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## Targeted Critical Thinking: Effective Use of Critical Thinking Activities

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*Arcadia University*

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PaLA, LIRT Spring Workshop, March 11, 2011

# Learning Styles and Critical Thinking in Library Instruction



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ARCADIA  
UNIVERSITY

In suburban Philadelphia

# Targeted Critical Thinking

## Effective Use of Critical Thinking Activities

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# First a word from the sponsor...

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**Wang is wrong, but Wäng  
is right.**

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# LibraryWängC

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# Effective Use of Critical Thinking Activities

is about applying

the activity  
for the knowledge  
to the population  
at the time  
under the circumstances

**RIGHT**



# Effective Use of Critical Thinking Activities

is about

# TARGETING

# SCOPE & SEQUENCE

scope & sequence

# SAMPLE STANDARDS

scope & sequence

sample standards

# SAMPLE POPULATIONS

scope & sequence

sample standards

sample populations

**SAMPLE  
KNOWLEDGE**

scope & sequence

sample standards

sample populations

SAMPLE  
sample knowledge  
ACTIVITIES

scope & sequence

sample standards

sample populations

sample knowledge

sample activities

**CASES**

scope & sequence

sample standards

sample populations

sample knowledge

sample activities

cases



scope & sequence

sample standards

sample populations

SCOPE &  
SEQUENCE

sample knowledge

sample activities

cases

# Effective Use of Critical Thinking Activities

is about

# TARGETING

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under the circumstances

**RIGHT**

# Scope & Sequence

is about

the knowledge  
at the **RIGHT** time

scope & sequence

sample standards

sample populations

SCOPE &  
SEQUENCE

sample knowledge

sample activities

cases

scope &  
sequence

for

Social  
Studies

in

Jeffco

Public

Schools,

Golden,

Colorado

### K-12 Scope and Sequence Charts

Grade Level	Fall	Winter	Spring
Kindergarten	Civics in the Kindergarten Classroom (Civics)	Economics in the Kindergarten Classroom (Economics)	Me and My World (Geography)
	Many Families, One Nation (History)		
First Grade	Civics in the First Grade Classroom (Civics)	Economics in the First Grade Classroom (Economics)	Learning About My World (Geography)
	Our American Heritage (History)		
Second Grade	Civics in the Second Grade Classroom (Civics)	Economics in the Second Grade Classroom (Economics)	Our World (Geography)
	Unity in Diversity (History)		
Third Grade	Citizenship (Civics)		
	The First Americans (History, Geography and Civics)		
	Foothills and Freeways (Civics, Economics and History)		
Fourth Grade	Jr.Geographers (Geography)	Exploring Africa (Geography)	Colorado (Civics, Economics and History)
	Japan-(optional study) (History and Civics)		
Fifth Grade	The World in 1492 (Geography,History, Economics)	Exploration of the Western Hemisphere (Geography and History)	Colonial America (Economics and History)
Sixth Grade	The American Revolution (History, Civics and Economics)		
	Founding our Nation (Civics and History)	Our Neighbors to the South and North (Economics and Geography)	
	U.S. Regional Geography-(optional study) (Geography)		

