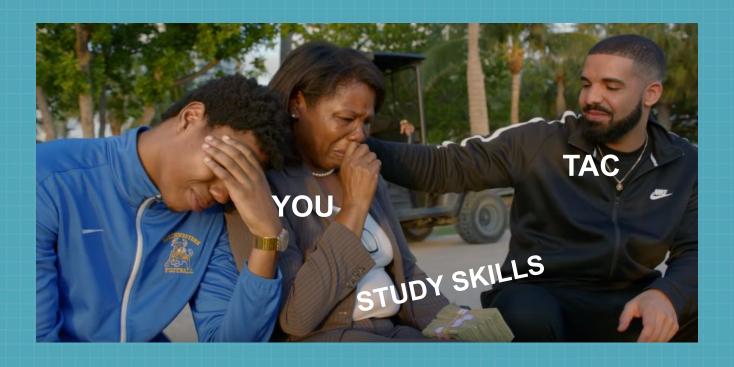


Welcome to TAC'S...

GENERAL STUDY SKILLS WORKSHOP #2





This study skills initiative is brought to you by Markville's Student Success Team and Transition Activities Council (TAC).

MEET YOUR TAC MENTORS! Q









CORE SUBJECT SPECIFICS

TODAY'S AGENDA

Q





1. SCIENCE

2. MATH

3. LANGUAGE

4. HISTORY / GEO / BUSINESS STUDIES



SCIENCE



WHOH TO

WHO HERE FINDS SCIENCE TO BE ESPECIALLY DIFFICULT TO STUDY FOR?





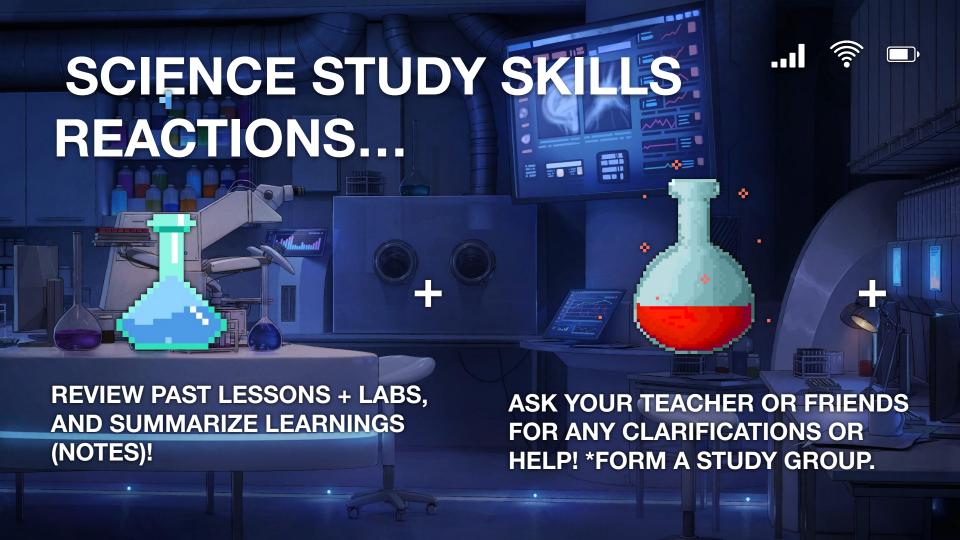
SCIENCE CLASS CAN SEEM OVERWHELMING, BUT IF YOU FIND SOMETHING THAT WORKS FOR YOU, YOU'LL BE FINE.



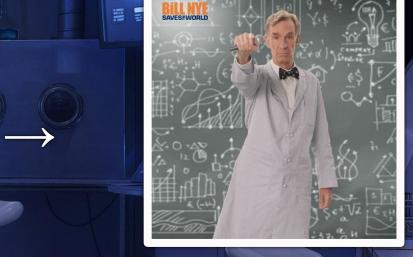
- TEXTBOOK (END OF UNIT **SUMMARIES!**)
- **PREVIOUS ASSESSMENTS**

MAKE ORGANIZED STUDY NOTES,

HIGHLIGHTING IMPORTANT **CONCEPTS/TERMS FROM EACH UNIT**







PRACTICE THE ANY CHAPTER REVIEW/HOMEWORK

QUESTIONS, AND RE-EXAMINE ANY PREVIOUS TESTS/QUIZZES

BE SUCCESSFUL IN SCIENCE CLASS!

