RAISING A SUCCESSFUL STUDENT
High school
Helping your teen succeed in high school... and get into college

Your child’s best chance for success in high school and college depends on developing good organization and study skills. This means keeping excellent notes, breaking down big projects, and taking the right classes. Learn how you can help your teen take the reins to manage school, earn good grades, and conquer college prep.

Teach your teen how to take great notes ................................................................. 2

5 steps on the road to college .............................................................................. 3

A math cheat sheet... for parents ........................................................................ 4

Will your child be ready for college math? Here’s how to find out. .................. 6

Brought to you in partnership with Sylvan Learning is the leading provider of tutoring to students of all ages, grades and skill levels with over 30 years of experience and more than 800 centers located throughout North America. Sylvan’s trained and Sylvan-certified personal instructors provide individualized instruction in reading, writing, mathematics, study skills and test-prep for college entrance and state exams. For more information, call 1-800-31-SUCCESS or visit www.SylvanLearning.com.
Teach your teen how to take great notes

Taking clear, complete notes is a survival skill your child will need in every class. The ability to evaluate, organize, and summarize important information — from class lectures, reading assignments, and research materials — will help your child in high school, college and beyond. Here are some tips to help your child become an A+ note taker.

Taking notes in class

• Start a new page each day and date it. Leave space between topics or ideas so you can easily scan the page later.

• Write down key words and concepts rather than full sentences. Develop your own system of abbreviations or symbols (such as w/ for with or math symbols such as > or =) to quickly take down key points.

• Listen for word clues from the teacher. Teachers often signal what's important to note, using introductory phrases such as, "The three incidents that led to the War of 1812 were..."

• Review notes after class to make sure they're accurate and complete. Then, before starting homework, review the relevant class notes again.

Taking notes from reading or research

• Pre-read a textbook chapter to get an idea of what it's about: read the intro text, subheads, graphics, captions, summary paragraphs, and study questions at the end. Then read the chapter.

• Pay attention to anything the textbook publisher has used typographical features to emphasize.

• Summarize information in your own words, rather than copying the textbook. Put quotation marks around passages that are direct quotes from an author and note the page number where you found the quote so you can easily find and attribute words that aren't your own.

• Remember: Accuracy and attribution are essential skills when preparing to write a research paper or take a test.
5 steps on the road to college
What’s the key to getting your child into college? Start early and stick to a plan.

1. Make your home a learning lab
Study after study shows that kids who come from homes where learning is a way of life have a much better chance of succeeding in school, all the way through college. How do you do this? Read aloud with your child, keep books and learning materials around the house, and give your child a creative space to work on projects and hobbies — both alone and with you.

2. Encourage extracurricular activities
Colleges look closely at extracurriculars these days — and not just traditional options like team sports or school clubs. Encourage your child to get involved in meaningful after school, weekend, and school break activities, particularly ones that tap into their interests or plans for the future. Consider competitions, volunteer opportunities, and experiences outdoors, too.

3. Get a grip on grades
Your child’s grade point average (GPA) is a major factor in college acceptance. What’s more, many schools look specifically at performance in subjects relevant to a student’s chosen major. So getting good grades and keeping them up is crucial — and it can’t wait until junior or senior year. Work with your child all along the way. If you maintain an active (and low-pressure) presence, you’ll be able to handle and head off crises as they arise.

4. Expose them to college early
AP classes are great, of course, but they’re not the only option. Many high schools have more direct (and rewarding) arrangements with colleges where students can take courses with professors. Some even offer “mini-college” experiences during the summer between junior and senior year. Such programs can alleviate fear of the unknown, motivate students, and help them focus — they’ll also make an impressive addition to your child’s college application. Bonus tip: when you’re traveling with your teen, drop by the local college or university, and attend a concert or other college event, if you can. These casual visits will give your teen a taste of the college atmosphere and help her decide what type of college she wants to attend.

5. Build a two-year plan and stick to it
Fall of junior year is the best time to create a point-by-point plan for getting your child into college. Your plan should include the upcoming PSATs; the SATs a year downstream; searching for schools, choosing where to apply, and completing the application process. Your child can choose the date and location of their SAT exam months in advance. It may seem like a lot, but getting it all on paper — and sticking to your plan — will reduce anxiety and bring your home team together.
A math cheat sheet for parents

Remember this stuff? Not to worry we’ve all forgotten some math lessons from long ago. Here are some refresher tips to help get your mathematical motor running again.

Properties of polygons

Regular — all angles are equal and all sides are the same length. Regular polygons are both equiangular and equilateral.

Equiangular — all angles are equal.

Equilateral — all sides are the same length

<table>
<thead>
<tr>
<th>Names</th>
<th>Names</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sides</td>
<td>N-gon</td>
</tr>
<tr>
<td>3</td>
<td>Triangle</td>
</tr>
<tr>
<td>4</td>
<td>Quadrilateral</td>
</tr>
<tr>
<td>5</td>
<td>Pentagon</td>
</tr>
<tr>
<td>6</td>
<td>Hexagon</td>
</tr>
<tr>
<td>7</td>
<td>Heptagon</td>
</tr>
<tr>
<td>8</td>
<td>Octagon</td>
</tr>
<tr>
<td>10</td>
<td>Decagon</td>
</tr>
<tr>
<td>12</td>
<td>Dodecagon</td>
</tr>
</tbody>
</table>

Perimeter formulas

The perimeter of any polygon is the sum of the lengths of all sides.

