
Student

Skills

Guide

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Setting Goals

What do you want from school: Success ? Sports ? Graduation ? Studies of outstanding students have found that they tend to share something in common. They are usually well motivated for study. They are interested and enthusiastic about schoolwork and extra-curricular activities. They have developed the ability to focus and maintain concentration on the job at hand.

One way to develop motivation is to set goals. Goals are anything you want to do, to be or to have - today or sometime in the future. They make school more interesting and enjoyable. Study isn't nearly so hard when you have motivation and interest. Without motivation, study becomes a chore. Forcing yourself to sit down and study, you spend time wishing you were doing something else. Effective study under these conditions is difficult if not impossible.

The best and most powerful motivation comes from inside. It is self generated. Others can help you trigger this type of motivation, but you are best motivated when you work to achieve **your** needs and **your** goals. Motivation runs low when you don't see the work leading to something **you** want. Some motivation comes naturally. For example, you may be motivated to run and get in shape if track and field interests you and your goal is to make your school's track team. If you are like most students, you're motivated to study subjects that interest you or you are good at. However, some of your courses may not fall into this category. How do you motivate yourself for courses you don't find naturally interesting or that you are naturally good at?

One of the first steps is to think about the goals you value. Because you are the author of your own goals, you can control your motivation for study. Studies of above-average students have found that most of them have given some thought to their short-term, mid-term and long-term goals. These students use goals to help give them a sense of direction, a plan for their life. When students have difficulty getting motivated to study, it is often due to a lack of goals. Here are some examples.

Long Term Goals

- Graduate from high school with above average grades
- Enter a university computer science program
- Become a computer programmer
- Get a good job as a computer graphics designer

Mid Term Goals

- Earn an 70% average in my courses this term
- Earn an 80% average in math and computer science this term
- Make the junior football team

Short Term Goals

- Copy the physics notes for the day I was absent
- Read 20 pages of the English novel by Saturday
- Review the first 4 chapters of history before the test

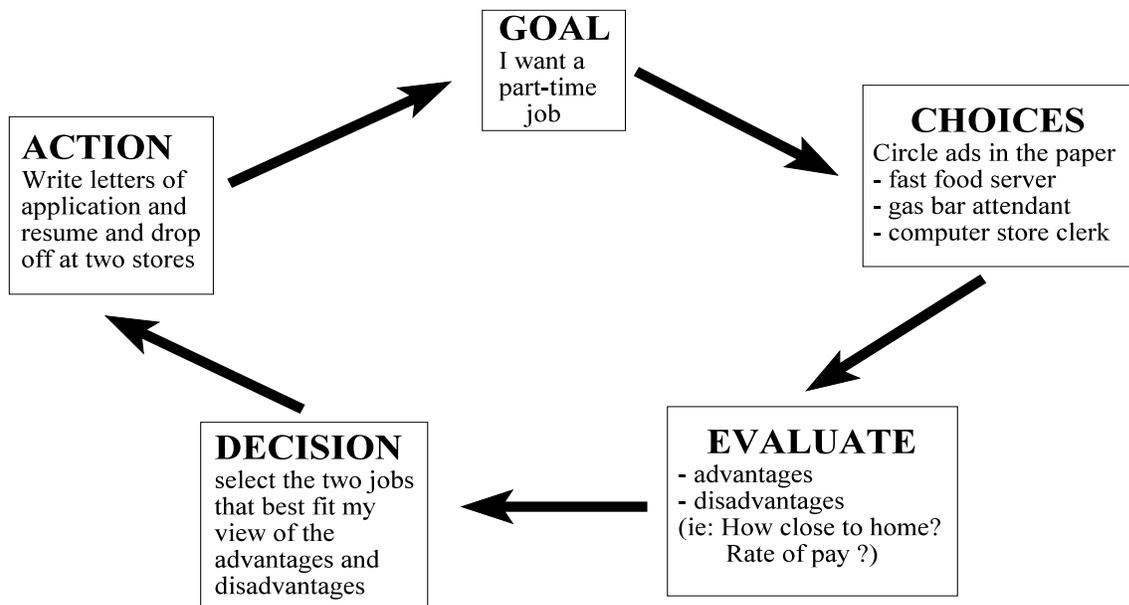
Have you thought about your own goals? Have you thought about how you will reach these goals? If not, you need to make this a priority. Do it now. Remember, 'putting it off' (as in "I'll do it sometime"), or not doing this (as in "I don't need to do this"), is in fact making a decision. **You** have decided that school is not important. **You** have decided that you don't want to graduate. **You** have decided that your future is

not worth planning for. **You** have already decided to start making excuses for lack of success. How do you go about setting goals or making choices? Some people find it helpful to write things down much as you would write a letter or short story or diary. Define your goals and write them in your language. Be specific. Write down the things you must do to achieve each goal, and put down some sort of time reference next to each goal. Come back and evaluate your plan later.

Other people find charts a handy way to plan. For example, suppose today is Monday and you have 3 main things to accomplish in the short-term. Chart them out in the following manner to keep on task. Such a chart also gives you a way to measure your progress in achieving the goals.

GOAL	NEED TO DO	ACTION PLAN
Review the Shakespeare play for the test this coming Friday	Re-read all 3 acts	Act 1 - Tuesday night Act 2 - Wednesday night Act 3 - Thursday night
History essay plan due next Tuesday	-Research topic in the library -Write thesis and outline	- Visit library after school Tuesday and Thursday - Write up outline Monday night
Buy sister's birthday gift for party on Saturday	Check out Sears and the Bay	Go to the mall Friday night

Other people find diagrams a visual cue to organizing. If you like visual art and enjoy sketching, try the approach shown below for setting and achieving your goals.



