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ABSTRACT
        The Biological Sciences Curriculum Study (BSCS) Human
Sciences Project developed, produced, and field tested 13
interdisciplinary, non-traditional, non-text science curriculum
modules for early adolescents, ages 11 to 14. The Codebook for Human
Sciences Activity Characteristics on Reviewer Evaluation File--HSACRE
(ED 211 384) contains 8 variables characterizing 623 activities or
activity parts used in the field test of the program (1973-1976,
1977) in middle/junior high schools in the United States. The same
file also contains 52 variables that present content and public
reviewer's ratings of most of the activities. This user's guide
presents the conceptual design and descriptions of four activity
characteristic codes (major focus of the activity, type of knowledge
required to do the activity, descriptive sources of the activity
content, and what students were to do as the activity was studied).
Variable names, variable labels, and coding format, are provided.
(Author/JN)

Human Sciences Activity Characteristics
and Reviewer Evaluation File, HSACRE

A file containing 8 variables that describe the characteristics of
631 student activities or activity parts that comprised the field
test of the BSCS Human Sciences Program, 1973 to 1976, and 1977, in
middle and junior high schools in the United States. The file also
includes 52 variables that present content and public reviewers'
ratings of the activities.

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User's Guide for the Machine-Readable Data File

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Abstract

The Human Sciences Project conceptualized, developed, and field tested a three-year interdisciplinary science curriculum designed especially for early adolescents--students in middle and junior high schools. Data from the field test have been prepared as an SPSS archive data file with 734 and 1,275 variables. Machine-readable codebooks and user's guides have been developed to document this large data base.

This codebook provides frequencies of the values of variables that describe or provide external evaluative ratings of the activities that comprised the experimental materials of the Human Sciences Program. Because the program was an activity-centered, non-text program, new ways of describing the materials were devised.

This user's guide presents the conceptual design and descriptions of four activity characteristic codes: major focus of the activity, type of knowledge required to do the activity, descriptive sources of the activity content, and the action--what students do-- as the activity is studied. Intra- and interrater reliabilities were satisfactory, with ranges from .867 to 1.00, with one exception.

The codebook also contains the frequencies of ratings, by academic content reviewers and by public reviewers, of the accuracy of the scientific content and procedures, and of public ratings of the value and community acceptability of the activities.

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Codebook Contents

Variable Name	Variable Label
MODNO	Module Name
TSTYR	Test Year for Activity
GRADE	Grade Level of Students (in test classes)*
CODER	Name of Person Who Coded (activity characteristics)
TASK	Coding Task
CONRV1	Name of First Content Reviewer
SPCLT1	Academic Specialty of First (Content) Reviewer
SCICON1	Science Content of the Activity (Rating of First Content Reviewer)
DIRCTN1	Directions and Procedures (Rating, First Content Reviewer)
CONRV2	Name of Second Content Reviewer
SPCLT2	Academic Specialty of Second (Content) Reviewer
SCICON2	Science Content of the Activity (Rating, Second Content Reviewer)
DIRCTN2	Directions and Procedures (Rating, Second Content Reviewer)
CONRV3	Name of Third Content Reviewer
SPCLT3	Academic Specialty of Third Content Revi(ewer)
SCICON3	Science Content of the Activity (Rating, Third Content Reviewer)
DIRCTN3	Directions and Procedures (Rating, Third Content Reviewer)
CONRV4	Name of Fourth Content Reviewer
SPCLT4	Academic Specialty of Fourth Content Rev(iewer)
SCICON4	Science Content of the Activity (Rating, Fourth Content Reviewer)
DIRCTN4	Directions and Procedures (Rating, Fourth Content Reviewer)
CONRV5	Name of Fifth Content Reviewer
SPCLT5	Academic Specialty of Fifth Content Rev(iewer)
SCICON	Science Content of the Activity (Rating, Fifth Content Reviewer)
DIRCTN5	Directions and Procedures (Rating, Fifth Content Reviewer)
PUBRV1	Name of first public reviewer
HSEXP1	Child (first reviewer) was in Human Sciences classes?
RV1ITM1	Students would find this (activity) interesting (rating)
RV1ITM2	This activity is worthwhile (rating)
RV1ITM3	Parents in my community would approve (this activity)
RV1ITM4	This activity should be (retained) in Human Sciences
PUBRV2	Name of second public reviewer

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*Parentheses include information not printed in Codebook label

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HSEXP	Child (second reviewer) was in Human Sciences classes?
RV2ITM1	Students would find this (activity) interesting (rating)
RV2ITM2	This activity is worthwhile (rating)
RV2ITM3	Parents in my community would approve (this activity)
RV2ITM4	This activity should be (retained) in Human Sciences
PUBRV3	Name of third public reviewer
HSEXP3	Child (third reviewer) was in Human Sciences classes?
RV3ITM1	Students would find this (activity) interesting (rating)
RV3ITM2	This activity is worthwhile (rating)
RV3ITM3	Parents in my community would approve (this activity)
RV3ITM4	This activity should be (retained) in Human Sciences
PUBRV4	Name of fourth public reviewer
HSEXP4	Child (fourth reviewer) was in Human Sciences classes?
RV4ITM1	Students would find this (activity) interesting (rating)
RV4ITM2	This activity is worthwhile (rating)
RV4ITM3	Parents in my community would approve (this activity)
RV4ITM4	This activity should be (retained) in Human Sciences
FOCUS	Major focus or foci of the activity
KNLDG	Piagetian knowledge requirement of activity
DSPLN	Discipline sources of activity content
DOING	What students do as they study the activity
CONMEAN1	Mean rating, content accuracy of activity
CONMEAN2	Mean rating, accuracy of directions
PUBMEAN1	Mean rating, student interest
PUBMEAN2	Mean rating, worthwhile activity
PUBMEAN3	Mean rating, parental approval
PUBMEAN4	Mean rating, retain in HSP

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History of the Originating Project

The history of the Human Sciences curriculum project is provided in Ross (1981). A description of test sites and other critical information about the field tests and data collected are provided in Robinson (1981a). Complete copies of the procedures and instruments used in the formative evaluation of the Human Sciences Program is available in Robinson (1981b). The evaluation data collected of the three-year period, 1973-76, and Spring, 1977, are available for research use as described in Robinson and Tolman (1981).

Utilization of evaluation data from the Human Sciences project for future research purposes raised questions about the characteristics of the activities that comprised the student component (activities) of the three-year curriculum materials. Since students in field test classes chose the activities they studied, it became important to identify critical characteristics of these activities.

The Human Sciences Program, as field tested, was subdivided into three Levels: I, II, and III. Each level was divided into large curriculum units termed modules. Modules consisted of interrelated groups and subgroups of activities. Thirteen modules containing 452 activities were tested in academic years 1973-74, 1974-75, and 1975-76 with sixth, seventh, and eighth graders, respectively. One module, KNOWING, containing 44 activities, was tested in the Spring of 1977 with a different group of students.

