


Name $\qquad$

## Plannersmun PUAPESE

 by SUCCESSHomeroom
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E-Mail

## SOAR

## PRINT VERSUS DIGITAL

## integrating Print and Digital Technologies

 as easily! ${ }^{1}$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. ${ }^{1}$ 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.

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

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. ${ }^{4}$


STUDENTS IN THE U.S. RIPPORT\&²


When asked what platform students most preferred for reading (print, tablet, e-reader, phone, or computer), $9.2 \%$ said that they concentrated best when reading in.

Integration Tips! However, using technology is important for well-rounded growth Here are two easy steps on how you may integrate your paper planner with technology!

1) In your digital calendar set alerts for events that you will be attendinggames, 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.
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 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."
(1) Stay Alert! Texting, checking emails, browsing the internet, messaging, and scrolling social media have become ingrained within our everyday lives. This 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!

ㅇ 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. ${ }^{2}$
( 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! ${ }^{3}$
(8) 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

"A plurality of teens (45\%) believe social
media has neither a positive nor negative "A plurality of teens (bositive nor negative
media has neither a their age. Meanwhile, effect on people their teens ( $31 \%$ ) say
roughly three-in-ten teens roughly thrie--has had a mostly positive
social media has
 impact, while 24,
mostly negative."
TEEN BELIEFS ON SOCIAL MEDIA EFFECTS:


Privacy Settings: Social media
apps, web browsers, etc. have various settings you can adjust to maintain security.
$\checkmark$ make your profile private when possible
$\checkmark$ turn current location sharing settings off
$\checkmark$ 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!
$\checkmark$ If you suspect somebody has hacked your account, change your password or disable the account.
$\checkmark$ Review the newsfeeds for all social media friend requests before you accept a request.

- $\qquad$

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:


Check out The Wordd Counts' wesite at
www.thewordcounts.com for more infomation and statistics.

## Reduce and Reuse: A Better Way



## 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 biodergadable, so when a water bottle ends up in a landfilli, it takes hundreds of years to
break down. And during that time, it will simply break break down. And during that time, it will simply brea
int smallerpieces, further polluting the environment.

"Reccycling collection and processing technology has
improved, demand for the recyclable material has increased, allowing the current CAPS ON recycling


POLYETHYLENE TEREPHTHALATE = clear plastic

HIGH DENSITY POLYETHYLENE $=$ Stiff plastic; opaque HIGH DENSITY margarine tubs, bottle caps POLYVINYL CHLORIDE Examples: pipes, 1 oses, clear medical tubing, vinyl, auto
product toottles product botties LOW DENSITY POLYETHYLENE = flexible plastics Examples: squeezaz
and bread bags POLYPROPYLENE Examples: yogurt tubs, medicine containers, ketchup bottles, kity litter bu polystrene packing peanuts, to-go containers
 Exampless toys,sipons cups, cds/ddvass, lenses, medicial/
dental equipment

## Green Speak

Check out these green vocab words! ${ }^{\text {B }}$
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

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 AND SECURITY
Passwords: Keeping your passwords secure is important.
$\checkmark$ don't use the same password for multiple accounts
$\checkmark$ 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\$. ${ }^{4}$


## Plan for Your Future!

Imagine yourself in five years. What will you be doing? Where will you be living? Now try picturing yourself in 10, even 15 years! Can you see your future clearly? Or does it appear a little hazy to you right now?

## 1. Get a Job

This path is the most direct route to your working future. Do you have a particular job in mind? Make sure that you're tak ing classes that best prepare you for the type of job you would like to obtain. Work with your guidance counselor to ensure that you are on the right track
Types of Jobs:
Store Clerk, Retail Environment, Manufacturing, Manual Labor, Food Service, etc.