Daily Routines

Attitude

All the following suggestions depend on a **positive** attitude. In secondary school **you** must accept responsibility for your own progress. Whether you feel your parents and all of your teachers are helpful or not, you must be ready to work for your own success. Each of your teachers has way more students than your home room teacher did in elementary school. Their job is partly to help you develop as an independent learner, responsible for your own achievement and in a few short years, get you ready to enter post-secondary education.

Making a Good Start

Check your daily time planner before you leave home to be sure you are bringing the work, books assignments etc., needed for the day. Come to school on time, rested and with a proper breakfast. Check your timetable before you go to home room to be sure you have the books and equipment needed for the morning's classes.

Participation

Attend classes mentally as well as physically. Having your homework done allows you to participate in homework correction and review. Ask questions about anything that puzzles you in the lesson. Chances are, you are not the only one unclear about the point just presented.

Absence

It is **your responsibility** to catch up on work missed when you are absent. Here are some key points to keep in mind.

- ☞ If you know in advance that you will miss a class (IE: for a scheduled school game), speak to the teacher beforehand.
- ☞ Set up a 'buddy system' in case you become ill. When you miss a class, your buddy gets the homework and any handouts for you.
- ☞ As soon as you return from missing a day or two, go to your teachers as soon as possible to check on the work covered and the assignments your buddy gave you.
- ☞ If you are going to be absent for an extended period (more than a week), have your parent or guardian contact your counselor to arrange for work to be collected and sent home.

Extra Help

One of the common characteristics among the most successful grads over the years has been how they constantly arrange to see their teachers for extra help whenever difficulties arise or major assignments are given. As mentioned above, subject teachers are responsible for up to 200 students in their individual classes. It is impossible for them to check on each student daily. When you have difficulty with a homework assignment, or don't know how to start a major project, arrange to see the teacher for extra help. Before school, at lunch or after classes are all times available for extra help.

Also now available is free, on-line math tutoring help for grades 7 - 10. Visit ontario.ca/homeworkhelp

Practice Your Basic Skills

One long-term goal you should have is to constantly strive to improve your basic student skills. Just like any skilled professional such as an auto technician or surgeon, you should try to work on improving through practice, your basic skills in listening, note making, and reading. Courses in English, math and science demand special skills. All these are discussed later in this guide.

What to Study ?

One of the most common comments from students new to high school is, “I don’t have any homework tonight, the teacher didn’t give us any questions.” This reflects a very narrow view of what a successful student should be doing on their schoolwork most week nights. It assumes that unless the teacher assigns specific questions from the day’s class, there is no homework. Nothing could be further from the truth. To be successful in your courses you need to expand your view of ‘homework’ to include all of the following.

☛ Exercises

This is the type of homework most students recognize. It is assigned by the teacher in many classes, especially math and science, and is intended to give you a chance to practice skills taught in the class. Often, such assigned questions also provide the basis for what the teacher is going to cover in the next class, so by not trying to complete all assigned exercises, you put yourself behind before the next class even begins.

☛ Reports and Shorter Assignments

This is work usually given within a week of when it is due. It includes such things as writing up a lab report in science, doing a couple of paragraphs of descriptive writing in English or mapping a table of data in geography. The teacher assigns these to give you a chance to go beyond the classroom lesson and be a little creative. Usually, they also provide the teacher with another basis for evaluating your progress in the course beyond major term tests.

☛ Major Projects and Essays

This is longer term work requiring significant out of class effort to do well. Usually, they are given with an assignment sheet outlining the purpose of the project and the expectations of the teacher in some detail. They are usually due two weeks or more after they have been assigned, partly to give you the necessary time to do them well, and also to allow you a chance to see the teacher for individual help since these projects usually require the use of materials and some creativity beyond the basic textbook and class lessons. They always count for a major portion of your term work mark and should never be late or done at the last minute.

☛ Regular Review

This is the most commonly forgotten part of schoolwork, but as you will see later in the sections on skills, **un-assigned** regular review needs to be a part of your homework in almost every course. Review is why successful students **hardly ever** say that they don’t have any homework tonight. One reason why teachers don’t always assign you exercise homework from each class is to allow you the time to do this **essential** un-assigned review.

☛ Major Term Tests

All courses in high school are partly evaluated by major term tests that are sort of mini-exams and test individual understanding of the course work. If you are doing regular review, getting prepared for such tests is a snap. You are already doing most of what you need to do to prepare for the test. Teachers usually give you quite a bit of advance notice of major tests to allow you to plan review into your homework schedule.

☛ Term Exams

Almost all high school courses are required to have a common term exam as part of the final evaluation mark. In advance of these term exams, teachers usually stop assigning other types of homework to allow you time to plan a special study schedule to review course work for these longer exams. However, the most successful students are those who don’t wait for the exam schedule to appear before beginning review. The school calendar you receive in September should show the dates for the term or semester exams. If you are in the habit of planning a regular week by week schoolwork schedule, **and** following a pattern of regular review, getting ready for exams is no big deal.

Where to Study ?

The time is 9:30pm. The stereo is cranked up. Your books and notes are strewn across the floor in no particular order. The history test is first period tomorrow and you haven't looked at the text or your notebook for two weeks. You got home from school late the last three days because of extra volleyball practice. You've just spent an hour on the phone with your best friend. If this describes your situation, you need to make some drastic changes **now** or you will have little chance of success in high school. In the next sections we will talk about where to study and how to best organize your life to have the proper time for study. First, some things to consider in creating your own space for effective study.

