



Gold Seal Lesson

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Grade Span			ICLE Application Model			
K-4	5-8 X	9-12 X	A	B	C	D

Instructional Focus:

Writing

Students write for a variety of purposes and audiences with sophistication and complexity appropriate to the grade level.

Algebraic Concepts and Relationships

Students use algebraic methods to investigate, model, and interpret patterns and functions involving numbers, shapes, data, and graphs in a problem-solving situation. Students evaluate and communicate the reasoning used in solving these problems.

Basic Concepts and Knowledge

Students develop an understanding of scientific concepts using facts, theories, principles, and models.

Performance Task

THE TOLL OF MAJOR BRAIN AND NERVOUS SYSTEM DISORDERS Table 1.

DISEASE
TOTAL CASES
COSTS/YEAR

Chronic Pain
97,000,000
\$100 billion

Hearing Loss
28,000,000
\$56 billion

All Depressive Disorders
18,700,000
\$30.4 billion

Alzheimer's Disease
4,000,000
\$90 billion

Stroke
3,800,000
\$40 billion

Epilepsy
2,500,000
\$3.5 billion

Traumatic Head Injury
2,000,000
\$25 billion

Performance Task continued...

Schizophrenia
2,000,000
\$32.5 billion

Parkinson's Disease
500,000
\$5.6 billion

Multiple Sclerosis
300,000
\$2.5 billion

Traumatic Spinal Cord Injury
250,000
\$5 billion

*Estimates provided by the National Institute of Health and voluntary organizations, 1997

The table above contains some raw data. We will make some decisions about what can be done with this data to make it more meaningful. Below you will find a list of some potential challenges. This is by no means an exhaustive list and you should do your best to make additions to it.

What can I do with this data table?

- practice my scientific notation skills
- review and construct bar graphs
- practice my internet research skills by updating the numbers in the table to reflect the 2001 year
- design and publish a pamphlet containing pertinent information about one of the diseases in the table
- interview a person having one of the diseases and write a newspaper article
- based on the statistics seen in the previous data table, I can fill out a personal survey sheet and gather classroom and or school data using this table

I KNOW SOMEONE WHO SUFFERS FROM ONE OR MORE OF THE FOLLOWING DISEASES

DISEASE
NUMBER OF RELATIVES
NUMBER OF FRIENDS/ACQUAINTANCES

Chronic Pain

Hearing Loss

All Depressive Disorders

Alzheimer's Disease

Stroke

Epilepsy

Traumatic Head Injury

Schizophrenia

Parkinson's Disease

Multiple Sclerosis

Traumatic Spinal Cord Injury

- I can compare my new data to the original table

ICLE Essential Skills

Identify, collect and/or select pertinent information while reading. (ela 5)
Gather information from a variety of sources, including electronic sources, and summarize, analyze, and evaluate its use for a report. (ela 3)
Draft a report that engages an audience and is concise, clear, well-organized, accurate, and informative. (ela 12)
Understand and produce a variety of informative formats such as business letters, memos, reports, news articles, brochures, proposals and critiques. (ela 22)
Understand and use graphs, charts, and visuals to enhance informational writing and oral presentations. (ela 29)
Gather information such as data, facts, ideas, concepts, and generalizations from oral sources. (ela 68)
Apply personal or objective criteria for evaluating informational, persuasive and literary materials. (ela 35)
Understand the basic properties and laws of exponents and scientific notation . (m 24)
Understand the best procedures for statistical data collection, organization, and display including making estimates and predictions and drawing inferences. (m 5)
Understand nerve regulation - the nervous system and related disorders such as cerebral palsy, meningitis, and polio; and chemical regulation - the endocrine system, hormones and related disorders such as goiter and diabetes. (s 45)
Exhibit good data management skills by collecting, organizing, and graphing data. (s 19)
Understand the transport (absorption and circulation) of materials throughout the body and related disorders such as high blood pressure, leukemia, anemia, and coronary thrombosis. (s 39)

Scoring Guide:

Data and Graph Rubric

Attributes

Above Standard

At Standard

Attribute Still A Goal

Attribute Points Earned

5 - 4

3 - 0

Data Presentation

Data is clearly and accurately displayed in tabular form with units clearly communicated.

Data is unclearly or incompletely communicated.

/5

Graphs

Graphs are imported from a graphical program. Graphs are accurate (dependent variable on the y-axis, and independent variable on the x-axis). Graphs are titled and axes are labeled.

Graphs are accurate (dependent variable on the y-axis, and independent variable on the x-axis). Graphs are titled and axes are labeled.

Graphs are inaccurately communicated, incomplete or missing.

/5

Data and Graph

/10

Rubric for News Article Based on an Interview

Rating

Criteria

A

engaging, creative, and thoughtful
 precise, vivid, and sophisticated vocabulary; varied patterns and lengths of sentences
 coherent and organized structure
 chosen form effectively and innovatively conveys content
 relevant and intriguing use of details to convey personality and experience of person interviewed
 few surface feature errors; only noticeable if looking for them

B

clear and thoughtful
 complex, precise vocabulary and varied sentences
 logical organization
 chosen form effectively conveys content
 relevant and careful use of details to convey personality and experience of person interviewed
 few surface feature errors; occasional spelling or punctuation errors

C

quite well developed and detailed
 generally precise vocabulary and complex sentence structures containing minimal errors
 obvious organization
 chosen form appropriate for content
 relevant use of details to convey personality and experience of person interviewed
 generally few surface feature errors; some punctuation, spelling, or pronoun reference errors

D

direct and usually clear
 straightforward vocabulary and effective sentences that are rarely complex or varied
 organization evident
 chosen form generally appropriate for content
 competent use of details to convey personality and experience of person interviewed
 surface feature errors such as comma splice, spelling, or pronoun reference errors

REWRITE

limited clarity and thought
 unsophisticated and, at times, inappropriate vocabulary with simple sentences
 evidence of some organization
 chosen form rarely conveys content effectively
 inconsistent use of details to convey personality and experience of person interviewed
 surface feature errors may at times distract reader
 message is clear, understandable, and thought-provoking

You and your instructor will develop a rubric together for your “Disease Pamphlet”

Keywords

English Language Arts	Mathematics	Science
Reading Research	Algebra	Earth Science
Writing Brochure Internet	Geometry	Life Science Disease Nervous System Health
Communications	Statistics Graphs Statistics in Daily Life Tables	Chemistry
Literature	Calculus	Physics
Other	Trigonometry	Other
	Other	