The Human Sciences materials provided a unique opportunity to examine in detail the curriculum each student chose within a module, a level, or for the full three-year period. However, an activity title is not sufficient information to use in examining activity choice. Ways of describing each activity in terms of a set of characteristics were needed. By characterizing each activity, activities with similar characteristics (or with differing characteristics) could be used to explore student choice patterns. A coding system was devised to make possible the numerical characterization of each activity that was field tested. This coding system is described in the following section.

The Activity Coding System

Four major characteristics were formulated to characterize each activity: major activity focus, type of knowledge required to successfully complete the activity, the discipline source of the content of the activity, and what kinds of things students did as they studied the activity. Activities were then coded for subcategories within each major characteristic.

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Criteria for coding within the four major activity characteristics were developed, tested, and retested. Two coders coded activities for some 40-45 categories within the four major characteristics, keeping notes of reasons for such codings. Criteria were written, coding was done and compared. Through this procedure, 37 characteristics were selected for the final coding.

Coding Conventions

Coders used the student activity as the object for coding. They did not read the teacher's guide to the activity. The literal content of the activity plus media, worksheets, evaluation problems, and other materials students used as they did the activity were the data sources for activity coding.

These conventions were adopted because teacher's guides were not provided for some activities and because of differences in these guides for different grade levels. Coding was done to reflect the activity from the students' perspective.

Identification Data

Each activity is identified by six codes: MODNO, the number and name of the module in which the activity was studied; ACTNO, the number and name of the particular activity being rated; TSTYR, the academic year in which the module and activity was field tested; GRADE, the grade (sixth, seventh, or eighth) level of the students testing the activity; CODER, the name of the person who coded the activity characteristics; and TASK, the coding task, used to identify what the task was. This last identifier was used to identify whether the coding was original (value=1), coding for interrater reliability (value=2), a crosscoding (value=3) for intrarater reliability. Only value=1 are included in this file. The codebook criteria only aggregate data, omitting the variable ACTNO. The data file contains identification of each activity with all of the codings for that activity.

Major Activity Focus

The theoretical design of activities in Human Sciences called for activities to have combinations of three major kinds of emphasis: cognitive, affective, and craftsmanship (Robinson, 1977a, 1977b). These areas of emphasis were derived from the theoretical model of the curriculum that asked the question, "How can the disciplines of the natural and behavioral sciences serve the cognitive, social, and personal growth of early adolescents?" The goal was to produce activities with all three emphases. In practice, this was very difficult to accomplish. Activities could include only one major focus, all three foci, or various combinations of them.

Craftsmanship Focus

A major part of some activities was craftsmanship, constructing, or building. Craftsmanship was judged as part of an activity if students put things together, built apparatus, or otherwise assembled parts that could have been already assembled. The student could not complete the activity satisfactorily without construction. Construction could have been the product (end), or means to other ends. Craftsmanship subsumes, but is more comprehensive than the psychomotor domain described in Bloom, et al. (1956).

Affective Focus

Some activities required the students to develop empathy, to reflect on how objects or events affected other persons, to be sensitive to other person's feelings, or to examine one's own feelings about some object or event. Or, a major part of the activity was an appeal to emotions or feelings rather than, or in addition to, acquisition of new knowledge or reformulations of knowledge in new contexts. Aesthetic outcomes, appreciating form, design, beauty, etc., were further examples of the affective focus. Affect is synonymous with the affective domain described by Krathwohl and his colleagues (1964).

Cognitive Focus

A major focus of some activities was knowledge acquisition. Knowledge acquisition may have involved reasoning or remembering, either exactly as presented, or with reformulation, but without reasoning or performing cognitive operations. Cognition as described here is classified by Piagetian types of knowledge rather than the taxonomy developed by Bloom, et al. (1956).

Each activity was assigned a single code number to describe the major focus. The major focus was coded for one or for any combination of the three categories described above.

Coded Values

One of eight values was assigned to each activity to describe the major focus characteristics (variables). The values and value labels for this characteristic are:

Value Labels	Value
Craftsmanship	1
Affect	2
Cognition	3
Craftsmanship and affect	4
Craftsmanship and cognition	5
Affect and cognition	6
Craftsmanship, affect, and cognition	7
Not codeable into the above categories	8

Types of Knowledge

Any activity may have required knowledge acquisition, even though its central focus may have been craftsmanship or affect. The criterion used in deciding the single code for the "Types of Knowledge" category was to determine a single highest level predominant type of knowledge acquisition that a student utilized if the activity were to be understood as the writers of the activity intended. If a single question or a small part of an activity required a high level of knowledge acquisition; it did not determine the code. The knowledge type coded was to be predominant, not unique. If two knowledge types were equally predominant, the higher type (defined by the higher number in the coding values described below) was coded.

In general, each activity was assigned a single "type of knowledge" code. The code reflected the predominant logical requirement of the activity. Predominant included situations where a higher knowledge type was required to get the "gist" of the activity even though a lower type was also predominant. In this instance the higher type was recorded.

The first determination was to dichotomize the general knowledge type, that is, to determine if the knowledge acquisition was essentially figurative or operative. If figurative, the task ended and the coded value, figurative knowledge, was applied. If operative knowledge was required, the kind of operative knowledge was coded as precisely as possible.

Figurative Knowledge

Figurative knowledge is knowledge that has not resulted from reasoning. It depends on recognition of the configuration of the stimulus. Figurative knowledge emphasizes forms of representation: deferred imitation, symbolic play, drawing, mental imagery, language, and memory--especially rote memory.

Passive "reading" of data without having to mentally act on, reason about, or transform it is a good example of figurative knowledge acquisition. When students are asked "What did you see?" or when they are asked to describe or consider static states of objects at some point in time, figurative knowledge acquisition is the requirement.

When the emphasis is on symbolically representing information without requiring any logical transformation, figurative knowledge is being attained. In figurative knowledge, emphasis is on representation without consideration of the necessary logical relation between the knowledge represented and the representation itself, e.g., words become an end in themselves and not a means to an end. Further examples are: asking for an accurate "reading" of the situation without asking for an understanding of what was "read," or, an activity was written in such a way that the student could easily go through the activity without reasoning.

Figurative knowledge includes all preoperational knowledge. The preoperational child tends to take the immediate appearance of things, as the sole and ultimate reality. A single, isolated cognition with little or no potential is the hallmark of the preoperational child (Flavell, 1963, p. 167). When the activity required isolated cognition without comparison or reference to other cognitions, the activity asked for figurative knowledge.