Set: \( a = 1 \) side length
\( b = 2 \) side lengths
\( c = 3 \) side lengths

<table>
<thead>
<tr>
<th>Polygon</th>
<th>Formula</th>
</tr>
</thead>
<tbody>
<tr>
<td>Square</td>
<td>( 4a )</td>
</tr>
<tr>
<td>Rectangle</td>
<td>( 2a + 2b )</td>
</tr>
<tr>
<td>Triangle</td>
<td>( a + b + c )</td>
</tr>
<tr>
<td>Circle</td>
<td>( 2 \pi r ) (where ( \pi \approx 3.141592 ) and ( r = ) radius)</td>
</tr>
</tbody>
</table>

Area formulas

<table>
<thead>
<tr>
<th>Polygon</th>
<th>Formula</th>
</tr>
</thead>
<tbody>
<tr>
<td>Square</td>
<td>( a^2 )</td>
</tr>
<tr>
<td>Rectangle</td>
<td>( ab )</td>
</tr>
<tr>
<td>Triangle</td>
<td>( \frac{1}{2} (bh) ) (where ( b = ) base ( h = ) height)</td>
</tr>
<tr>
<td>Parallelogram</td>
<td>( bh )</td>
</tr>
<tr>
<td>Circle</td>
<td>( \pi r^2 )</td>
</tr>
</tbody>
</table>
Phythagorean theorem
The Pythagorean theorem has many uses. You can use it to verify whether or not a triangle is a right triangle or you can use it to find the missing measure of one side.

\[ a^2 + b^2 = c^2 \]

Where \( a \) and \( b \) are the two legs, and \( c \) is the hypotenuse, the side opposite the right angle.

Trigonometry
One of the many operations that function based on the right triangle, trigonometry focuses on the relationship between an angle and its sides. If one value of a right triangle is known — whether a side length or an angle degree — you can determine the rest of its values using the following trigonometric functions:

**Functions**
- **sine** (sin) = opposite/hypotenuse
- **cosine** (cos) = adjacent/hypotenuse
- **tangent** (tan) = opposite/adjacent
- **cosecant** (csc) = hypotenuse/opposite
- **secant** (sec) = hypotenuse/adjacent
- **cotangent** (cot) = adjacent/opposite
Will your child be ready for college math? Here’s how to find out.

Sad but true: Even if your high schooler’s on track to complete the math classes required by your state and pass the exit exam, he may not be prepared for college math.

Many students aren’t ready. A significant number of students wind up taking remedial math once they get to college, which means it’ll take them longer (and cost more) to graduate. Studies also show that they are at higher risk for dropping out of college altogether.

Meanwhile, an increasingly competitive global marketplace has increased the demand for graduates with math skills, so it’s important to make sure your child’s skills are on track for success.

The math classes your child needs. Professor W. Stephen Wilson, who teaches freshman calculus at Johns Hopkins University and is a former senior math advisor for the U.S. Dept. of Education, puts it simply: “Arithmetic. You really have to be able to add, subtract, multiply, and divide with pencil and paper, do ratios, propositions, and percentages, and work multistep word problems that apply arithmetic.”

To learn these skills, Wilson ticks off the list of math classes a college-bound student should take: algebra I, geometry, algebra II, and some trigonometry.

Your child needs math every year. Be sure your student takes algebra I and above — not business math, consumer math, or general math. If your child took her first year of algebra in the seventh or eighth grade, she is likely to be able to fulfill minimum admissions requirements for all but the most selective colleges by the end of her junior year. The idea of taking a break from math in her senior year might sound pretty appealing, but it’s a bad idea, say math professors and researchers.

"A gap without math will make taking whatever math they have to take in college extremely difficult,” says Wilson.
Will your child be ready for college math? continued

Placement tests are "hidden standards." What's more, skipping a year of math in high school will make it harder to pass a college placement exam. Placement tests have become a "hidden set of standards," says Bill Moore, director of the Transition Mathematics Project, an initiative in Washington state aimed at getting more students prepared for college math. Moore says this doesn't just happen to poor students.

"They take their senior year off, they take a placement test — and have to take remedial math," says Moore.

Does every student need to take calculus? Calculus isn't right for every student, and contrary to what many parents think it's not the only option. Some schools offer AP statistics or math modeling. If you're uncertain about whether calculus is the next step your student should take, talk to his math teacher about whether he's ready. There may be better math options at a nearby community college, too.

Look for homework clues. Wilson offers this advice to parents trying to evaluate their students' math instruction: "If a student isn't bringing home work that requires lots of manipulation and lots of word problems, then there is probably a problem," he says. "If the homework requires, instead, lots of making tables, then there is probably a problem. If the work involves a lot of use of calculators there is probably a problem."

If you notice any of these questionable practices in your child's math classroom, you may want to express your concerns to the teacher.

One other cautionary note: Beware of classes in which students are allowed to pass or progress because they complete extra credit rather than demonstrate through tests and classwork that they understand the concepts.

If you have a weak math background, don't let that get in the way of your child's learning. You don't have to know the math to get a good idea of how well your child will be prepared. You can ask the teacher about the content of the class. Ask whether the calculus in college will be different than this — and whether your child is repeating math concepts he should have already mastered.