AN ANNOTATED LIST OF ENGLISH-LANGUAGE CRITICAL THINKING TESTS

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This annotated list of critical thinking tests (last revised, April, 2018) was compiled to assist educators at all levels in finding a useful test of critical thinking.

The basic list is categorized in accord with whether a test is a general-content critical thinking test or a subject-specific critical thinking test, and whether it focuses on a number of aspects of critical thinking or just one. Several listed tests are free of charge; others vary considerably in expense. By far the large majority are general content, multi-aspect tests. Some are selected response (usually multiple-choice) and some are constructed response (short answer or essay tests). Internet addresses are generally supplied.

Some tests are available to anyone; some are available only to instructors; some are available only to institutions, and some are made for particular institutions and available only to students at those institutions (the British tests). But these last-described tests might also be available to other institutions if special arrangements are made with the sponsoring institution.

The information provided is correct to the best of our knowledge, but we do not guarantee it. Suggested amendments and corrections are invited: rhennis@illinois.edu.

Contents

The tests are listed alphabetically within three categories.

1. GENERAL-CONTENT, MULTI-ASPECT, CRITICAL THINKING TESTS

ACT CAAP Test Module: Critical Thinking. ACT CAAP Operations (85), PO Box 1688, Iowa City, IA 52243. A "College Assessment of Academic Proficiency Test" done by ACT, and aimed at students at the end of their second year in college, often used to assess student mastery of critical thinking acquired in general education. All item are multiple-choice items based on four passages. Aspects assessed include identifying conclusions, inconsistency, and loose implications; judging direction of support, strength of reasons, and representativeness of data; making predictions; noticing other alternatives; and hypothesizing about what a person thinks. The test has three content categories: analysis of elements of an argument, evaluation of an argument, and extension of an argument. http://www.act.org/caap/index.html

AQA AS-Level Critical Thinking – 1771. AQA (Assessment and Qualifications Alliance), Stag Hill House, Guildford, Surrey, England, GU2 7XJ. This assessment has a corresponding course that students must take. For students seeking to achieve AS-Level in Critical Thinking, they must take two 90-minute assessments, one of each of the following units: (1) a critical thinking foundation unit of short answers and extended writing questions that requests reasoning on a subject related to provided source materials; and (2) an information, inference, and explanation unit that has a short answer section requiring extracting and interpreting information, assessing claims and conclusions, drawing inferences and offering explanations, and another section requiring candidates to argue for or against a short statement or proposal. http://web.aqa.org.uk

AQA A-Level Critical Thinking – 2771. AQA (Assessment and Qualifications Alliance), Stag Hill House, Guildford, Surrey, England, GU2 7XJ. This assessment has a corresponding course that students must take. For students seeking to achieve A-Level in Critical Thinking, they must take four 90-minute assessments, one of each of the following units: (1) a critical thinking foundation unit of short answers and extended writing questions that requests reasoning on a subject related to provided source materials; (2) an information, inference, and explanation unit that has a short answer section requiring extracting and interpreting information, assessing claims and conclusions, drawing inferences and offering explanations, and another section requiring candidates to argue for or against a short statement or proposal; (3) a unit on beliefs, claims, and with one section requiring short answers related to source material expounding a belief, theory, or hypothesis and another section of extended writing questions related to short but complex arguments or persuasive texts; and (4) a unit on reasoning and decision making, with questions based on a case study that will be part pre-released and part contained in the examination paper. http://web.aqa.org.uk

The California Critical Thinking Skills Test (CCTST): College Level. By Peter Facione. Insight Assessment, 217 LaCruz Ave, Millbrae, CA 94030. Aimed at college students, but probably usable with advanced and gifted high school students. A 35-item multiple-choice test, incorporating interpretation, argument analysis and appraisal, evaluation, inference, and explanation. Sub-scores on deduction and induction. Actually the CCTST now is a family of tests with varying age levels and foci. Some versions use everyday content; other versions focus on professional fields, e.g., health sciences, business, law and government, military and defense. http://www.insightassessment.com