# scope & sequence

for

Language Arts

in

Carrollton-

Farmers Branch

Independent

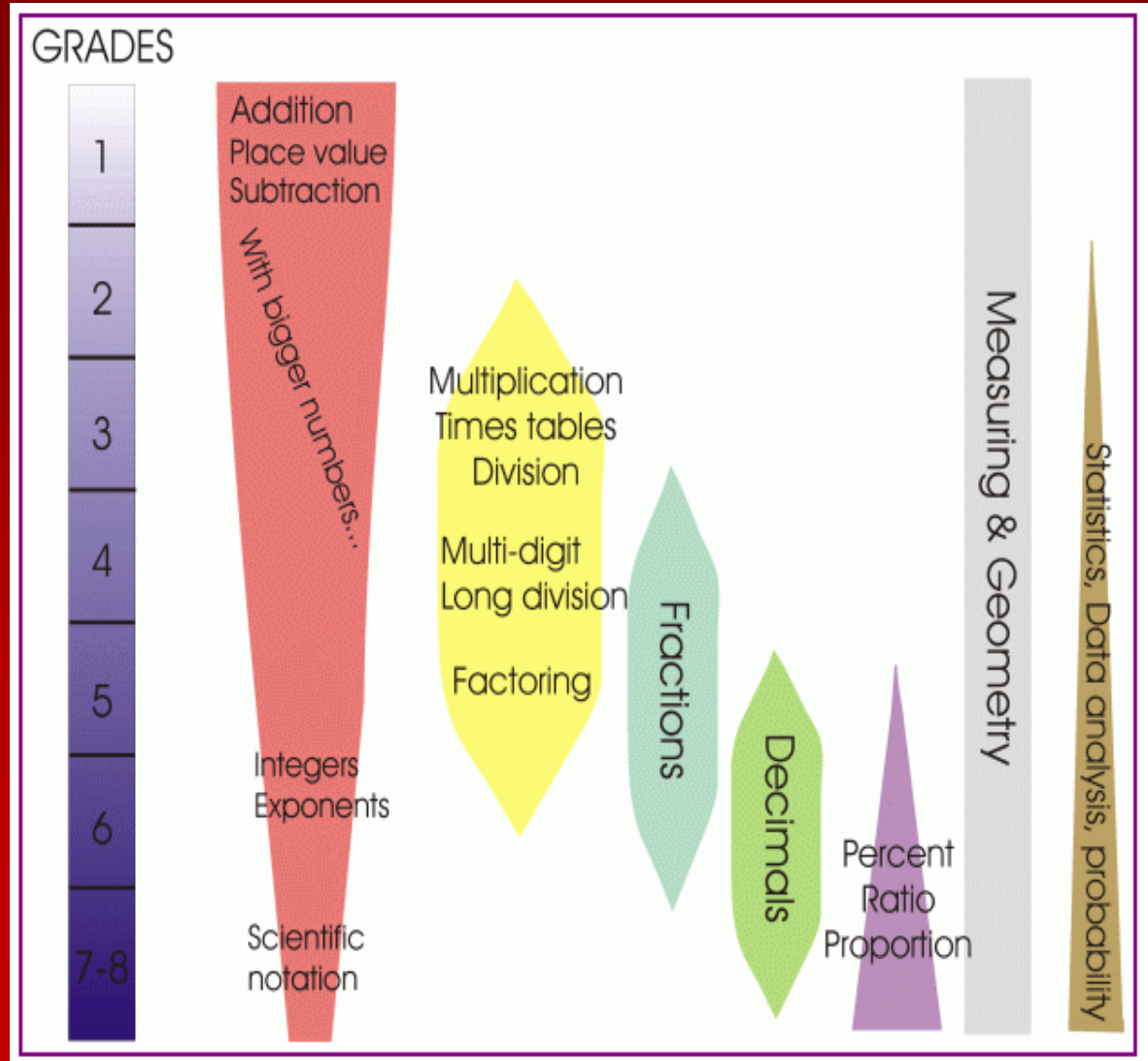
School District,

Carrollton,

Texas

<u>Middle School</u>			
	Language Arts		
	6 <sup>th</sup> Grade	7 <sup>th</sup> Grade	
<b>Oral Communication: Listening, participating in discussion, presenting ideas.</b>			
Developing as a reader	6.1 E) Listen to proficient models of oral reading from classic and contemporary works to appreciate language and to increase vocabulary.	7.1 E) Listen to proficient models of oral reading from classic and contemporary works to appreciate language and to increase vocabulary.	8.1 E) Listen to proficient models of oral reading from classic and contemporary works to appreciate language and to increase vocabulary.
Understanding/Appreciating literature	6.2 B) Compare language, oral traditions, and experiences that connect and reflect customs, regions, and cultures.	7.2 B) Compare language, oral traditions, and experiences that connect and reflect customs, regions, and cultures.	8.2 B) Compare language, oral traditions, and experiences that connect and reflect customs, regions, and cultures.
Developing as a researcher	6.2 C) Clarify and support spoken ideas with evidence, elaboration, and examples.	7.2 C) Clarify and support spoken ideas with evidence, elaboration, and examples.	8.2 C) Clarify and support spoken ideas with evidence, elaboration, and examples.
Developing as a reader	6.2 F) ESL: Identify people, places, objects, events, and basic concepts such as numbers, days of the week, food, occupations, time, and surroundings.	7.2 F) ESL: Identify people, places, objects, events, and basic concepts such as numbers, days of the week, food, occupations, time, and surroundings.	8.2 F) ESL: Identify people, places, objects, events, and basic concepts such as numbers, days of the week, food, occupations, time, and surroundings.
Understanding/Appreciating literature	6.3 A) Present dramatic interpretation and read aloud texts, plays, and personal experiences to demonstrate understanding and engage an audience.	7.3 A) Present dramatic interpretations and read aloud texts, plays, and personal experiences to demonstrate understanding and engage an audience.	8.3 A) Present dramatic interpretations and read aloud texts, plays, and personal experiences to demonstrate understanding and engage an audience.
<b>Reading: Learning to read, reading to learn, responding to text.</b>			
Developing as a reader		7.4 A) Use context, syntax, phonics, knowledge of Greek and Latin roots, and structural cues (affixes and base words) to identify unknown words. <b>[1.7.6B; 1.7.9B,D]</b>	8.4 A) Use context, syntax, phonics, knowledge of Greek and Latin roots, and structural cues (affixes and base words) to identify unknown words. <b>[1.8.6B; 1.8.9B,D]</b>