✓ **Quiet** You need a place to study where you will not be interrupted. If you don't have your own room, talk to your parents. Emphasize your need for a quiet corner in the home and get them to help in keeping this as **your** place. Ask your counselor for assistance if needed.

✓ **Desk** All the skills discussed later in this guide require that you have a place to write, sketch, use a calculator etc., as well as a place to read. Always study at a desk or table. Do not be tempted to work on your bed or in a lounge chair.

✓ **Light** You need good light so you don't suffer from eye fatigue that reduces your work efficiency. If possible, position your desk so that natural light from a window falls across it. At night, use both a desk lamp and the overhead light in the room.

✓ **Temperature** Keep your study place at a comfortable 'working' temperature. Try to have some fresh air. Don't overheat in the winter or you will become drowsy.

✓ **Chair** Use a comfortable chair of the right height for you and the desk.

✓ **Board** Try to arrange for a notice board to pin up important aids such as your class timetable and the study schedule calendar we will talk about later.

✓ **Bookshelf** Try to have a bookshelf within easy reach for your textbooks, files and notebooks.

✓ **Neat** You don't have to become a neatness 'freak' but you need a place for everything so you don't waste time looking for things, or worse, lose important materials for assignments you are working on.

✓ **Phone** Have someone else in the family monitor the phone. If the call is for you, have them take a message. You can't concentrate with frequent distractions from callers.

✓ **Music** Some people find low volume background instrumental music a help in maintaining concentration by covering up other household noises. However, hard rock at full blast is totally useless.

✓ **TV** If there is a TV near where you study, turn it **OFF**. It is too tempting to look at the pictures and the constant changes in volume from a TV is distracting, not relaxing.

✓ **Tools** Like a mechanic without a wrench, your job as a student will be more difficult if you don't have your tools handy. Keep your regular study spot well stocked with paper, pens, calculator, math instruments etc.

When to Study ?

Using your time effectively is an important student survival strategy. Students who do well in school and are actively involved in extra-curricular activities in school and in the community, find time for necessary study and use that time efficiently. Actually, **time** is not the problem. After all, it's one thing that all people are given in equal supply - 24 hours, the same for you, your friends, your teachers, the Prime Minister. The trick is how to **manage** your time, to make the most effective use of the hours in each day.

If you are serious about doing well in your courses, it's essential that you devote time to reaching these goals. Making efficient use of time is an art. Few of us come by it naturally. Unless you're careful, your daily schedule can become filled with low priority activities, not leaving enough time for higher priority activities such as homework and studying. However, finding enough time for schoolwork needs to be balanced with other needs. A balanced life should include time for proper rest, family and social activities, relaxation and exercise or other extra-curricular activities; as well as time for course work. Obviously, no one can create more than twenty-four hours for you. What I can do is help you to become more aware of how you now use your time. Almost always, this awareness can help you find ways to use your time more effectively. Here is one approach to **TAP** into how you use time and how to change you use of your time.

T.A.P.

Time

Start by keeping a detailed time record of how you spend each day. Your school student day planner will be a help here. For each hour of the day, keep a record of how you used that time. Keep your time record for a full week. Keep up your normal activities. Remember, the purpose is to find out how you typically are spending your time now. Use a time record chart such as the one following to keep your time record. At the end of a week you will know exactly how you spent your time.

Hour	Monday	Tuesday	Wednsay	Thursday	Friday	Saturday	Sunday
7-8:00 am							
8-9:00 am							
9-10:00 am							
10-11:00 am							
11-12 noon							
12-1:00 pm							
1-2:00 pm							
2-3:00 pm							
3-4:00 pm							
4-5:00 pm							
5-6:00 pm							
6-7:00 pm							
7-8:00 pm							
8-9:00 pm							
9-10:00 pm							
10-11:00pm							

Analyze

The next step is to analyze your time record to try to get an overall view of how you spent your time during the week. You might try using highlighters to colour code similar activities using categories such as class, travel, eating, relaxation, homework, extra-curricular. Look for patterns. It's likely for example, that more time will be spent on relaxation during the weekend than during the week. How do the times spent on study and relaxation during the week compare ? Are your study times fairly constant each day or do they vary ? Do you see any blocks of time that could have been used for other activities ? Look for large pockets of 'dead' time that seemingly disappears, but in reality, you devoted to things like TV after supper before you got down to schoolwork.

Prioritize

There is a way that you can accomplish more in less time. You can plan ahead and make conscious choices about how much of your time will be spent on the various activities in your life. In order to find more time for schoolwork you will have to spend less time on other activities. You especially want to make use of the dead time you identified above.

Another way to 'find' time is to monitor your priorities. You need to arrange your priorities before you make changes in how you manage your time. It is important that you give time to activities so that the time spent matches the priority (or importance) of that activity. Because you are a student, schoolwork must have a high priority in your life if you want to be successful. If you are not doing as well as you would like in your courses, you need to find more time for schoolwork. If you are like the majority of new high school students, your time record probably shows that more study time can be found by making modest reductions in relaxation time (such as watching TV or talking on the phone). Although relaxation is always more fun than work, relaxation must have a lower priority for anyone to be successful. We all need some recreation for balance in our life but **not** at the expense of higher priority activities. When trying to match your priorities to managing your time, keep these suggestions in mind:

- ➡ To 'find' time for a high priority activity, reduce time spent on lower priority activities.
- ➡ Experiment with ways to reduce time spent on low priority activities. For example, don't always go to a friend's house after school every day.
- ➡ Don't always sleep in on weekend mornings.
- ➡ Be ruthless in spotting wasted time. For example, no one needs the entire 75 minute lunch period to eat. Use some of that time productively to read your English novel in the library for example.
- ➡ Be willing to re-organize your priorities when you need extra schoolwork time before a major test or exam. Trade in the time normally spent on your favourite TV show for example.
- ➡ Rest and relaxation are important. Set aside Friday night and part of the weekend to get away from school.

