- Support from others
- Learning new things¹

NEGATIVES (THE NOT-SO-GOOD)

Some negative effects teens listed about social media include:

- Bullying and rumor spreading
- Lack of in-person contact
- Unrealistic views of other's lives
- Causes distraction / addiction
- Mental health issues
- Peer pressure
- Drama¹

By relatively large margins, teens indicate that social media makes them feel:²



59% of teens in the U.S. have experienced some type of cyberbullying. Name calling and rumor spreading are top forms.³



Consider This!

- Constant updates on what friends and family are doing make it easy to compare our lives to others. Step away from time online when it's bringing you down. Turn notifications off to avoid constant updates.⁵
- Phones, tablets, TVs, and computer screens give off blue light, which is similar to daylight. This confuses the body into a state of daytime alertness. Shut off your devices with plenty of time to unwind before bed, so you can get quality, uninterrupted sleep!⁶
- Think before you post. **Once something is on the internet, it can be very difficult or impossible to remove completely.** Photos, videos, and words can be seen, shared, and saved by thousands of people, even if unintended.
- While it's easy to stay in touch with your friends and family online, nothing beats in-person contact! Don't forget to set up times to hang out, talk, and do fun activities with your people—phones aside.

Privacy & Security

Passwords: Keeping your passwords secure is important.

- ✓ don't use the same password for multiple accounts
- ✓ avoid sharing your passwords
- ✓ create strong passwords by using more characters

Password Tip v Create a strong password by using numbers, symbols, and upper and lowercase letters. For example, create a phrase that you can remember, but is random to others, like Sharks24Blue!headphone\$.⁴

Privacy Settings: Social media apps, web browsers, etc. have various settings you can adjust to maintain security.

- ✓ make your profile private when possible
- ✓ turn current location sharing settings off
- ✓ adjust settings to manually approve photos you are tagged in

Safety: Things are not always the way they seem in an online world. Be vigilant and protect your security!

- ✓ If you suspect somebody has hacked your account, change your password or disable the account.
- ✓ Review the newsfeeds for all social media friend requests before you accept a request.

See page 21 for in-text citation sources.

GREEN LIVING

Our Planet

We live on an amazing planet filled with many different resources! However, as our population grows and technologies advance, our way of life needs to be evaluated.

The earth's water systems, land, and atmosphere are facing pollution and depleting resources. If we don't pay attention to our planet, our planet may not be able to sustain us well in the future!

The World Counts states it this way:

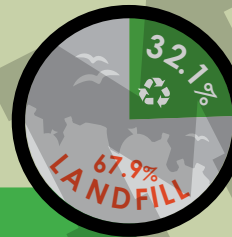
"If Earth's history is squeezed into one year, modern human has existed for 37 minutes and used up a third of Earth's natural resources in the last 0.2 seconds."¹



Check out The World Counts' website at www.theworldcounts.com for more information and statistics.

Reduce and Reuse: A Better Way

The latest U.S. government data from 2018 states that out of 292.4 million tons of trash produced only approximately 32.1% was recycled and composted!²



While recycling your **CLEAN** items is essential, **REDUCING** the need for unnecessary products and packaging is even better! **Here are some ideas:**

- Stop purchasing bottled water—choose a reusable bottle instead.
- Bring cloth bags when you go shopping instead of using the store's provided plastic bags. (Or skip the bag if you only have a couple of items!)
- Use cloth rags for cleaning (instead of paper towels) and washcloths as napkins.

Green Speak

Check out these green vocab words!³

food mile: the distance from the area a food item is produced to the area where it is consumed

trashion: fashionable items that are made from used and recycled elements

upcycling: the act of reusing materials to create a new product of higher value or better quality than the original

See page 21 for in-text citation sources.

Life with Plastic

PETE (PET), or #1 plastics, are a strong petroleum-based plastic that is used to make many "disposable" containers—such as the common water bottle.

! PETE plastics are not biodegradable, so when a water bottle ends up in a landfill, it takes hundreds of years to break down. And during that time, it will simply break into smaller pieces, further polluting the environment.⁴

Leave the cap ON!?

PETE bottles with caps (made from PP and HDPE) are ground into "flake" and washed. "PET will sink, PP and HDPE will float." The plastics are then separated for recycling.⁵

There is a lot of confusion as to whether or not the plastic caps should be left

on bottles that are sent off for recycling. According to **The Association of Plastic Recyclers:**

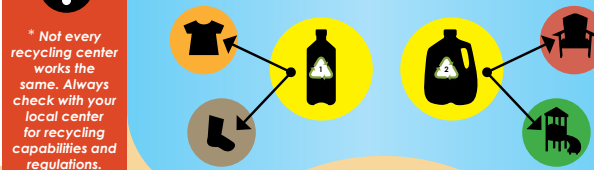
"Recycling collection and processing technology has improved, demand for the recyclable material has increased, allowing for the current **CAPS ON** recycling message and process."^{5*} (capitalization emphasis added)

Scan the QR code for a demo on the float/sink process.