WRITE NOTES AS YOU LEARN!







Hvdrocarbons

non-polar compounds.

In this section, you will

- distinguish among the following classes of organis compounds: alkanes alkenes, alkynes, an
- aromatic compounds draw and name hydrocarbons using the IUPAC
- communicate your under standing of the following terms: hydrocarhons alighatic hydrocarbon. aromatic hydrocarbon alkane, cycloalkane, alkene functional group, alkyne, alkyl group

CONCEPT CHECK

The molecular formula of benzene is C₆H₆. Remember that each carbon atom must form a total of four bonds. A bond, a double bond counts as two bonds, and a triple bond counts as three bonds Hydrogen can form only one bond Draw a possible structure for benzene.







In this section, you will review the structure and nam

As you may recall from your previous chemistry stud

are the simplest type of organic compound. Hydrocar

entirely of carbon and hydrogen atoms, and are wide

Gasoline, propane, and natural gas are common exam

Scientists classify hydrocarbons as either aliphat

re chains and rings. The carbon atoms have single

Because they contain only carbon and hydrogen aton

aliphatic hydrocarbon contains carbon atoms that ar

bonds. Aliphatic hydrocarbons include straight chair

alkenes, and alkynes. An aromatic hydrocarbon is a

on the aromatic benzene group. You will encouter th

the section. Benzene is the simplest aromatic compc

arrangement results in special molecular stability.

An alkane is a hydrocarbon that has only single bon

contain rings have the formula CnH2n+2. An alkane

compound that has at least one double bond. Straig

one double bond have the same formula as cycloalk

pair of electrons forms a single bond and the other

al weaker hand. The electrons in the additional w

than the electrons in the single bond. Thus, carbon

are more reactive than carbon-carbon single bonds

reacts, the reaction almost always occurs at the site

in all the members of a chemical family. Each func-

characteristic way. Thus, functional groups help to

and chemical properties of compounds. For examp

An alkyne is a compound that has at least one

bond is the functional group for an alkene. In this

chain alkyne with one triple bond has the formula

are even more reactive than double bonds. The fu

encounter many different functional groups.

alkyne is the triple bond

A functional group is a reactive group of bond

A double bond involves two pairs of electrons.

called a cycloalkane. Cycloalkanes have the formula

Alkanes, Alkenes, and Alkynes

12 MHR • Unit 1 Organic Chemistry

Single-Bonded Functional Groups

When you cut yourself, it is often a good idea to swab the cut with rubbing alcohol to disinfect it. Most rubbing alcohols that are sold in drugstores are based on 2-propanol (common name: isopropanol), C_3H_4O . You can also swab a cut with a rubbing alcohol based on ethanol, C_2H_6O . Often it is hard to tell the difference between these two compounds. Both have a sharp smell, and both evaporate quickly. Both are effective at killing bacteria and disinfecting wounds. What is the connection between these compounds? Why is their behaviour so similar?

Both 2-propanol and ethanol contain the same functional group, an OH (hydroxyl) group, as shown in Figure 1.12. Because ethanol and 2-propanol have the same OH functional group, their behaviour is similar.

Figure 1.12 Ethanol and 2-propanol both belong to the alcohol family.

2-propago

The general formula for a family of simple organic compounds is R + functional group. The letter R stands for any alkyl group. (If more than one alkyl group is present, R' and R" are also used.) For example, the general formula R-OH refers to any of the following compounds: CH3OH, CH3CH2OH, CH3CH2CH2OH, CH3CH2CH2CH2OH, etc.

