



## **Speak the Common Language of Education and Businesses**

**Directions:** Make these connections whenever possible in your classroom. If you are asking business people to speak with your class, be sure to encourage them to speak this common language too!

1. Make connections to specific areas on the Employability Skills List included on the next page.
2. Ask your guest speakers to refer to Math, Science, Language Arts and/or Social Studies Topics whenever possible (lists included in this document).
3. Connect as many job titles or educational paths as possible to the study of your topic.

# Career and Employability Skills!

## Problem Solving ✓

- Questioning
- Investigating
- Researching
- Analyzing/Evaluating
- Appraising
- Assessing
- Estimating
- Predicting
- Setting goals
- Consider impacts
- Generate alternatives
- Planning
- Making decisions
- Taking action
- Evaluating results

## Applied Academics in Work Related Situations ✓

- Reading
- Reasoning
- Thinking Critically
- Teaching/Tutoring
- Writing
- Academic Projects

## Personal Management ✓

- Responsibility and self-management
- Self-confidence
- Ethical behavior
- Respect self and others
- Demonstrate ethical behavior
- Motivating self and others
- Recognizing Quality/Not Yet Quality
- Networking

## Negotiation Skills ✓

- Perceiving
- Communicate to support a position
- Resolve divergent interests
- Developing insights/intuition
- Express Empathy
- Persuading

## Organizational Skills ✓

- Identify, organize, plan and allocate: time, money, material, human resources.
- Categorizing
- Managing

## Teamwork ✓

- Work cooperatively
- Identify group goals and values
- Exercise leadership
- Teach others
- Serve clients or customers
- Contribute ideas and effort

## Develop and Present Information ✓

- Teaching/Tutoring
- Combining information in new ways
- Synthesizing
- Summarizing
- Using symbols, pictures, charts and graphs
- Comparing/Contrasting
- Forming a viewpoint
- Generalizing (based on information and experience)
- Presenting
- Speaking

## Understand Systems ✓

- Understand systems.
- Work with maintain technologies
- Computing

## Identify and Pursue Career Goals ✓

- Acquire, organize, interpret and evaluate career-related information.
- Interviewing

**Employers want these skills; with them you can earn a living and advance in your career!**

## Math Topics

Area

Areas of Circles

Area of a trapezoid

Area under a curve

Averages/ Mean

Bar graphs

Basic math computation

Calculator skills, Graphing calculators

Calculus: Area of ellipses, area under curves, right triangle, trigonometry, volume of cones.

Central angles

Computing cost

Correlation coefficient

Critical thinking

Charts

Circles: area, diameter and radius, circumference

Circumference

Coordinate plotting

Decimals

Decimal multiplication

Density

Discounts and Mark-ups

Distance

Estimation

Excel software

Exponential and logarithmic functions

Finite Sums Integration

Flow velocity

Formulas

Fractions

Functions

Function Notation

Graphing

Graphs Equations

Integers

Length

Linear Equations

Percentages

Polar coordinates, parameterizations and conic sections.