HIGHLY RECYCLABLE	1 PETE	POLYETHYLENE TEREPHTHALATE = clear plastic Examples: water, soda, mouthwash, and cooking oil bottles
HIGHLY RECYCLABLE	2 HDPE	HIGH DENSITY POLYETHYLENE = stiff plastic; opaque Examples: milk jugs, detergent and shampoo bottles, margarine tubs, bottle caps
HARDLY RECYCLABLE	3 V	POLYVINYL CHLORIDE Examples: pipes, hoses, clear medical tubing, vinyl, auto product bottles
MODERATELY RECYCLABLE	4 LDPE	LOW DENSITY POLYETHYLENE = flexible plastics Examples: squeezable bottles, hand cream bottles, grocery and bread bags
HIGHLY RECYCLABLE	5 PP	POLYPROPYLENE Examples: yogurt tubs, medicine containers, ketchup bottles, kitty litter buckets
HARDLY RECYCLABLE	6 PS	POLYSTYRENE Examples: disposable cups, plasticware, coffee cups, packing peanuts, to-go containers
HARDLY RECYCLABLE	7 OTHER	OTHER = combinations of 1-6; less common plastics Examples: toys, sippy cups, cds/dvds, lenses, medical/dental equipment

What Can Plastics Become?⁶



! Not every recycling center works the same. Always check with your local center for recycling capabilities and regulations.

Parts of Speech

NOUN

Proper nouns are capitalized and refer to specific persons, objects, ideas, or places.

Examples: John, White House, Monday, Slovakia

Common nouns refer to any person, object, place, or idea.

Examples: house, building, boy, city, anger, desk

PRONOUN

A **pronoun** takes the place of a noun.

Example: Tom washed *his* car on *his* day off.

VERB

A **verb** shows action or state of being. It also indicates the time of that state or action.

Examples: He *worked* on Friday. (*past*)

I *need* to place the order. (*present*)

He *will present* his report tomorrow. (*future*)

ADJECTIVE

Adjectives describe nouns by modifying them. They can specify color, size, number, etc.

Example: The *green* van struck the *metal* pole near the *third* intersection.

Punctuation

PERIOD

Place a period at the end of a declarative sentence.

Example: We arrive at school each day at 8 am.

In addition, use a period at the end of an imperative sentence that does not express strong emotions.

Example: Sit down.

COMMA

Use commas to separate words and phrases in a series.

Example: Bill has two dogs, one cat, and a hamster.

QUESTION MARK

Use after all interrogative sentences.

Example: Where did you go on vacation?

EXCLAMATION MARK

Use after sentences that express surprise or emotion.

Example: You scared me!

Figurative Language

SIMILE

A **simile** is a comparison between unlike things using the words "like" or "as."

Examples: He was motionless *like* a statue.

She was quiet as a mouse.

HYPERBOLE

A **hyperbole** is an extended exaggeration.

Example: I have a *ton* of questions to ask.

ADVERB

Adverbs are words which describe verbs, other adverbs, or adjectives. They specify in what manner, when, how much, and where.

Example: The crowd reacted *violently* when it was confronted.

PREPOSITION

Prepositions indicate how nouns and pronouns are related to another word in a sentence.

Examples: Paul stood *behind* the fence.

The cat jumped *onto* the bed.

CONJUNCTION

Conjunctions join words, clauses, and phrases.

Examples: Your drink options are *either* coffee or tea.

John could not react fast enough *because* of a poorly healed foot.

INTERJECTION

Interjections are words which convey emotion, often indicated by the use of an exclamation point.

Example: Wow! What a beautiful car!

SEMICOLON

Use when a conjunction is omitted; it indicates a greater degree of separation than a comma would.

Example: The road was bumpy and curvy; the scenery grand.

COLON

Colons are used to start a list or to formally introduce a statement.

Example: He has three cars: a Mustang, Camaro, and a Duster.

QUOTATION MARKS

Use quotation marks around a direct quotation.

Example: He said, "I want to go home."

APOSTROPHE

Use an apostrophe to show contracted words such as it's (for it is) or to show possession as in Bill's bike.

METAPHOR

A **metaphor** is a comparison between unlike things in which one thing becomes another.

Example: Her eyes were sparkling *diamonds*.

PERSONIFICATION

Personification is attributing human characteristics to an inanimate object or animal.

Example: The fox *begged* the hunters to chase him.

Capitalization

Capitalize the following—

1. The first word in a sentence.
2. Days of the week, months, holidays, periods and eras in history, trade names, streets, formal documents, geographical names, political parties, holy days, and official titles.
3. Words such as history or math when the words are a part of a specific course. Do not capitalize such words when they indicate a field of study.
4. Words such as brother, mother, or doctor when they are a part of the title or when they are a substitute for the noun.
5. Points of the compass. Do not capitalize words which indicate simple direction.