Once you have become more aware of how you spend your time and how to prioritize your use of it, you can now **PLAN** to make better use of it. Successful students know that planning and scheduling schoolwork along with the rest of your activities is essential for success. Anything - even schoolwork - seems less overwhelming when you break it down into smaller tasks each day. As you get used to managing your time and planning well ahead, you'll discover that you seem to have more time than before.

P.L.A.N.

Put Assignments in your student time Planner

The first step to organizing your schoolwork schedule is to make sure you **use** your school day time planner constantly. Don't depend on memory. Put down all exercise homework, assignments, major projects and tests. Put down important details such as the due date or page numbers for the homework. Get into the habit of carrying your planner with you as you would your wallet or purse.

Lay Out a Study Schedule

To most effectively plan ahead, you need two tools. One is a weekly calendar similar to the time record sheet shown on page 9. You can photo-copy the example printed on the first back page of this guide. Secondly, you need a monthly calendar with enough space for each day to keep track of due dates for major assignments, tests and exams that are more than one week in advance. This gives you the 'big picture' of your schoolwork. You might find there is a suitable wall calendar at home. Office supply stores have re-usable monthly calendars covered in plastic laminate for use with erasable marker pens. Here are some tips on laying out your schoolwork plan.

- Start by looking through your daily time planner and transfer the due dates for all assignments, tests etc., to your monthly calendars, which you should post up close to your study desk.
- Refer to your monthly calendars to plan in time on your week schedule necessary to complete the review for tests or do the work for project and assignments. Don't leave things to the last night

- before. Remember, the idea is to break the task down into smaller bits.
- On your weekly schedule, block in time first for regular homework and review in your courses. Keep in mind the timetable for your classes in the particular week upcoming. Also, try to give more time to your weaker subjects.
 - Remember to block in time you have committed to extra-curricular activities such as sports.
 - Block in your normal classes, travel time and meal times.
 - Remember to allow some time during the week for relaxation. Schedule TV time in the evenings **after** completing the necessary schoolwork. This acts as an incentive to finishing your work.
 - Schedule some short breaks between schoolwork times in the evening. Studies show that trying to work 3 hours straight in the evening when you are tired is not efficient use of time. You won't be able to maintain concentration. When you take a break, get right out of the room. Go for a short walk for some fresh air or watch 10 minutes of TV.
 - Try colour coding your entries on your weekly calendar. It is easier then to see if you have planned enough time for high priority activities. Some students like to colour code by subject.
 - If you work on a paper weekly calendar, use pencil. As the week goes on, you may need to re-arrange some of your planned time blocks as unforeseen circumstances come up.

Analyze your Weekly Plan

After you have made up your weekly schedule, take a moment to look it over to check for some of the following:

- Have I given myself enough time to reach my goals such as preparing for the test next Friday? If not, rework your plan and remember to 'find' time by taking it away from lower priority activities.
- Have I planned work early enough to comfortably meet deadlines?
- Have I included some time for regular review if there are no tests coming immediately?
- Have I included some reasonable breaks in my schoolwork time each night?
- Have I made use of so called 'dead' time such as part of the long lunch period?
- If part of your schedule involves group work on a project, did you check your plan with the schedule of the other members of your group?
- Have I been realistic? Don't block out 3 hours straight for study. Set goals that are reasonable.

Next Plan is Important

Old habits die hard. After a couple of weeks of planning, it is tempting to fall back into your old habits of just letting the week go by. To avoid this:

- Always set aside a short block of time on Sunday to plan the next week's schedule.
- Always check ahead with your monthly calendar to be sure your next plan is going to take into account important due dates that are now getting closer. Don't let work pile up.
- If you start to fall behind with a deadline approaching, don't panic. Re-arrange your next weekly schedule to take this into account.

Listening Skills

"A good listener is not only popular everywhere, but after awhile, he (or she) knows something"
Wilson Mizner

To get the most out of your classes, it is important to develop good listening skills. Surprisingly, listening is not as easy or natural as you might imagine. We tend to listen in short spurts. After a few seconds, our attention wanders away for a short time and then returns. Our listening tends to be best when we have a purpose for listening. With a purpose, we tend to hear more and better because our listening is actively searching for information to satisfy our purpose.

H.E.A.R.

The first step for improving your classroom listening is to get a **H**ead start. This involves preparing for the class.

→ **Know the purpose of the class.** What topic is likely to be covered? Your course outline gives an overview of the topics. Review your notes from the last class.

→ **Get ready to listen.** Read assigned materials before coming to class. This will help you anticipate what the teacher is going to say in the next class.

→ **Ask Questions.** Ask yourself questions about what you don't understand from the assigned materials that you need to find out about in the upcoming class.

→ **Get a good seat.** If your teacher gives you a choice, ask for a seat close to the front toward the middle where you can see all the blackboards and screen. Don't sit behind someone taller than you.