Understanding/Appreciating literature	6.5 A) Read from a variety of self-selected and assigned genres, including classic and contemporary works, for pleasure, to acquire information, to appreciate the writer's craft and to discover models for his/her own writing.	7.5 A) Read from a variety of self-selected and assigned genres, including classic and contemporary works, for pleasure, to acquire information, to appreciate the writer's craft and to discover models for his/her own writing.	8.5 A) Read from a variety of self-selected and assigned genres, including classic and contemporary works, for pleasure, to acquire information, to appreciate the writer's craft and to discover models for his/her own writing.
Developing as a researcher	6.5 B) Use multiple reference aids (dictionary, thesaurus, technology) to locate or clarify meanings.	7.5 B) Use multiple reference aids (dictionary, thesaurus, technology) to locate or clarify meanings.	8.5 B) Use multiple reference aids (dictionary, thesaurus, technology) to locate or clarify meanings.

scope &  
sequence  
for  
Mathematics  
on  
Home  
School  
Math  
Website





scope &  
sequence  
for  
Information  
Literacy  
in  
New Hope-  
Solebury  
School District,  
New Hope,  
Pennsylvania

[NHSD Libraries Home](#) / [About Our Libraries](#) /  
[K-12 Technology Scope & Sequence](#) / [NHSD District Page](#)

## ***K-12 Information Literacy Scope & Sequence***

The following scope and sequence of Information Literacy Skills were assembled by the New Hope Solebury School District librarians after reviewing a variety of professional sources. These sources included the Pennsylvania Department of Education's Library Tool Kit for Implementing Information Literacy in Schools, The Pennsylvania Guidelines for School Library Programs 2005, the Big Six, and numerous websites based on other states K-12 Information Literacy Skills sets.

Target bench marks for each skill are indicated with a "C" for competence. This does not mean that the skills will be mastered by all students at the grade level, but rather that most students will be able to consistently perform the listed skill by the end of the given grade level. In each case the "C" for competence was listed for the highest grade in a particular building (2,5,8, and 12) to reflect our building configurations and that the skill should be considered a benchmark for students leaving that building. ISTE (International Standards for Technology in Education) also uses the same building level configurations. Our district has already adopted a K-12 technology skill set based on ISTE and PDE standards.

Central to the core of Information Literacy Skills utilization by students is the integration of these skills throughout the subject area curricula of each building. The 2005 Pennsylvania Guidelines for School Library Programs emphasize that "just as the information literacy skills cannot be taught in isolation from the classroom curriculum, neither can these skill become the sole responsibility of the librarian. It takes the entire educational community - the librarian, teachers, administrators, and parents - working together to have students attain the information literacy skills linked to established academic standards."