6. Words which refer to the Supreme Being. Capitalize the word Bible, the books of the Bible, and the names of all holy books or sacred works.
7. The first word in a direct quote.
8. Words denoting religions, languages, nationalities, and races.
9. Names of organizations.
10. Degrees, titles, and abbreviations of organized groups.
11. The first word of a title, the last word, and all words in between except short conjunctions or prepositions.
12. The first word in a greeting or the closing of a letter.

Spelling Rules

1. I before E (field, yield), except after C: (deceive, conceive), or when there's an "ay" sound (weigh, eight).

Exceptions: their, weird, seize, either, receive

2. If a word ends with a "y" and is preceded by a consonant, then the "y" becomes an "i". If the preceding letter is a vowel, the "y" remains unchanged.

Examples: heavy+er = heavier; portray+ed=portrayed

3. On words ending with a consonant preceded by a single vowel (drip, can, begin), double the consonant before adding -ing or -ed.

Examples: drip+ing=dripping, tan+ed=tanned

4. If a word ends with a silent final "e" (bite, move, desire), drop the "e" if the suffix starts with a vowel (ing, ence). Keep the "e" if the suffix starts with a consonant (less, ty).

Examples: use+able=usable; use+ful=useful

Exceptions: argument, judgment, simply, truly, noticeable

Writing Skills

Paragraph Writing

1. **Write a topic sentence.**
The topic sentence tells the main idea of your paragraph.
2. **List supporting ideas.**
3. **Make a rough outline.**
Eliminate irrelevant items.
4. **Write the paragraph.**
5. **Add the clincher.**
A clincher sums-up the paragraph.
6. **Revise and edit.**
Make sure sentences flow in an organized fashion. Reword or reorganize information.
7. **Proofread.**
Read and correct grammar, spelling, etc.
8. **Write the final copy.**

Essay Revising Tips

Finishing an essay is a great feeling! Getting an "A" on your essay is an even better feeling! How are your writing skills? Looking to improve?

Evaluate your past essays. What were your grades? Do you see ways in which you can improve your writing? Don't be afraid to seek the help of teachers for some friendly advice. Here are some tips that can help you bring your essays up to grade "A" standards!

1. **Read your draft aloud**—The simple act of reading your writing out loud, instead of quietly to yourself, will help you catch a surprising amount of errors.
2. **Did the order make sense?** After you've read your draft, evaluate it. Did all your paragraphs, facts, and details fall in the correct order?
3. **Do you like your paragraphs?** Need help writing stellar paragraphs? See "Paragraph Writing" in the column to your left!
4. **Make improvements**—Change at least two things in your essay that will make it better!
5. **Be sure to proofread**—Read over your essay one last time. Be sure to pay attention to punctuation, and remember to run spell-check on your computer!

ENGLISH

Commonly Misspelled Words

accidentally	consensus	harass	millennium	sergeant
accommodate	coolly	height	noticeable	severely
achievement	definitely	immediately	occasion	specifically
acquitted	despair	inadvertent	occurrence	subpoena
a lot	desperate	incidentally	performance	succeed
anoint	development	independent	permissible	succession
beneficial	embarrassment	indispensable	perseverance	supersede
benefited	eminent	insistent	privilege	their
broccoli	exceed	irresistible	professor	tomorrow
cemetery	existence	irritable	pursue	tyranny
changeable	exhilarate	liquefy	receive	weird
choose	experience	judgment	recommend	yield
chose	fiery	liaison	repetition	
compelled	foreign	loneliness	seize	
congratulations	grandeur	memento	separate	

Words Often Confused

accept: accept a gift except: every day except today	desert: a dry, hot desert dessert: pie for dessert	sole: the sole survivor soul: body, soul, and spirit
advice: listen to good advice advise: counselors advise students	forth: go forth into the crowd fourth: fourth in line	stationary: a stationary object stationery: correspondence written on stationery
affect: His speech affected the listeners. effect: the effect of the sun	hoping: hoping for a good grade hopping: a hopping rabbit	steal: to steal money steel: a bridge made of steel
already: He already ate. all ready: He was all ready to leave.	its: the color of its eyes it's: It's cloudy outside.	than: bigger than a bread box then: We left then.
altar: church's altar alter: alter the clothes; alter the report	loose: a loose connection; loose clothing lose: lose a toy	there: over there their: their house they're: They're not here.
angel: angel in heaven angle: a right angle	mantel: the fireplace mantel mantle: (cape or cloak) He put on the mantle.	to: to the car; to cheer too: I want some too; too often two: two soft drinks
breath: out of breath breathe: breathe fresh air	passed: passed a test; passed a car past: lived in the past; past errors	troop: Boy Scout troop troupe: a theatrical troupe
capital: nation's capital; a capital idea capitol: a capitol building	peace: live in peace piece: piece of cake	wander: He wandered aimlessly. wonder: I wonder what happened.
cite: to cite a source site: a building site sight: a terrible sight to see	precede: The National Anthem precedes the game. proceed: Proceed with your report.	weak: weak from starvation week: a week from today
clothes: to wear clothes cloths: cloths for cleaning	principal: the principal reason; a school's principal principle: the principle of good manners	weather: hot, humid weather whether: It doesn't matter whether we go or stay.
coarse: a coarse fabric; coarse language course: a race course; a history course	quiet: the quiet night quite: quite handsome	who's: Who's at the door? whose: Whose house is this?
complement: An attractive tie complements the suit. compliment: He complimented her attitude.	right: the right direction rite: the religious rites write: write a letter	your: Your feet are dirty. you're: You're angry.
counsel: The teacher gave the student good counsel. council: The council voted against the action.	shone: The sun shone on the valley. shown: He was shown the evidence.	