The California Critical Thinking Dispositions Inventory (CCTDI). By Peter Facione and N. C. Facione. Insight Assessment, 217 LaCruz Ave., Millbrae, CA 94030. Multiple-choice, aimed at assessing critical thinking dispositions. Probably useful for self-appraisal and as anonymous information, for research and evaluation of groups. http://www.insightassessment.com

The California Critical Thinking Skills Test M Series for Children and Youth: CCTST-M20 CCTST-M25, CCTST-MIB. Insight Assessment, 217 LaCruz Ave., Millbrae, CA 94030. Multiple-choice tests of critical thinking skills from analysis of the meaning of a given sentence to complex integration of critical thinking skills. 45 minutes. Either online or paper-and-pencil versions. M20 & M25 are for grades 6-9 or with adolescents and adults with comparable reading skills. The CCTST-MIB is for grades 3-5. http://www.insightassessment.com

Cambridge Thinking Skills Assessment. Cambridge Assessment, 1 Hills Road, Cambridge, CB1 2EU, UK. This assessment is for Cambridge undergraduate applicants for courses in Computer Science, Economics, Engineering, Land Economy, Natural Sciences (Physical and Biological), and Politics, Psychology and Sociology. The Cambridge TSA is a 90-minute assessment that consists of 50 multiple-choice questions that test problem solving skills (including numerical and spatial reasoning and critical thinking skills), and understanding arguments and reasoning using everyday language.
http://www.admissionstests.cambridgeassessment.org.uk/adt/tsacambridge/about

The CEU-Lopez Critical Thinking Test. By Marcos Y. Lopez. Centro Escolar University, City of Malolos, Bulacan, Philippines. This test is a multi-aspect general-knowledge critical thinking test. It is aimed at students in tertiary level regardless of the courses they pursue. It consists of 87 items which can be taken in a period varying from 90 to120 minutes. Each item on the test has three choices and one keyed answer. It uses a multiple-choice-question format that deals with deduction, induction, assumption identification, meanings and fallacies, and credibility/observation judgment. The topics included in the test do not call for any special knowledge of any particular discipline or school subject. mylopez28@gmail.com

Collegiate Learning Assessment+ (CLA+). The Council for Aid to Education (CAE), 215 Lexington Ave, Floor 21, New York NY 10016-6023. For college students. Two parts. One part calls for an essay response to computer-administered performance tasks. It provides a problem and documents to use in producing a solution or answer to be defended, a written recommendation accompanied by written justification to be appraised, and an issue calling for a position to be defended by the test taker. Critical thinking essay-test scoring is done by computer, but monitored. The other part is multiple-choice. Focuses on critical thinking, analytic reasoning and evaluation, problem solving, and written communication, but specific aspects of critical thinking that are assessed are not to our knowledge announced, though correlation and causation are mentioned. The institution is one primary unit of analysis emphasizing a "value-added" approach to appraising the institution, but other approaches to reporting are also available. 90 minutes. http://www.collegiatelearningassessment.org/

The College and Work Readiness Assessment+ (CWRA+). The Council for Aid to Education (CAE), 215 Lexington Ave, Floor 21, New York NY 10016-6023. High school. Proctored and delivered exclusively over the internet. Similar to CLA+, but less demanding. Contains constructed-response and selected-response questions, assessing critical thinking, analytic reasoning and evaluation, problem solving, and written communication, and calling for document analysis and position defense. Critical thinking essay scoring is done by computer, but monitored. http://www.cae.org/content/pro_collegework.htm

