Boulder Valley School District Technology
– An Introduction to The Curriculum Essentials Document

Background

This BVSD Curriculum Essentials Document incorporates the International Society for Technology in Education’s (ISTE) National Educational Technology Standards for Students (NETS) and the integrated essentials from the Colorado Academic Standards for 21st Century Learning Skills.

The NETS for Students from ISTE do not delineate how courses should be created or taught. Each teacher must determine appropriate lesson planning. As technology rapidly evolves with new dynamic tools, there is no set of prescribed software, tools, or technologies that students and teachers may adopt to achieve these rigorous and robust standards. It is with experience, trust, and teacher consensus in ISTE that the Technology Teachers and Educational Technology Department at BVSD adopted these same NETS for our Boulder Valley students. The writing teams took the ISTE NETS for Students and carefully and thoughtfully divided them into courses for the creation of the 2011 BVSD Educational Technology Curriculum Essentials Documents (CED).

The ISTE 2007 Standards

The expectations in these documents are based on mastery of the topics at specific grade levels with the understanding that the standards, themes and big ideas reoccur throughout PK-12 at varying degrees of difficulty, requiring different levels of mastery. The Standards are:

1. Creativity and Innovation
   Students demonstrate creative thinking, construct knowledge, and develop innovative products and process using technology.
   Students:
   a. Apply existing knowledge to generate new ideas, products, and processes
   b. Create original works as a means of personal or group expressions
   c. Use models and simulations to explore complex systems and issues
   d. Identify trends and forecast possibilities

2. Communication and Collaboration
   Students use digital media and environments to communicate and work collaboratively to support individual learning and contribute to the learning of others. Students:
   a. Interact, collaborate, and publish with peers, experts, or others employing a variety of digital environments and media
   b. Communicate information and ideas effectively to multiple audiences using a variety of media and formats
   c. Develop cultural understanding and global awareness by engaging with learners of other cultures
   d. Contribute to project teams to produce original works or solve problems

3. Research and Information Fluency
   Students apply digital tools to gather, evaluate, and use information. Students:
   a. Plan strategies to guide inquiry
   b. Locate, organize, analyze, evaluate, synthesize, and ethically use information from a variety of sources and media
   c. Evaluate and select information sources and digital tools based on the appropriateness to specific tasks
   d. Process data and report results

4. Critical Thinking, Problem Solving, and Decision Making
   Students use critical thinking skills to plan and conduct research, manage projects, solve problems and make informed decisions using appropriate digital tools and resources. Students:
   a. Identify and define authentic problems and significant questions for investigation
   b. Plan and manage activities to develop a solution or complete a project
   c. Collect and analyze data to identify solutions and/or make informed decisions
   d. Use multiple processes and diverse perspectives to explore alternative solutions

5. Digital Citizenship
Students understand human, cultural, and societal issues related to technology and practice legal and ethical behavior. Students:
   a. Advocate and practice safe, legal, and responsible use of information and technology
   b. Exhibit a positive attitude toward using technology that supports collaboration, learning, and productivity
   c. Demonstrate personal responsibility for lifelong learning
   d. Exhibit leadership for digital citizenship

6. Technology Operations and Concepts
Students demonstrate a sound understanding of technology concepts, systems, and operations. Students:
   a. Understand and use technology systems
   b. Select and use applications effectively and productively
   c. Troubleshoot systems and applications
   d. Transfer current knowledge to learning of new technologies

**Components of the Curriculum Essentials Document**
The CED for each grade level and course include the following:
- An At-A-Glance page containing:
  - approximately ten key skills or topics that students will master during the year
  - the general big ideas of the grade/course
  - the Standards of Technology Practices
  - assessment tools allow teachers to continuously monitor student progress for planning and pacing needs
  - Description of Technology at that level
- The Grade Level Expectations (GLE) pages.
- The Grade Level Glossary of Academic Terms lists all of the terms with which teachers should be familiar and comfortable using during instruction. It is not a comprehensive list of vocabulary for student use.
## Multimedia Overview

<table>
<thead>
<tr>
<th>Course Description</th>
<th>Topics at a Glance</th>
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| This class is designed to allow students to explore a variety of software used in everyday life. Students create slideshows using digital photography, create animated movies, design games and create presentations, spreadsheets and websites. | • Responsible Use of Tools & Technology  
• Presentations: Multiple Formats and Purposes  
• Student-Inquiry Topics (led by standards and student choice) |

| Assessments | Multimedia is a class that is offered to 7th and 8th grade students to introduce them to the world of media, design and production. Software and Web 2.0 programs used in this class promote career development and 21st century job readiness skills preparing students for the 21st century job force. Achieving these goals may be reached by a variety of projects and/or programs. Use of specific program names were deliberately not mentioned due to some schools using different software.  
  
**Standards:** The National Education Technology Standards (NETS) for Students were developed in 1998 and updated in 2007 by ISTE, the International Society for Technology in Education. |
| This is a project-based class. Students will be assessed on completed projects. Instructors evaluate students through observation, the project process, and student presentations. |  
1. Creativity and Innovation  
2. Communication and Collaboration  
3. Research and Information Fluency  
4. Critical Thinking, Problem Solving, and Decision Making  
5. Digital Citizenship  
6. Technology Operations and Concepts |
Content Area: Technology - Middle Level Multimedia

Standards
Standard 1: Critical Thinking, Problem Solving, and Decision Making
Standard 4: Digital Citizenship
Standard 5: Technology Operations and Concepts

Prepared Graduates:
Demonstrate essential life skills of using technology to assist in solving a variety of problems

Grade-Level Expectation
Concepts and skills students master:
1. Students learn to think critically and solve problems through inquiry-based, cooperative and collaborative such as: game and simulation programming, building animations, designing websites, creating digital productions.

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<tr>
<th>Evidence Outcomes</th>
<th>21st Century Skills &amp; Readiness Competencies</th>
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<tbody>
<tr>
<td>Students can:</td>
<td>Inquiry Questions:</td>
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<tr>
<td>a. Design and program games and simulations</td>
<td>1. How will I be able to synthesize the knowledge, skills and attitudes needed to demonstrate responsible and respectful behavior when using technology or participating in digital environments?</td>
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<tr>
<td>b. Solve problems using computational thinking</td>
<td>2. What elements of media design can help me create authentic collaboration, communicate ideas digitally and produce greater efficiency?</td>
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<tr>
<td>c. Create digital productions</td>
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<td>d. Analyze purpose in creating products</td>
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<td>e. Design websites</td>
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<td>f. Build collaborative projects</td>
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Inquiry Questions:
1. How will I be able to synthesize the knowledge, skills and attitudes needed to demonstrate responsible and respectful behavior when using technology or participating in digital environments?
2. What elements of media design can help me create authentic collaboration, communicate ideas digitally and produce greater efficiency?

Relevance and Application:
1. Students can develop a basic website, create podcasts and videocasts (vodcasts), edit digital music and movies, create basic games and animated movies, publications, and other cloud technologies to learn how to communicate in the 21st Century business world.

Nature of Discipline:
1. These design skills are essential to learn how to communicate and function in the 21st Century business and professional world.