MATHEMATICS

Numbers

PRIME NUMBER
A whole number that has only two factors, itself and 1.
Examples: 2, 5, 7, 11, 17.

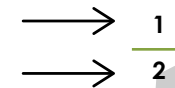
COMMON FACTOR
A number that is a factor of two or more numbers.
Examples: 1, 2, and 4 are common factors of the numbers 12 and 16.

GREATEST COMMON FACTOR
The greatest number that is a factor of two or more numbers.
Example: 4 is the greatest common factor of the numbers 12 and 16.

LEAST COMMON MULTIPLE
The smallest number that is a multiple of two or more numbers.
Example: 12 is the least common multiple of the numbers 2, 3, 4, and 6.

NUMERATOR
The number above the line in a fraction.

DENOMINATOR
The number below the line in a fraction.



Roman Numerals

Roman Numerals are numerical symbols formed with the Roman letters I, V, X, L, C, D, and M, representing respectively the numbers 1, 5, 10, 50, 100, 500, and 1000. Once used by the ancient Romans, the system of numbering can still be found today in certain formal contexts.

1 I	19 XIX	100 C
2 II	20 XX	101 CI
3 III	21 XXI	200 CC
4 IV	22 XXII	300 CCC
5 V	23 XXIII	400 CD
6 VI	24 XXIV	500 D
7 VII	25 XXV	600 DC
8 VIII	26 XXVI	700 DCC
9 IX	27 XXVII	800 DCCC
10 X	28 XXVIII	900 CM
11 XI	29 XXIX	1000 M
12 XII	30 XXX	1001 MI
13 XIII	40 XL	2000 MM
14 XIV	50 L	2001 MMI
15 XV	60 LX	5000 MMMMM or V
16 XVI	70 LXX	5001 MMMMMI or VI
17 XVII	80 LXXX	10,000 X̄ or
18 XVIII	90 XC	MMMMMMMMMMMM

Multiplication Table

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
2	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40
3	3	6	9	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60
4	4	8	12	16	20	24	28	32	36	40	44	48	52	56	60	64	68	72	76	80
5	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
6	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102	108	114	120
7	7	14	21	28	35	42	49	56	63	70	77	84	91	98	105	112	119	126	133	140
8	8	16	24	32	40	48	56	64	72	80	88	96	104	112	120	128	136	144	152	160
9	9	18	27	36	45	54	63	72	81	90	99	108	117	126	135	144	153	162	171	180
10	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200
11	11	22	33	44	55	66	77	88	99	110	121	132	143	154	165	176	187	198	209	220
12	12	24	36	48	60	72	84	96	108	120	132	144	156	168	180	192	204	216	228	240

MATHEMATICS

English/Metric Conversion

If you know— You can find— By multiplying by

Length	inches	millimeters	25
	feet	centimeters	30
	yards	meters	0.9
	miles	kilometers	1.6
Area	square inches	square centimeters	6.5
	square feet	square meters	0.09
	square yards	square meters	0.8
	square miles	square kilometers	2.6
Mass	ounces	grams	28
	pounds	kilograms	0.45
Liquid Volume	ounces	milliliters	30
	pints	liters	0.47
Volume	quarts	liters	0.95
	gallons	liters	3.8
Temperature	degrees Fahrenheit	degrees Celsius	subtract 32 and multiply by $\frac{5}{9}$

Equivalent Measurements

English System

Area

1 acre = 4840 square (sq) yards
1 sq mile = 640 acres
1 sq foot = 144 sq inches
1 sq yard = 9 sq feet

Length/Distance

1 foot (ft) = 12 inches
1 yard (yd) = 3 feet
1 yard = 36 inches
1 mile (mi) = 1760 yards
1 mile = 5,280 feet
1 nautical mile = 1.15 miles
1 league = 3 miles

Volume

1 tablespoon (T) = 3 teaspoons (t)

Volume (Continued)

1 cup (c) = 16 T
1 cup = 8 fluid oz (fl oz)
1 pint (pt) = 2 c
1 quart (qt) = 2 pt
1 quart = 4 c
1 quart = 32 fl oz
1 gallon (gal) = 4 qt

Weight

1 pound (lb) = 16 oz
1 ton = 2000 lbs

Metric System

1 m² = 10,000 cm²
1 hectare (ha) = 10,000 m²
1 km² = 100 ha
1 metric ton (t) = 1000 kg

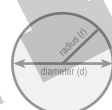
Perimeter and Circumference

Perimeter: The distance around an object. **Circumference:** The distance around a circle.