## 2. Learn a Trade

Learning a trade allows you to begin working in a field of interest, usually as an apprentice or an assistant, while you take classes at a vocational school to further your education. To earn your certification in a skilled trade will take approx. 2-4 years. Skilled Trades:
Electrician, Automotive Repair, Heating and Cooling, Plumbing, Construction, and many more!
3. Go to College

Going to college requires a lot of early preparation and is perhaps the most costly of the four paths, but for the right
person it can be a fabulous choice. The decision to go to college is usually followed by an interest in a career that requires an is usually followed by an ins A Masters (approx. $6+$ years) degree in order to be qualified.
College Degrees:
Different colleges offer a vast array of degrees. Do some internet research, and share your ideas/goals with your guidance counselor in order to determine the type of degree your career would require
4. Join the Military

If fast-paced, on-the-job-training is more your speed, then perhaps joining a branch of the military is for you. Military jobs can range from service positions to technical and computer specialists, with many different options in between. It is a great choice if you want to see other parts of the world and don't mind relocating.
Branches of Service.
Army, Marine Corps, Navy, Air Force and Coast Guard
Whether you can see years into your future, or only a few months into it, now is the time to begin preparing for your life after high schoo!!
There are four main paths you can take after you graduate. Review the lists below to see where the best fit for you may be! Get Ready...
,

## Parts of speech

1. 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
2. Pronoun: Pronouns take the place of a noun.

Example: Tom washed his car on his day off.
3. Verb: Verbs show action or state of being. They also
indicate the time of that state or action.
Examples: He worked on Friday. (past)
ce the (present)
He will present his report tomorrow. (future)
4. 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!

5. Adverb: Adverbs are words that 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.
6. 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.
7. 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.
8. Interjection: Interjections are words that convey emotion They are often indicated by the use of an exclamation point. Example: Wow! What a beautiful car!

Semicolon: Use to combine two closely related sentences. le:The road was bumpy and curvy; the scenery was 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 He haster.

- Quotation Marks: Use quotation marks around a direc 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.


## 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.

- 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.


## 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.
4. Add the clincher: A clincher sums-up the paragraph. . Revise and edit: Make sure the sentences flow in an organized fashion. Reword or reorganize information. 7. Proofread: Read and correct grammar, spelling, etc. 8. Write the final copy.

## WORDS OFTEN CONFUSED

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

WORDS OFTEN MISSPELLED

| despair | indispensable | pursue |
| :--- | :--- | :--- |
| desperate | insistent | receive |
| development | irresitible | recommend |
| embarrassment | irritable | repetition |
| eminent | liquefy | seize |
| exceed | judgment | separate |
| existence | liaison | sergeant |
| exhilarate | loneliness | severely |
| experience | memento | specifically |
| fiery | millennium | subpoena |
| foreign | noticeable | succeed |
| grandeur | occasion | succession |
| harass | occurrence | supersede |
| height | performance | their |
| immediately | permissible | tomorrow |
| inadvertent | perseverance | tyranny |
| incidentally | privilege | weird |
| independent | professor | yield |

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 th 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.
9. Degrees, titles, and abbreviations of organized groups
10. The first word of a title, the last word, and all words in between except short conjunctions or prepositions.
11. The first word in a greeting or the closing of a letter.
12. On words ending with a consonant preceded by a

## 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
2. If a word ends with a " $y$ " and is preceded by a consonant, then the " y " becomes an "ii." If the preceding letter is a vowel, the " $y$ " remains unchanged. Examples: heavy+er = heavier; portray+ed=portrayed single vowel (drip, can, begin), double the consonan
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 vowe (ing, ence). Keep the " $e$ " if the suffix starts with a consonant (less, ty).

Exceptios: use+able $=$ usable; use + ful $=$ useful

## GRAMMAR AND USAGE ERRORS

Sentence Fragment: A group of words, either short or long which does not give a complete thought

Example: Incorrect-A blue convertib.
Correct-The new car is a blue convertible.

Possessive Nouns: Nouns which show ownership, connection, or possession.

Examples: Tom's book, the band's music, Tanya's mother.
Remember these rules when forming the possessive of common nouns:

1) If the noun does not end in an " $s$," add an 's. Example: dog becomes dog's.
2) If the noun is plural and ends in an " $s$," add an apostrophe. Example: cars becomes cars
Misplaced Modifier: The incorrect placement of a word or group of words in a sentence which indicates that it modifies one word, when it is supposed to modify another

Example: Incorrect-I saw the piano walking into the room. Correct-Walking into the room, I saw the piano
Run-on Sentence: Two or more complete sentences written as one, often separated by only a comma
Example: Incorrect-The time ran out quickly, we did not finish the test.
Correct-The time ran out quickly. We did not finish the test.

Tense Shift: Changing or mixing verb tenses in sentences or paragraphs.

Example: Incorrect-Tom bought the book and reads it quickly. Correct-Tom bought the book and read it quickly

## Active, Passive Voice:

Active Voice-The subject of a sentence is performing the verb's action.
Example: He reads all the new novels.

