

ACADEMIC FOUNDATION COMPETENCIES

Career and technical education (CTE) provides a context for the development of academic teaching and learning. The commitment of CTE to enhance academic achievement in our schools, programs and courses, has led to the identification of these Academic Foundation Standards. Taken directly from the measurable standards of the Connecticut Academic Performance Test (CAPT), these foundation standards will be incorporated into each of the 18 areas of concentration statewide CTE assessments, beginning in the spring of 2007.

MATHEMATICS STANDARDS

1) EXTEND THE UNDERSTANDING OF NUMBER TO INCLUDE INTEGERS, RATIONAL NUMBERS AND REAL NUMBERS

- Compare, locate, label and order real numbers on number lines, scales, coordinate grids and measurement tools
- Select and use an appropriate form of number (integer, fraction, decimal, ratio, percent, exponential, scientific notation, irrational) to solve practical problems involving order, magnitude, measures, labels, locations and scales.

2) INTERPRET AND REPRESENT LARGE SETS OF NUMBERS WITH THE AID OF TECHNOLOGIES

- Use technological tools such as spreadsheets, probes, computer algebra systems and graphing utilities to organize and analyze large amounts of numerical information.

3) DEVELOP STRATEGIES FOR COMPUTATION AND ESTIMATION USING PROPERTIES OF NUMBER SYSTEMS TO SOLVE PROBLEMS

- Select and use appropriate methods for computing to solve problem in a variety of contexts
- Solve problems involving scientific notation and absolute value
- Develop and use a variety of strategies to estimate values of formulas, functions and roots; to recognize the limitations of estimation; and to judge the implications of the results.

4) DEVELOP AND EVALUATE MATHEMATICAL ARGUMENTS USING REASONING AND PROOF

- Recognize the validity of an argument
- Create logical arguments to solve problems and determine geometric relationships

5) CONSTRUCT APPROPRIATE REPRESENTATIONS OF DATA BASED ON THE SIZE AND KIND OF DATA SET AND THE PURPOSE FOR ITS USE.

- Collect, organize, display, compare and analyze large data sets
- Construct a variety of data displays, including box-and-whisker plots, and identify where measures of central tendency and dispersion are found in graphical displays

READING STANDARDS

6) MAKE CONNECTIONS BETWEEN THE TEXT AND OUTSIDE EXPERIENCES AND KNOWLEDGE

- Students recognize and appreciate that contemporary and classical literature has shaped human thought
- Students interpret, analyze and evaluate text in order to extend understanding and appreciation
- Students communicate with others to create interpretations of written, oral and visual texts
- Students select and apply strategies to facilitate word recognition and develop vocabulary in order to comprehend text
- Students use appropriate strategies before, during and after reading in order to construct meaning

7) DRAW CONCLUSIONS ABOUT THE AUTHOR'S PURPOSE IN INCLUDING OR OMITTING SPECIFIC DETAILS

- Students interpret, analyze and evaluate text in order to extend understanding and appreciation
- Students select and apply strategies to facilitate word recognition and develop vocabulary in order to comprehend text
- Students use appropriate strategies before, during and after reading in order to construct meaning

8) USE EVIDENCE FROM THE TEXT TO DRAW AND/OR SUPPORT A CONCLUSION

- Students interpret, analyze and evaluate text in order to extend understanding and appreciation
- Students communicate with others to create interpretations of written, oral and visual texts
- Students use appropriate strategies before, during and after reading in order to construct meaning

9) USE INFORMATION FROM THE TEXT TO MAKE A PREDICTION BASED ON WHAT IS READ

- Students interpret, analyze and evaluate text in order to extend understanding and appreciation
- Students communicate with others to create interpretations of written, oral and visual texts
- Students use appropriate strategies before, during and after reading in order to construct meaning

10) EVALUATE EXPLICIT AND IMPLICIT INFORMATION AND THEMES WITHIN A GIVEN WORK

- Students use appropriate strategies before, during and after reading in order to construct meaning
- Students interpret, analyze and evaluate text in order to extend understanding and appreciation
- Students communicate with others to create interpretations of written, oral and visual texts
- Students recognize how literary devices and conventions engage the reader
- Students explore multiple responses to literature