Polygon: $2(L + W)$



Circle: πd or $2\pi r$



Area: L = length; w = width; h = height; s = side; b = base; r = radius

Rectangle: $L \cdot w$



Parallelogram: $b \cdot h$



Square: s^2



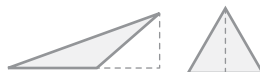
Circle: πr^2



Trapezoid: $\frac{1}{2}(b_1 + b_2)h$



Triangle: $\frac{1}{2}b \cdot h$



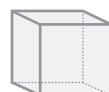
Surface Area and Volume

Surface Area: Find the area of each face and total. **Volume of Prisms:** Find the area of the base (b) and multiply by the height (h).

Rectangular Prism:
 $v = L \cdot w \cdot h$



Cube: $v = s^3$



Cylinder Volume: $v = \pi r^2 h$
Surface Area: $sa = 2\pi r^2 + 2\pi rh$



Cone: $v = \frac{1}{3}\pi r^2 h$



Sphere volume: $v = \frac{4}{3}\pi r^3$
Surface Area: $sa = 4\pi r^2$

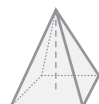


Triangular Prism: $v = b \cdot h$



Pyramid Volume: Find the area of the base (b); multiply by the height (h); and divide by 3.

Square Pyramid:
 $v = \frac{1}{3}bh$



Triangular Pyramid:
 $v = \frac{1}{3}bh$



Rectangular Pyramid:
 $v = \frac{1}{3}bh$



Copyright © 2024–25 Success by Design, Inc. • 2025D

MATHEMATICS

Algebra

Quadratic Equation—If $ax^2 + bx + c = 0$

$$\text{then } x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

Special Products—

$(a - b)^2 = a^2 - 2ab + b^2$
 $(a - b)(a + b) = a^2 - b^2$
 $a^3 + b^3 = (a + b)(a^2 - ab + b^2)$
 $a^3 - b^3 = (a - b)(a^2 + ab + b^2)$
 $(a + b)^2 = a^2 + 2ab + b^2$
 $a(b + c) = ab + ac$
 $(a + b)^3 = a^3 + 3a^2b + 3ab^2 + b^3$
 $(a - b)^3 = a^3 - 3a^2b + 3ab^2 - b^3$

Law of Exponents—If $a, b \in \mathbb{R}$, $a, b \geq 0$, and $p, q, r, s \in \mathbb{Q}$ then:

- $a^r a^s = a^{r+s}$
- $a^r / a^s = a^{r-s}$
- $(a^r)^s = a^{rs}$
- $(ab)^r = a^r b^r$
- $(a/b)^r = a^r / b^r$ ($b \neq 0$)
- $a^0 = 1$ ($a \neq 0$)
- $a^{-r} = 1/a^r$ ($a \neq 0$)
- $a^{r/s} = \sqrt[s]{a^r} = (\sqrt[s]{a})^r$
- $a^{1/2} = \sqrt{a}$
- $a^{1/3} = \sqrt[3]{a}$

Equations of a Line—(m = slope; b = y intercept)

Slope of a Line: $m = \frac{y_2 - y_1}{x_2 - x_1}$

Slope Intercept Form: $y = mx + b$

Point Slope Form: $(y - y_1) = m(x - x_1)$

Logarithms—

$\log x^r = r \log x$
 $\log(xy) = \log x + \log y$
 $\log(x/y) = \log x - \log y$
 $\log x = n \leftrightarrow x = 10^n$ (common log)
 $\log_a x = n \leftrightarrow x = a^n$ (log to the base a)
 $\ln x = n \leftrightarrow x = e^n$ (natural log)
 $\pi \approx 3.14159265$
 $e \approx 2.71828183$

Variation Models—For variables x, y , and z where k is a positive constant called the constant of variation.

Direct Variation: $y = kx$ or $y/x = k$

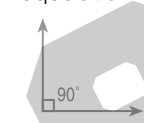
Inverse Variation: $y = k/x$ or $xy = k$

Joint Variation: $z = kxy$

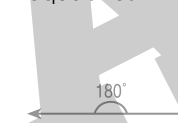
Geometry

Angles and Triangles: All angles of a triangle add up to 180°

Right angle: equals 90°



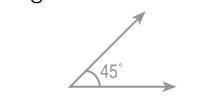
Straight angle: equals 180°



Obtuse angle: greater than 90° but less than 180°



Acute angle: less than 90° but greater than 0°



Equilateral triangle: all sides equal; all angles equal



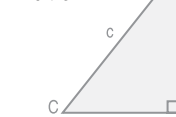
Isosceles triangle: two sides equal; two angles equal



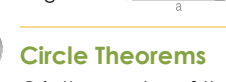
Scalene triangle: no sides equal; no angles equal



Right triangle: one angle is 90°



Pythagorean Theorem: sides a and b are legs; side c is hypotenuse; $a^2 + b^2 = c^2$ angles. This applies only to right angles.