Polynomial regression

Predicting data

Probability

Problem solving

Proportion

Pythagorean theorem

Quadratic Equations

Quadratic functions

Rates of Change

Ratios

Reasoning skills

Rectangular coordinates

Relationship between variables

Relationships direct and inverse

Right triangle

Scale

Scatter plots

Sequences, series and mathematical induction

Slope

Slope and Intercept

Slope Perimeter

Spreadsheet use

Standard, Deviations

Tables

Trapezoid rule

Trigonometry functions

Unit Conversions

Vectors, Matrices and Systems of

Equations

Velocity

Variance

Volume

Volume of cylinders

Volumes of prisms

Weight

## Science Topics

<p>Ask questions          Conduct investigations          Leverage resources          Develop solutions          Interpreting graphs, tables, pictures or other representations of scientific knowledge.          Communicate findings          See connections among different areas of knowledge          Analyze claims for scientific merit          How science and technology affect our society</p>	<p>Description and explanation of real world objects, systems or events          Prediction          Design of systems or courses of action          Design and conduct scientific investigations          Concepts: Uncertainty, error, range, tolerances, accuracy, precision          Tools: balance, thermometer, measuring tools, electronic measuring devices, graduated cylinder</p>
<p><b>Life Science</b>          Life cycles          Heredity – traits transmitted from one generation to the next.          Evolution          Ecosystems of parts are related and how they interact.          How communities of living things change over a period of time.          How materials cycle through an ecosystem and get reused in the environment          Analyze how humans and the environment interact.          Measurement</p>	<p>Knowledge of cells and functions          Reproduction, growth, response, movement of animals and plants.          Functions of bacteria          Cost-benefit analysis          Issues related to new technologies          Appreciation of the balance of nature, and the effect that humans have on the natural world.          Life cycles of organisms          Respiration          Genetics          Reproduction (plants and animals)          Use of science in manufacturing and production</p>
<p><b>Physical Science</b>          Forms of energy          Electricity and Magnetism interactions          Describe how living things and human technology change matter and transform energy.          How changes in matter are related to changes in energy          Motion of objects. Relate motion to energy and energy conversions.          Waves and Vibrations          Sound waves          Light phenomena          Waves and vibrations transfer energy</p>	<p><b>Earth Science</b>          Systems and subsystems          Earth's surface          Geological processes, Analyze effects of technology on earth's surface and resources          Characteristics of water and its movement          Analyze human activities with the hydrosphere          Weather          Relationships between human activities and atmosphere          Solar system, galaxy, universe</p>

<p><b>Chemistry</b>  Motion, forces  Magnets, energy  the atom, chemical formula writing  Acids and bases  Carbon compounds  Chemical bonding  The relationship between atomic structure and chemical properties  Chemical and physical properties of elements and compounds and reactions</p>	<p><b>Biology</b>  Cells  Microscope use  Heredity  Ecology, ecosystems  Living things – including all five kingdoms  Anatomy and physiology</p>
<p><b>Physics</b>  Mechanics and heat  Force and motion  Matter and energy  Machines  Temperature, heat and change of phase.  Light, electricity, and sound  Wave nature and wave interactions  Study of light  Sound and electricity</p>	<p><b>Anatomy and Physiology</b>  Structures and functions of the human body  Body systems</p>
<p><b>Microbiology</b>  Metabolism,  Growing and culturing bacteria  Gram staining, Petri plates and sterile technique  Microbial diseases, viruses  Protozoa, fungi  Sterilization and disinfection  Epidemiology, microbial STD's, AIDs.  Biosphere 2  Common micro-life on and in the human body  Bioluminescence  Planet seeding and exobiology  Microbes  Bugs that kill bugs</p>	<p><b>Genetics</b>  Cloning, genetic engineering, genetic fingerprinting  Molecular human development  Nature vs. nurture  Mutations  Genetically modified foods  The genetics of race  Molecular clocks &amp; evolution  Immunity, and medical technology  Blood typing  Color blindness  Transgenic organisms</p>