The Critical Thinking Assessment Test (CAT). Center for Assessment & Improvement of Learning, Box 5031, Tennessee Technological University, Cookeville, TN 38505. Faculty-scored one-hour short-essay critical thinking assessment. Targets the items in Bloom's Taxonomy of Educational Objectives (evaluation, synthesis, analysis, application, and comprehension) and knowledge (rote retention). Measures student ability to evaluate information (separate factual information from inferences; interpret numerical relationships in

graphs; understand the limitations of correlational data; and evaluate evidence and identify inappropriate conclusions); think critically (identify alternative interpretations for data or observations; identify new information that might support or contradict a hypothesis; and explain how new information can change a problem); solve problems (separate relevant from irrelevant information; integrate information to solve problems; learn and apply new information; and use mathematical skills to solve real-world problems); and communicate ideas effectively. http://www.tntech.edu/cat/using/

Cornell Critical Thinking Test, Level X. By Robert H. Ennis and Jason Millman. The Critical Thinking Company (formerly Midwest Publications), PO Box 1610, Seaside, CA 93955. Aimed at Grades 7-12. The test can be used to teach critical thinking skills or assess them in honors/AP programs, critical thinking courses, college admissions, careers, and employment. Seventy-one multiple-choice items. Assesses induction, deduction, credibility of sources, and identification of assumptions. Can be administered as 50-minute timed or untimed evaluations. The Fifth Edition of the Manual is extensive. http://www.criticalthinking.com/. Select from "Pick a Product Family."

Cornell Critical Thinking Test, Level Z. By Robert H. Ennis and Jason Millman. The Critical Thinking Company (formerly Midwest Publications), PO Box 1610, Seaside, CA 93955. Aimed at college students, graduate students, and adults, but usable with advanced or gifted high school students. May be administered as 50-minute timed or untimed evaluations. Fifty-two multiple-choice items. Can be used to teach critical thinking or assess it. *Aspects assessed* include induction, deduction, credibility of sources, identification of assumptions, definition, fallacies (especially equivocation), and prediction in planning experiments. The Fifth Edition of Manual is extensive. http://www.criticalthinking.com/. Select from "Pick a Product Family."

The Ennis-Weir Critical Thinking Essay Test. By Robert H. Ennis and Eric Weir. Critical Thinking Press and Software (formerly Midwest Publications). Publication discontinued by original publisher. However, together with the "Supplementary Information" (including user norms, validity and reliability data), this constructed-response test is available for direct printing at no cost. Aimed at, and used in, grades 7 through college. For both formative and summative evaluation, and also as a teaching material. Incorporates getting the point, identifying the reasons and assumptions, stating one's point, offering good reasons, seeing other possibilities (including other possible explanations), and responding to and avoiding equivocation, irrelevance, circularity, reversal of a conditional ("if-then") relationship, overgeneralization, credibility problems, and the use of emotive language to persuade. The last three pages constitute the actual test. http://www.criticalthinking.net Click "How can critical thinking be assessed?"

ETS® Proficiency Profile (formerly "MAPP"). Educational Testing Service, PO Box 6000, Princeton, NJ 08541. A measure of college-level reading, mathematics, writing, and critical thinking in the context of the humanities, social sciences, and natural sciences. Under critical thinking, measures a student's ability to distinguish between rhetoric and argumentation in a piece of nonfiction prose; to recognize assumptions; to recognize the best hypothesis to account for information presented; to infer and interpret relationships between variables; and to draw valid conclusions based on information presented. Multiple-choice. Standard forms: two hours. Abbreviated forms: 40 minutes. Web or paper-and-pencil delivery.
http://www.ets.org/proficiencyprofile/about

Halpern Critical Thinking Assessment (HCTA) By Diane Halpern. Department of Psychology, Claremont McKenna College, Claremont, CA 91711. Consists of 25 everyday scenarios, each of which is briefly described. Respondents are first asked an open-ended question, which is followed by a forced-choice item (e.g., multiple choice, ranking, or rating of alternatives), such as, "select the best alternative," "rate each of the alternatives in terms of their relevance," or "indicate which two of the following alternatives indicates a good response." Represents five categories of critical thinking skills: verbal reasoning (e.g., recognizing the use of persuasive or misleading language), argument analysis (e.g., recognizing reasons, assumptions, and conclusions in arguments), thinking as hypothesis testing (e.g., understanding sample size, generalizations), using likelihood and uncertainty (e.g., applying relevant principles of probability such as base rates), as well as decision making and problem solving (e.g., identifying the problem goal, generating and selecting solutions among alternatives). Contact mayr@schuhfried.at, Schuhfried Publishing. Also see www.DianeHalpern.com Look under "Research"