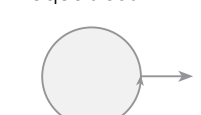
Complementary angles: two angles add up to 90°



Supplementary angles: two angles add up to 180°



Complete angle rotation: equals 360°

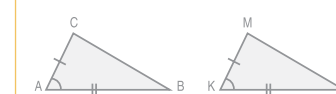


Congruency Cases

S.S.S. (Side, Side, Side)
 $\triangle ABC \cong \triangle DEF$



S.A.S. (Side, Angle, Side)
 $\triangle ABC \cong \triangle KLM$



A.S.A. (Angle, Side, Angle)
 $\triangle ABC \cong \triangle QRS$



H.S. (Hypotenuse, Side)
 $\triangle ABC \cong \triangle XYZ$



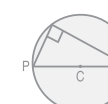
Copyright © 2024–25 Success by Design, Inc. • 2025D

Circle Theorems

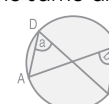
C is the center of the circle



$\angle x = 90^\circ$ PQ is a diameter



$\angle a = \angle b$ angles subtended on the same arc AB



SCIENCE

Measurements of Astronomy

Measurement	Earth	Sun	Moon
Mass (m)	5.98×10^{24} kg	1.99×10^{30} kg	7.35×10^{22} kg
Radius (r)	6.37×10^3 km	6.96×10^5 km	1.74×10^3 km
Average Density	5.52 g/cm ³	1.42 g/cm ³	3.34 g/cm ³

Specific Heat of Common Materials in:

Water	=	4180	Aluminum	=	903	Copper	=	385
Alcohol	=	2450	Carbon	=	710	Brass	=	376
Ice	=	2060	Glass	=	664	Silver	=	235
Steam	=	2020	Iron	=	450	Lead	=	130

J
kg • k

Physics Equations

Density

m is mass; v is volume

$$D = \frac{m}{v}$$

Distance

v is velocity; t is time

$$d = v \cdot t$$

Acceleration

vf is final velocity;
vi is initial velocity;
t is time

$$a = \frac{(vf-vi)}{t}$$

Distance

vi is initial velocity;
t is time;
a is acceleration

$$d = vi \cdot t + \frac{1}{2} \cdot a \cdot t^2$$

Net Force

m is mass; a is acceleration

$$F = m \cdot a$$

Kinetic Energy

m is mass; v is velocity

$$K.E. = \frac{1}{2} \cdot m \cdot v^2$$

Force of Gravity

G is universal gravitational constant; m₁, m₂ are masses of the two objects; r is the distance between the centers of the objects

$$F_g = G \frac{m_1 \cdot m_2}{r^2}$$

Work

F is force; d is distance

$$W = F \cdot d$$

Power

W is work; t is time

$$P = \frac{W}{t}$$

Momentum

m is mass; v is velocity

$$p = m \cdot v$$

Electrical Force

Q₁, Q₂ are electrical charges;
d is separation distance;
k is Coulomb's constant

$$F_e = \frac{(k \cdot Q_1 \cdot Q_2)}{d^2}$$

$$k = 9.0 \cdot 10^9 \frac{N \cdot m^2}{C^2}$$

Electric Current

Q is electric charge flowing;
t is time

$$I = \frac{Q}{t}$$

Electrical Energy

V is voltage; I is current; t is time

$$W = V \cdot I \cdot t$$

Power

V is voltage; I is current

$$P = V \cdot I$$

Electrical Potential Difference

V is volts; W is work done; Q is electric charge moving

$$V = \frac{W}{Q}$$

Heat Energy

c is specific heat; m is mass;
DT is change in temperature

$$H = c \cdot m \cdot \Delta T$$

SCIENCE

The Periodic Table

The periodic table is organized into groups (1-7) and periods (1-18). A legend identifies element categories: METALLOIDS (green), OTHER NONMETALS (light green), HALOGENS (red), NOBLE GASES (blue), ALKALI METALS (orange), ALKALINE EARTH METALS (yellow), LANTHANOIDS (light blue), ACTINOIDS (dark blue), TRANSITION METALS (purple), and POST-TRANSITION METALS (pink).

GROUP	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
PERIOD 1	1 H HYDROGEN 1.00794																	
PERIOD 2	3 Li LITHIUM 6.941	4 Be BERYLLIUM 9.0122		12 Mg MAGNESIUM 24.305														
PERIOD 3	11 Na SODIUM 22.98977		19 K POTASSIUM 39.0983	20 Ca CALCIUM 40.078	38 Sr STRONTIUM 87.62													
PERIOD 4																		
PERIOD 5																		
PERIOD 6																		
PERIOD 7																		
PERIOD 8																		
PERIOD 9																		
PERIOD 10																		
PERIOD 11																		
PERIOD 12																		
PERIOD 13																		
PERIOD 14																		
PERIOD 15																		
PERIOD 16																		
PERIOD 17																		
PERIOD 18																		

Copyright © 2024-25 Success by Design, Inc. • 2025D

Copyright © 2024-25 Success by Design, Inc. • 2025D

CIVICS

Bill of Rights

Amendment I

*Religious establishment prohibited.
Freedom of speech, of press, and right to petition.*

Congress shall make no law respecting an establishment of religion, or prohibiting the free exercise thereof; or abridging the freedom of speech, or of the press; or the right of the people peaceably to assemble, and to petition the government for a redress of grievances.

