

301 Rubric for Experimental Design

Source: Doran, Rodney L., Boorman, Joan, Chan, Fred, and Hejaily, Nicholas. Authentic Assessment: An instrument for consistency, *The Science Teacher*, September, 1993.

| | | | |
|------------------|----------------|--------------------------|---|
| Subjects: | <i>Science</i> | # of scales | 3 |
| Grade(s) | 9-12 | # of scale points | 6 |

Note: Each applicable item is checked separately, with one point awarded for each correct item. A sum from 0 to 5 may be calculated for each scale.

Scale I: Statement of Hypotheses

- Effect linked to variable
- Directionality of effect
- Expected effect/change
- Independent variable
- Dependent variable

Scale II: Procedure for Investigation

- Resolves experimental problem/feasibility
- Sequenced and detailed plan
- General strategy
- Safety procedures
- Use of equipment/diagram of set-up

Scale III: Plan to Record and Organize Observations/Data

- Space for measured/calculated data
- Matched to plan
- Organized sequentially
- Labelled fully (units included)
- Variables identified

302 Rubric for Experiment Report (page 1 of 2)

Source: Doran, Rodney L., Boorman, Joan, Chan, Fred, and Hejaily, Nicholas. Authentic Assessment: An instrument for consistency, *The Science Teacher*, September, 1993.

| | | | |
|------------------|---------|--------------------------|---|
| Subjects: | Science | # of scales | 4 |
| Grade(s) | 9-12 | # of scale points | 6 |

Note: Each applicable item is checked separately, with one point awarded for each correct item. A sum from 0 to 5 may be calculated for each scale.

Scale I: Quality of the Observations/Data

- Consistent data
- Accurate measurements/observations
- Completed data table
- Correct units
- Qualitative description

Scale II: Graph

- Curve is appropriate to data trend
- Points plotted accurately
- Appropriate scale (units included)
- Axes labeled with correct variables
- Has an appropriate title

Scale III: Calculations

- Calculated accurately
- Substituted correctly into relationship
- Relationship stated or implied
- Units used correctly
- Used all data available

(cont'd.)

Source: Doran, Rodney L., Boorman, Joan, Chan, Fred, and Hejaily, Nicholas. Authentic Assessment: An instrument for consistency, *The Science Teacher*, September, 1993.

Scale IV: Forms a Conclusion from the Experiment

- Consistent with scientific principle
- Sources of error
- Consistent with data
- Relationship among variables stated
- Variable stated in conclusion

303 Science Writing Sample Scoring Scales (page 1 of 3)

Source: Dave Winnett, *Have Students Write in Science*.

| | | | |
|------------------|---------------|--------------------------|---|
| Subjects: | Science | # of scales | 6 |
| Grade(s) | Not specified | # of scale points | 7 |

Scale I: Organization

(This scale characterizes the systematization of the report produced by the student. This does not require that students write a typical lab report or a standard scientific article.)

- 6 The written record has topics. All topics are logical.
- 5 The written record has topics. Some topics are logical, some not.
- 4 The written record has a chronological list of activities, observations, and results.
- 3 The written record has no clear organization. A random list is included.
- 2 The written record is too brief to determine if any organization was attempted. A short set of notes or a few items are listed.
- 1 Name, title, or a single note may be included.
- 0 No written record is attempted.

Scale II: Coherence

(This scale characterizes how well the reported activities of the student fit together.)

- 6 Student work has a clear, complete plan. All components relate to the plan.
- 5 Student work has a clear plan. All components relate to the plan.
- 4 Student work has a clear but incomplete plan. Minor gaps may exist. No extraneous activity is included.
- 3 Student work has an apparent plan, or a plan can be inferred. Extraneous activity may be included. Gaps may exist.
- 2 Student work has a vague plan. It is plausible that a plan may have been attempted. Extraneous activity may be included. Gaps may exist.
- 1 Student work appears to lack a coherent plan. Random activity.
- 0 No work is reported.

(cont'd.)

303 Science Writing Sample Scoring Scales (page 2 of 3)

Source: Dave Winnett, *Have Students Write in Science*.

Scale III: Procedures

(This scale characterizes the reported execution of the plan and/or activities undertaken by the student.)