The second step is to **E**ngage yourself to become a more active listener. Usually we think of listening as passive, someone else is producing the words and we are passively absorbing them. Effective listening is not passive.

→ **Listen for the purpose of the class.** Listen at the start of the class to see what the teacher's purpose is that day. It may be to present new information, or to offer explanations for difficult ideas from the homework, or to explain and give practice for new skills, or to demonstrate a concept.

→ **Listen for main ideas.** Many teachers will give special emphasis to major ideas by either repeating them, or writing them on the chalkboard, or using colour on the board or overhead.

→ **Learn the style of the teacher.** Learning about the teaching style or methods of each of your teachers can help learning. Does your teacher usually start classes with a review? How much of your teacher's class is spent on covering material not found in the textbook? How does your teacher indicate the special importance of information?

→ **Questions.** Don't be reluctant to ask questions during class when the teacher presents something you don't understand or reviews something from the homework that you didn't understand. Most teachers welcome questions. You can be sure there will others who don't understand either.

→ **Respond to the teacher.** When you aren't taking notes, look at the teacher. If you agree with what is being said, nod your head. If you disagree or don't understand, frown or shake your head. Teachers need cues that the class is following the lesson.

The third step to becoming a better listener is to **A**bsorb yourself in what is being said. Concentration is essential for effective listening. If you are bored or allow yourself to be distracted, listening suffers.

→ **Take notes.** Don't just sit there. When you hear something important, write it down in your notes. Taking notes keeps you active and helps you concentrate on what is being said.

→ **Focus on the lesson.** Be alert to when your mind begins to wander. Some students who have difficulty concentrating during class find it helpful to make a check mark every time they find themselves not concentrating. Initially, you may have many checkmarks, but after a week or so of practicing, you will likely find your checkmarks reduced to one or two per class.

→ **Listen to others.** Listen closely to the words and questions of your classmates. You'll often find their comments and opinions as helpful and insightful as those of your teacher.

→ **Maintain eye contact with the teacher.** Looking at the speaker helps maintain our interest and concentration. In addition, it helps you pick up on important non-verbal messages.

→ **Notice non-verbal messages.** Teachers typically also communicate by using cues such as body posture, gestures, changing in speaking volume or rate to indicate important material.

The last step to improved listening is to actively **R**eact to the teacher's cues or signals that indicate the importance of material or how information is connected and related.

→ **Listen for the obvious.** Many teachers are straightforward in telling the class when something is important and should be noted. Cues such as “Keep this in mind for the test” or “It’s important to remember that.....” should never be ignored. As a general rule, if a teacher repeats something more than once, get it down in your notes. As a general rule, if the teacher thinks it is important enough to write on the chalkboard, it’s probably important enough to be in your notes.

→ **Listen for clues about key ideas.** Teachers often use words such as the following to emphasize the importance of the material being presented:- basic...important...significant...critical...remember that...finally...most importantly...a major finding.

→ **Listen for clues about supporting information.** These words often indicate the teacher is presenting material to support or connect main ideas:- also..for example...similarly...further... compared to.

→ **Listen for instructions.** Become especially attentive whenever the teacher talks about homework, course assignments or upcoming exams. Listen for all the details and requirements. Write down everything when the teacher is assigning work, including the due date.

Note making Skills

A well organized notebook for each subject is an important aid for better learning. Working on how to keep better **N.O.T.E.S.** is the major step to improving marks on tests and exams.

Notes: Why do you need them?

Unless you’re really convinced that note taking is helpful, you won’t have much desire to improve your present note taking skills.

- ▶ An organized set of notes helps you identify the important ideas from each class.
- ▶ Good notes are a permanent record of the work in each course.
- ▶ Some classes present information not available in the textbook. Notes on this material, including handouts given by the teacher, will be your **only** record of this material.
- ▶ Teachers generally spend valuable class time on the most important information. Reviewing notes helps you decide what is important when preparing for tests and exams.
- ▶ Your notebook should be your primary record of assignments given.
- ▶ Taking notes from class discussion helps maintain your concentration and helps sharpen your listening skills.

Organize your notes

One of the biggest problems students report about class notes is that they end up being disorganized to the point where they offer little help for later review. There is no one best method of organizing notes. If one of your course teachers requires a specific notebook arrangement, use it and follow their instructions. If your teacher doesn’t give you a specific method, try the following ideas.

- **Use loose leaf paper kept in a 3 ring binder.** The advantage is that you can add sheets easily, for example, handouts given in class or summary notes from reading the textbook on the same topic.
- **Identify each sheet of notepaper.** Before the day’s classes, put the course name at the top of a few sheets of blank paper. Add page numbers. If this information is on each page, at least you have a chance of getting your notes back in order if they are misplaced or get mixed up.
- **Leave space of each page for marginal notes or comments.** Double the size of the left margin on each page by drawing a bold, vertical line about 6cm in from the left side. Use the space remaining to the

right for your actual class notes. The space on the left of the new margin can be used for later comments, summaries or symbols to call attention to very important sections of notes.

➤ **Develop a routine system for marking main topics.** Try something like double underlining topic headings, or drawing a box around them. Some students like to number in order the main ideas from that day's class. Some students like to add colour highlights later when reviewing notes so that the main topics stand out clearly.

➤ **Write legibly.** You don't have to be a neatness freak, but you do need to be able to read your notes later. Try double spacing.