Amendment II

Right to bear and keep arms.

A well-regulated militia being necessary to the security of a free State, the right of the people to keep and bear arms shall not be infringed.

Amendment III

Conditions for housing soldiers.

No soldier shall, in time of peace, be quartered in any house without the consent of the owner nor in time of war but in a manner to be prescribed by law.

Amendment IV

Right of search and seizure regulated.

The right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures, shall not be violated, and no warrants shall issue, but upon probable cause, supported by oath or affirmation, and particularly describing the place to be searched, and the persons or things to be seized.

Amendment V

*Provisions for prosecution. Trial and punishment.
Compensation for private property taken for public use.*

No person shall be held to answer for a capital, or otherwise infamous crime, unless on a presentment or indictment of a grand jury, except in cases arising in the militia or naval forces, or in the militia, when in actual service, in time of war or public danger; nor shall any person be subject for the same offense to be twice put in jeopardy of life or limb; nor shall

be compelled in any criminal case to be a witness against himself, nor be deprived of life, liberty or property, without due process of law; nor shall private property be taken for public use without just compensation.

Amendment VI

Right to a speedy trial. Witnesses, etc.

In all criminal prosecutions, the accused shall enjoy the right to a speedy and public trial, by an impartial jury of the State and district wherein the crime shall have been committed, which district shall have been previously ascertained by law, and to be informed of the nature and cause of the accusation; to be confronted with the witnesses against him; to have compulsory process for obtaining witnesses in his favor and to have the assistance of counsel for his defense.

Amendment VII

Right of trial by jury.

In suits at common law, where the value in controversy shall exceed twenty dollars, the right of trial by jury shall be preserved, and no fact tried by a jury shall be otherwise reexamined in any court of the United States, than according to the rules of common law.

Amendment VIII

Excessive bail or fines. Prohibition of cruel punishment.

Excessive bail shall not be required, nor excessive fines imposed, nor cruel and unusual punishment be inflicted.

Amendment IX

Rule of construction of Constitution.

The enumeration in the Constitution of certain rights shall not be construed to deny or disparage others, retained by the people.

Amendment X

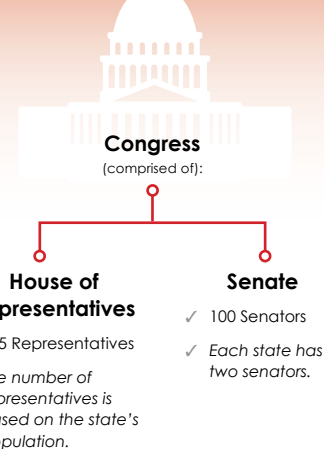
Rights of States under Constitution.

The powers not delegated to the United States by the Constitution, nor prohibited by it to the States, are reserved to the States respectively, or to the people.

The Branches of the U.S. Government*

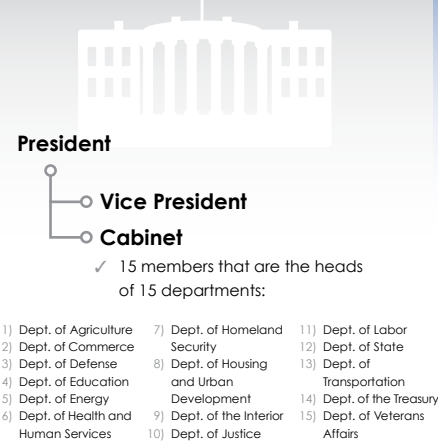
★ LEGISLATIVE

This branch **makes the laws.**



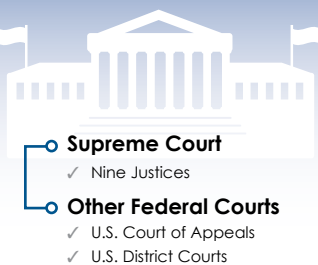
★ EXECUTIVE

This branch **enforces the laws.**



★ JUDICIAL

This branch **interprets the laws.**



* SOURCES:
"Branches of the U.S. Government." USAGov, <https://www.usa.gov/branches-of-government>.
The United States Government. (2021, January 17). The executive branch. The White House. Retrieved November 15, 2021, from <https://www.whitehouse.gov/about-the-white-house/our-government/the-executive-branch/>.

