## Bernards Township Board of Education Basking Ridge, New Jersey

# FIVE-YEAR EVALUATION BUSINESS DEPARTMENT

Ridge High School Grades 9-12

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# **Philosophy**

In accordance with the district's philosophy and goals, the Business Department of Ridge High School prepares students to become contributing citizens. It produces students who are capable of making astute personal and professional decisions: legal, financial, economic, and technological. Learning experiences in the business department prepare students to work productively in any workforce with skills that will enable them to allocate resources: time, money, and materials. They learn to work with others individually and as part of a team. Students learn to process information: acquire, evaluate, organize, interpret and communicate. Understanding systems is taught, including how to monitor and correct performance. And finally, how to work with a variety of technologies: computers and related equipment, understand the intent and procedures for operation of equipment, and to prevent, identify or solve problems.

The subject areas offered by the business department provide knowledge and skills that are valuable for all adults, today, to function effectively in society. This is true whether our students go on to college, technical school, go directly into the work force or marry and raise a family. They must understand basic principles of the laws under which we live. They must be able to access information, whether it is through traditional paper sources, digital sources or the Internet. They must be able to communicate with the world at large. If our students intend to go on to college and attain advanced degrees they will benefit by beginning as early as possible to attain knowledge and skill in the previously mentioned skills. Technology should be used as a means to an end, a tool to explore, not an end in itself. The greater the skills the greater the potential to process acquired knowledge and skills to generate new ideas, to communicate to others and to express one's self.

The technologies taught in the Business Department are truly integrated into all other facets of the educational process. Whether it is word processing, data organization and processing or mathematical functions, skills are required for Math, Science, Social Studies, Language Arts, Foreign Languages, World History, Physical Education and the Fine and Practical Arts. Business skills are used anywhere that information/thoughts are acquired, organized, processed and/or communicated.

# **Program Goals**

The goals of Business Education are as follows:

- To help all students make informed decisions as users and consumers of technology in all aspects of their lives.
- To develop within the students an understanding of the impact and consequences of technology on their lives.
- To encourage students to be alert consumers in all aspects of their lives
- To give students the skills to understand finances, both personal and business
- To have students apply creative problem solving techniques to finding the solution to technical problems.
- To engage students from all sectors of the student population in meaningful first hand experiences in technology.
- To use technology education as a catalyst for an interdisciplinary approach to general education.
- To aid all students to begin making informed career choices.
- To develop an attitude within students that encourages them to keep pace with a rapidly changing society and realize education is a life long process.

# **Review of Previous Five-Year Evaluation**

This is the first time that a Five-Year Evaluation has been done for the Business Department. The most recent evaluation was the Middle States Report, done in 1996. At that time the Business Education Department consisted of three full-time teachers. One of the teachers was designated as the Business Department Coordinator.

The department was commended for the teachers' dedication, preparation, and their awareness of new developments as well as changing practices and procedures in their field. The department was recognized for its curricular breadth and for the teachers' ability to attract students in elective courses.

The committee recommended the following changes:

- update their computer equipment to help keep students abreast of the technology used in the workplace.
- Consider Keyboarding as a required ninth grade course.
- maintain a repair contract to enable teachers to obtain repair of equipment within 24 hours of a request, particularly when the on-site teachers cannot fix a problem.

# **Review of the Current Program**

At this time the Business Education Department consists of four full-time teachers. This increase in staff is most likely due to the increased enrollment in the high school, the popularity of the computer courses, and the addition of new courses.

The makeup of department staff has changed a bit due to the addition of one teacher and the retirement of one department member. As in 1996, the current teachers should be recognized for their dedication, preparation, and their awareness of new developments as well as changing practices and procedures in their field. The curricular breadth continues to be comprehensive with the revision of a few courses and addition of one new course.

The first recommendation that the committee made was to update the computer equipment to help keep students abreast of the technology used in the workplace. This has been done in one of the labs and is scheduled for the second lab this coming summer. Software has also been updated with the addition of supplemental applications for individual courses. Books have been updated and curricula have been revised according to the district review and revision plan. There are a number of curricula due to be studied and will be addressed as the district funding is available.