Holistic Critical Thinking Scoring Rubric (HCTSR). By Peter A. Facione and Noreen C. Facione. Published by Insight Assessment / The California Academic Press. Designed for rating the observable critical thinking demonstrated by presentations, reports, essays, projects, classroom discussions, panel presentations, portfolios, and other ratable events or performances. Qualitative instrument for formative classroom-level learning outcome assessing of student products. Rubric measures weak to strong critical thinking on a 4-point scale. Rubric offered at no charge for instructor use at http://www.insightassessment.com

Illinois Critical Thinking Essay Test. By Marguerite Finken and Robert H. Ennis. Aimed at high school students, but could be used above and below that level. Emphasizes both critical thinking and writing. Provides guidance and a detailed one-page six-point rubric for evaluating the focus, supporting reasons, reasoning, organization, conventions of standard English, and integration of argumentative essays dealing with an issue of interest to the student. The issue that was used for test development deals with one specific topic, but a different issue could easily be used. High inter-rater reliability. Available at no cost:
http://www.criticalthinking.net (Click "How can critical thinking be assessed?")

International Critical Thinking Basic Concepts & Understanding Online Test: Assessing Initial Understanding of Basic Critical Thinking Concepts and Principles. By Linda Elder, Richard Paul, and Rush Cosgrove. The International Center for the Assessment of Thinking, PO Box 220, Dillon Beach, CA 94929. Three-part, 100-item selected-response test. Focuses on five dimensions of critical thinking: analysis of thought, assessment of thought, dispositions of thoughts, skills and abilities of thought, and obstacles to critical thought. Online test provides feedback and statistics related to performance for students. High school (grade 10) and above (college, university, graduate level).
http://www.criticalthinking.org/pages/online-critical-thinking-basic-concepts-test/679

International Critical Thinking Essay Test. The International Center for the Assessment of Thinking, PO Box 220, Dillon Beach, CA 94929. Provides eight criteria (to be shown to students in advance and also to be used for grading by trained graders). Students respond to an editorial, article excerpt, or textbook passage (selected by test administrator) by writing an essay

summarizing it, identifying its focus, and commenting on its strengths and weaknesses. Each exam must be graded by a person competent to assess the critical thinking of the test taker and trained in the grading called for in this examination. Grader attempts to answer two questions: (1) Did the student clearly understand the key components in the thinking of the author, as exhibited in the writing sample? (identifying purpose, question at issue, information, conclusions, assumptions, concepts, implications, point of view). (2) Was the student able to effectively evaluate the reasoning, as appropriate, in the original text and present his/her assessment effectively? (Pointing out strengths and possible limitations and/or weaknesses of the reasoning in the writing sample).
http://www.criticalthinking.org/store/products/international-critical-thinking-test/185

James Madison Test of Critical Thinking, Form A and Form B. The Critical Thinking Company, PO Box 1610, Seaside, CA 93955. Aimed at grade 7 through college. Fifty-five-item, fifty-minute test that can be administered online, over a network, or on a stand-alone computer. Assesses more than sixty-five critical thinking related skills and concepts, including: evaluating whether an inductive argument is strong or weak; assessing the relevance of claims to other claims, and to questions, descriptions, representations, procedures, information, directives, rules, principles, etc., and identifying and avoiding errors in reasoning, informal fallacies [begging the question, equivocation, post hoc, ergo propter hoc (after that, therefore, because of that), false dilemma/false dichotomy fallacy (line drawing fallacy, perfectionist fallacy), smoke screen/red herring/rationalizing, hasty generalization, appeal to ridicule/sarcasm, ad hominem fallacy (personal attack, poisoning the well), appeal to illegitimate authority, loaded question, evidence surrogate, stereotyping, appeal to consequences (favorable or unfavorable), "wishful thinking," genetic fallacy, biased generalization, anecdotal evidence]. http://criticalthinking.com. Select from "Pick a Product Family."