Operative Knowledge

Operative knowledge is knowledge that results from reasoning. In general, operations consider how things have changed from what they were to what they are now, or how things might change. Operations ask for an inference, an induction, or a deduction. It is a representational act which is an integral part of an organized network of related acts. Cognitive operations are a holistic domain, presupposing a structured system that includes other related operations, "for the moment latent and inactive but always potentially actualizable by themselves and, above all, always a force governing the form and character of the operation which is momentarily on stage" (Flavell, 1963, p. 167).

Concrete Operations

Concrete operations are inductions, inferences, and deductions from or about concrete witnessed events. The content of deduction's is real objects. The focus is on the properties of objects, classification and relations, or facts and contradictions of facts. Concrete operations include inductive summative processes of accumulating instances (examples) and correspondences. They are "concrete" rule oriented, rules being fixed and immutable. Formal operational problems, such as the pendulum problem (Inhelder and Piaget, 1958), can be reduced to concrete operational problems by providing concrete referents in all aspects of the problem and eliminating many alternatives for the student. Concrete thinking may, nevertheless, be very sophisticated, and, therefore, difficult.

Concrete operational requirements in an activity were elaborated into subtypes for coding purposes. These types are explained following the discussion of formal operations.

Formal Operations

Formal operations are operations on the potential and hypothetical rather than on the real. Formal operations require the delineation of all possible (logical) eventualities at the outset and then to try to discover which of these possibilities really do occur in the present data. The real becomes the special case of the possible, not the other way around (Flavell, 1963, p. 204). When proportional reasoning, logically manipulating contrary-to-fact propositions, hypothetical deductive thinking, and systematic combinatorial thinking were required in an activity, the coding was for formal operations.
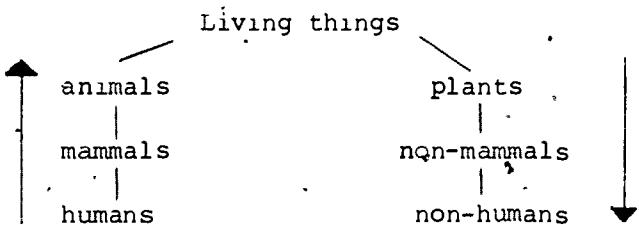
This category was not further elaborated. It was not used when one question in/an activity reflected formal requirements. In distinguishing the concrete from formal dichotomy the convention was to code the predominant operation required, rather than the highest mode required in the activity.

Coding Categories Within Concrete Operations

The Roman numeral designations provided in this section follow the conventions used in Flavell (1963) and Inhelder and Piaget (1958) for convenience in referring to those sources for further specifications of each type of thinking. The coder selected the single most appropriate category, a subcategory within concrete operations, when the decision was made that the activity required concrete operational thought as its predominant knowledge acquisition mode.

Primary addition of classes--I (class inclusion, class hierarcy)

"Class" refers to concrete, █al, physical entities. The student was required to make subclasses, make a superordinate █ss, or make a set of superordinate classes. For example, the student was required to take a superordinate class and make two or more subordinate classes, as shown below.

```
                    Living things
          animals                    plants
             |                          |
          mammals                  non-mammals
             |                          |
          humans                    non-humans
```

Secondary addition of classes--II (reclassification)

The student was required to reclassify classes. For example, a class group of teachers (one class group) and students (one class group) were to be reclassified as male (one class group) and female (one class group). This knowledge type was not coded. It will be included in the "not codeable" category.

Multiplication of classes--III-IV (or bi-univocal multiplication of classes)

Classes, as before, refers to concrete, real physical entities. Students may have been asked to relate one class to another (one-to-one) or many classes to one class, or vice versa (one-to-many). All of these cognitive tasks were coded in this category.

Intersection of Classes--A

The logic required is to generate the intersection of two or more variables (classes), creating a new entity (class) at the

intersection. The initial entities lose their identity as the new class is developed. For example, students would be asked to determine whether the size of a weight or the length of string on the weight controlled the rate of swing (period) of a pendulum. Students were provided a 3X3 table for the number of swings that occur when each element of one set (size of weight) intersected with each element of a second set (string length). Notice that the entries within the table (frequencies) are different from the entries that define the intersecting classes. Also notice that the entries within the table define a single entity whereas the entries within a correspondence table (see "Correspondence," below) essentially involve two, or more, entities.

String Length	Number of Swings in 30 Seconds		
	Small Weight	Medium Weight	Heavy Weight
6 in.			
12 in.			
18 in.			

In intersection, the elements that define the classes that are intersected define a "new entity." For example, in completing the matrix, "types of people," the intersection of three eye-color classes with four hair-color classes required the student to generate new classes--types of people. Intersection of classes was one of the alternative values used to code the characteristic, types of knowledge.

Hair Color	Eye Color		
	Brown	Blue	Hazel
Brown			
Black			
Blond			
Red			

Types of people

Correspondence of classes--B

Correspondence of classes asks students to set in correspondence each element from one class (say, five boys with names, Al, Bob, Dan, Chuck, and John), with each element from another class (say five girls

with names, Louise, Marsha, Sally, Nancy, and Tina). Notice that
when each element of one class is set in correspondence with each
element of another class, a complete matrix is produced. Also,
notice that the elements that make up the body of the matrix still
retain their original identities, i.e., there are two elements that
"make up" each cell of the body of the matrix. Similar logic is
required for developing the incomplete matrix. However, the results
are different because one element of a class is set in correspondence
with one element of a second class. For example, if students were
asked to set a picture of a middle-class American family in corres-
pondence with a white frame middle-class American family house (from
a set of house pictures and a set of people pictures), no other cor-
respondence of the middle-class American family with any other house
would be correct. Notice that the form of the result is similar to
the table for the pendulum problem. The logic is identical, but the
entries in the table are different--there is one and only one correct
entry for each class. Thus, the result of this type of correspondence
is a single line of correspondences in contrast to a complete matrix
as described in the boy-girl example.

Pictures of Houses

		A	B	C	D	E	F	G	H	K
	1									
	2									
Pictures	3									
	4									
of	5									
	6									
People	7									
	8									
	9									

Seriation--V (ordering, sequencing, addition of asynometrical
relations).

This group of logical operations requires students to order
concrete objects or events. Such ordering may be from largest to
smallest (descending), youngest to oldest (ascending), most expensive
to least expensive, and similar sequencing or ordering of classes.

Addition of Symmetrical Relations--VI

Sibling relations are the best example of this type of knowledge.
This category was not coded. Examples fall in "not codeable" category.

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Multiplication of Relations--VII-VIII (intersection of relations; correspondence of relations from one series with relations of another series; one-to-one or biunivocal multiplication of relations, and many-to-one multiplication of relations).

Intersection of Relations--A

Intersection of relations is analogous to intersection of classes. The student is required to generate the intersection of two or more series, creating a new series jointly defined by the original series. In intersection the relations that define the two series that are intersected define a "new entity." The position of each element in each series must be unique to correctly define the relations among the elements. It follows from this requirement that the entries in a table displaying a solution to an intersection of relations problem are defined by their joint position when both series are simultaneously taken into consideration.