[Library Awareness Skills](#)

[Lifelong Reading Skills](#)

[Information Problem  
Solving](#)

<http://www.nhsd.org/Library/litscope.htm>

# scope & sequence

**Skill Development Codes: I = Introduction D = Development C = Competence R = Review**  
**C. Information Problem Solving (Continued)**

<b>3.2 Find information within sources (Continued)</b>	<b>K</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>
Magazines							I	D	C	R	R	R	R
Newspapers				I	D	D	D	D	C	R	R	R	R
Reference Materials						I	D	D	C	R	R	R	R
Atlases				I	D	D	D	D	C	R	R	R	R
Almanacs				I	D	D	D	D	C	R	R	R	R
Dictionary			I	D	D	C	R	R	R	R	R	R	R
Encyclopedias				I	D	D	D	D	C	R	R	R	R
Thesauri					I	D	D	D	C	R	R	R	R
Phone book				I	D	C	R	R	R	R	R	R	R
Locates & is able to use - electronic card catalog systems	i	D	D	D	D	D	D	D	C	R	R	R	R
Locates & is able to use - Types of electronic resources													
Full text data bases						I	D	D	D	D	D	D	C
Internet			I	D	D	D	D	D	C	D	D	D	C
Interlibrary Loan							I	D	D	D	D	D	C
Power Library					I	D	D	D	D	D	D	D	C
<b>C4 Information Use</b>													
<b>4.1 Reads Purposely</b>													
Skims													
Scans				I	D	D	D	D	C	R	R	R	R
<b>4.2 Extract relevant information - data collection</b>				I	D	D	D	D	C	R	R	R	R
Underlines keywords and context clues													
Follows links and layers in electronic sources			I	D	D	C	R	R	R	R	R	R	R
Reads & interprets information			I	D	D	D	D	D	C	R	R	R	R
Gathers information from a variety of sources:			I	D	D	D	D	D	C	R	R	R	R

# scope & sequence

The following scope and sequence of Information Literacy Skills were assembled by the New Hope Solebury School District librarians after reviewing a variety of professional sources. These sources included the Pennsylvania Department of Education's Library Tool Kit for Implementing Information Literacy in Schools, The Pennsylvania Guidelines for School Library Programs 2005, the Big Six, and numerous websites based on other states K-12 Information Literacy Skills sets.