➤ **Ignore unnecessary material.** Many teachers begin each class with a review from the last class. Listen, but don't bother writing anything down. Try to write down only key words and phrases, not everything the teacher says. It helps to develop a system of personal 'shorthand' for common words. More about this later.

Tabulate the Main Ideas

The most complete and accurate set of notes won't do you any good if you don't use them. Part of each night's homework should be to come back to your notes and review them to tabulate the main ideas. This is where double spacing and that extra wide left margin comes into use. Here are some ways to do this.

➤ **Fill in the gaps.** Have a look at your notes while your memory of the class is still fresh. Use the blank space between lines to fill in any missing parts or abbreviations you may not recognize later.

➤ **Add comments to make your notes clearer.** Add comments in the left margin to clarify ideas. Relate to pages in the textbook if necessary.

➤ **Identify key words and phrases.** Use the left margin to write down key words found in the notes. This is the time to highlight topic headings if you wish. These steps help fix key information in your memory.

Engage in Review

The key to avoiding much of the worry and fear about approaching tests or exams, is *regular review*. The more you review, the less you will have to 'cram' before a test because you will have stayed on top of the material as it was presented. Regular review means that you **always** have homework whether or not the teacher has assigned anything specific. In fact, one reason why teachers do not always assign specific homework is to give you time for regular review that they know is essential for long term preparation for exams and major tests.

➤ **Use the key words to help review the lesson.** Once you've written the key words and ideas in the left margin, cover the rest of the page and see if you can recall verbally to yourself the meaning and importance of these ideas. Then uncover the notes to the right and check for accuracy.

➤ **Expand your thinking about the lesson.** Can you think of examples from your own experience that illustrate any of the key words or ideas you've listed and highlighted? This reflection step can be one of the most powerful learning processes. Relating new information to what you already know is a powerful strategy for increasing both understanding and memory.

➤ **Pick a topic to study.** Look through it for no more than ten minutes. Close your notes and summarize it in your own words on a separate sheet of paper. Check back for accuracy.

➤ **Try personalizing the lesson.** Pretend you are teaching the class. Using only the key words, outline the lesson plan on a sheet of paper, or talk about the ideas into a tape recorder. Check back with your notes for accuracy. Another idea is to try diagramming the key ideas, or characters presented in the lesson.

➤ **Summarize the week's work.** At the end of each week of classes, or major unit, make a brief summary of material on a separate sheet of paper. Re-draw all diagrams, tables, maps etc. Re-work math or science problems and check the answers. If you find it hard to summarize a week's work accurately, this is an excellent way of pinpointing that you need more review of your notes or text, or that you need to arrange for extra help with the teacher. If you are having trouble reviewing the work after one week, you will surely have more trouble before the major test or exam a few weeks in the future.

Develop your own Shorthand

A common fault with many students is trying to write down every word the teacher says. This is an exercise in frustration. It's impossible to write as fast as someone can talk. Notes should concentrate on recording the main concepts, key words and how ideas are related; rather than a verbatim transcript of everything said in class. To do this effectively, you need to develop your own 'shorthand' of abbreviations for common words and phrases. Whatever system you develop, just make sure it serves the purpose, which is, giving you the time to really listen to your teachers rather than furiously scribbling down everything they say. The following table gives you some tips for using abbreviated shorthand.

ex	example	apx	approximately	tn	Christian
w	with	esp	especially	↗	increasing
wo	without	&	and	↘	decreasing
Q	question	#	number	▲	changing
bc	because	NB	very important	→	resulting in
IE	that is	vs	versus	√	square root
ch	chapter	=	equal	X	multiply
b4	before	+	in addition	%	percentage
ref	reference	>	more than	.∴	therefore
gvt	government	<	less than	-	subtract

Developing your own shorthand takes practice. Besides using abbreviations and symbols, you can also leave out some vowels and shorten words to how they sound. Try using sections from your textbooks to increase your skill. For example you could compact the following from a history textbook:

At the beginning of World War two, one of Prime Minister MacKenzie King's most important acts was signing the treaty to establish the British Commonwealth Air Training Plan to train aircrew for the Royal Air Force.

into the much shorter note:

Start WW2 PM King sign BCATP train a/c for RAF.

Reading Skills

Your success as a student in high school depends heavily on your reading proficiency. Most courses have a major textbook or several smaller ones. Teachers often use supplementary reading materials. Researching an assignment or essay in the library demands that you read through much material. The purpose for reading influences how you read. Good students read a textbook very differently than they do a novel or story for enjoyment. Recreational reading is usually faster. You are not concerned with remembering or understanding. When reading for enjoyment, you seldom return and reread a previous passage. Unfortunately, many students apply this reading style to course materials. Have you ever noticed how much you remember about an entertaining novel you read for fun a month ago? If you are like most people, you'll be doing well to remember the plot. Reading a textbook like you read a novel will give the same results. Nearly everything will be forgotten unless you learn some skills to read for understanding and memory. Reading with a purpose requires a system. Try the following.

SQR³

Survey

The idea is to see what the big picture looks like before digging into details. Making a survey is an easy habit to develop because we often survey our recreational reading. For example, when we first pick up a newspaper, most of us will skim through the headlines on the first few pages to decide what we will read first. Do the same thing before reading a chapter in a textbook. Survey it to get an idea of what the chapter is about and the main concepts and important information discussed in the chapter.