Correspondence of Relations--B

Solving a problem requiring the operation, correspondence of relations requires the student to set in correspondence one element from one series with one, and only one, element from another series. For example, a student is asked to set in correspondence one of the elements from a series of boys of different heights with one of the elements of a series of fishing poles of different heights (i.e., the second shortest boy should coincide with the second shortest pole and the third shortest boy should coincide with the third shortest pole). In this example the correspondence established is between two increasing series (i.e., as the boys get taller, the poles they are using get taller).

There may be two decreasing series or a problem in which one series is increasing and the other decreasing. Correspondence of relations involves any of a set of problems in which the relations among the elements in a series are fixed and in which there is only one element in one series that can correctly be put in correspondence with only one element in a second series. Note that the result of this type of correspondence is a single line of correspondences in contrast to a complete matrix.

Summary for Coding Types of Knowledge

Activities requiring concrete operational thought were coded for one, and only one, of the six categories (I, III-IV A, III-IV B, V, VII-VIII A, VII-VIII B) of concrete operational thought described above. If the activity did not require concrete thought it was coded as "figurative knowledge," "formal operations," or not codeable.

The values and value labels for the type of knowledge character-
istic for which activities were coded were:

Value Label	.Value
Figurative knowledge concrete operations	1
Addition of Classes--I	2
Multiplication of Classes--III-IV	
Intersection--A	3
Correspondence--B	4
Seriation--V	5
Multiplication of Relations--VII-VIII	
Intersection--A	6
Correspondence--B	7
Formal Operations	8
Not codeable into the above categories	9

Content of the Activity

Activities were categorized as to the discipline sources of
their content. First, the major content focus was coded. Then a
second and third code were given to completely describe the activity
content.. Three content codes were assigned to each activity.

Coding proceeded in the following manner. The major content
descriptor was coded first. If there was no other content source in
the activity, the descriptor code was repeated twice. If there were
two content descriptors for an activity, the major content source
was coded once; the second content source, twice. If there were
three or more content sources, the three that best described the con-
tent of the activity were selected. The major content descriptor
was coded first. There was no attempt to try to hierarchically code
the remaining two content codes. The lowest numbered content source
was coded second; the highest, third. Note that every activity was
assigned three content code numbers. The following content sources
describe most activities in the Human Sciences program.

Life Sciences

The content or process(es) used was (were) derived from or
directly related to one of the subdisciplines of the biological,
medical, or health sciences.

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Physical Sciences

The content or process(es) used was (were) derived from or directly related to one of the subdisciplines of physics, chemistry, engineering, or materials sciences.

Earth Sciences

The content or process(es) used was (were) derived from or directly related to one of the subdisciplines of geology, oceanography, astronomy, paleontology, or meteorology.

Behavioral Sciences

The content or process(es) used was (were) derived from or directly related to one of the sciences that deals with human action and developing of generalizations of human behavior in society, i.e., psychology, sociology, anthropology, archeology.

Social Sciences

The content or process(es) used was (were) derived from or directly related to one of the sciences that deals with the institutions and functioning of human society and with the interpersonal relationship of individuals as members of society, i.e., economics, political science.

Humanities

The content or process(es) used was (were) derived from or was (were) directly related to history, languages, literature, or philosophy.

Fine Arts

The content or process(es) used was (were) derived from or was (were) directly related to subjects for which aesthetic purposes are primary or uppermost, such as painting, sculpture, drawing, architecture, music, ceramics, dance, drama, or landscape architecture.

Mathematics

The content or process(es) used was (were) mathematical.

Other

The content or process(es) used does (do) not fall into one of the above categories.

Summary for Coding Activity Content

An interdisciplinary curriculum such as Human Sciences required multiple descriptors for the sources of the content for activities.

Therefore, each activity was given three content codes. The first code was the major content source. Two additional non-hierarchical categories were provided to complete the description. The value labels and values of these activity characteristics are:

Value Labels	Values
Biology	1
Physical Sciences	2
Earth Sciences	3
Behavioral Sciences	4
Social Sciences	5
Humanities	6
Fine Arts	7
Mathematics	8
Not codeable into the above categories	9

What Students Do in Activities

This category was used to code the central "doing" that students engaged in as they studied the activity. An activity could have more than one "doing." Three two-digit codes were used to describe what students did. Each "doing" was to be critical to the achievement of the activity goals.

In some activities there were several of these "doings." For example, in "Strange Fossil" (KNOWING), constructing was the most necessary "doing." It was one thing the student must have done to get the "gist" of the activity. Note that this coding was not done for outcomes, but for what the student did. Creating would be a second descriptor, as the student was to create a restoration from which deductions were to be made. Without the creation, the intellectual purpose of the activity was lost. Note that the focus of the activity can be captured by these two descriptors. There was reading in the activity about fossils, but reading was limited. All of the "doing" characteristics of each activity may not be coded, only one, two, or three--the most important "doings."

Some categories are self-evident and, therefore, have limited definitions. Deciding a primary or secondary "doing" would be difficult and probably arbitrary. Therefore, the three codes for each activity were assigned without weight or precedence. In coding, the convention adopted was that the lower number was always coded first, the next higher number, second; and the highest number, third. In this way activities with the same "doings" have the same code sequence. If an activity had only one "doing" it was triple coded for that characteristic. If only two "doings" were assigned, the second "doing" was repeated, but is not to be evaluated as a weighting.

Fourteen "doings" were required to characterize this facet of Human Sciences activities.

Appreciating

A non-cognitive act of positive awareness or positive recognition of some object or event.

Calculating/Computing/Graphing

A single category in which one or more of these operations was central to the conduct of the activity.

Constructing.

The student must have built, put together, or in some other way constructed something in order to carry out the intent of the activity.

Creating

The preparation of something novel, when the student was asked to produce a novel product and not given criteria for judging whether the product was the "right" product.

Deciding

Included decision-making, coming to a choice among alternatives for a course of action, or arriving at a consensus by a group. A decision usually implied action or potential action.

Experimenting

The student gathered data systematically under specified conditions. Variables or controls need not have been specified. This category differs from Information Gathering (below) in being systematic and controlled.

Interviewing

Conducting one or more interviews was an essential part of the activity.

Listening/Watching

When the student used a sound/slide, sound/filmstrip, or sound/film product.

Nurturing

When students were caring for plants and/or animals over a period of days or weeks, or where keeping organisms alive was an essential component of successfully meeting the activity focus.

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Reading

When a booklet or book integral to the activity must have been read by the student to do the activity successfully. Activities with long internal narrative, such as "Time Travel Into The Paleozoic," (KNOWING) would be coded once for reading.

Listening

When the activity depended on the student listening to a tape recording, record, stethoscope, or other sound device.