## Passive Vo

Example: All the new novels are read by him.
The active voice is easier to understand and most often preferred Parallel Structure: Writing which uses words, phrases, claus es, and sentences in the same grammatical form.
Example: Incorrect-I enjoy swimming, walking by the pier and also to eat ice cream at the beach.
Correct-l enjoy swimming, walking by the pier and eating ice cream at the beach

Equivalent Measurements

Metric System

| $1 \mathrm{~m}^{2}$ | $=10,000 \mathrm{~cm}^{2}$ |
| :--- | :--- |
| 1 hectare (ha) | $=10,000 \mathrm{~m}^{2}$ |

[^0]English / Metrio Conversion


## Area



| You can find- | By multiplying by |
| :---: | :---: |
| millimeters | 25 |
| centimeters | 30 |
| meters | 0.9 |
| kilometers | 1.6 |
|  |  |
| square centimeters | 6.5 |
| square meters | 0.09 |
| square meters | 0.8 |
| square kilometers | 2.6 |
|  |  |
| grams | 28 |
| kilograms | 0.45 |
| milliliters | 30 |
| liters | 0.47 |
| liters | 0.95 |
| liters | 3.8 |
| degrees | subtract 32 and |
| Celsius | multiply by $5 / 9$ |

## Perimeter : circumference

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

Polygon: $2(\mathrm{~L}+\mathrm{W})$ $\square$ Circle: $\pi d$ or $2 \pi r$


Area
$\mathbf{L}=$ length; $\mathbf{w}=$ width; $\mathbf{h}=$ height; $\mathbf{s}=$ side; $\mathbf{b}=$ base; $\mathbf{r}=$ radius


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).


Pyramid Volume: Find the area of the base (b); multiply by the height (h); and divide by 3
Square Pyramid: $\mathrm{v}=1 / 3 \mathrm{bh}$

$$
\text { Triangular Pyramid: } \mathrm{v}=1 / 3 \mathrm{bh}
$$



## MULTIPLICATION TABLE

|  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| 2 | 2 | 4 | 6 | 8 | 10 | 12 | 14 | 16 | 18 | 20 | 22 | 24 | 26 | 28 | 30 | 32 |
| 3 | 3 | 6 | 9 | 12 | 15 | 18 | 21 | 24 | 27 | 30 | 33 | 36 | 39 | 42 | 45 | 48 |
| 4 | 4 | 8 | 12 | 16 | 20 | 24 | 28 | 32 | 36 | 40 | 44 | 48 | 52 | 56 | 60 | 64 |
| 5 | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 |
| 6 | 6 | 12 | 18 | 24 | 30 | 36 | 42 | 48 | 54 | 60 | 66 | 72 | 78 | 84 | 90 | 96 |
| 7 | 7 | 14 | 21 | 28 | 35 | 42 | 49 | 56 | 63 | 70 | 77 | 84 | 91 | 98 | 105 | 112 |
| 8 | 8 | 16 | 24 | 32 | 40 | 48 | 56 | 64 | 72 | 80 | 88 | 96 | 104 | 112 | 120 | 128 |
| 9 | 9 | 18 | 27 | 36 | 45 | 54 | 63 | 72 | 81 | 90 | 99 | 108 | 117 | 126 | 135 | 144 |
| 10 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 | 110 | 120 | 130 | 140 | 150 | 160 |
| 11 | 11 | 22 | 33 | 44 | 55 | 66 | 77 | 88 | 99 | 110 | 121 | 132 | 143 | 154 | 165 | 176 |
| 12 | 12 | 24 | 36 | 48 | 60 | 72 | 84 | 96 | 108 | 120 | 132 | 144 | 156 | 168 | 180 | 192 |

## ALGEBRA

## Logarithms

$\log x=r \log x$
$\log (x y)=\log x+\log y$
$\log (x / y)=\log x-\log y$
$\log x=n \leftrightarrow x=10^{n}$ (common log)
$\log _{\mathrm{a}} \mathrm{x}=\mathrm{n} \leftrightarrow \mathrm{x}=\mathrm{a}^{\mathrm{n}}(\log$ to the base a$)$
$\operatorname{Ln} \mathrm{x}=\mathrm{n} \leftrightarrow \mathrm{x}=\mathrm{e}^{\mathrm{n}}$ (natural log)
$\pi \simeq 3.14159265$
$\mathrm{e} \simeq 2.71828183$
Law of Exponents:
If $a, b \in R, a, b \geq 0$, and $p, q, r, s$ are $\in Q$ then:

1. $a^{r} a^{s}=a^{r+s}$
2. $a^{1} / a^{s}=a^{r-s}$
3. $\left(a^{r}\right)^{s}=a^{r s}$
4. $(a b)^{r}=a^{r} b^{r}$
5. $(a / b)^{r}=a^{r} / b^{r}(b \neq 0)$
6. $a^{0}=1(a \neq 0)$
7. $a^{-r}=1 / a^{r}(a \neq 0)$
8. $a^{1 / s}=\sqrt[5]{a^{r}}=(\sqrt[5]{a})^{r}$
$a^{1 / 2}=\sqrt{a}$
$a^{1 / 3}=\sqrt[3]{a}$
Variation Models: For variables $x, y$, and $z$ where $k$ is a positive constant called the constant of variation.
Direct Variation-y $=k x$ or $y / x=k$
Inverse Variation- $y=k / x$ or $x y=k$
Joint Variation-z = kxy

GEOMETRY
Angles and Triangles-All angles of a triangle add up to $180^{\circ}$

| Right angle: equals $90^{\circ}$ | Straight angle: equals $180^{\circ}$ | Obtuse angle: greater than $90^{\circ}$ but less than $180^{\circ}$ | Acute angle: less than $90^{\circ}$ but greater than $0^{\circ}$ |
| :---: | :---: | :---: | :---: |
| Equilateral triangle: <br> all sides equal; all angles equal $\qquad$ | Isosceles triangle: two sides equal; two angles equal | Scalene triangle: no sides equal; no angles equal | Right triangle: B one angle is $90^{\circ}$ |
| Pythagorean Theorem: sides a and b are legs; side c is hypotenuse; B $a^{2}+b^{2}=c^{2}$ angles. This applies only to right angles. $c \square \square_{A}$ | Complementary angles: two angles add up to $90^{\circ}$ | Supplementary angles: two angles add up to $180^{\circ}$ | Complete angle rotation: equals $360^{\circ}$ |


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

$\angle a=\angle$ b angles sub-

Congruency Cases

S.A.S. (Side, Angle, Side) $\Delta A B C \cong \Delta K L M$



H.S. (Hypotenuse, Side) $\Delta \mathrm{ABC} \cong \Delta \mathrm{XYZ}$
tended on the same
$\operatorname{arc} A B$

## Problem Solving

General Problem Solving Tip

1. What is the problem asking you to find Start out by analyzing the problem and figuring out what it is asking.
2. What skills do you need to use? 2. What skills do you need to use?
Identify the skills that you've learned that you can apply towards solving the problem.
3. Start working!

Use these skills for solving the problem
4. Does your answer make sense? Check your answer to be sure that it is correct Solving a Word Problem

1. Read through the word problem. It is always a good idea to read through a problem in order to comprehend it. Then decide what it's asking you to find.
2. Set up your math problem! 2. Set up your math problem!
Convert the word problem into a mathematical equation
3. Would a picture help?

Draw a picture of what the words describe if necessary
4. Solve the problem.

Use your math skills to solve the problem that you have set up. Don't forget to convert your answer back into words.
ar

## Point-Slope Form

 $\left(y-y_{1}\right)=m\left(x-x_{1}\right)$
$\sin (A+B)=\sin A \cos B+\cos A \sin B$ $\sin (A-B)=\sin A \cos B-\cos A \sin B$ $\sin 2 A=2 \sin A \cos A$
$\sin ^{2} \theta+\cos ^{2} \theta=1$
$1+\tan ^{2} \theta=\sec ^{2} \theta$
$1+\cot ^{2} \theta=\csc ^{2} \theta$ $\cos ^{2} \theta-\sin ^{2} \theta=\cos ^{2} \theta$
$\sin 1 / 2 A= \pm \sqrt{(1-\cos A) / 2}$
$\cos (A+B)=\cos A \cos B-\sin A \sin B$
$\cos (A-B)=\cos A \cos B+\sin A \sin B$
$\cos 2 A=\cos ^{2} A-\sin ^{2} A=2 \cos ^{2} A-1=1-2 \sin ^{2} A$
$\cos 1 / 2 A= \pm \sqrt{(1+\cos A) / 2}$
$\tan (A+B)=\tan A+\tan B /(1-\tan A \tan B)$ $\tan (A-B)=\tan A-\tan B /(1+\tan A \tan B)$
$\tan 2 \mathrm{~A}=2 \tan \mathrm{~A} /\left(1-\tan ^{2} \mathrm{~A}\right)$
$\tan 1 / 2 A= \pm \sqrt{(1-\cos A) /(1+\cos A)}=1-\cos A / \sin A$ $=\sin A / 1+\cos A$