New Jersey Test of Reasoning Skills. By Virginia Shipman. Institute for the Advancement of Philosophy for Children, Test Division, Montclair State College, Upper Montclair, NJ 08043. Aimed at grades four though college. Multiple-choice, incorporates the syllogism (heavily represented), assumption identification, induction, good reasons, and kind and degree. Single copies free. Photocopying requires permission. To order this test, contact the Institute for the Advancement of Philosophy for Children (IAPC), Montclair State University, University Hall 2151, Montclair, NJ 07043 or call (973) 655-4278.
http://cehs.montclair.edu/academic/iapc/

OCR AS/A Level GCE Critical Thinking – H052. OCR, 1 Hills Road, Cambridge, England, CB1 2EU. This test is aimed at transitioning heads of departments and teachers involved in teaching critical thinking. For qualification of candidates having completed the first year of study of the corresponding two-year Advanced GCE course (both in terms of teaching time and content), an assessment is offered consisting of (2) 90-minute units that focus on, respectively, an introduction to critical thinking (language of reasoning and credibility) and assessing and developing an argument (writing arguments in response to stimulus material and evaluation of the strengths and weaknesses of an argument).
http://www.ocr.org.uk/qualifications/type/gce/hss/critical_thinking/documents/index.html

OCR AS/A Level GCE Critical Thinking – H452. OCR, 1 Hills Road, Cambridge, England, CB1 2EU. This test is aimed at transitioning heads of departments and teachers involved in

teaching critical thinking. For qualification of candidates having completed the second year of study of the corresponding two-year Advanced GCE course (both in terms of teaching time and content), an assessment is offered consisting of (4) 90-minute units that focus on, respectively, an introduction to critical thinking (language of reasoning and credibility); assessing and developing an argument (writing arguments in response to stimulus material and evaluation of the strengths and weaknesses of an argument); ethical reasoning and decision making (analysis and evaluation of conflicting ideas and arguments from a range of source material); and critical reasoning (which includes, but is not limited to, analysis and evaluation of materials and typical arguments found in newspapers, journals, books, and magazine.

http://www.ocr.org.uk/qualifications/type/gce/hss/critical_thinking/documents/index.html

Oxford Thinking Skills Assessment. Cambridge Assessment, 1 Hills Road, Cambridge, CB1 2EU, UK. This assessment is for undergraduate applicants for courses in Psychology and Philosophy, Experimental Psychology, Economics and Management, and Philosophy, Politics and Economics at Oxford University. The TSA Oxford consists of two sections: the TSA (thinking skills assessment) and the Writing Task. The 90-minute TSA consists of 50 multiple-choice questions that test problem solving skills (including numerical and spatial reasoning and critical thinking skills), and understanding arguments and reasoning using everyday language. The 30-minute writing task requires students to answer one essay question from a choice of four. This writing task tests a candidate's ability to organize ideas clearly and concisely, communicating them with effective writing. The prompts are not subject specific.

http://www.admissionstests.cambridgeassessment.org.uk/adt/tsaoxford/about

Reasoning About Current Issues Questionnaire. By Sheila S. Johnson. Scoring based upon stages used in the Reflective Judgment Interview (RJI), and scored on a 2-7 point scale, with 2 representing absolutist or dogmatic thinking and 7 representing knowledge gained through critical inquiry and evaluation. Participants react to questions related to dilemmas arising from current issues, like global warming or government debt.

www.umich.edu/~refjudg/reasoningaboutcurrentissuestest.html

The Smith-Sturgeon Conditional Reasoning Test. By Edward Smith and Joanne Sturgeon. An interview conditional-logic (deduction) test developed for use in an experimental study in grades 1-3. Students were tested individually by two staff members (one test administrator and one observer). Although labor intensive, this assessment is recommend for researchers and others interested in deductive-logic competence of children in grades 1-3, a difficult age for any kind of assessment of thinking. Available at no charge from ERIC in PDF form in the research report, *Conditional Logic and Children.* http://files.eric.ed.gov/fulltext/ED040437.pdf