Valuing

Included the decision that A was of more worth or importance than B. It was comparative and more than two alternatives might have been compared. The outcome of the comparison resulted in a higher value for one of the alternatives.

Watching/Viewing

Included the use of silent film, film loops, flat pictures, overhead transparencies, slides, filmstrips with no sound, wall charts, or posters.

Information Gathering

Measuring, counting, taking photos, making prints of objects, diagramming, sketching, describing, and recording observations in natural settings are examples of information gathering. Information gathering differs from experimenting in that data gathering took place in naturalistic environments with no attempt to randomize, to sample, or to control variables.

Summary of Codes for "Doings"

In summary, each activity was coded for one, two, or three "doings." These codings were not hierarchical, but were arranged in a series of three, two-digit numerals, with the lowest numeral left-justified, followed by the next higher numeric codes. By adopting this convention, activities with the same "doings" have identical codes. The value and value labels for this activity characteristic are:

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Value Labels	Values
Appreciating	11
Calculating	12
Constructing	13
Creating	14
Deciding	15
Experimenting	16
Listening/Watching	18
Nurturing	19
Reading	20
Listening	21
Valuing	22
Watching/Viewing	23
Information Gathering	24
Not codeable into the above categories	25

Reviews of Human Sciences Activities

Introduction

Public and content reviews of selected activities from the exper-
imental modules of the Human Sciences program were conducted in April,
1977.

Public reviewers were selected upon recommendation of national
citizens and educational organizations and from principals in Human
Sciences field test schools. All public reviewers had a child in
middle school or junior high school. Eighteen public reviewers were
brought to the BSCS headquarters to review activities. Nine of the
18 had no knowledge of Human Sciences prior to their arrival. Nine
others were parents of students who had participated in the field
testing of the Human Sciences Program.

Content reviewers were selected on the basis of specializing in
any one of the content areas of the Human Sciences activities. Review-
ers were selected from colleges and universities throughout the United
States. Reviewers had not been involved as writers on the project,
although some knew of the project through their colleagues. Content
reviewers were brought to the BSCS for the review process, also.
Complete details of both reviews are documented in Ross (1977a and
1977b), unpublished evaluation papers of the Human Sciences Project.

Content reviewers were selected by academic specialty to review
selected experimental activities. Criteria for selecting the activi-
ties were:

- a potential or actual controversial subject was included in the
  activity,

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- content needed to be reviewed for accuracy because of extensive revision or criticism by previous informal review.

Activities were given priorities on these criteria and assigned to the appropriate content reviewer. The highest priority activities were reviewed first and others were reviewed later if time permitted. All high priority activities were reviewed at one of two content review conferences.

The review plan provided that every activity be reviewed by at least one content reviewer whose specialty was central to the activity, with a second reviewer with similar preparation where feasible. Additional reviewers were needed for some activities because of their interdisciplinary character. As the content review conference progressed, some activities generated additional interest and received additional reviews.

The Reviewer Coding System

Each content reviewer was assigned a code number and specialty code (see Appendix A) that identified all reviews completed by that individual. Names of the reviewer are also provided in Appendix A, but are not keyed to the file codes.

Public reviewers were also assigned code numbers and were assigned an additional code identifying whether or not one of their children participated in test classes of Human Sciences (see Appendix A).

All reviewers were provided with the student activity cards, work sheets, evaluation materials, equipment, media, and supplies required for successful completion of the activity by the student. Reviewers were invited to write comments directly on the materials where appropriate. Additionally, each content reviewer was asked to complete an evaluation form with two multiple-choice questions and two open-ended essay questions (see Appendix B). Data from the two multiple-choice problems are included in the data file. No other data were coded.

Public reviewers were also asked to complete an evaluation form for each activity they reviewed. This form had four Likert-type items plus space for comment (see Appendix C). Only responses to the Likert items were coded.

Data for a maximum of five content reviews and four public reviews were coded and are in the data file. The term "first" for content and public reviewer designates the first space allocated in the file for content or public reviewer data. Six variables (CONMEAN1, CONMEAN2, PUBMEAN1, PUBMEAN2, PUBMEAN3, and PUBMEAN4) were computed for each activity using the COMPUTE and COUNT facilities of SPSS. The procedure used was to add the rating value from each content or public reviewer for a particular item on the Activity Evaluation Form, count the number of ratings, and divide the sum by the count to produce the new variable, a mean score for all ratings for each

item for each activity. The distribution of mean scores was printed
in the Codebook using the FREQUENCIES subprogram of SPSS.

Module and activity identifiers are provided to define the
activity case in the data file. Values for the module codes are pro-
vided in the codebook, but the activity codes are not printed as there
is only one value for each module plus activity identifier. The
activity codes, by module, are presented below.

ACTIVITY CODING FORMAT, LEVEL 1

Code Activity Title   Code Activity Title

BEHAVIOR (Code 01)

Code	Activity Title	Code	Activity Title
01	Grotty	15	All Thumbs
02	What's Going On Here?	16	How Did They Get That Way?
03	Help, I'm Coming Unplugged!	17	Slow Down
04	Shut Your Ears and Open Your Eyes	18	Friends
		19	The Game
05	Where Did You Get That Idea?	20	Paste-A-Person
		21	Is Anything Wrong With That?
06	Mind Your Posture		
07	Animal Crackles	22	The Twins
08	Where Do They Live?	23	Boy or Girl?
09	Interface	24	Jabberock
10	Pandemonium	25	Winning and Losing
11	Brain Jam	26	Unfriendly Actions-- Friendly Feelings
12	The Settlers		
13	Time Line	27	What's the Problem?
14	Rhythms and Patterns	28	What Would You Have Done

SURVIVAL (Code 02)

Code	Activity Title	Code	Activity Title
01	The Mysterious Yuk	15	The Incredible Ant
02	Mice Meals	16	What's For Sale?
03	What Do Mice Eat?	17	My Family Space
04	Food Chain	18	The Mini-Community
05	Let's Make a Mobile	19	Adventures at Home
06	Is Taste the Test?	20	Animal Shelters
07	Food for Thought	21	Job Cards--Shelter
08	What's in it for You?	22	It's Off to Work I Go!
09	If You Want It, Can You Get It?	23	Keep on Truckin'
		24	Future Job
10	Did I Eat All That?	25	What's It Worth?
11	The American Way of Eating	26	Judging Jobs
12	Job Cards--Food	27	Job Ladder
13	The Mouse Takes a House	28	Job Cards--Work
14	The Gerbil's House		

SENSE...OR NONSENSE (Code 03)

Code	Activity Title	Code	Activity Title
01	Extending Our Senses	10	What Do You See?
02	Attention!	11	Do You See What You Feel?
03	Sight and Sound	12	What Are They Doing?
04	What If You Couldn't See?	13	The Perception Chain
05	The Silent World	14	You Are A Witness
06	What Is It Like?	15	DO You See What I See?
07	Seeing Myself	16	The Time Capsule
08	The Wall of Light	17	The Seeing Room
09	Animal Worlds	18	Near and Far