scope & sequence

sample standards

sample populations

**SAMPLE**

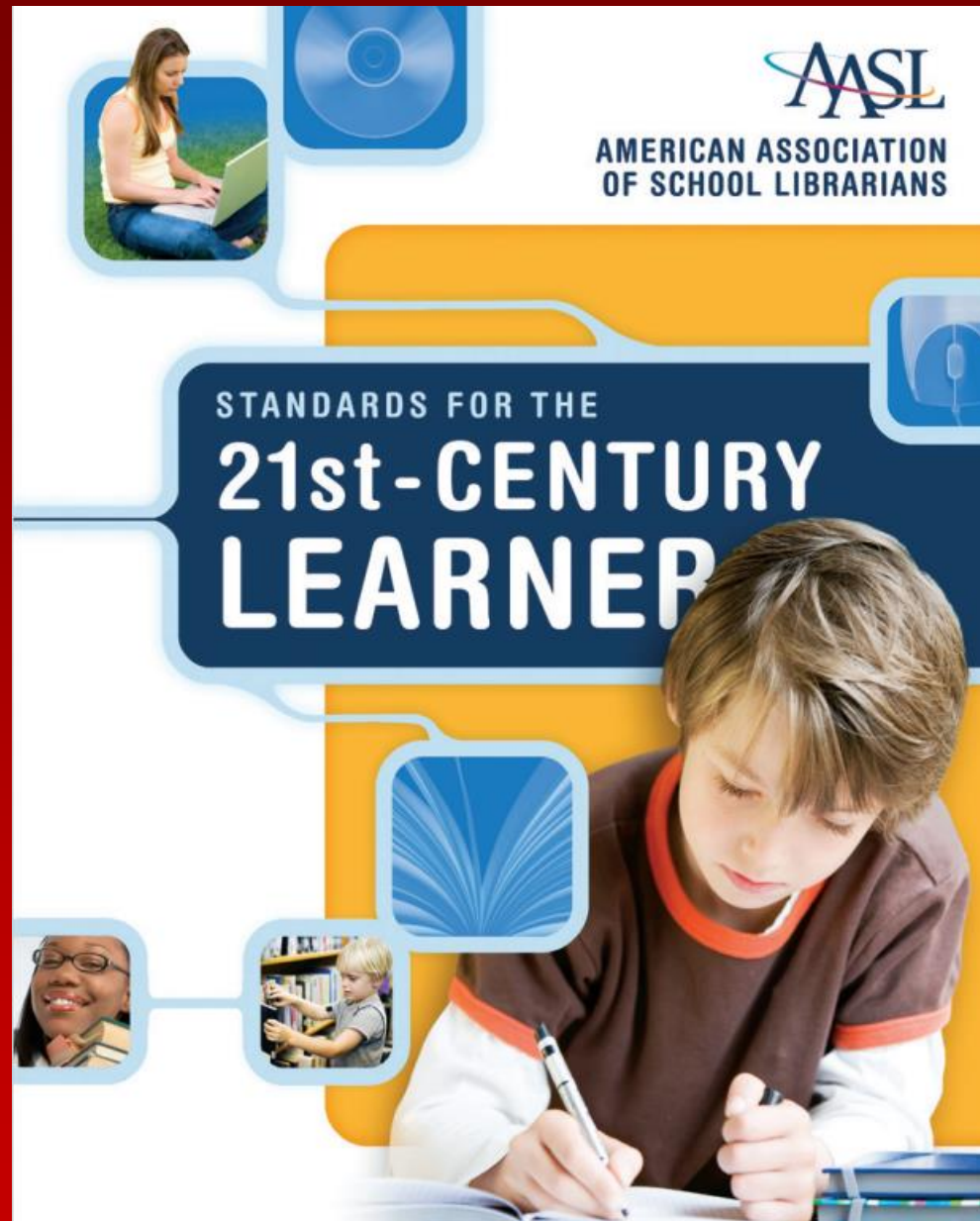
sample knowledge

sample activities

**STANDARDS**

cases

sample  
standards



[http://www.ala.org/ala/mgrps/divs/aasl/guidelinesandstandards/learningstandards/AASL\\_LearningStandards.pdf](http://www.ala.org/ala/mgrps/divs/aasl/guidelinesandstandards/learningstandards/AASL_LearningStandards.pdf)

# sample Standards for the standards 21st-Century Learner

- Inquire, think critically, and gain knowledge.
- Draw conclusions, make informed decisions, apply knowledge to new situations, and create new knowledge.
- Share knowledge and participate ethically and productively as members of our democratic society.
- Pursue personal and aesthetic growth.

sample  
standards



## Information Literacy Competency Standards for Higher Education



# sample Information Literacy standards Competency Standards for Higher Education

The information literate student:

1. Determines the nature and extent of the information needed.
2. Accesses needed information effectively and efficiently.
3. Evaluates information and its sources critically and incorporates selected information into his or her knowledge base and value system.



# sample Information Literacy standards Competency Standards for Higher Education

The information literate student:

4. Individually or as a member of a group, uses information effectively to accomplish a specific purpose.
5. Understands many of the economic, legal, and social issues surrounding the use of information and accesses and uses information ethically and legally.

# sample ILC SHE Standard 2 standards Performance Indicator 2

The information literate student constructs and implements effectively designed search strategies.

*Outcomes Include:*

- b. Identifies keywords, synonyms and related terms for the information needed
- c. Selects controlled vocabulary specific to the discipline or information retrieval source

# sample ILC SHE Standard 2 standards Performance Indicator 2

The information literate student constructs and implements effectively designed search strategies.

*Outcomes Include:*

- d. Constructs a search strategy using appropriate commands for the information retrieval system selected (e.g., Boolean operators, truncation, and proximity for search engines; internal organizers such as indexes for books)

# sample ILC SHE Standard 2 standards Performance Indicator 2

The information literate student constructs and implements effectively designed search strategies.