The Test of Everyday Reasoning (TER). By Peter Facione. California Academic Press, 217 La Cruz Ave., Millbrae, CA 94030. Derived from *The California Critical Thinking Skills Test* (listed above), with 35 multiple-choice administered in 50 minutes. High school and community college. Uses familiar topics and contexts. Calls for analysis and interpretation of information presented in text, charts, or images; drawing accurate and warranted inferences; and evaluating inferences and explaining why they represent strong reasoning or weak reasoning.

http://www.insightassessment.com

Test of Inference Ability in Reading Comprehension. By Linda M Phillips and Cynthia Patterson. Centre for Research on Literacy, 635 Education Centre South, University of Alberta, Edmonton, Alberta T6G 2G5 Canada. Aimed at grades 6-8. Tests for ability to infer information and interpretations from short passages. Multiple-choice version (by both authors) and constructed-response version (by Phillips only). linda.phillips@ualberta.ca

Test of Problem Solving 2 Adolescent (TOPS 2). By Linda Bowers, Rosemary Huisignh, and Carolyn LoGiudice. LinguiSystems, Inc. 3100 4th Ave., East Moline, IL 61244. Grades 7-12. Five subtests: making inferences, determining solutions, problem solving, interpreting perspectives, and transferring insights. Serves as basis for an effective therapy program (assessment used for troubled teens). Forty minutes. Items presented verbally and in print to one student at a time. Responses graded on a 1 or 0 scale based on the relevancy of the response to the question per the Examiner's Manual.
http://www.linguisystems.com/products/product/display?itemid=10440

Test of Problem Solving 3 Elementary (TOPS 3). By Linda Bowers, Rosemary Huisignh, and Carolyn LoGiudice. LinguiSystems, Inc. 3100 4th Ave., East Moline, IL 61244. Grades 1-7. Six subtests: making inferences, sequencing, negative questions, problem solving, predicting, and determining causes. Students are presented full-color photographs from a Picture Stimuli Book that presents situations, and students offer oral responses. For example, a student might be presented with a photograph of lightning striking in a city, and the student might be asked, "What might happen to the elevators in these tall buildings?" A score of 2, 1, or 0 would be assigned to each response based upon the relevancy of the response to the question and on the quality of the response. Acceptable responses are referenced on the test form. Used to assess pragmatic competence. 35 minutes.
http://www.linguisystems.com/products/product/display?itemid=10362

Watson-Glaser Critical Thinking Appraisal. by Goodwin Watson and Edward Maynard Glaser. Pearson Education, Inc. 19500 Bulverde Road, San Antonio, TX 78259. Aimed at grade 9 through adulthood. Multiple-choice. The standard form: 40-60 minutes; short form: 30-45 minutes. Available in online and paper formats. Induction, assumption identification, deduction, judging whether a conclusion follows beyond a reasonable doubt, and argument evaluation.
http://talentlens.com/watson-glaser-critical-thinking-test

Watson-Glaser II Critical Thinking Appraisal. Pearson Education, Inc. 19500 Bulverde Road, San Antonio, TX 78259. For use with individuals employed in professional positions (e.g., executives, individual contributors) and with college undergraduate and graduate students. Contains more contemporary and business-relevant items than the Watson-Glaser I, and includes a higher proportion of difficult items. Measures thinking, reasoning, and intelligence; predicts judgment, problem solving, and creativity; classifies individuals as low, average, and high; suggests critical-thinking based job behaviors; items separate the "bright" from the "exceptional." Assesses three components of critical thinking via the RED model, evaluating one's ability to recognize assumptions, evaluate arguments, and draw conclusions. Two forty-item multiple-choice tests. http://us.talentlens.com/. Select "Critical Thinker."