- 6 All procedures are systematic, precise, or appropriate to the plan.
- 5 Almost all procedures are systematic, precise, or appropriate to the plan.
- 4 Most procedures are systematic, precise, or appropriate to the plan.
- 3 Some procedures are systematic, precise or appropriate to the plan.
- 2 Procedures are not systematic, do not employ precision, or are not appropriate to implement the plan.
- 1 Report of procedures does not allow a judgment about systematization.
- 0 No procedures are reported.

Scale IV: Facts

(This scale characterizes the reported facts obtained through the student investigation.)

- 6 All of the facts reported are relevant and plausible.
- 5 Most of the facts reported are relevant or plausible. Minor reservations.
- 4 About half of the facts reported are relevant or plausible. Some reservations.
- 3 Some of the facts reported are relevant or plausible. Major reservations.
- 2 "Facts" are stated in a generalized manner.
- 1 The facts reported are irrelevant or implausible.
- 0 No facts are reported.

(cont'd.)

303 Science Writing Sample Scoring Scales (page 3 of 3)

Source: Dave Winnett, *Have Students Write in Science*.

Scale V: Interpretations

(This scale characterizes the reported facts obtained through the student investigation.)

- 6 All of the inferences and conclusions reported are supported by data.
- 5 Most of the inferences/conclusions reported are supported by data.
- 4 About half of the inferences/conclusions reported are supported by data.
- 3 Some of the reported inferences/conclusions are supported by data.
- 2 One inference/conclusion is reported and supported by data.
- 1 Reported inferences/conclusions are not supported by data.
- 0 No inferences/conclusions are reported.

Scale VI: Scientific Qualities

(This scale characterizes the report in respect to typical feature of science not included in other scales. Two scientific genres are possible: hypothetico-deductive science and retroductive science.)

The following six qualities relate to hypothetico-deductive work:

Hypothesis formulation Repeating trials
Operational definitions Quantification
Control of variables Reporting allowing replication

These six qualities relate to retroductive studies:

Completeness of the description of the phenomena
Completeness of the description of the setting
Completeness of the description of the methods/approaches used
Operational definitions
Reporting allowing replication
Justified inferences

The scoring strategy for this scale is different from each of the other scales. For this scale:

- The reader is to review the student's report and classify the effort as either a hypothetico-deductive strategy or a retroductive strategy.
- The reader then is to use the appropriate list of qualities (see above) to identify which of the qualities are present in the report.
- The reader scores each quality present as cursory (1 point) or adequate (2 points).
- The final score for this scale is the total divided by 2 and rounded to the nearest whole number.

304 Kentucky Open-Ended Scoring Guide for Grade 8 Mathematics, Social Studies and Science

Source: Kentucky Department of Education

| | | | |
|------------------|---|--------------------------|---|
| Subjects: | Science, mathematics, social studies | # of scales | 1 |
| Grade(s) | 8 | # of scale points | 5 |

Holistic Scale

- 4**
- The student completes all important components of the task and communicates ideas clearly.
 - The student demonstrates in-depth understanding of the relevant concepts and/or processes.
 - Where appropriate, the student chooses more efficient and/or sophisticated processes.
 - Where appropriate, the student offers interpretations or extensions (generalizations, applications, analogies).
- 3**
- The student completes most important components of the task and communicates clearly.
 - The student demonstrates understanding of major concepts even though he/she overlooks or misunderstands less important ideas or details.
- 2**
- The student completes some important components of the task and communicates those clearly.
 - The student demonstrates that there are gaps in his/her conceptual understanding.
- 1**
- Student shows minimal understanding.
 - Student unable to generate strategy or answer may display only recall. Answer lacks clear communication.
 - Answer may be totally incorrect or irrelevant.
- 0**
- Blank/no response

Note: Scale points are defined in greater detail for each test question.