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LEARNING (Code 04)

GROWING (Code 05)

ACTIVITY CODING FORMAT, LEVEL II

RULES (Code 06)

WHERE DO I FIT? (Code '07)

PERCEPTION (Code 08)

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REPRODUCTION (Code 09)

ACTIVITY CODING FORMAT, LEVEL III

CHANGE (Code 1Q)

01	Quiet: Plants Working	27	Positive Mail
02	Bean Rhythms	28	Technoland
03	GA and the Beanstalk	29	Do Not Spit at Random
04	Tree Rings and Time	30	Controlling Community
05	The More the Better?		Change
06	You, the Animal Trainer	31	Growing Up Politically
07	Cool It!	32	Adopt-A-Stock
08	Goldfish and Drugs	33	Acculturation
09	Earth Movers	34	Architectural Change
10	Who Survives?	35	Milk Bar
11	Change and Change Again	36	Watch the Crystals Grow
12	Of Time and Temperature	37	Ice-Water-Ice
13	Yeast It!	38	Disappearing Water
14	Microbes in Milk	39	Wind Power/Person Power
15	Changing the Recipe	40	Calories, Calories
16	Working with Fruit Flies	41	Sweet Concrete
17	Making and Using Graphs	42	Acids, Bases, and
18	Seeing Small Things		Indicators
19	Input/Output	43	Cookie Chemistry
20	Biofeedback	44	Metal Overcoats
21	Nostalgia Box	45	Rock Around
22	The Phantom Tollbooth	46	Streaming Along
23	Me Now, Me Then, Me When	47	Solar Energy
24	Divorce	48	Rubber Band Cannon
25	Death	49	Changing Numbers
26	Changing Behavior		

FEELING FIT (Code 11)

01	Personal Health Inventory	17	Why Do People Have Skin
02	Is Your Family Tree		Problems?
	Healthy?	18	Where's Your Plaque?
03	Blood Pressure	19	Will Your Career Affect
04	Blood Tests and		Your Ear?
	Examinations	20	How Do Glasses Correct For
05	Rhythms of a Healthy Heart		Farsightedness and Near-
06	What Is Wrong With This		sightedness?
	Blood?	21	The Immunology Game
07	Breaking Unhealthy Habits	22	Aloneness can be Positive
08	Can You Achieve a Natural	23	Expressions of Loneliness
	High?	24	Send a Person to Coventry
09	How Fast Can You React?	25	My Life: Who Decides?
10	Coffee and Me	26	Drugs: What Do You Think?
11	Smoking and You	27	Stress: How Do You Cope?
12	Working Lungs	28	Cigarette Advertising
13	Muscle Building	29	Your School Cafeteria:
14	Muscle Relaxation		A Case Study
15	Looking Into the Stomach	30	Fooling the Senses With
16	Sensible Reducing and		Food Substitutes
	Weight Control	31	Hairy Investigations

32	Pets and People	36	Folk Medicine: Then and Now
33	Venereal Disease	37	Geography of Life and Death
34	The Sirius Stain		
35	Trapping the Wild Microbe	38	Life or Death?

INVENTION (Code 12)

Invention activities are coded by activity parts rather than by activity.

01	Paper I	44	The Automobile I
02	Paper II	45	The Automobile II
03	Paper III	46	The Automobile III
04	Paper IV	47	Airplanes I
05	Paper V	48	Airplanes II A
06	Paper VI A	49	Airplanes B
07	Paper B	50	Airplanes III A
08	Printing I A	51	Airplanes B
09	Printing B	52	Airplanes C
10	Printing C	53	Airplanes D
11	Printing II A	54	Airplanes E
12	Printing B	55	Airplanes F
13	Printing C	56	Space Travel I
14	Printing D	57	Space Travel II A
15	Printing III	58	Space Travel B
16	Printing IV	59	Space Travel C
17	Money-Money-Money I A	60	Space Travel D
18	Money-Money-Money B	61	Weaving I
19	Money-Money-Money II A	62	Weaving II
20	Money-Money-Money	63	Weaving III
21	The Camera I	64	Weaving IV
22	The Camera II	65	Scrub-A-Dub-Dub I
23	The Camera III	66	Scrub-A-Dub-Dub II A
24	The Camera IV	67	Scrub-A-Dub-Dub B
25	The Telephone I A	68	Scrub-A-Dub-Dub C
26	The Telephone II	69	Scrub-A-Dub-Dub D
27	The Telephone B	70	Scrub-A-Dub-Dub III
28	The Telephone C	71	Scrub-A-Dub-Dub IV
29	The Telephone III	72	Shoes I
30	The Telephone IV	73	Shoes II A
31	Technology and Music I A	74	Shoes B
32	Technology and Music B	75	Shoes C
33	Technology and Music II A	76	Marking Time I
34	Technology and Music B	77	Marking Time II
35	Technology and Music C	78	Marking Time III
36	Technology and Music III	79	Marking Time IV
37	Technology and Music IV	80	Marking Time V
38	The Bicycle I	81	The Power of Humans, Horses, and Other Machines I
39	The Bicycle II		
40	The Bicycle III		
41	The Bicycle IV	82	The Power of Humans, Horses, and Other Machines II
42	The Bicycle V		
43	The Bicycle VI		

SURROUNDINGS, (Code 13)

08	Going to the Dogs	14	Tools of Nature
09	Here, Kitty, Kitty	15	Green Scenes
10	They Prowl by Night	16	Wet Pets
11	Can You Dig It?	17	Watch the Birdie
12	To Blend or Not to Blend?	18	Moon Watch
13	The Beasts in the Meadow		

KNOWING (Code 14)

01	The Strange Fossil	23	How Old Are They?
02	Time Travel into the Paleozoic	24	The Unknown Millions
03	Counting With Carbon	25	Vital Statistics
04	Rosetta II	26	The Very Different Ones
05	Where Did We Come From	27	Surveys, Samples, and Schools
06	Patterns in Your Past		
07	Pueblo People in the Past	28	Size Wise
08	The Solar Merry-Go-Round	29	Knowing Yourself
09	Sun Watch	30	A Martian Test
10	The Star Gazers	31	Martian Tales
11	What Do the Stars Know?	32	Four Views of Mars
12	Human Ideas About Disease	33	Moving Words
13	Farther and Faster	34	Dancing Motion
14	Hot Spit	35	Vibes
15	Levers of the Body	36	Rolling Along
16	Knowing About the Brain	37	Heavenly Motion
17	A Way of Seeing Inside the Human Body	38	Magic Motion
		39	The Rainmakers
18	Building With Bricks	40	Weather Music
19	Foiled Again	41	The Weather According to Granny Oakes
20	Materials in Space		
21	Building Materials: How Good Are They?	42	Do Dew Drops Drop?
		43	The Storm
22	Images of Brush and Pen	44	Ways of Knowing (Sound filmstrip, all-class)

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Two coders who had been members of the Human Sciences project coded the activities. Preliminary codings were completed and deliberated, with consequent revision of the descriptions of the coding categories and criteria. Three revisions of the descriptions of the original descriptions were made to produce the final coding criteria. The modules were divided by general content emphasis, with the behavioral science coder coding the modules with more behavioral science activities and the natural science coder coding the activities in modules with more natural science activities.