Organic compounds are named according to their functional Generally, the suffix of a compound's name indicates the mos functional group in the molecule. For example, the suffix -ene indicates the presence of a double bond, and the suffix ol indicates the presence

Functional groups are a useful way to classify organic compounds,

1. Compounds with the same functional group often have similar physical properties. In the next two sections, you will learn to recognize various functional groups. You will use functional groups to help you predict the physical properties of compounds

2. Compounds with the same functional group react chemically in very similar ways. In Chapter 2, you will learn how compounds with each

Table 1.4, on the next page, lists some of the most common functional groups.

1.3

- In this section, you will distinguish among the wing classes of organic alcohols, ethers, and amines
- describe the effects of intermolecular forces on the physical properties of alcohols, ethers, and amines
- draw and name alkyl halides, alcohols, ethers, and amines using the
- IUPAC system identify the common names
- of some organic compounds communicate your understanding of the following terms: - OH (hydroxyl group, general formula intermolecular forces hydrogen bonding. dipole-dipole interaction dispersion forces, alcohol

(haloalkane), ether, alkoxy CONCEPT CHECK

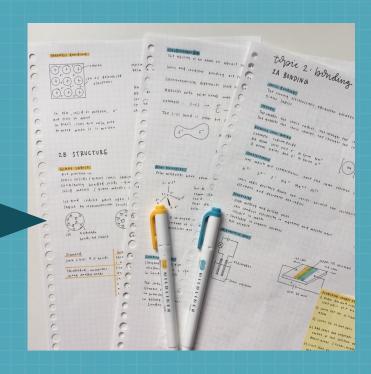
parent alkane, alkyl halide

Each organic family follows a set pattern. You have just seen that you can represent the hydrocarbon part of a functional family by the lette R. All the structures below selong to the primary amine family. What is the functional group for this family? Write the general formula for an amine.

CH3-CH2-NH2

CH₃-CH₂-CH₂-NH₂

Chapter 1 Classifying Organic Compounds • MHR 21



When you study, you can study based off of your notes and you won't feel overwhelmed by all the text/pages in the textbooks

WHAT TO INCLUDE IN NOTES: Q

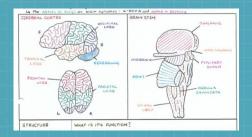


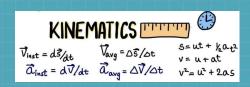




- Key terms + definitions
 - Your teacher and the textbook will usually provide you with these!
- Labelled Diagrams
 - Most science tests will require you to draw out diagrams (i.e nitrogen cycle, chemical structures, human body processes etc), so practice drawing them while you can!
- Simplified summaries of key concepts/theories in your own words
- Formulas (useful for physics & chemistry)

Convex	An object or shape that curves or bulges outwards, like a circle or sphere.	
Crest	The topmost part of a wave.	
Frequency	The number of waves produced each second. The unit of frequency is hertz (Hz).	
Lens	A transparent tool that can change the direction of a ray of light.	
Longitudinal	A wave that moves in the same direction as the direction in which the particles are vibrating.	
Opaque	Not transparent or see-through.	
Reflection	There is a reflection when waves bounce off a surface.	











REVIEW BIG IDEAS!

BIG

- Groups of organs with specific structures and functions work together as systems that interact with other systems in the body.
- The development and uses of technology to maintain human health are based, in part, on the changing needs of society.

How does the circulatory system interact with the respiratory system?

What types of technological innovations were mentioned throughout the unit?

Think about the different concepts you learned and how they connect to the big ideas

What potential test questions could relate to these big ideas?