305 Norwood Park Draft Science Lab Rubric (page 1 of 2)

Source: Faculty of Norwood Park Elementary School, Chicago, Illinois

| | | | |
|------------------|----------------|--------------------------|---|
| Subjects: | <i>Science</i> | # of scales | 6 |
| Grade(s) | <i>K-8</i> | # of scale points | 4 |

Scale I: Purpose

Distinguished Identifies the purpose and special features

Proficient Identifies the purpose

Apprentice Identifies part of the purpose

Novice Identifies wrong purpose

Scale II: Materials

Distinguished Lists all materials and equipment

Proficient Lists all the materials

Apprentice Lists some of the materials

Novice Lists wrong materials

Scale III: Hypothesis

Distinguished Predicts with correct facts and creates a new hypothesis

Proficient Predicts with correct facts

Apprentice Predicts with some facts

Novice Guesses

Scale IV: Procedure

Distinguished Lists all steps and special details

Proficient Lists all the steps

Apprentice Lists some of the steps

Novice Lists incorrect steps

305 Norwood Park Draft Science Lab Rubric (page 2 of 2)

Source: Faculty of Norwood Park Elementary School, Chicago, Illinois

Scale V: Results

Distinguished Data is recorded, organized, and graphed

Proficient Data is recorded and organized

Apprentice Data is recorded

Novice False or incorrect results

Scale VI: Conclusion

Distinguished Shows understanding of the concepts and creates new hypothesis to apply to another situation

Proficient Shows understanding of the concepts learned

Apprentice Shows some understanding

Novice No conclusion or shows misconceptions

306 Alberta Performance Criteria (page 1 of 2)

Source: Greg Hall, Alberta Education Department

| | | | |
|------------------|---------|--------------------------|---|
| Subjects: | Science | # of scales | 2 |
| Grade(s) | 9 | # of scale points | 4 |

Scale I: Problem Solving/Inquiry

- 3 Beyond**
- Analyzed and readily understood the task
 - Developed an efficient and workable strategy
 - Strategy implemented effectively
 - Strategy supports a qualified solution
 - Appropriate application of critical knowledge
- 2 At Grade**
- Understood the task
 - Developed a workable strategy
 - Strategy inferred (some evidence), but not always clear
 - Strategy supports appropriate solution
 - Evidence of application of critical knowledge
- 1 Not Yet**
- Partially understood the task
 - Appropriate strategy some of the time
 - Possible evidence of a plan, but not clear
 - Partial connection to appropriate solution
 - Partial evidence of application of critical knowledge
- 0 Zero points**
- Misunderstood the task
 - Inappropriate, unworkable strategy
 - No evidence of carrying out a plan
 - No connections to solution
 - No evidence of critical knowledge
 - Blank

(cont'd.)

306 Alberta Performance Criteria (page 2 of 2)

Source: Greg Hall, Alberta Education Department

Scale II: Communication

3 Beyond

- Appropriate, organized, and effective system for display of information or data
- Display of information or data is precise, accurate, and complete
- Interpretations and explanations logical and communicated effectively
- Interpretations and explanations logical and mostly clear

2 At Grade

- Appropriate, organized system for display of information or data
- Display of information or data is mostly precise, accurate, and complete
- Interpretations and explanation logical and mostly clear

1 Not Yet

- System for display of information or data may not be clear or effective
- Display of information or data is somewhat precise, accurate, and complete
- Interpretations and explanations somewhat clear

0 Zero points

- Disorganized system for display of information or data
- Display of information or data is not precise, accurate, or complete
- Interpretations and explanations not clear
- Blank

307 Connecticut Academic Performance Test Lab Report Rubric (page 1 of 2)

Source: Connecticut State Department of Education

| | | | |
|------------------|---------|--------------------------|---|
| Subjects: | Science | # of scales | 1 |
| Grade(s) | 10 | # of scale points | 4 |

Holistic Scale

- Excellent**
- The response reflects excellent problem-solving and science process skills.
 - The problem is defined clearly.
 - An appropriate experimental design has been selected and employed rigorously.
 - Reasoning is logical and explained thoroughly.
 - Inferences and conclusions are supported by appropriate observations.
 - There are few if any misconceptions or errors, and none of them are serious.
 - The methods and results are communicated clearly enough that a reader could easily repeat the experiment.
- Proficient**
- The response reflects proficient problem-solving and science process skills.
 - The problem is defined adequately.
 - An experimental design is evident although it may not be completely appropriate and/or may not be employed rigorously.
 - Reasoning is generally logical.
 - Most inferences and conclusions are supported by observations.
 - There are few if any serious misconceptions as well as other errors.
 - The methods and results are communicated clearly enough for a reader to understand what the student has done, but there may be omissions and/or inconsistencies that would hinder a reader from being able to repeat the experiment easily.

(cont'd.)