The second recommendation was to propose that Keyboarding be considered as a required ninth grade course. This recommendation was acknowledged and the proposal was made to the District Curriculum Committee. In light of the overall district needs and plans, it was decided that students should begin to develop keyboard skills long before they reach the high school, so that when they reach the high school they are able to demonstrate competency. Keyboarding is introduced in the elementary schools and continues to be provided minimally in the middle school. The district is seeking ways to expand the keyboarding opportunities to assure higher level skill in a larger percentage of the student body. This year students in the eighth grade were given the opportunity to test their keyboarding skills to determine if they had achieved the basic competency. If students can "test out" of keyboarding they can move directly into Word Processing which would promote expanded computer usage and higher levels of performance.

The third recommendation was to maintain a repair contract to enable teachers to obtain repair of equipment within 24 hours of a request, particularly when the on-site teachers cannot fix a problem. The district has been working to improve the operation of the network and operation of the computers. The biggest leap in this area took place last summer when the technology operations were privatized. An outside organization was contracted to maintain equipment and the network. This has brought about an outstanding improvement. Technicians appear promptly after repair requests are submitted, the number of repairs needed is significantly reduced and the frequency of times when the

network goes down, or the length of time it is down is minimal. This has made a tremendous improvement in the efficiency of the equipment and therefore in the time on task for the students. It has drastically reduced the frustration levels and promoted a positive attitude about technology.

Class sizes for the computer rooms have been maintained at an excellent size due to the equipment required for each student. The non-computer classes, however, have extremely large classes. Law classes are an average of 31 students and Marketing classes are up to 28 students. This has been due to the high enrollments, and an insufficient amount of staff to break the enrollments down into smaller sections.

### **Instructional Strategies**

In the technology based courses students are continually **Identifying Similarities and Differences**. This strategy is most overtly observed when students are critiquing work, whether it is their own work or that of others. During the process of generating documents there is a constant analysis of the appearance and presentation of text and/or information and comparing and contrasting their work to text sources, graphic samples provided and the work of other students. In the use of computers there is an analysis of the software and how it is working, comparing and contrasting one method of accomplishing a task over other methods, making judgments about their output. Judgments and decisions continually are made about actions to take, and methods to pursue or alter.

**Summarizing and Note Taking** are strategies utilized during the presentation/demonstration/motivational phases of business classes. Students are asked to summarize concepts presented, to review the steps in a procedure demonstrated, and react to or consider ideas or experiences to which they are exposed through projects. Teachers present short lectures, lead class discussions, and require that student take notes to use as a reference in working through assignments or processes.

Teachers are constantly **Reinforcing Effort and Providing Recognition** to their students. Formal reward systems are created, but recognition is given verbally by identifying successes and achievements.

**Homework** is not formally given in most of the Business classes. The exception to that are the Law and Marketing courses. Students are expected to collect information from current events, and to prepare for tests. As part of the process of encouraging the students to be informed and to behave in responsible and intelligent manner, students are expected to see the relationship between what they are studying in their business classes and what is going our in their lives outside of those classes. They are encouraged to **See Relationships and Make Connections** in order to apply their learning effectively.

**Nonlinguistic Representations** are provided in the classroom as visual aides to the learning process. LCD projectors are used to present information and provide examples of lesson ideas and projects.

Cooperative Learning strategies are utilized to help students think about concepts that are presented, to develop ideas for projects and to reflect on projects both underway and completed. Students are divided into groups for discussion of ideas and concepts.

For every new project that is presented, teachers practice **Setting Objectives and Providing Feedback**. Objectives are identified that address the information and skills

being taught, one or more of the Cross Curriculum Content Standards. Instruction is provided to expand the students' knowledge and thinking opportunities, assignments given. Assessments are done on a continual basis, both individually by the students and teachers, and then through discussion, quizzes and tests.

Students are repeatedly required to **Generate and Test Hypotheses**. When given projects to complete, students must apply their knowledge and skills to new contexts. They decide on procedures to follow and then determine if they were successful or not. If not, they must adjust their process and formulate another hypothesis and test it again.

When new learning experiences are presented to students they are given **Cues**, asked **Questions** and provided with **Advance Organizers**. New ideas are presented within contexts so that the students can relate new learning to past learning. Information is presented in structured format, not random facts.

**Direct, Authentic Experiences** are provided as often as is possible. Law classes provide simulations of crimes and the legal proceedings that follow. They also visit actual courtrooms to see how they operate. Marketing classes have had guest speakers, and also gone on field trips to see real life settings and the operations of businesses, such as a sports arena.