Intra-rater reliability was determined by having each coder recode a random sample of 10 percent of the activities they previously coded, after a delay of four weeks from the original coding.

Inter-rater reliability was determined by having each coder code the 10 percent sample of activities recoded by the other coder. This cross-coding was done six weeks after the recoding.

The Spearman rank correlation coefficient Siegel (1956) was used to calculate these reliabilities.

Intra-rater reliabilities ranged from 0.87 to 1.00 (Table 1).

TABLE 1
Intra-rater Reliabilities of Activity Codes
by Codes and Coding Categories

CATEGORY	CODER 1		CODER 2	
	N	rs	N	rs
Major Focus	23	.98	37	.98
Knowledge Type	23	1.00	37	.95
Discipline Sources	23	.97	37	.87
WHAT STUDENTS DO				
1st Match	23	1.00	37	1.00
2nd Match	23	1.00	37	.94
3rd Match	23	.89	37	.88

Three codes were issued for the category "What Students Do" in the activity. For both intra- and inter-rater reliabilities, the three codes assigned to the activity were examined for correspondence. If there were no matching codes, the lowest numbers were selected as a pair, followed by the next lowest. If one or more pairs matched, the lowest numerical pair were placed in the "1st match" group, the second in the "2nd match" group, etc. Matched pairs precluded non-matched pairs in being assigned to 1st, 2nd, or 3rd matched pairs.

Inter-rater reliabilities ranged from 0.42 to 1.00 (Table 2).

TABLE 2
Inter-rater Reliabilities of
Activity Codes by Categories

CATEGORY	rs
Major Focus	.95
Knowledge Type	.94
Discipline Sources	.96
WHAT STUDENTS DO	
1st Match	1.00
2nd Match	.86
3rd Match	.42

The low reliability for the 3rd match in the category "What Students Do" indicates the weakness of this sub-category. Many activities had more than three "doings," the coding of which of two or more "doings" were most important to coder was apparently arbitrary. Nonetheless, both inter- and intra-rater reliabilities are very satisfactory for having confidence in the activity characteristics codes.

File Processing Summary

The HS Activity Characteristics File was developed from optical-scan sheets. Secretarial personnel prepared sheets with identifying numbers, plus the name of the module and activity. A template was used by coders to assure that coding errors would be minimal. Optical scan sheets were ordered numerically by module and activity in order to detect identifying code errors. Errors caught by scanning were corrected by key punching new codes.

The data file was created and stored as an SPSS system file. SPSS program Frequency was used to check on the accuracy of coded values, as well as to provide output for the data dictionary.

There were several activities listed by title and/or number that could not be coded. In Level I, MODNO 02, Survival, Job Cards-Food (ACTNO 12), Job Cards-Work (ACTNO 21), and Job Cards-Shelter (ACTNO 28) could not be coded because each activity had from eight to ten options, each with unique characteristics. Data collected did not include records of which card(s) students used within each of these activities.

In Level II, MODNO 06, "Where Do I Fit?" ACTNO 24, "Baboons," and ACTNO 28, "Follow The Leader," were film loops that were proposed but not produced for field testing. In MODNO 08, Reproduction, three integrative (all class) activities were not coded although they were available in the field test classes. No data were gathered for these activities.

This User's Guide was prepared by using the AM Jacquard J500 word processor as a data input and editing device and then using it inter-actively with the University of Colorado Cyber 720 computer. Data and copy were exchanged between these two units to prepare the final files for this project.

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Appendix A
Coding Protocols for Content and Public Reviewer Data

The following protocols were used to code data from the Activity Evaluation Forms (Appendices B and C) onto optical scan sheets for conversion to card images. Listings and SPSS "FREQUENCIES" were used to provide data for verifying the accuracy of the coded data.

HUMAN SCIENCES ACTIVITY CHARACTERISTICS AND REVIEWER EVALUATION FILE

Card Column	Variable Name	Content	Value No.	Label
1-2	MODNO	Module Title	01	BEHAVIOR
			02	SURVIVAL
			03	SENSE...OR NONSENSE?
			04	LEARNING
			05	GROWING
			06	RULES
			07	WHERE DO I FIT?
			08	PERCEPTION
			09	REPRODUCTION
			10	CHANGE
			11	FEELING FIT
			12	INVENTION
			13	SURROUNDINGS
			14	KNOWING
3-4	ACTNO	Activity Title		Comment: Activity numbers begin and end within each module. See below for titles and codes. Therefore, the four digit field of module and activity code is required to provide a unique identifier for each activity. The INVENTION module is an exception. The activities in this module required three digits. The activity code was expanded to Cols. 3, 4, and 5. Therefore, TSTYR is a one digit field in Col. 6 in INVENTION only.
5-6	TSTYR	Field Test Year	73	1973-74*
			74	1974-75
			7(5)	1975-76
			77	Spring, 1977
			x	*See "Comment"

7	GRADE	Grade Level of Field Test	6	Sixth Grade
			7	Seventh Grade
			8	Eighth Grade
8	CODER	Activity Coder	1	McConnell
			2	Ross
9	TASK	Activity Coder Task	1	Code the Activity
			2	Cross Code (code activity for inter-rater reliability)
10	(no data)			
11-12	CONRV1	Name of first	01-26	Each value identifies a particular academic content reviewer. Names of reviewers are provided below.
13-14	SPCLT1	Academic specialty of first reviewer	10	Biology
			11	Physical Sciences
			12	Zoology
			21	Anthropology
			22	Psychology
			23	Sociology
			31	Education
			32	Engineering
			33	Forestry
			34	Health Sciences
			35	Medicine
			36	Policy Studies
15	SCICON1	Response to Item 1		(See Appendix B for complete item)
				Notes
16	DIRCTN1	Response to Item 2		(See Appendix B for complete item)
17-18	CONRV2			
19-20	SPCLT2			
21	SCICON2			
22	DIRCTN3			These variables are repeats of CONRV1, SPCLT1, SCICON1, and DIRCTN1 for other academic specialists reviewing the activity.
23-24	CONRV3			
25-26	SPCLT3			
27	CONRV3			
28	DIRCTN3			
29-30	CONRV4			
31-32	SPCLT4			Codes 31-45. Each value identifies a particular public reviewer. Names of reviewers are provided below.
33	CONRV4			
34	DIRCTN4			
35-36	CONRV5			
37-38	SPCLT5			The Likert-type items were scored:
39	CONRV5			
40	DIRCTN5			

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.41-42	PUBRV1	Name of first Public Reviewer	SA=1	D=4
43	HSEXP1	Parent of Human Sciences test group child	A =2	SD=5
			N =3	Blank=6

If multiple-responses were given, the more critical response was recorded.