307 Connecticut Academic Performance Test Lab Report Rubric (page 2 of 2)

Source: Connecticut State Department of Education

Marginal

- The response reflects marginal problem-solving and science process skills.
- The problem may be defined poorly.
- There may be some evidence of an experimental design, but it may be inappropriate and/or may not have been employed well.
- Reasoning may contain significant flaws.
- There may be some inferences and conclusions that can be supported by observations, but others may not be supportable and those that are supportable may not have been supported adequately.
- There may be some evidence of serious misconceptions as well as other errors.
- An attempt has been made to communicate the student's methods and results, but a reader would probably have significant difficulty repeating the experiment.

Unsatisfactory

- The response reflects unsatisfactory problem-solving and science process skills.
- The definition of the problem may be very limited or altogether missing.
- There is little if any evidence of an experimental design.
- Reasoning may be illogical, or it may contain numerous errors.
- There may be few if any inferences or conclusions, and those that appear may not be supportable.
- There may be numerous and serious misconceptions as well as other errors.
- There may be little evidence that the student tried to communicate his or her methods and results.
- Any attempt that has been made to communicate the methods and results would not enable a reader to reproduce the experiment.

308 CAPT Open-Ended Question Rubric

Source: Connecticut State Department of Education

| | | | |
|------------------|---------|--------------------------|---|
| Subjects: | Science | # of scales | 1 |
| Grade(s) | 10 | # of scale points | 4 |

Holistic Scale

- Excellent**
- The response is an excellent answer to the question. It is correct, complete, appropriate and contains elaboration and/or evidence of higher-order thinking and relevant prior knowledge.
 - There is no evidence of misconceptions.
 - Minor factual errors will not necessarily lower the score.
- Proficient**
- The response is a proficient answer to the question. It is generally correct, complete and appropriate although minor inaccuracies may appear.
 - There may be limited evidence of elaboration, extension, higher-order thinking and relevant prior knowledge, or there may be significant evidence of these traits but other flaws (e.g., inaccuracies, omissions, inappropriateness) may be more than minor.
 - There may be evidence of minor misconceptions.
- Marginal**
- The response is a marginal answer to the question. While it may contain some elements of a proficient response, it is inaccurate, incomplete and/or inappropriate.
 - There is little evidence of elaboration, extension, higher-order thinking or relevant prior knowledge.
 - There may be some evidence of serious misconceptions.
- Unsatisfactory**
- The response, although on topic, is an unsatisfactory answer to the question. It may fail to address the question, or it may address the question in a very limited way.
 - There may be no evidence of elaboration, extension, higher-order thinking or relevant prior knowledge.
 - There may be some evidence of serious misconceptions.

309 Rubric for Technical Writing

Source: Independent School District 196, Rosemount, Minnesota

| | | | |
|------------------|-------------------------|--------------------------|---|
| Subjects: | <i>Science, writing</i> | # of scales | 5 |
| Grade(s) | <i>Not specified</i> | # of scale points | 3 |

Scale I: Organization/Format

| | |
|---------------------|---|
| Advanced | Organizes material in a clear, appropriate, and precise manner. |
| Adept | Organizes material in an appropriate manner, but may lack some clarity or consistency. Presents basic information but may have extraneous material. |
| Unacceptable | Little evidence of a cohesive plan. Little or no description or detail. Ideas seem scrambled, jumbled, or disconnected. |

Scale II: Content

| | |
|---------------------|--|
| Advanced | Material content is clear, relevant, accurate, and concise. |
| Adept | Material is appropriate, but may lack a clear connection to the purpose. |
| Unacceptable | Little evidence of appropriate content. |

Scale III: Writing Conventions

| | |
|---------------------|---|
| Advanced | Enhances the readability of the paper. |
| Adept | Minor errors are present, but they do not detract from the readability of the paper. |
| Unacceptable | Little or no evidence of correct writing. Poor conventions seriously limit the paper's readability. |

Scale IV: Research and Interpret Data/Information

| | |
|---------------------|---|
| Advanced | Correct interpretation of data or information. Analysis and conclusion are based on research. |
| Adept | Correctly interprets data or information, but analysis or conclusion may not be supported by research. |
| Unacceptable | Incorrectly interprets data or information with little or no analysis or conclusion. Little or no evidence of research presented. |

Scale V: Appropriate Vocabulary

| | |
|---------------------|--|
| Advanced | Articulates appropriate vocabulary and terms associated with the subject matter. |
| Adept | Some inappropriate vocabulary present, or limited use of appropriate vocabulary. |
| Unacceptable | Inappropriate vocabulary and use occurs. |