RESOURCES FOR SCIENCE Q









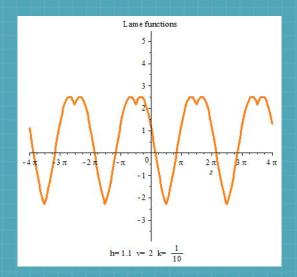
QUIZLET Make your own study sets and cue cards on quizlet to help with memorization



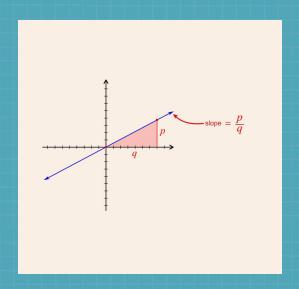
In depth video explanations and solutions on specific topics



Interesting video summaries on specific topics (great for visual learners)



MATH







Math is 100% practice

Useful Math Resources









DESMOS



USEFUL FOR GRAPHING

SYMBOLAB



USEFUL FOR SOLVING ALGEBRAIC

PREP ANYWHERE



VIDEO EXPLANATIONS ON TEXTBOOK PROBLEMS

Youtube Channels: Organic Chemistry Tutor, Khan Academy, JensenMath, Ms Havrot's Canadian University Math Prerequisites, AllThingsMathematics



DO NOT FORGET TO KEEP YOUR QUIZZES/TESTS!

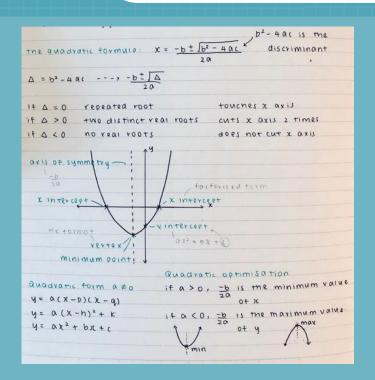
(for extra practice, ask any friends in other math classes for their old tests/quizzes too! 5)







Practice Practice Practice



Practice graphing different equations in the textbook/lessons

Race car:	
vi = 177 Km/h [E]	$\vec{a}_{av} = \frac{\Delta \vec{v}}{\Delta t}$
v _f = 63 km/h [E]	
At = 5 25 % x 1 min x 1 hour	$= \vec{V}_f - \vec{V}_i$
Δt = 5.25 % x 1 min x 1 nour co min = 0.00146 h	Δt
	= 63 Km/h - 177 Km/h
Let west be negative	0.00196 h
Let east be positive	= -114 Km/h
cor cust be positive	0.00146 h
	= - 78082.19 Km/h² [E]
	= 7.81 x 104 Km/h² [W]
	her acceleration was 7.81 × 104 km/h² [w]

Your teachers WILL take off marks for form! Practice proper form when doing homework questions until it becomes a habit

DO NOT BE AFRAID TO ASK YOUR PEERS/TEACHERS FOR HELP!

LANGUAGES



ENGLISH CLASS!



Cheese Your Meye

WHTER



ENGLISH CLASS

EFFECTIVE (WATER) MOVES

Identify the key themes in the novel

Gather all quotes that were studied and highlighted in class.

Understand KEY terms: conflict, character development, plot, theme, setting, atmosphere, etc.



WHTER



ENGLISH CLASS

EFFECTIVE (WATER) MOVES

Make a list of questions for your readings and answer them!

Ex: "In The Great Gatsby, what symbols represent the theme of greed?"

Discuss readings with classmates and do research!

Cheese Your Reve





ENGLISH CLASS

INEFFECTIVE (ICE) MOVES

Falling behind on readings.

Relying on online sources rather than analyzing the book yourself first.

Not participating + note-taking in in-class discussions.



HISTORY / GEO / BUSINESS STUDIES

Business (Marketing, Leadership, etc.)





- DECA is a great extracurricular activity to prepare for the course content in grades 11 and 12 → lots of overlapping terminology
- Really build up those presentation skills
- Lots of essay writing involved





HISTORY/GEOGRAPHY









- Review each unit and ensure you understand its key concepts and terms
- Quizlets and Cue Cards
- Gather and use any quizzes, assignments, or classwork when studying
- Practice by creating your own mock test or ask your classmates to quiz yourself