44	RV1ITM1	Response of the same reviewer to Item 1.
45	RV1ITM2	Response of the same reviewer to Item 2.
46	RV1ITM3	Response of the same reviewer to Item 3.
47	RV1ITM4	Response of the same reviewer to Item 4.

48-49	PUBRV2
50	HSEXP2
51	RV2ITM1
52	RV2ITM2
53	RV2ITM3
54	RV2ITM4
55-56	PUBRV3
57	HSEXP3
58	RV3ITM1
59	RV3ITM2
60	RV3ITM3
61	RV3ITM4
62-63	PUBRV4
64	HSEXP4
65	RV4ITM1
66	RV4ITM2
67	RV4ITM3
68	RV4ITM4

These variables are repeats of PUBRV1, HSEXP1, RV1ITM1 to RV1ITM4, for the additional resources of the activity.

Computed Variables

The variables list below was computed to complete the data tape and codebook for this activity characteristics file. The six variable are mean scores, calculated using the SPSS Compute and Count facilities.

Name

CONMEAN1	Mean, Content Review Activity Evaluation Form, Item 1	The SPSS COMPUTE facility does not print decimals; there-
CONMEAN2	Mean, Content Review Activity Evaluation Form, Item 2	fore, mean scores on these six variables were multiplied by ten. This provides one signi- ficant figure beyond the deci- mals. For CONMEAN1, interpret
PUBMEAN1 to PUBMEAN4	Means, Public Review Activity Evaluation Form, Items 1 to 4	CODE 10 as mean score 1.0, with 427 (67.7 percent) of the acti- vities rated at 1.0.

Appendix B:
<u>Activity Evaluation Form, Content Reviewers</u>

Activity # _____

Activity Title _____

Reviewer _____

Please circle the letter of the statement that best reflects your reactions to the activity.

1. The science content in the activity   (SCICON1)

    1. is too limited to make comments about.
    2. is accurate as written.
    3. needed minor revisions that I have made on the activity card.
    4. needs some staff work to complete the revisions I have suggested.
    5. needs extensive work to be useful.

    Comments:

2. The directions and procedures for the student   (DIRCTN2)

    1. have no technical material so I did not comment on them.
    2. are accurate as written.
    3. needed minor revisions that I have made on the activity card.
    4. needs some staff work to complete the revisions I have suggested.
    5. needs extensive work to be useful.

    Comments:

3. The activity as a whole could be improved by:

4. Please use the back of this form for specific comments you would like to write about this activity.

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Appendix C:
Activity Evaluation Form, Public Reviewers

Activity # _____

Activity Title _____

Reviewer _____

Please rate each statement for the activity you have reviewed.

Circle: SA if you strongly agree with the statement
          A if you agree with the statement
          N if you are undecided or neutral about the statement
          D if you disagree with the statement
         SD if you strongly disagree with the statement

                                                          Circle One

1. Young people I have known (6th or 7th or
   8th graders) would find this activity
   interesting.   SA   A   N   D   SD

   Comments:

2. This will be a worthwhile activity for
   students who choose to do it.   SA   A   N   D   SD

   Comments:

3. Most parents in my community would approve
   this activity.   SA   A   N   D   SD

   Comments:

4. This activity should be included in Human
   Sciences.   SA   A , N   D   SD

   Comments:

Write additional comments on the back.

Appendix D:
Data File and Codebook Shipment

The Human Sciences Activity Characteristics and Reviewer Evaluation date are distributed in three files: the machine-readable user's guide, the codebook, and the data.

The user's guide and the codebook are available on magnetic tape, as print documents, and in microfiche form. The data, stored on an SPSS Systems File, are available on magnetic tape. Output will be written from the runs, one for card images and a second for SPSS labels. Users with CDC hardware may order an SPSS systems file if desired.

A request form for ordering tape appears on the next page. The data tape will be produced by a Control Data Corporation (CDC) computer. Labels produced by CDC equipment cannot be used by other computers. To avoid problems in reading the tape, an unlabeled tape is recommended. SPSS labels will be output in a form readable by any computing system with SPSS software. Both data and labels will be output from SPSS version 8.0. Unless otherwise specified, data will be written XF3.0 format, where X is the number of variables in the file.

Tape files are listed below. Use these titles on the Tape Order Form;

Human Sciences Activity Characteristics and Revision Evaluation File, HSACRE.

Codebook for Human Sciences Activity Characteristics and Reviewer Evaluation File, HSACRE.

Human Sciences Activity Characteristics and Reviewer Evaluation File, HSACRE, User's Guide to the Machine-Readable Data File.

Requests for the user's guide and codebook should specify whether print copy or microfiche form is desired. Use the Nontape Order Form for print or microfiche materials. Cost estimates will be sent prior to preparation and delivery. The publication, Human Sciences Evaluation Materials, discussed in the first section of this User's Guide, may be ordered on the Nontape Order Form. Cost estimates will be sent prior to preparation and delivery.

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TAPE ORDER FORM

Name: _____

Address: _____

_____

_____

Title(s) of tape(s) requested: _____

_____

Tape Recording Specifications

Seven-track Tape

Density (BPI)	200	556	800
Parity	Even	Odd	
Record blocking	Blocked	Unblocked	
Maximum block size			
Record length	80 columns	Other _____	
CDC standard labels	Labeled	Not labeled	
1-6 character label			
Character code	ASCII	EBCDIC	Other _____

Nine-track Tape

Density (BPI)	800	1600	6250
Parity	Odd		
Record blocking	Blocked	Unblocked	
Maximum block size			
Record length	80 columns	Other _____	
CDC standard labels	Labeled	Not labeled	
1-6 character label			
Character code	ASCII	EBCDIC	Other _____

Send to: Center for Educational Research and Evaluation
          833 W. South Boulder Road
          Louisville, CO 80027

NONTAPE ORDER FORM

Name: _____

Address: _____

_____

_____

Materials Requested

No. of Copies	Title	Form
_____	Human Sciences Activities Characteristics and Reviewer Evaluation File, HSACRE, User's Guide to the Machine-Readable Data File	___Print ___Microfiche
_____	Codebook for Human Sciences Activity Characteristics and Reviewer Evaluation, HSACRE	___Print ___Microfiche
_____	Human Sciences Evaluation Materials	___Microfiche Only

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