



California  
Subject  
Examinations for  
Teachers®

**TEST GUIDE**

**INDUSTRIAL AND TECHNOLOGY  
EDUCATION**

**General Examination Information**

Copyright © 2005 by National Evaluation Systems, Inc. (NES®)

"California Subject Examinations for Teachers," "CSET," and the "CSET" logo are registered trademarks of the California Commission on Teacher Credentialing and National Evaluation Systems, Inc. (NES®).

"NES®" and its logo are registered trademarks of National Evaluation Systems, Inc.™

CS-TG-ITEDGI-02

## Test Structure for CSET: Industrial and Technology Education

CSET: Industrial and Technology Education consists of two separate subtests, each composed of both multiple-choice and constructed-response questions. Each subtest is scored separately.

The structure of the examination is shown in the table below.

<b>CSET: Industrial and Technology Education</b>			
<b>Subtest</b>	<b>Domains</b>	<b>Number of Multiple-Choice Questions</b>	<b>Number of Constructed-Response Questions</b>
I	Nature of Technology	45	2 short (focused) 1 extended
	Subtest Total	45	2 short (focused) 1 extended
II	Power and Energy	25	1 short (focused)
	Information and Communication	25	1 short (focused)
	Project and Product Development	25	1 short (focused)
	Subtest Total	75	3 short (focused)

# **Annotated List of Resources for CSET: Industrial and Technology Education**

This list identifies some resources that may help candidates prepare to take CSET: Industrial and Technology Education. While not a substitute for coursework or other types of teacher preparation, these resources may enhance a candidate's knowledge of the content covered on the examination. The references listed are not intended to represent a comprehensive listing of all potential resources. Candidates are not expected to read all of the materials listed below, and passage of the examination will not require familiarity with these specific resources. A brief summary is provided for each reference cited. Resources are organized alphabetically and by content domain order in subtest order.

## **Nature of Technology**

Asfahl, Ray C. (1995). *Industrial Safety and Health Management*. Upper Saddle River, NJ: Prentice Hall.

This book contains a discussion of factors involved in creating and maintaining a safe and healthful workplace.

Brown, Ryan, and Wright, Thomas. (2004). *Technology: Design and Applications*. Tinley Park, IL: Goodheart-Willcox.

The authors offer an apt introduction to technology specifically for grades seven through nine.

Pierce, Alan J., and Karwatka, Dennis. (2005). *Introduction to Technology*. New York, NY: Glencoe McGraw Hill.

This text provides an introduction to technology for students.

*Standards for Technological Literacy: Content for the Study of Technology*. (2000). Reston, VA: International Technology Education Association.

These standards identify content for attaining technological literacy.

*Technology for Americans: A Rationale and Structure for the Study of Technology*. (1996). Reston, VA: International Technology Education Association.

This work defines technology and technological literacy and explains what it means to be a technologically literate member of society.

## **Power and Energy**

Banks, James. (2002). *Introduction to Transportation Engineering*. Boston, MA: McGraw Hill.

This text covers transportation technology and all its contexts.

Cassedy, Edward, and Grossman, Peter. (1998). *Introduction to Energy: Resources, Technology, and Society*. Cambridge, England: Cambridge University Press.

This is an introduction to energy technology, the benefits of energy, and the problems caused by energy.

Duffy, James. (2004). *Automotive Excellence, Volumes One and Two*. New York, NY: Glencoe McGraw Hill.

This two-volume set covers materials required for Automotive Service Excellence certification.

Duffy, James. (2004). *Modern Automotive Technology*. Tinley Park, IL: Goodheart-Willcox.

The author gives thorough coverage of modern automotive technology.

Stephen, Matt. (1998). *Electricity and Basic Electronics*. Tinley Park, IL: Goodheart-Willcox.

This introduction to electricity and electronics includes applications to communications.

## **Information and Communication**

Brown, Jimmie, and McMahon, Chris. (1998). *CAD/CAM: Principles, Practice, and Manufacturing Management*. Harlow, England: Addison Wesley.

This text covers computer-aided design and manufacturing.

Ching, Francis. (1997). *Design Drawing*. New York, NY: John Wiley and Sons, Inc.

This text is a comprehensive introduction to drawing including a discussion of line, shape, tone, and space.

Greenwald, Martin, and Luttrupp, John. (1997). *Graphic Communications: Design Through Production*. Stamford, CT: Thomson Learning and Delmar.

This book is an introduction to the design process and how it relates to graphic communications and technology.

Jones, Stephan, and Kovac, Ron. (2002). *Introduction to Communications Technologies: A Guide for Non-Engineers*. Boca Raton, FL: Auerback Publications.

The authors give a comprehensive introduction to communications technology.

Landa, Robin, and Gonnella, Rose. (2001). *Visual Workout Creativity Workbook*. Stamford, CT: Thomson Learning and Delmar.

This graphic design workbook offers useful exercises and applications.

Toor, Marcelle Lapow. (1998). *Graphic Design on the Desktop: A Guide for the Non-Designer* (2nd edition). New York, NY: John Wiley and Sons, Inc.

The author provides a thorough introduction to graphic design and Web site design.

## Project and Product Development

Groover, Mikell P. (2003). *Fundamentals of Modern Manufacturing: Materials, Processes, and Systems*. New York, NY: John Wiley & Sons, Inc.

This text is written from the engineering perspective and gives coverage to the manufacturing process.

Heizer, Jay, and Render, Barry. (1996). *Production and Operations Management: Strategic and Tactical Decisions*. Upper Saddle River, NJ: Prentice Hall.

This is an introduction to production and operations management and its role in increasing productivity.

Hepler, Donald E.; Hepler, Dana J.; and Wallach, Paula Ross. (1998). *Architecture: Drafting and Design*. New York, NY: Glencoe McGraw Hill.

This book covers principles of architectural design and construction systems.

Kostof, Spiro, and Castillo, Greg. (1995). *History of Architecture: Settings and Rituals*. New York, NY: Oxford University Press.

The authors provide a history of architecture from prehistory to the present day.

Nunnally, S. W. (2004). *Construction Methods and Management* (6th edition). Upper Saddle River, NJ: Prentice Hall.

The author covers construction methods and management.