- Note the chapter title. This tells you what this section is about.
- Some texts present a summary outline at the beginning or end. This has all the main ideas.
- Read the headings and subheadings, usually shown in bold type or colour. Authors usually use them to organize major ideas and concepts.
- Write down any words appearing in bold print in the body of the text or in the margins. These usually mark key concepts or definitions.
- Look at any tables, illustrations, graphs or maps. Read the legend and captions.
- Read any footnotes. They are sometimes used for definitions or further explanation of key ideas.

Question

Never begin a detailed reading of a text without first formulating a set of questions. Use what you have learned from your survey to make your questions. Some students find it helpful to write down questions at the same time they are surveying the chapter. When you ask questions beforehand, your detailed reading has a purpose: to find the answers to your own questions. Active reading generates more interest and focuses your attention. Here are some ways you might use a chapter survey to make questions you need to answer from your reading.

- Use the chapter title for a question such as “What is important about world population?”
- Use section headings or subheadings to suggest questions such as “Why is population a problem?”
- When you see graphs, tables or other illustrations, ask yourself “What variables are shown on the graph?” or “How are the variables on this graph related?”
- Notice definitions and make up questions such as “What is an atom?”
- Use your survey to make up questions such as “What is the main message of the author is this act of the play?”
- Don’t overlook questions that may be included in your textbook. Authors often add these to help with study.

Read

Now you are ready for a careful, detailed reading of the chapter. You are reading to fill in your survey and to answer your questions. You should be making notes on these as you go along. Each paragraph usually contains a main idea. Try to identify which of the following is the main purpose of the paragraph.

- | | |
|----------------|--|
| ? Who | The paragraph focuses on a particular person or group. |
| ? When | The paragraph is concerned with change over time. |
| ? Where | The paragraph discusses a particular place or location. |
| ? Why | The paragraph explains reasons for some belief, happening or theory. |
| ? How | The paragraph identifies the way something works, or is done, or how main ideas are related. |

When you have finished the chapter reading, mark any questions that you can’t answer. If these are not covered in class, you need to ask the teacher for extra help.

Recite

After a few paragraphs, stop reading and, in your own words, try to summarize the main ideas and explain to yourself how they answer your questions. The reason for stopping frequently for recall is that it greatly improves memory. It also helps you concentrate because you are dealing with difficult material in shorter

chunks.

- Try to get in the habit of stopping reading to recite whenever you come to a new main heading or subheading.
- Use recall breaks to remember the main ideas and check how the material answers your questions.
- Don't just think during recall. Write down the answers to your questions.

Review

It is important to double-check your understanding of important material through regular review. Several days after reading a chapter, go back to the questions you initially asked yourself about the chapter. See how many of them you can still answer. If you need to re-read a section of the chapter, or need teacher help with some of the material, you are finding out about this well in advance of tests or the term exam.

Perhaps the biggest hesitation students have about using a systematic approach to reading text materials is that it is too time consuming. Actually, research has shown the exact opposite. Why? When you read with a purpose, read to answer questions, your attention and concentration improves. The recite and review steps help store the information you read in your memory. These benefits make **SQR**³ more time efficient than less active reading methods. The trick to 'studying smarter' is to study more efficiently.

Reading Literature

In compulsory English courses you will always encounter fictional novels and plays. Most literature is an attempt to tell a story or make social comment through a story. There is a beginning, in which characters and setting are introduced. There is conflict or struggle that advances the story to some climax where the conflict is resolved. When reading novels or plays for English courses, make notes on the following important parts that usually will form the major portion of your course work on the literature.

- **Plot**
Look for the order or sequence of the story - how it proceeds from the opening through the climax. Part of your ability to understand literature depends on how well you can follow the story.
- **Characters**
Look for the personalities or characters central to the story - the heroes, heroines, the villains. You need to identify the main characters of the story and their relationship to the struggle or conflict that makes up the story.
- **Theme**
Make sure you can identify the controlling message of the story. Look for the moral or idea that the author is using the plot and characters to illustrate or communicate.
- **Setting**
The time and place in which the story occurs is especially important when reading a historical novel or play, especially if this takes you to another culture.
- **Point of View**
Who is telling the story? Is it one of the central characters giving you a first-person perspective? Or is it a third-person narrator offering commentary and observations on the characters, setting and plot? Or are you like an observer looking in on the unfolding story or play?

A basic step to successful reading and study of literature in your English courses is to familiarize yourself with these concepts. Try practicing recognizing them in a novel or short story you are reading for fun. When reading literature, approach it with some emotion. What do you feel about the characters? Do you like them? Why? Your school library has lots of other literature for you to practice on.

Math and Science Courses

Many students find courses in math and science more difficult than other course work. These subjects demand a logical, organized approach. Added to this is the 'phobia' that many students have about math and science. Whenever they see a complex formula, many students quickly jump ahead to a section of the book that contains words rather than symbols. This only makes things worse because another way that math and science courses differ from other courses is that the information is cumulative, that is, one unit of information builds on another. That means that if you don't understand an earlier formula or concept, you won't be able to grasp later information developed on the basis of the earlier material. One last difference between math and science courses and other subjects is that math and science often make greater demands on your memory. There are lots of facts, formulas and definitions that you are expected to remember. When studying math and science courses, your learning efficiency will improve if you try the following strategies.

❖ **Read math and science texts differently.** Allow more time in the SQR³ system for careful reading. The danger in reading math/science material is that you will read a difficult passage and continue on even though you really haven't grasped something important for understanding the next major part of the text. If you don't understand a particular section or concept, you likely won't be able to understand the next section either. Most technical books are saturated with ideas, terms, formulas and theories. When reading math/science materials look for:

1. Definitions and terms
2. Examples used to explain definitions or concepts
3. Classifications and listings to categorize details
4. Use of contrast and comparison to relate a new idea to one previously presented
5. Discussion of cause and effect relationships. *Why* does it snow?