Internet classes research current information in real time and create their own websites on topics relevant to the students.

Personal Finance and Accounting courses focus on topics of relevance to the students and their family's lives.

#### Assessment and Evaluation

The **rationale** for assessing and evaluating is to develop a knowledge and understanding of student performance, to identify each student's prior level of knowledge, skill and understanding of the content and processes, and assess student growth and development.

**Grades** are a means of communication with students, teachers and parents what is expected in each student's growth and progress during the course. There are a number of very strong suggestions in regard to attitudes towards evaluating.

- Grades should not get in the way of learning
- Emphasis should be placed on the intrinsic reward of gaining knowledge and improving skills, not on receiving grades as rewards.
- Assessments should be used to communicate relative progress and help the teacher to guide the student to further growth.

#### **Methods of Evaluation and Assessment:**

**Observe** the student at work to assess confidence, self reliance, attitude, application of knowledge, task commitment, manipulative skills, work habits, etc. Visually assess the students by watching for skills in the performance of tasks, gestures and body language.

Talk to the students to verbally assess their level of skill. Review their intentions and compare with the results. Does the student have the ability to orally communicate information about the subject in a coherent and logical manner? Does the student have the ability to discuss his/her own work and the work of others, to use appropriate terminology?

**Portfolio Review** includes reflective activities, which encourage students and teachers to compare and contrast a sequence of work. It encourages recognition and analysis of the evolution of a student's work and growth. Whenever possible this type of review is recommended.

**Writing and Reading** involves student demonstration of the ability to write about the subject in a logical, easily understood style with appropriate grammar and sentence structure. This might include quizzes, tests, exams, or reports. Also, students are assessed for reading for understanding.

**Listening** requires student demonstration of the ability to listen, comprehend and interpret information. Their willingness to listen attentively is reflective of the affective domain.

**Group Discussion** can be useful at various stages of the learning process. This might involve collection of facts, analysis of a problem, brainstorming or debate to find solutions to a problem. This process should require of the students a conscious awareness of the process, the contributions of the various people, the criteria and rationale behind the conclusions drawn, and the benefits or consequences of alternative options. Responses should not be accepted without reasons.

**Behavior** includes identifying and demonstrating behaviors that reflect a feeling for the dignity and worth of other people, including those of other ethnic, cultural, linguistic and economic groups.

**Rubrics** will be used to enable students to evaluate themselves and others. Rubrics provide an understanding of strengths and identification of areas that need to be improved.

# **Cultural Diversity/Multiculturalism**

The Business Department is open to people of all cultures. Whenever possible the subject matter addresses cultural differences and supports multiculturalism. For example:

- The textbook in Keyboarding uses terminology associated with various cultures and customs. It uses names, travel, food and experiences associated with other countries in its exercises.
- The Personal Finance textbook references different cultures and their business practices. In addition there is an international finance section in each unit.
- Because the Internet is an international medium it accesses businesses and resources that are not limited by geography, language or a single culture.
- In accounting the teachers use a resource book, which provides short articles about finances and the economies of other countries.
- In Consumer Education there is a global awareness section in each chapter as it relates to banking, insurance, credit, different market economies.
- In the Law courses, students discuss the legal system and issues that come up relevant to society and the enforcement of laws. Because our society is culturally diverse, issues are discussed as to how various cultures are affected by the laws and law enforcement officials.

### **Interdisciplinary Opportunities**

Everything that is taught in the Business Department can be integrated into other courses, but also can be useful as life skills. The following are examples of interdisciplinary opportunities:

- Word-processing is used in generating research papers for all courses, writing in Language Arts, correspondence through email, business correspondence, and resumes. It gives the students the ability to communicate information effectively.
- The Internet courses teach students to effectively research and site and evaluate references. It gives students an understanding of how web sites are created, and the capability to creating their own web sites.
- Keyboarding gives students the manual skill and basic understanding of the keyboard to utilize word-processing as well as other applications with ease and fluidity.
- PowerPoint presentation software provides skills that can be utilized for other course presentations, but also for future presentations for job or volunteer work.
- Knowledge of Excel gives students the skill to organize numerical information, generate calculations, maintain records and query the data to acquire desired results. Knowledge of Excel also provides students with the ability to organize and maintain data. These skills frequently overlap, particularly in the disciplines of science and math.
- The Word Processing Center accepts assignments from a variety of sources including teachers from different departments, the main office, the PTO and others. These assignments are to generate documents to meet the needs of the person making the request. Documents include programs for events, certificates for awards, correspondence, reports and others.
- Personal Finance and Accounting require the application of mathematical skills.
- The yearbook course gives students the opportunity to experience publishing in a real life situation, and to work with other students cooperatively.
- The Law courses present information and experiences to the students, which help them, understand the structure and functioning of the legal system. They learn how to operate within the legal system.