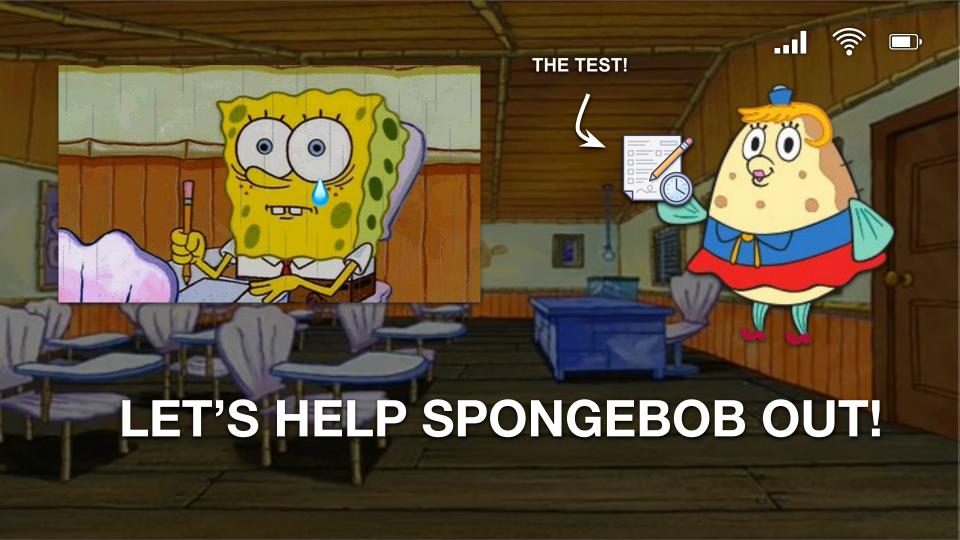
OBJECTIVE TEST

a test that has right or wrong answers and so can be marked objectively

SUBJECTIVE TEST

a test evaluated by giving an opinion, usually based on agreed criteria or evidence (usually based on content from the course)