*Outcomes Include:*

- e. Implements the search strategy in various information retrieval systems using different user interfaces and search engines, with different command languages, protocols, and search parameter

# sample Additional standards Performance Indicators

- Articulates understanding of subject matter
- Implements process obtaining full-text

scope & sequence

sample standards

sample populations

**SAMPLE**

sample knowledge

sample activities

**STANDARDS**

cases

# STANDARDS

provide the scope to

scope & sequence

scope & sequence

sample standards

sample populations

SCOPE &  
SEQUENCE

sample knowledge

sample activities

cases



# Scope & Sequence

is about

the knowledge  
at the **RIGHT** time

# Effective Use of Critical Thinking Activities

is about applying

the **RIGHT** activity  
for the knowledge  
to the population  
at the time  
under the circumstances

scope & sequence

sample standards

sample populations

**SAMPLE**

sample knowledge

sample activities

**POPULATIONS**

cases

# sample Arcadia University populations

- EN 101 students
- First-year Seminar students
- Research-writing students
- Transfer students
- Capstone students
- Graduate students
- Returning students
- Adjunct faculty members
- Full-time faculty members

# sample populations

In reality, a given individual could be anywhere on the scope and sequence plane.

# SCOPE & SEQUENCE

transcends educational level

# scope & sequence

**Skill Development Codes: I = Introduction D = Development C = Competence R = Review**  
**C. Information Problem Solving (Continued)**

<b>3.2 Find information within sources (Continued)</b>	<b>K</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>
Magazines							I	D	C	R	R	R	R
Newspapers				I	D	D	D	D	C	R	R	R	R
Reference Materials						I	D	D	C	R	R	R	R
Atlases				I	D	D	D	D	C	R	R	R	R
Almanacs				I	D	D	D	D	C	R	R	R	R
Dictionary			I	D	D	C	R	R	R	R	R	R	R
Encyclopedias				I	D	D	D	D	C	R	R	R	R
Thesauri					I	D	D	D	C	R	R	R	R
Phone book				I	D	C	R	R	R	R	R	R	R
Locates & is able to use - electronic card catalog systems	i	D	D	D	D	D	D	D	C	R	R	R	R
Locates & is able to use - Types of electronic resources													
Full text data bases						I	D	D	D	D	D	D	C
Internet			I	D	D	D	D	D	C	D	D	D	C
Interlibrary Loan							I	D	D	D	D	D	C
Power Library					I	D	D	D	D	D	D	D	C
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Underlines keywords and context clues													
Follows links and layers in electronic sources			I	D	D	C	R	R	R	R	R	R	R
Reads & interprets information			I	D	D	D	D	D	C	R	R	R	R
Gathers information from a variety of sources:			I	D	D	D	D	D	C	R	R	R	R

# Effective Use of Critical Thinking Activities

is about applying

the activity  
for the knowledge  
to the population  
at the time  
under the circumstances

# RIGHT



A bit more history,  
professional  
ancient history...

# Standard Use of Average Thinking Activities

is about applying

the  
for the

**SAME**

activity  
knowledge

to a  
at a  
under

**DIFFERENT**

population  
time  
circumstances

# Effective Use of Critical Thinking Activities

is about applying

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to the population  
at the time  
under the circumstances

# RIGHT

scope & sequence

sample standards

sample populations

**SAMPLE**

sample knowledge

sample activities

**CIRCUMSTANCES**

cases

# sample circumstances

- Life status
- Degree of subject mastery
- Attitude
- Proximity
- Instructional frequency
- Learning style
- Demands of assignments
- Level of information literacy

Do you see a  
problem?

# Effective Use of Critical Thinking Activities

is about applying

the **RIGHT** activity  
for the knowledge  
to the population  
at the time  
under the circumstances

scope & sequence

sample standards

sample populations

SAMPLE

sample knowledge

sample activities

ACTIVITIES

cases



# sample activities

- Lower level population: Focused associations
- Lower level population: 6 degrees of Kevin Bacon
- Upper level population: Focused conversations
- All levels: Lecture about personality of search interfaces
- All levels: Lab time with JIT elaboration

scope & sequence

sample standards

sample populations

sample knowledge

sample activities

**CASES**  
cases

# cases

- Education graduate student: Effort on learning styles and self-improvement. Necessity to NOT “higher education”
- Biology senior: Effort on what happens during suffocation. Issue of wrong knowledge base and wrong period of time for the knowledge base. Necessity to employ alternate terms. Necessity to utilize supplemental database (WorldCat).
- All students: Necessity to see research and available resources at a higher level.

# Effective Use of Critical Thinking Activities

is about

# TARGETING

# Effective Use of Critical Thinking Activities

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UNIVERSITY

In suburban Philadelphia

# Targeted Critical Thinking

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