CIVICS

Order of Presidential Succession

1. The President
2. The Vice President
3. Speaker of the House
4. President pro tempore of the Senate
5. Secretary of State
6. Secretary of the Treasury
7. Secretary of Defense
8. Attorney General
9. Secretary of the Interior
10. Secretary of Agriculture
11. Secretary of Commerce
12. Secretary of Labor
13. Secretary of Health and Human Services
14. Secretary of Housing and Urban Development
15. Secretary of Transportation
16. Secretary of Energy
17. Secretary of Education
18. Secretary of Veterans Affairs
19. Secretary of Homeland Security

U.S. Presidents

Political Parties:				Federalist	Democratic-Republican	Whig	Union	Democrat	Republican		
#	President	Term Dates	Vice President	#	President	Term Dates	Vice President	#	President	Term Dates	Vice President
1	George Washington	1789–1797	John Adams	27	William H. Taft	1909–1913	James S. Sherman				
2	John Adams	1797–1801	Thomas Jefferson	28	Woodrow Wilson	1913–1917	Thomas Marshall				
3	Thomas Jefferson	1801–1805	Aaron Burr		Woodrow Wilson	1917–1921	Thomas Marshall				
	Thomas Jefferson	1805–1809	George Clinton	29	Warren G. Harding	1921–1923*	Calvin Coolidge				
4	James Madison	1809–1813	George Clinton	30	Calvin Coolidge	1923–1925					
	James Madison	1813–1817	Elbridge Gerry		Calvin Coolidge	1925–1929	Charles G. Dawes				
5	James Monroe	1817–1825	Daniel D. Tompkins	31	Herbert Hoover	1929–1933	Charles Curtis				
6	John Quincy Adams	1825–1829	John C. Calhoun	32	Franklin D. Roosevelt	1933–1937	John N. Garner				
	Andrew Jackson	1829–1833	John C. Calhoun		Franklin D. Roosevelt	1937–1941	John N. Garner				
	Andrew Jackson	1833–1837	Martin Van Buren		Franklin D. Roosevelt	1941–1945	Henry A. Wallace				
8	Martin Van Buren	1837–1841	Richard M. Johnson		Franklin D. Roosevelt	1945–1945*	Harry S. Truman				
9	William H. Harrison	1841–1841*	John Tyler	33	Harry S. Truman	1945–1949					
10	John Tyler	1841–1845			Harry S. Truman	1949–1953	Alben W. Barkley				
11	James K. Polk	1845–1849	George M. Dallas	34	Dwight D. Eisenhower	1953–1957	Richard M. Nixon				
12	Zachary Taylor	1849–1850*	Millard Fillmore		Dwight D. Eisenhower	1957–1961	Richard M. Nixon				
13	Millard Fillmore	1850–1853		35	John F. Kennedy	1961–1963*	Lyndon B. Johnson				
14	Franklin Pierce	1853–1857	William R. King	36	Lyndon B. Johnson	1963–1965					
15	James Buchanan	1857–1861	John C. Breckinridge		Lyndon B. Johnson	1965–1969	Hubert Humphrey				
16	Abraham Lincoln	1861–1865	Hannibal Hamlin	37	Richard M. Nixon	1969–1973	Spiro Agnew				
	Abraham Lincoln	1865–1865*	Andrew Johnson		Richard M. Nixon	1973–1974*	Gerald R. Ford				
17	Andrew Johnson	1865–1869		38	Gerald R. Ford	1974–1977	Nelson Rockefeller				
18	Ulysses S. Grant	1869–1873	Schuyler Colfax	39	James E. Carter	1977–1981	Walter Mondale				
	Ulysses S. Grant	1873–1877	Henry Wilson	40	Ronald Reagan	1981–1985	George Bush				
19	Rutherford B. Hayes	1877–1881	William A. Wheeler		Ronald Reagan	1985–1989	George Bush				
20	James A. Garfield	1881–1881*	Chester A. Arthur	41	George H. W. Bush	1989–1993	Dan Quayle				
21	Chester A. Arthur	1881–1885		42	William J. Clinton	1993–1997	Albert Gore				
22	Grover Cleveland	1885–1889	Thomas A. Hendricks		William J. Clinton	1997–2001	Albert Gore				
23	Benjamin Harrison	1889–1893	Levi P. Morton	43	George W. Bush	2001–2005	Richard Cheney				
24	Grover Cleveland	1893–1897	Adlai E. Stevenson		George W. Bush	2005–2009	Richard Cheney				
25	William McKinley	1897–1901	Garret A. Hobart	44	Barack Obama	2009–2013	Joe Biden				
	William McKinley	1901–1901*	Theodore Roosevelt		Barack Obama	2013–2017	Joe Biden				
26	Theodore Roosevelt	1901–1905		45	Donald Trump	2017–2021	Mike Pence				
	Theodore Roosevelt	1905–1909	Charles A. Fairbanks	46	Joe Biden	2021–Present	Kamala Harris				

* Did not finish term

MONTHLY CALENDARS

JULY 2024

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

AUGUST 2024

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

MONTHLY CALENDARS

SEPTEMBER 2024

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

OCTOBER 2024

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

Copyright © 2024-25 Success by Design, Inc. • 2025D

Copyright © 2024-25 Success by Design, Inc. • 2025D