## Social Studies Topics

<p style="text-align: center;"><b><u>Civics</u></b></p> <p>Branches: Legislative, Executive, Judicial          Careers in government (and How to get them)          Charters of Freedom (Declaration of Independence, Constitution and Bill of Rights)          Economy          Election process          Federalism          Foreign Policy          Government Structure and Processes          Interest groups and Media          Ideologies          International Relations          Individual Rights          Law          Local government          Origins of Government          Politics          State Government          Purposes          Political parties          Voting          Working Poor, War on Drugs and impact on the economy</p>	<p style="text-align: center;"><b><u>US History</u></b></p> <p>Presidents          New Deal          Civil Rights movement          Military          War – WW I, WWII, Cold War, Korean War, Vietnam War and Counter Culture          Roaring 20s          Expansion of U.S.          Industrial Age/Revolution          Immigration          1950's          The Great Depression          Progressive Movement/Era          Environmental Movement          Social Movements          Historical Figures          Turbulent 60's          Civil Rights          Foreign Policy          Domestic Policy          Watergate          Women's Suffrage          1980s Reaganomics          Progressive Era          Closing of Frontier          Gilded Age          Great Society          Post 9/11          War on Terrorism</p>	<p style="text-align: center;"><b><u>World History</u></b></p> <p>Prehistory          Ancient Civilizations          Middle Ages, Reinassance Absolutism          Revolutions          Enlightenment          World War I, World War II          Cold War          Various population placement          Establishment of countries          Culture          Geography, maps, ceraphs, charts          History of China/Asia, Africa, Europe (Middle Ages, French Revolution, Enlightenment etc.) South Asia/Southeast Asia, Middle East</p> <p style="text-align: center;"><b><u>Advanced Psychology</u></b></p> <p>Emotions          Interviewing          Various psychological studies          Study of Brain          Individual Behavior          Theories on changing Behavior          Environment vs. Heredity</p> <p style="text-align: center;"><b><u>Sociology</u></b></p> <p>Study of Groups of People Behavior          Effects of Family Unit          Factors that change personality: education, religion, ethnic background</p>
<p style="text-align: center;"><b><u>Economics</u></b></p> <p>Supply and Demand          Scarcity and Limited Resources          Job Skills          Decision Making          Public and Private Sectors          Entrepreneurship          Competition          Credit          Wages          Production: schedules, possibilities factors of production          Trade          Banking, Financial Institutions          Micro and Macro Economics          Trade          Labor          Influence of Advertising          Price systems          graphs</p>	<p>Economics cont.          economic systems          macro economics          Mortgages          Auto Insurance          Economic Goals          Monetary Policy          Financing          Business Types, Globalization (World Markets)          unemployment          inflation          GDP: indicators, business cycle          Types of Systems          World economy          Global economy          Personal finance          Role of Government</p> <p>Opportunity Cost          Taxes</p>	<p style="text-align: center;"><b><u>World Geography</u></b></p> <p>Economy          Resources          Map Skills          Other Cultures</p> <p style="text-align: center;"><b><u>8<sup>th</sup> Grade American History</u></b></p> <p>American History Learning Support          Time period from last Ice Age through reconstruction          Geography of the Americas          Civilization of North and South America          US History from Independence through reconstruction          Constitution          Revolutionary and Civil Wars</p>

## Language Arts Topics

Writing in a variety of patterns or genres that will be published such as:

- informational report
  - persuasive essay
  - newspaper article / headline
  - historical fiction, science fiction or realistic fiction
  - posters: to illustrate metaphors, scenes, or many other useful literary areas.
  - career research paper
  - fairytale
  - mystery
  - comic strip
  - advertisement
  - sensory writing
  - autobiography
  - memoir
  - poetry
  - fables
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- Writing in various styles to use in "real life" such as a letter of compliment or complaint.
  - Distinguish facts from opinions and question their validity when listening to or viewing a variety of speeches and presentations.
  - Speaking and Listening such as learning and practicing speeches: Impromptu, Extemporaneous, and Memorized. This teaches so many important skills such as preparing, delivering and presenting material to an audience.
  - Communicate effectively with a variety of audiences and for different purposes by using specialized language related to a topic and selecting words carefully to achieve precise meaning when presenting.
  - Speak effectively using slang, dialect, and colloquial language suitably to create interest and drama in narrative and informational presentations.
  - Listen to or view critically while demonstrating appropriate social skills of audience behaviors (e.g., eye contact, attentive, supportive); critically examine the verbal and non-verbal strategies during speeches and presentations.
  - Writing responses to human behaviors within literary works.

### Traits of Writing

1. Ideas: The content or main theme. This can be looked at as the heart of the message.
2. Organization: The internal structure of the writing.
3. Voice: The personal voice of author comes through. This gives a sense of a real person speaking.
4. Word Choice: The use of precise, colorful and rich words to communicate. Also proper use of synonyms, homonyms,
5. Sentence Fluency: The writing flows together often with a rhythm or cadence
6. Conventions: Mechanical correctness, including spelling and grammar.