### **Enrichment/Remediation/Acceleration**

The Computer Labs are open all during the day, before school and after school. Students are encouraged to come in to make up work, to help them keep up with their work, or for extra practice for work in their business courses.

Students also are encouraged to come in to the labs to work on projects from other academic areas. The teachers make themselves available to help students in any technological area of expertise in which they need help.

Most classes are self paced, so students who are capable of working at an accelerated pace are free to do so and are given additional challenging assignments. Students who need to work at a slower pace are also free to do so. Projects are geared to challenge students at their own individual levels.

The software applications as well as the textbooks provide a wide variety of activities that can suit a wide range of needs.

# **Curricular and Co-Curricular Offerings**

Keyboarding
Word Processing
Advanced Word Processing
Word Processing Center
Internet and Web Design
Advanced Web Design
Publications I & II
Personal Finance
Consumer Education
Marketing
Accounting
Internet
Business Education Practicum
Introduction to Law
Law Seminar

There are no co-curricular offerings at this time. There was an attempt two years ago to start up a FBLA club (Future Business Leaders of America), but that effort came to an end due to lack of an advisor.

### Technology/Facilities/Program

**Room 209** has new Dell computers that were installed mid year. Peripheral equipment is in good shape. There is a black and white and a color laser printer and a scanner. A digital camera was recently purchased. This lab is scheduled for use every period of the day limiting access to students outside of scheduled classes. This is in part due to the fact that the other lab, room 207, is so badly in need of new computers that classes have been moved to other computer labs in the building, 209 being one of those labs.

**Room 207,** as was just explained, has extremely outdated computer equipment, making it non-functional. Classes have been rescheduled to other rooms to keep the classes going. This lab is scheduled for new computers for the fall of next year. A new color laser printer already has been purchased. A second LCD projector is required because the one in the department currently is being used almost continuously and therefore unavailable.

There has been a transitional period in the high school at large in regard to the assigning of responsibility for ordering computer supplies. We are hopeful that the problem has been resolved and future ordering of supplies will be accomplished efficiently. Supplies must be ordered in a timely manner as requested.

The nearest Xerox machine is near the Media Center entrance and the 500 wing. That is a very long distance from the business department rooms. It is therefore very inconvenient to make copies. There is a risograph in room 203, but that is not appropriate for all types of documents.

**Room 211** is the classroom used for the law classes. This is a standard size classroom with classes of up to 31 students. It is very crowded. Next year it will also be used for the marketing classes that have been bumped out of room 205 due to other building demands. Those classes run up to 28 students so they are also very large.

**Room 203** has served this year as the Business Department Office. Our understanding is that this office will no longer be available next year. That will mean that the teachers will lack a place to go to do work during prep times and computer access. Since the other departmental rooms are used almost every period of the day, there are no unused classrooms where they can go during their prep periods.

There are a number of classes from outside of the business department that require access to computer labs. These are very difficult to schedule since the business rooms are used so many periods of the day. When the labs cannot be scheduled teachers must change planned activities and the curriculum must be modified. Law classes are very large (up to 31).

Teachers are all teaching six classes, and some students have been deferred to other electives because they could not be accommodated. Two new courses were introduced this year to meet the curricular needs of the students. But that did impact on the number of other classes that could be run of other subjects. This is not the first year that teachers have had to sign off to teach six classes in order to meet the enrollment needs. The law teacher chose to accept large classes rather than teach the additional sections.

# **Staff Development**

The Ridge High School Business Department Teachers have participated in both mandatory and extracurricular activities that support their development as business teachers.

#### Those activities include:

- Staff College
- College courses- including both graduate and undergraduate
- Professional Days- observing other schools, career day at colleges
- Workshops
- Evaluation and improvement of curriculum and facilities
- Read periodicals/magazines
- Internet use (research, etc.)