310 Science Fair Project (page 1 of 2)

Source: Ogden Elementary School, Chicago, Illinois

| | | | |
|------------------|-------------------------|-----------------------|---|
| Subjects: | <i>Science, writing</i> | # of scales | 5 |
| Grade(s) | <i>Not specified</i> | # Scale length | 3 |

Scale I: Research

- 5 Uses many sources (>6) of different kinds. All information is relevant to the topic. Written research is presented in a coherent, logical fashion.
- 4 Good number of sources. Shows some attempt at varying " of sources. Information is relevant with only minor exceptions. Written research is presented in an ordered fashion with logical structure.
- 3 Uses between 35 sources (encyclopedia not being a major resource). Information is for the most part relevant. Written research is presented in an ordered fashion, having some structure.
- 2 Small number of sources (<3), possibly relying heavily on encyclopedia. Larger sections of information are irrelevant. Some small attempt made at ordering information.
- 1 Research is minimal, including only 1 or 2 sources that were actually used. Includes much information that is not relevant. Information presented in an unordered, almost haphazard fashion.

Scale II: Experimentation

- 5 Correctly applies basic principles of scientific research and appropriately uses terms such as hypothesis, variable, control.
- 4 Correctly applies basic principles of scientific experimentation with some conscious realization of terminology's meaning.
- 3 .Correctly applies principles. May use some terminology appropriately.
- 2 .Application of basic scientific principles of experimentation is inconsistent. Does not use terminology appropriately.
- 1 Does not correctly apply or even make attempt to apply basic scientific principles of experimentation. Shows no use or understanding of basic terminology.

310 Science Fair Project (page 2 of 2)

Scale III: Presentation

- 5 Results are represented graphically in clear and illuminating way. Conclusion is valid given results. Display encompasses entire project including all major steps (hypothesis, experimentation, results, conclusion).
- 4 Results are graphically represented in a clear way. Conclusion is valid with no more than minor sticking points. Display contains all major steps and flows from beginning to end.
- 3 Results represented graphically with only minor flaws. Conclusion valid with only minor reservations. Display encompasses all major steps.
- 2 Graphical representation of results is rudimentary. Conclusion is fraught with possibly major reservations. Display has some, but not all of major steps.
- 1 No (useful) graphical representation of results. Conclusion is not valid. Display does not encompass progression of steps. Presentation is haphazard and appears without structure.

Note: This rubric is adapted from Ogden's Rubric

311 Applying Scientific Processes (page 1 of 2)

Source: Ogden Elementary School, Chicago, Illinois

| | | | |
|------------------|---------------|-----------------------|---|
| Subjects: | Science | # of scales | 1 |
| Grade(s) | Not specified | # Scale length | 5 |

Holistic Scale

- 5
- Format of scientific process accurate.
 - All data collected correctly.
 - All data analyzed thoroughly.
 - Data represented in most accurate way.
 - All metric units of measurement used and converted where necessary.
 - Conclusion is consistent with data.
 - Problem or question is well defined.
 - All materials are listed.
 - Procedures are orderly command form.
 - Known facts and principles handled accurately in all areas.
 - Sources of experimental error evaluated.
 - Equipment used effectively with little to no "extra" direction from teacher.
- 4
- Format of scientific process generally accurate but with minor fault.
 - Most data collected correctly.
 - Most data analyzed thoroughly.
 - Data represented accurately but with minor fault.
 - All or most metric units measurement used and converted.
 - Conclusion consistent with data.
 - Problem or question well defined.
 - All but one material listed.
 - All methods stated in an orderly fashion using command form.
 - Known facts and principles handled accurately in most areas.
 - Good attempt made to evaluate experimental error.
 - Equipment used effectively with little "extra" direction from teacher.
- 3
- Format of scientific process partially correct.
 - Some data collected correctly.
 - Some data analyzed thoroughly.
 - Data represented, but not in most accurate way.
 - Some units of measurement used, but little attempt to convert.
 - Struggles with grammar: more than five mistakes.
 - Conclusion inconsistent with data.
 - Problem not well defined; lacks understanding of topic.
 - Shows confusion with known facts and principles.
 - Sources of experimental error not described.
 - Equipment used effectively, but with guidance from teacher.