2. GENERAL-CONTENT, ASPECT-SPECIFIC, CRITICAL THINKING TESTS

Cornell Class Reasoning Test. By Robert H Ennis, William L. Gardiner, Richard Morrow, Dieter Paulus, and Lucille Ringel. Assesses a variety of forms of (deductive) class reasoning (the elementary predicate calculus without material implication and its associated concepts). Available at no cost. Multiple-choice. Aimed at grades 4-14. Developed for research purposes, but usable in standard classrooms. The research report with considerable data is *Critical Thinking Readiness in Grades 1-12: Phase I, Deductive Logic in Adolescence,* USOE Cooperative Research Project #1680, New York State College of Agriculture, Cornell University, 1965 (ERIC Document # ED 003818: http://www.eric.ed.gov/ERICWebPortal/contentdelivery/servlet/ERICServlet?accno=ED003818 This test can be copied at http://www.criticalthinking.net/testing.html

Cornell Conditional Reasoning Test. By Robert H. Ennis, William Gardiner, John Guzzetta, Richard Morrow, Dieter Paulus, and Lucille Ringel. Assesses a variety of forms of (deductive) conditional reasoning (the elementary propositional calculus without material implication and its associated concepts). Available at no cost. Multiple-choice. Aimed at grades 4-14. Developed for research purposes, but usable in standard classrooms. The research report with considerable data is *Critical Thinking Readiness in Grades 1-12: Phase I, Deductive Logic in Adolescence*, USOE Cooperative Research Project # 1680), New York State College of Agriculture, Cornell University, 1965 (ERIC Document # ED 003818): http://www.eric.ed.gov/ERICWebPortal/contentdelivery/servlet/ERICServlet?accno=ED003818. This test can be copied at http://www.criticalthinking.net/testing.html

Test on Appraising Observations. By Stephen P. Norris and Ruth King. Department of Educational Policy Studies, University of Alberta, Education North 7-104, Edmonton, Alberta T6G 2G5 Canada. Aimed at grades 7-14. Multiple-choice. Tests for ability to judge the credibility of statements of observation. Multiple-choice and constructed response versions. Send inquiries to Linda Phillips at linda.phillips@ualberta.ca

3. SUBJECT-SPECIFIC, MULTI-ASPECT, CRITICAL THINKING TESTS

ACT Science Reasoning (current). ACT CAAP Operations (85), PO Box 1688, Iowa City, IA 52243. 40 multiple-choice items, 35 minutes, based on passages, diagrams, and tables and experiments. Some familiarity with scientific vocabulary and concepts assumed. Asks students to read with comprehension, identify conclusions, interpret data, evaluate experiments, draw probable conclusions from data, and hypothesize best explanations. Uses natural science content. Involves reading graphs and interpreting data on tables, diagrams, figures, and scatterplots.

http://www.actstudent.org/testprep/descriptions/scidescript.html

The California Critical Thinking Skills Test: Quant-Q (2005), Insight Assessment, 217 LaCruz Ave., Millbrae, CA 94030. Measures quantitative reasoning integrated with critical thinking with a 28-item standardized test, 50 minutes. Designed for programs in mathematics, economics, statistics, the physical and biological sciences, engineering, computer science, architecture, and business. Available in an encrypted on-line e-testing system, or in paper-&-pencil form. While the questions can be challenging, the actual mathematical knowledge

required is basic. Aimed at college-bound high school students and college students of all levels.

http://www.insightassessment.com.