## CIVICS

Measurements of Astronomy

| Measurement | Earth | Sun | Moon |
| :---: | :---: | :---: | :---: |
| Mass $(\mathrm{m})$ | $5.98 \times 10^{24} \mathrm{~kg}$ | $1.99 \times 10^{30} \mathrm{~kg}$ | $7.35 \times 10^{22} \mathrm{~kg}$ |
| Radius (r) | $6.37 \times 10^{3} \mathrm{~km}$ | $6.96 \times 10^{5} \mathrm{~km}$ | $1.74 \times 10^{3} \mathrm{~km}$ |
| Average Density | $5.52 \mathrm{~g} / \mathrm{cm}^{3}$ | $1.42 \mathrm{~g} / \mathrm{cm}^{3}$ | $3.34 \mathrm{~g} / \mathrm{cm}^{3}$ |


| Water $=4180$ <br> Alcohol $=2450$ <br> Ice $=2060$ | $\begin{aligned} & \text { Steam }=2020 \\ & \text { Aluminum }=903 \\ & \text { Carbon }=710 \end{aligned}$ | 20 Glass <br> 3 Iron <br> 0 Copper | $\begin{aligned} & =664 \\ & =450 \\ & =385 \end{aligned}$ | $\begin{aligned} \text { Iss } & =376 \\ \text { rer } & =235 \\ \text { ad } & =130 \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: |
| Physics Equations | Acceleration <br> vf is final velocity; vi is initial velocity; t is time $a=\frac{(v f-v i)}{t}$ <br> Density $\mathbf{m}$ is mass; $\mathbf{V}$ is volume $D=\frac{m}{v}$ | Electrical Potential Difference $V=\frac{\mathbf{W}}{\mathbf{Q}}$ <br> $\mathbf{V}=$ Volts; $\mathbf{W}$ is work done; $\mathbf{Q}$ is electric charge moving | Work F is force; $\mathbf{d}$ is distance $\mathrm{W}=\mathrm{F} \cdot \mathrm{~d}$ | Electric Current <br> Q is electric charge flowing; tis time $I=\frac{Q}{t}$ |
|  |  | Heat Energy <br> $\mathbf{c}$ is specific heat; $\mathbf{m}$ is mass; $\Delta \mathbf{T}$ is change in temperature $H=c \cdot m \cdot \Delta T$ | Power W is work; tis time $P=\frac{w}{t}$ | Electrical Energy <br> $\mathbf{V}$ is voltage; <br> $\mathbf{I}$ is current; $\mathbf{t}$ is time $w=v \cdot l \cdot t$ |
| Net Force $\mathbf{m}$ is mass; $\mathbf{a}$ is acceleration $F=m \cdot \mathbf{a}$ | Distance $\mathbf{v}$ is velocity; $\mathbf{t}$ is time $d=v \cdot t$ | Kinetic Energy $\mathbf{m}$ is mass; $\mathbf{v}$ is velocity $\text { K.E. }=1 / 2 \cdot m \cdot v^{2}$ | Force of Gravity <br> $\mathbf{G}$ is universal gravitational constant; $\mathbf{m}_{1}, \mathbf{m}_{2}$ are masses of the two objects; <br> d is separation distance | Electrical Force $F e=\frac{\left(k \cdot Q_{1} \cdot Q_{2}\right)}{d^{2}}$ <br> $\mathbf{Q}, \mathbf{Q}_{2}$ are electrical charges; $\boldsymbol{d}$ is separation distance; $\mathbf{k}$ is |
| Power <br> $\mathbf{V}$ is voltage; $\mathbf{I}$ is current $P=V \cdot I$ | Distance <br> vi is initial velocity; $\mathbf{t}$ is time; $\mathbf{a}$ is acceleration $d=v i \cdot t+\frac{1}{2} \cdot a \cdot t^{2}$ | Momentum $\mathbf{m}$ is mass; $\mathbf{v}$ is velocity $p=m \cdot v$ | $\mathrm{Fg}=\frac{\left(\mathrm{G} \cdot \mathrm{~m}_{1} \cdot \mathrm{~m}_{2}\right)}{\mathrm{d}^{2}}$ | $\mathrm{k}=9.0 \cdot 10^{9} \frac{\mathrm{~N} \cdot \mathrm{~m}^{2}}{\mathrm{C}^{2}}$ |