The Business Teachers at Ridge High School continually look for ways to enhance the department and its offerings. The only problem identified is that the district's teachers' contract requires that courses taken for reimbursement must be graduate level courses. This restricts the teachers' opportunities to take basic level courses in new software applications.

### For example:

Reimbursement of any course or workshop that would increase or enhance the teacher's ability to teach the curriculum (i.e.- *include* undergraduate studies). In an effort to expand knowledge in other software applications that were not studied in college, as there are MANY now in existence, the teacher might need to take an *undergraduate* level college course before being eligible to take a graduate level course. However, since there is no reimbursement for undergraduate level courses, this inhibits the teachers from expanding his/her knowledge in that area.

# **Comparison of I Factor Schools**

Programs of Study were collected from a variety of I Factor school districts. Those districts included Governor Livingston, Mendham, Chatham, Holmdel, Madison, Summit and New Providence. Our course offerings compare quite favorably to the other school districts, both in breadth and depth. Of those schools, Bernards Township offers the largest variety of courses in the Business Education Department. Titles of courses vary between districts. Though we may not have an entire course dedicated to some topics, those topics are included in some detail in courses by other titles; for example, desktop publishing is presented in Word Processing. The courses we offer provide exposure to Law, Desktop Publishing, Personal Finance, Marketing, Consumerism, Keyboarding, the Internet, E-Commerce and Information Processing.

Those areas that are not addressed in our Program of Studies, but are offered in the other schools are Business Management, Coop Business education, C++, or HTML. We have not identified a need to address these areas at this time.

# **Analysis of Survey Results**

A survey was given to juniors and seniors currently taking Business courses. This group was selected because they have been in the school long enough to know something about the business courses and to have had the most extensive personal experience with those offerings.

The survey indicated that students believe that...

Their intellectual curiosity is challenged to a slightly more than moderate degree Business classes prepare them very well to become more informed citizens Business course requirements are very consistent with what they expected Business courses offered at Ridge will help them a lot to perform more successfully both in the work place and in college

Business courses vary in content, but have some overlapping
The demands of homework and project work were as they expected
Business classes help them considerably to become more technologically aware
and proficient

There was some feeling that there was a need for additional courses at Ridge Some connections are made between Business and other disciplines in a meaningful manner

Current events are well integrated into the classroom when appropriate Writing skills are utilized but not enhanced through their business courses Business courses are somewhat helpful in preparing them to work in cooperative settings

Their experience with the Business Department has been good to excellent

The majority of responses to questions indicated a positive attitude about the Business Department and its offerings. Their selection of answers was predominately "agree" or "above average". We might look into the reasons why the answers were not "strongly agree" or "excellent", but the students believe that the Department is doing a good job.

### Recommendations

Historically, in most secondary schools business education has been an "elective" program. Ironically though, business programs at post-secondary institutions are among the most popular, and an MBA is one of the most sought-after masters degrees in the United States. Until those post-secondary schools start to require business courses for entrance that dichotomy will continue to exist. It would be wise on the part of the secondary school system, however, to emphasize the fact that:

- ✓ To succeed in business requires high academic achievement
- ✓ The business of America is business
- ✓ High school prepares all students to transition to college and ultimately to career.
- ✓ Business is academic
- ✓ All courses educate for business.

A Xerox machine would be very helpful in the 200 wing of the building. Other than the main office copiers, the nearest one is across from the Media Center, a long way away. There is a risograph machine, but that is not appropriate for much of the copying needs.

Every effort should be made to keep non-computer class sizes down to reasonable numbers. It is important each year to consider the need for additional staff to accommodate not only the current student enrollments in popular classes, but also the growing enrollment.

Continually review course offerings in an effort to meet the needs of students in our everchanging technological world.

A larger percentage of students should be arriving at the high school level with proficient keyboarding skills. Consider ways of providing students with opportunities to develop appropriate keyboarding skills in the elementary and middle school levels. That would allow students to proceed to Word-processing, Information Processing and the Web courses

Course reimbursement should be provided by the Board of Education for any course or workshop that would increase or enhance the teacher's ability to teach the curriculum. That means that teachers should be encouraged to take undergraduate courses when they would fulfill that criterion.