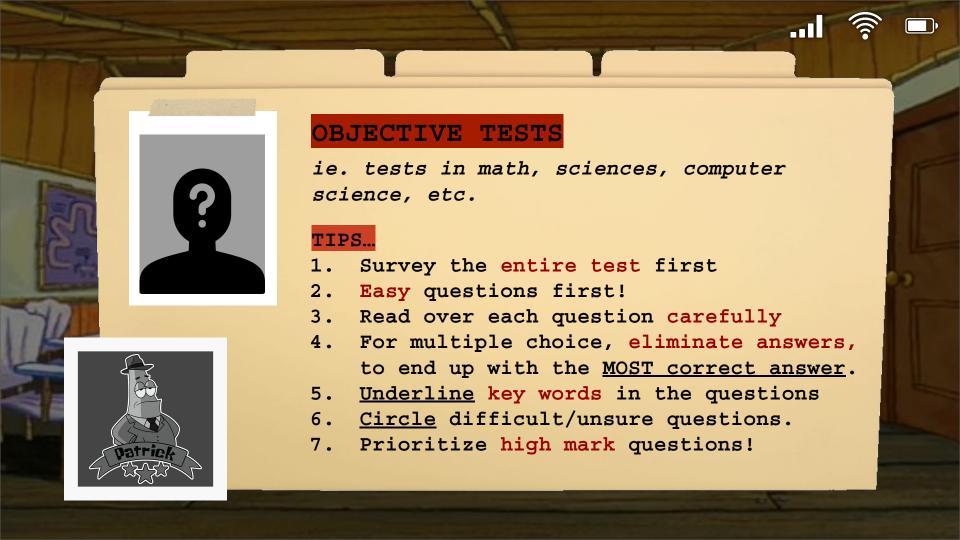


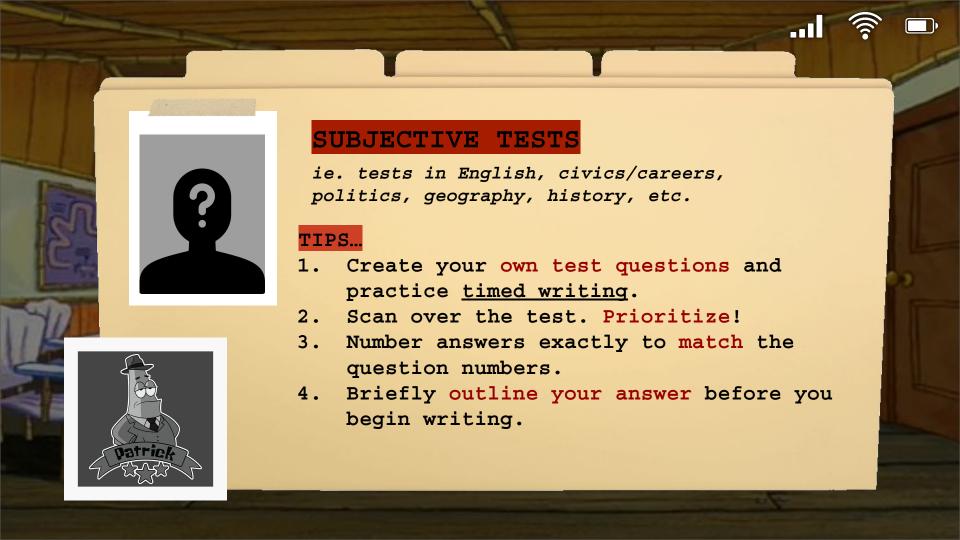


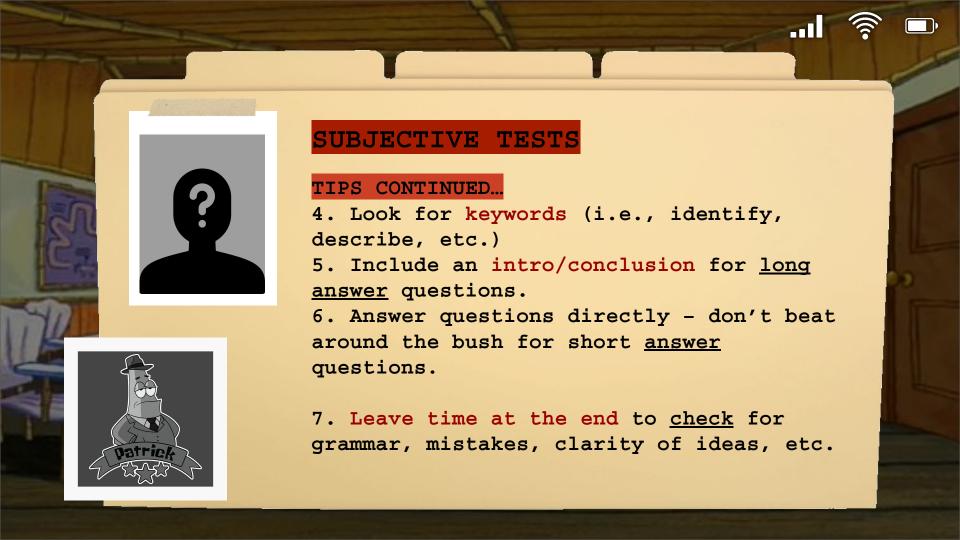
UNDER INVESTIGATION



LET'S IDENTIFY WHAT TYPE OF TEST IT **IS...**











IF SPONGEBOB
IS WRITING A
MATH TEST...

WHAT TYPE OF TEST IS IT?

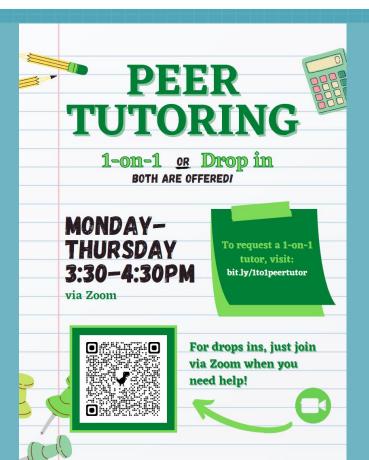
OBJECTIVE!







Reminder: Peer Tutoring



Students can drop-in when help is needed or request for a weekly 1-to-1 peer tutor. Peer tutoring sessions will be virtual, after school **Monday-Thursday from** 3:30-4:30 pm.

MARKY MARKY MARKY DKYILL MARKY

ANY QUESTIONS?