## NORTH AMERICA



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## BUDGETING 101

BUDGETING 101
Why do I need to learn how to make a budget？
We live in a world of instant gratification，but it isn＇t beneficial to spend our money carelessly．A lot of people spend their money on wants，instead of needs．This can lead to debt．It is extremely important to learn budgeting skills at a young age．Learning how to budget at a young age means you can start saving earlier．Budgeting also prepares you for when you are older and accumulate more money and financial responsibility．If you are good about budgeting nd saving your money now，you will be able to handle all of your financial responsibilities in the future． Here are some terms you need to understand before we get started：

## Key Terms

Budget：A savings plan，or a record of actual and estimated income and expenses over a set period of time

Income：Money that you anticipate earning，or receiving．
Expenses：Money spent during a period of time to pay for goods or services．
Needs：The very basic things that people must have to survive．
Wants：The things that make life more interesting and fun．


Fill in the example budget worksheet below to see how well you are budgeting your money．

| Monthly Income | Monthly Expenses |  |
| :---: | :---: | :---: |
| Allowance：\＄ | Food and Snacks：\＄ |  |
| Job:\$ <br> Ex：mowing lawns，babysitting，etc． | Entertainment：\＄ <br> ies，music，video games，etc． |  |
| Birthday money：$\$$ | Hobby Supplies：\＄ |  |
| Other：\＄ | Charitable Donation：\＄ |  |
| Other：\＄ | Other：\＄ |  |
| Total Monthly Income：\＄＿＿＿＊ | Total Monthly Expenses：\＄ | ＊ |

＊If your total monthly income is more than your expenses，that means you are saving money．

## Total Monthly Income：

$\qquad$ Total Monthly Expenses：\＄ $\qquad$ Total Monthly Savings：

If you filled out your budget and found out that your total monthly income and expenses are equal，you aren＇t saving anything．Additionally，if your total monthly income is less than your total monthly income，you are going into debt．

Do you think there is a problem with your budget？ $\qquad$


## Create a Budget！

Create a budget that you may use when you are older and living on your own．Select a career you are interested in and look up how much on average you will get paid per year．Do some research for basic cost of living expenses，and talk to your parents（and／or other responsible adults）to gather information for the table below．

\section*{Future Budget： <br> | Monthly Income | Monthly Expenses |
| :---: | :---: |
| Job／Salary：\＄＿＿＿ | Rent／Mortgage：\＄ |
| Divide your salary by 12 ，since there are twelve months in one year． | Home Repair：\＄ |
| Monthly Salary Total：\＄ | Utilities：\＄ |
| Other：\＄ | Charitable Donations：\＄ |
|  | Groceries／Food：\＄ |
|  | Phone／Cell Phone：\＄ |
|  | Cable／Internet：\＄ |
|  | Car／Gasoline：\＄ |
|  | Car Repair：\＄ |
|  | Loans：\＄ |
|  | Entertainment：\＄ |
|  | Insurance：\＄ |
| － | Shopping／Clothes：\＄ |
|  | Gifts／Holidays：\＄ |
|  | Travel／Vacation：\＄ |
|  | Medical Expenses：\＄ |
| $\bigcirc$ | Savings：\＄ |
|  | Miscellaneous：\＄ |
| Total Monthly Income：\＄ | Total Monthly Expenses：\＄ | <br> （Taxes will also be applied to your income and expenses in the future．）}

Hopefully your total monthly income was more than what your total monthly expenses were．
This was not made to make you stress about your future instead it was made to show you how important it is to start saving and handling your money wisely！After looking over this budget，it may make you rethink wha you really NEED to have and what things are just WANTS．


Challenge：Share your＂future budget＂with your parents and see how realistic it is．Discuss with your parents how they budget their money．