311 Applying Scientific Processes (page 2 of 2)

Source: Ogden Elementary School, Chicago, Illinois

- 2 Format of scientific process incorrect.
 Data collected, but not analyzed.
 Data represented inaccurately (graphs not labeled or variables missing).
 Some metric units of measurement used; no conversions.
 Conclusion lacks consistency.
 Struggles with problem or question.
 Many materials not listed.
 Methods difficult to understand; not in command form.
 Struggles with known facts and principles.
 Struggles with directions for using equipment.
- 1 Complete interpretation of scientific process.
 Data collected incorrectly.
 Data not represented.
 No attempt to use metric units of measurement.
 Lacks understanding of question or problem and known facts and principles.
 Struggles with directions for using equipment.

Note: This rubric is adapted slightly from Ogden's rubric. This holistic rubric may be separated into separate scales addressing data collection and analysis, statement of problem, and hypothesis, description of methods, experimental, design (if applicable), use of scientific method and conclusions drawn.

312 Science Performance Assessment Analytical Scoring (page 1 of 2)

Source: Unknown

| | | | |
|------------------|---------------|---------------------|---|
| Subjects: | Science | # of scales | 4 |
| Grade(s) | Not specified | Scale length | 6 |

Scale 1: Scientific Methodology

(Procedures and reporting are completed according to the scientific method as appropriate to the developmental level of the student.)

- 5 All procedures and reporting show evidence that scientific method was followed.
- 4 Almost all procedures and reporting show evidence that scientific method was followed.
- 3 Most procedures and reporting show evidence that scientific method was followed.
- 2 Procedures and reporting show some evidence that scientific method was followed.
- 1 Procedures and reporting do not follow scientific method.
- 0 No procedures or reporting are included.

Scale 2: Predictions

(Predictions made are relevant and accurate as appropriate to the developmental level of the student.)

- 5 Predictions are relevant and all are accurate.
- 4 Predictions are relevant and most are accurate.
- 3 Predictions are relevant and some are accurate.
- 2 Predictions are relevant, but inaccurate.
- 1 Predictions are irrelevant and inaccurate.
- 0 No predictions are included.

312 Science Performance Assessment Analytical Scoring (page 2 of 2)

Source: Unknown

Scale III: Facts

(Facts obtained and reported are relevant and accurate as appropriate to the developmental level of the student.)

- 5 Facts are relevant and all are accurate.
- 4 Facts are relevant and most are accurate.
- 3 Facts are relevant and some are accurate.
- 2 Facts are relevant, but inaccurate.
- 1 Facts are irrelevant and inaccurate.
- 0 No facts are reported.

Scale IV: Applications

(Inferences, generalizations, interpretations, and conclusions are supported by the data and are accurate as appropriate to the developmental level of the student.)

- 5 Applications made are supported by the data and all are accurate.
- 4 Applications made are supported by the data and most are accurate.
- 3 Applications made are supported by the data and some are accurate.
- 2 Applications made are supported by the data, but are not accurate.
- 1 Applications made are not supported by the data and are not accurate.
- 0 No applications are made.

313 Hands-On Performance-Based Assessment

Source: Virginia Malone

| | | | |
|------------------|----------------------|---------------------|---|
| Subjects: | <i>Science</i> | # of scales | 3 |
| Grade(s) | <i>Not specified</i> | Scale length | 5 |

Scale I: Designing the Experiment

- 3 Design allows comparison of variables and indicates sufficient number of tests to obtain meaningful data.
- 2 Design allows comparison of variables, but lacks sufficient number of tests to obtain meaningful data.
- 1 Design allows comparison of variables to standard
- 0 Fails to develop any type of plan.

Scale II: Collecting and Reporting Data

- 4 Making a meaningful table and records the data accurately.
- 3 Make a meaningful table, but fails to record the observations or records them inaccurately.
- 2 Makes a data table, but the table lacks meaningful labels.
- 1 Describes observations in rambling discourse.
- 0 Fails to collect any data.

Scale III: Drawing Conclusions

- 3 Draws a conclusion that is supported by the data, and gives supporting evidence for the conclusion.
- 2 Draws a conclusion that is supported by the data, but fails to show the support for the conclusion.
- 1 Draws a conclusion that is not supported by the data.
- 0 Fails to reach a conclusion.