Critical Thinking Interview. By Gail Hughes and Associates. Minnesota State Colleges and Universities. Available from Gail Hughes, 141 Warwick St. S.E., Mpls., MN 55414. Aimed at college students and adults. About a half hour for a one-to-one interview. People being tested are interviewed about an issue of their choice, and rated by a subject-matter specialist on a combination of their displayed subject-matter knowledge and reasoning. Emphasis is on clarity, context, focus, credibility, sources, familiarity with the topic, assumption identification, and appropriate use of such reasoning strategies as generalization, reasoning to the best explanation, deduction, values reasoning, and reasoning by analogy. e-mail: hughe038@tc.umn.edu

Texas Assessment of Critical Thinking Skills™ (TACTS™), (2005). The College of Business Administration, Sam Houston State, Huntsville, Texas 77341. A 45-minute, multiple choice test that evaluates twelve thinking skills important in the business disciplines, including employing basic quantitative reasoning techniques to solve percentage problems, simultaneous equations, etc.; applying the rules of probability calculus; interpreting what inferences can be made from quantitative information presented in a chart or diagram; distinguishing data showing a correlation from information needed to establish a cause and effect relation; recognizing the logical components involved in the process of hypothesis testing; determining logically possible combinations given a set of constraints; recognizing argument structure and being able to use appropriate concepts such as premise, conclusion, and intermediate conclusion to identify the parts; distinguishing a successful paraphrase of an idea from one that does not say the same thing; identifying an essential unstated premise or conclusion of an argument; evaluating how strongly a particular set of premises supports a specific conclusion; evaluating the degree of relevance of particular pieces of evidence to determining the truth or falsity of a conclusion; and evaluating the degree of relevance of particular criticisms to the validity or invalidity of an argument. To acquire a copy email a request to Dr. Valerie Muehsam at eco_vpm@shsu.edu or Dr. Frank Fair at psy_fkf@shsu.edu

NOTES:

1. See Buros' *Mental Measurements Yearbook* and *Tests in Print* for further information about available tests.

2. Please be aware that since Robert Ennis is the co-author of some of these tests, he has a conflict of interest.

3. For extended discussions of assessing critical thinking, see these items:

Fisher, Alec & Scriven, Michael (1997). *Critical thinking: Its definition and assessment.* Point Reyes, CA: Edgepress.

Norris, Stephen P. & Ennis, Robert H. (1989). *Evaluating critical thinking*. Pacific Grove, CA: Midwest Publications.

Possin, Kevin (2014). Critique of the *Watson-Glaser Critical Thinking Appraisal* test: The more you know, the lower your score. *Informal Logic*, 34, 4, 393-416.

Possin, Kevin (2013). Some problems with the Halpern *Critical Thinking Assessment* (HCTA) test. *INQUIRY: Critical Thinking Across the Disciplines*, 28, 3, 4-12.

Possin, Kevin (2013). A serious flaw in the *Collegiate Learning Assessment* [CLA] Test. *Informal Logic*, 33, 3, 390-405. Also posted in Italian: http://unibec.wordpress.com/2013/05/13/un-grave-difetto-del-test-colligiate-learning-assessment-cla

Possin, Kevin (2013). A fatal flaw in the *Collegiate Learning Assessment* test, *Assessment Update*, 25, 1, 8-11.

Possin, Kevin (2008). A Field Guide to Critical-Thinking Assessment," *Teaching Philosophy*, 31, 3, 201-28.

Sobocan, Jan & Groarke, Leo (eds.), (2009). *Critical Thinking Education and Assessment: Can Higher Order Thinking Be Tested?* London, Ontario: The Althouse Press.

4. If you know of any other published and available critical thinking tests, or of problems in obtaining one of these listed tests, please let us know by writing Robert Ennis: rhennis@illinois.edu. His academic web site and his critical thinking web site, which contain a variety of interdependent references and some free tests, are respectively http://faculty.ed.uiuc.edu/rhennis, and http://www.criticalthinking.net.

5. A number of widely available standardized tests incorporate critical thinking, although critical thinking is not an exclusive focus. Among them are ACT (*American College Test*), AP (*Advanced Placement*), GRE (*Graduate Record Examination*), ITED (*Iowa Test of Educational Development*), LSAT (*Law School Admissions Test*), and MCAT (*Medical College Admissions Test*).

6. When considering a test, it is a good idea to take the test and grade yourself. Ask: For your students, is the test likely to assess what you want assessed without undue strain on your and your institution's resources? Also check other aspects of its validity and reliability for your situation.