## TAKING CARE OF YOU!

Eating right, sleeping enough, exercising, managing relationships, and controlling stress (and many other factors) takes work. YOU have to make the decision to live healthy!
Your emotional well-being is just as
important as your physical well-being.
The pressure and stress of everyday life
can really take a toll on you. Feeling sad,
lonely, or depressed? ASK for help! The National Suicide Prevention Lifeline offers these helpful tips: Overwhelming feelings? Talk to trusted family, friends, teachers and mentors for help right away
Feelings may feel impossible to handle, but they CAN be overcome. If it is hard to do on your own, seek support.
Make a safety plan. Visit: suicidepreventionlifeline.org/help-yourself/
 You deserve to be respected. If you are in a toxic relationship of any kind, it's time to make a plan to get out. Talk to a trusted adult, seek medical help, or call the "love is respect" helpline at 866-331-9474. (You can also text 'LOVEIS' to 22522, or visit www.loveisrespect.org/get-relationship-help//

- Intervene when you witness somebody:

$$
\begin{aligned}
& \text { talking about death/suicide }
\end{aligned}
$$

Watch out for others!
Here are some

that intervention and help may be needed!
sharing feelings of hopelessness, being trapped,

## $4 \quad$ or being burdensome to others

$$
\begin{aligned}
& \text { Suicide \& Crisis Lifeline } \\
& \text { reckless behavior } \\
& \text { showing rage and/or having } \\
& \text { extreme mood swings } \\
& \text { sleeping a lot or too little } \\
& \text { increasing substance abuse }
\end{aligned}
$$

## HARMFUL SUBSTANCES

Alcohol. Think it's "just a drink"? Here are the risks:
$\checkmark$ heart disease $\sqrt{ }$ liver disease $\sqrt{ }$ cancer $\sqrt{ }$ memory loss $\checkmark$ weakened immune system $\checkmark$ anxiety $\checkmark$ depression $\checkmark$ injuries $\checkmark$ increased chance of accidental death


The list goes on. Read more: cdc.gov/alcohol/fact-sheets/alcohol-use.htm'
Vaping . It's not "just vapor." E-cigs, vape pens, etc., all contain these harmful chemicals:
$\checkmark$ nicotine (a highly addictive substance)
$\checkmark$ carcinogens (cancer-forming chemicals)
$\checkmark$ heavy metals (nickel, tin, and lead)
$\checkmark$ benzene (volatile organic compound found in car exhaust)
$\checkmark$ diethylene glycol and propylene glycol (chemicals used to make antifreeze)
$/$ chemical flavorants and ultrafine particles that get inhaled deep into the lungs. ${ }^{2,3}$


2024-2025 school Year

| July 2024 | August 2024 | September 2024 | October 2024 | November 2024 | December 2024 |
| :---: | :---: | :---: | :---: | :---: | :---: |
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| January 2025 | February 2025 | March 2025 | April 2025 | May 2025 | June 2025 |
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2025-2026 School Year
Notes:

| July 2025 | August 2025 | September 2025 | October 2025 | November 2025 | December 2025 |
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## GENERAL STUDY SKILLS:

Goal Setting, Time Management, Using a Planner, \& Organization of Notes

```
A new school year has begun, and
``` you're in the driver's seat. You'll be the one to decide your destinations by decisions you make.


GOAL SETTING: a first step to academic success is developing good study skills.
One study skill that accelerates success is writing down your goals. Did you know that successful people are intensely goal oriented? They know what they want and are focused on achieving it every single day.

The best goals are the ones that are:
 T S TIMELY (NCLUDE ATARGE DATE)?
There is space on every weekly spread to record your goals.
\(\checkmark\)
TIME MANAGEMENT
. How can you make the best use of your time as it speeds by? Use this planner List everything you need to do. Record assignments on the date given and on the date due. But don't limit your list to schoolwork. Write down all of your commitments. How important and urgent is each item you listed? Highlight commitments that are important. Next, prioritize and schedule. Number the list so tha you get the most important and urgent items done first. Do the work and review.

What future College? destinations do The military? you hope for? A satisfying, lucrative career? A smarter, more confident you?

\section*{ROADBLOCKS:}

Be on the lookout for roadblocks that will stop you from practicing good study skills. For example, scheduling too many commitments for one day is a roadblock for time management. What other roadblocks might keep you from being an organized goal setter who manages time well?

Check your odometer and continue to make progress!
```


[^0]:    $1 \mathrm{~km}^{2}$
    $=100 \mathrm{ha}$
    1 metric ton $(\mathrm{t})=1000 \mathrm{~kg}$