# Appendix

# **Data Collection**

# Comparison of I Factor Schools Business Curricula

	Bernards	Governor						New
	Township	Livingston	Mendham	Chatham	Holmdel	Madison	Summit	Providence
Intro to Business			X	X				
Business								
Management		X						
Entrepreneurship		X	X	X				
Consumer Ed	X				X			
Marketing	X	X			X			
Business Law	X	X	X		X			
Accounting I & II	X	X	X	X	X	X	X	
E-Commerce								
Coop-Business Ed				X		X		
Yearbook	X					X		
Notetaking		X			X			
Keyboarding	X	X	X	X		X	X	
Wordprocessing		X	X					X
Spreadsheet	X	X	X	X	X			X
Database	X	X			X			X
Desktop Publishing	X							

	Bernards	Governor						New
	Township	Livingston	Mendham	Chatham	Holmdel	Madison	Summit	Providence
Power Point	X	X	X	X				
Internet	X				X			
C++				X				
HTML					X			

# **Student Survey-Business Education at Ridge**

Directions: Using the Scantron Card, fill in the answers that best describe how you feel about the statements. Use the answers below to best describe your feelings.

### A. Strongly Agree B. Agree C. Neutral D. Disagree E. Strongly Disagree

- 1. Business courses at Ridge challenge my intellectual curiosity.
- 2. Business classes help to prepare me to become a more informed citizen.
- 3. The course requirements are consistent with what is expected.
- 4. The Business courses offered at Ridge will help me perform more successfully both in the work place and college.
- 5. Many of the Business courses seem to cover the same content.
- 6. Homework and project work were more demanding than had been expected in Business classes.
- 7. Business classes help me to become more technologically aware and proficient.
- 8. There is a need for more Business electives to be offered at Ridge high School
- 9. Connections are made between Business and other disciplines in a meaningful manner
- 10. Current events are integrated into the classroom when appropriate
- 11. Through the Business courses at Ridge High School my writing abilities are being enhanced.
- 12. The Business courses at Ridge are helping to prepare me to work in cooperative settings.
- 13. Overall, how would you rate your Business experience at Ridge thus far?

### A. Excellent B. Above Average C. Average D. Below Average E. Poor

### **New Jersey Cross-Content Workplace Readiness Standards**

# Standard 1: ALL STUDENTS WILL DEVELOP CAREER PLANNING AND WORKPLACE READINESS SKILLS.

**Descriptive Statement:** Students will be expected to develop the skills to seek, obtain, maintain, and change jobs. These skills are critical to each student's future ability to navigate in the complex world of work. Prior to leaving school, each student should possess the skills needed to sustain him/herself as an adult in the labor force.

- 1.1 Demonstrate employability skills and work habits, such as work ethic, dependability, promptness, and getting along with others, needed to get and keep a job.
- 1.2 Describe the importance of personal skills and attitudes to job success.
- 1.3 Identify career interests, abilities, and skills.
- 1.4 Develop an individual career plan.
- 1.5 Identify skills that are transferable from one occupation to another.
- 1.6 Select a career major and appropriate accompanying courses.
- 1.7 Describe the importance of academic and occupational skills to achievement in the work world.
- 1.8 Demonstrate occupational skills developed through structured learning experiences, such as volunteer, community service, and work-based experiences or part-time employment.
- 1.9 Identify job openings.
- 1.10 Prepare a resume and complete job applications.
- 1.11 Demonstrate skills and attitudes necessary for a successful job interview.
- 1.12 Demonstrate consumer and other financial skills.

# Standard 2: ALL STUDENTS WILL USE INFORMATION, TECHNOLOGY, AND OTHER TOOLS.

**Descriptive Statement:** Students will be expected to develop skills in the use of information, up to-date educational technology, and other tools to improve learning, achieve goals, and produce products and presentations. They will learn to develop, locate, summarize, organize, synthesize, and evaluation formation. Students will be expected to use technological tools, such as telecommunications networking for problem-solving, writing, and research.

- 2.1 Understand how technological systems function.
- 2.2 Select appropriate tools and technology for specific activities.
- 2.3 Demonstrate skills needed to effectively access and use technology-based materials through keyboarding, troubleshooting, and retrieving and managing information.
- 2.4 Develop, search, and manipulate databases.
- 2.5 Access technology-based communication and information systems.
- 2.6 Access and assess information on specific topics using both technological (e.g., computer, telephone, satellite) and print resources available in libraries or media centers.
- 2.7 Use technology and other tools to solve problems, collect data, and make decisions.
- 2.8 Use technology and other tools, including word-processing, spreadsheet and presentation programs, and print or graphic utilities, to produce products.
- 2.9 Use technology to present designs and results of investigations.
- 2.10 Discuss problems related to the increasing use of technologies.