❖ **Try to 'translate' key concepts.** Putting difficult ideas into your own words or into another form can help you understand the concept or at least reveal where you need more help from the teacher.

1. Whenever you can, 'translate' formulas and numbers into words that explain the process.
2. Try translating a hard science problem into a drawing or diagram.
3. Before you try solving a math problem, try to estimate the answer.
4. When the author presents a problem and solution, try to find other equally valid solutions.
5. When checking calculations, try working backwards from the correct answer.
6. Always identify *what* is being asked, what principles are involved, what information is important.
7. Teach someone else such as a sibling or parent. Trying to explain concepts to someone will quickly pinpoint what you really know or don't know.

❖ **Brief reviews are especially important.** Because of the sequential nature of math and science courses, brief same-day reviews really pay off. Refreshing your memory of earlier information will improve your understanding of the new material presented in the next class.

❖ **Don't skip materials that are difficult to understand.** When reading a math/science text or doing homework assignments, there is a strong temptation to skip over equations, problems or paragraphs that you don't at first understand. Because the ideas in these courses follow a logical progression, each new idea builds on previous ideas. You'll soon be hopelessly lost if you ignore things you don't understand. Seek help from the teacher whenever you encounter such sections in math/science courses.

❖ **Go back rather than ahead.** In most cases, the reason why you find new material difficult is that the passage assumes you have prior knowledge. Skipping over a difficult section and moving ahead only makes things worse. Go back and use your chapter surveys to relearn the earlier concepts you need in order to understand the present section.

❖ **Get help when you need it.** Rather than spending hours at home hopelessly bogged down with something you can't understand, **get help**. The most common problem counselors in schools find with

students failing a subject is that they have rarely if ever sought out the teacher for extra help. If you have given the topic an honest try, and still can't understand what is being discussed or how to calculate the solution to a problem, there is nothing wrong with asking for help

Problem Solving

A major component of most math and science courses is the ability to apply what you have learned to solving problems. Problem solving in math and science will become easier if you adopt a systematic approach to tackling problems.

✓ **Practice.** Always try all the practice exercises and assigned homework problems. Simply going through one sample solution in the text is seldom sufficient to allow you to easily solve a similar problem yourself.

✓ **Set a maximum attempt time.** Don't get bogged down on one difficult problem. Set a reasonable (no more than 20 minutes) time to spend. If you still haven't solved the problem, try reviewing the material needed for the problem or the sample solution in the text. If that doesn't help, seek teacher help.

✓ **Try sketches to help solve problems.** Diagraming the problem can be a good way to immediately highlight what you need to find. For example: Is it better to purchase 2 pencils for 79 cents or 3 pencils for \$1.29? Your sketch of the problem might look like this:

$$\text{✎ ✎} = 0.79$$

$$\text{✎ ✎ ✎} = 1.29$$

The sketch tells you that you will have to find the price of *each* pencil in the sketch to determine the better buy, and this suggests division of the total purchase price is necessary.

✓ **Try using different methods.** There is usually more than one way to solve most problems. Sometimes we become focused on only one way and don't even think about trying new solutions.

✓ **Think about similar problems.** If you have already successfully learned how to solve similar problems, think about how you solved them. A similar approach may work, or at least get you started, on solving the new problem.

✓ **Take time to go back and learn what you need to know.** If you are having trouble with a math problem because you have forgotten how to apply a basic algebraic operation, go back and relearn this material. If it was from a previous course, seek help from the teacher.

✓ **Try to predict the answer.** When you don't have the benefit of a text with the correct answers in the back of the book, before starting a problem, make a prediction about what the final answer will look like.

✓ **List the data in a table.** When trying to solve more difficult problems such as those concerning the data from a science experiment, try listing the data in a neat table. Many students find that just re-arranging the information into a table helps get them started on a solution by showing relationships in the data that they didn't see before. It may help you to see the steps required for solution.

✓ **Record intermediate steps when using a calculator.** Writing down each of the intermediate calculations gives you a record to check if something goes wrong. Without this written record you pretty much have to go back to the beginning if your answer is wrong.

✓ **Attack easy parts first when you are stuck.** Some students try to see right to the final solution before starting longer, difficult problems. Instead, try to solve just a part of the problem. Doing the preliminary work can sometimes lead toward the final solution. If not, when you seek help from the teacher, he/she can see where you went wrong and re-teach what you need to know.

✓ **Try working with smaller numbers.** When trying to solve science problems with large and complex

quantities, try first solving the problem with smaller numbers by taking off the same number of zeroes from all the data presented. It is easier to work with 10 or 100 instead of 100,000 or 1,000,000.

✓ **Assign small numbers to problems that don't have numbers.** This may be especially helpful in solving geometry problems. Geometrical relationships may be easier to see when you assign small numbers to replace the more common letter designations in geometry.

✓ **Check for computational errors.** If you don't arrive at a correct solution compared to the answer in the back of the book, check first for simple computational errors. Keep an eye open for the types of mistakes you've made in the past. Do you tend to mis-place decimals? Do you sometimes forget to square numbers when needed? Do you mess up the correct order of operations?

✓ **Give it a rest.** When you're really at a dead end, put away your work. Take your attempt to the teacher at the next opportunity. Requesting help is a sign of a student who wants to learn. Teachers respect this kind of motivation.

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