### Standard 3: ALL STUDENTS WILL USE CRITICAL THINKING, DECISIONMAKING AND PROBLEM-SOLVING SKILLS.

**Descriptive Statement:** Students will be expected to develop original thoughts and ideas, think creatively, develop habits of inquiry, and take intellectual and performance risks. They will be expected to recognize problems, devise a variety of ways to solve these problems, analyze the potential advantages and disadvantages of each alternative, and evaluate the effectiveness of the method ultimately selected.

- 3.1 Recognize and define a problem, or clarify decisions to be made.
- 3.2 Use models, relationships, and observations to clarify problems and potential solutions.
- 3.3 Formulate questions and hypotheses.
- 3.4 Identify and access resources, sources of information, and services in the school and the community.
- 3.5 Use the library media center as a critical resource for inquiry and assessment of print and non-print materials.
- 3.6 Plan experiments.
- 3.7 Conduct systematic observations.
- 3.8 Organize, synthesize, and evaluate information for appropriateness and completeness.
- 3.9 Identify patterns and investigate relationships.
- 3.10 Monitor and validate their own thinking.
- 3.11 Identify and evaluate the validity of alternative solutions.
- 3.12 Interpret and analyze data to draw conclusions.
- 3.13 Select and apply appropriate solutions to problem-solving and decision-making situations.
- 3.14 Evaluate the effectiveness of various solutions.
- 3.15 Apply problem-solving skills to original and creative/design projects.

# Standard 4: ALL STUDENTS WILL DEMONSTRATE SELF-MANAGEMENT SKILLS.

**Descriptive Statement:** Students will be expected to address issues related to personal development, such as accepting responsibility for their own learning and understanding expectations for performance. They are also expected to demonstrate positive work behaviors and ethics, the ability to work individually and cooperatively in groups, and respect for others of diverse cultural and social backgrounds.

- 4.1 Set short and long term goals.
- 4.2 Work cooperatively with others to accomplish a task.
- 4.3 Evaluate their own actions and accomplishments.
- 4.4 Describe constructive responses to criticism.
- 4.5 Provide constructive criticism to others.
- 4.6 Describe actions that demonstrate respect for people of different races, ages, religions, ethnicity and gender.
- 4.7 Describe the roles people play in groups.
- 4.8 Demonstrate refusal skills.
- 4.9 Use time efficiently and effectively.
- 4.10 Apply study skills to expand their own knowledge and skills.
- 4.11 Describe how ability, effort, and achievement are interrelated.

#### Standard 5: ALL STUDENTS WILL APPLY SAFETY PRINCIPLES.

**Descriptive Statement:** Safety is an important component of all content areas, especially the arts, health and physical education, science, occupational education programs, and any content area where hands-on activities take place. Students need to learn behaviors that will ensure their own safety and health and that of others. They also should become familiar with the rules and laws governing safety and health so that they can act responsibly and implement these standards.

- 5.1 Explain how common injuries can be prevented.
- 5.2 Develop and evaluate an injury prevention program.
- 5.3 Demonstrate principles of safe physical movement.
- 5.4 Demonstrate safe use of tools and equipment.
- 5.5 Identify and demonstrate the use of recommended safety and protective devices.
- 5.6 Identify common hazards and describe methods to correct them.
- 5.7 Identify and follow safety procedures for laboratory and other hands-on experiences.
- 5.8 Discuss rules and laws designed to promote safety and health, and their rationale.
- 5.9 Describe and demonstrate procedures for basic first aid and safety precautions.

### Resources

- <u>Business and Personal Finance</u>, Glencoe/McGraw-Hill Publishing Company, 2002.
- <u>Century 21 Accounting</u>, South-Western Educational Publishing Company, 1995.
- <u>Century 21 Keyboarding and Information Processing</u>, South-Western Educational Publishing Company, 1997.
- <u>Economic Education For Consumers</u>, South-Western Educational Publishing Company, 2000.

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New Jersey Cross-Curricular Content Standards