
SURVEY OF INSTRUCTIONAL CONTENT

IN

Elementary SCIENCE

Thank you for your time and patience in completing this survey. The survey was designed with the assistance of science educators representing a number of states, including your own. We hope the results will help teachers and schools in improving curriculum and support for science education. Each school will receive a report on the results of this survey. Please read each question and the possible responses carefully, and then mark your response by filling in the appropriate circle in the response section.

The following pages request information regarding topic coverage and your expectations for students in this science class for the current school year. The content matrix that follows contains lists of discrete topics associated with science instruction. The categories and the level of specificity are intended to gather information about content across a wide variety of programs. It is not intended to reflect any recommended or prescribed content for the grade level and may or may not be reflective of your local curriculum.

Please use #2 pencil in responding to this survey.

Step 1; Indicate topics not covered in this class.

Begin by reviewing the *entire list* of topics identified in the topics column of each table, noting how topics are grouped. After reviewing each topic within a given grouping, if none of the topics listed within that group receive any instructional coverage, circle the “<none>” in the “Time on Topic” column for that group. For any **individual topic** which is not covered in this science class, fill-in the circled “zero” in the “Time on Topic” column. (Not necessary for those groups with “<none>” circled.) Any topics or topic groups so identified will not require further response. [Note, for example, that the class described in the example below did not cover any topics under “Science, Health and the Environment” and so “<none>” is circled.]

Step 2; Indicate amount of time spent on each topic covered in this class.

Examine the list of topics a second time. This time note the amount of coverage devoted to each topic by filling in the appropriately numbered circle in the “Time on Topic” column, based upon the following codes:

- 0** = None, not covered
- 1** = Slight coverage (less than one class/lesson)
- 2** = Moderate coverage (one to five classes/lessons)
- 3** = Sustained coverage (more than five classes/lessons)

Step 2

Example:

<i>Time on Topic</i>	<i>Science Topics</i>	<i>Expectations for students in science</i>								
		Memorize	Understand Concepts			Perform Procedures				
<none>	² Science and Technology									
● ① ② ③	²⁰¹ Design a solution or product, implement a design	①	①	②	③	①	①	②	③	①
① ② ● ③	²⁰² Relationship between scientific inquiry and technological design	①	①	②	③	①	①	②	③	①
① ② ● ③	²⁰³ Technological benefits, trade-offs and consequences	①	①	②	③	①	①	②	③	①
① ② ● ③	³ Science, Health and Environment									
① ② ● ③	³⁰¹ Personal health, behavior, disease, nutrition	①	①	②	③	①	①	②	③	①
① ② ● ③	³⁰² Environmental health, pollution, waste disposal	①	①	②	③	①	①	②	③	①

Step 1

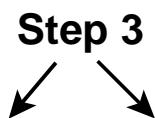
Step 3; Indicate relative emphases of each student expectation for every topic taught.

The final step in completing this section of the survey concerns your expectations for students – i.e. your expectations for what students should know or be able to do. For each topic taught, please provide information about the relative amount to instructional time spent on work designed to help students reach each of the listed expectations by filling in the appropriately numbered circle using the response codes listed below. (Note: At the top of each content sheet you will find a list of descriptors for each of the six expectations for students.)

- 0 = No emphasis** (Not an expectation for this topic.)
- 1 = Slight emphasis** (Accounts for **less than 25%** of the time spent on this topic.)
- 2 = Moderate emphasis** (Accounts for **25% to 33%** of the time spent on this topic.)
- 3 = Sustained emphasis** (Accounts for **more than 33%** of the time spent on this topic.)

Note: A code of “3” should typically be given for only one, and no more than two expectation categories within any given topic. No expectation codes should be filled-in for those topics for which no coverage is provided (i.e. circled “0” or “<none>”).

Example:



<none>	² Science and Technology	Memorize	Understand Concepts	Perform Procedures	Conduct Experiments	Analyze Information	Apply Concepts
① ② ③	201	Design a solution or product, implement a design	① ② ③	① ② ③	① ② ③	① ② ③	① ② ③
① ② ③	202	Relationship between scientific inquiry and technological design	① ② ③	① ② ③	① ② ③	① ② ③	① ② ③
① ② ③	203	Technological benefits, trade-offs and consequences	① ② ③	① ② ③	① ② ③	① ② ③	① ② ③
<none>	³ Science, Health and Environment	Memorize	Understand Concepts	Perform Procedures	Conduct Experiments	Analyze Information	Apply Concepts
① ② ③	301	Personal health, behavior, disease, nutrition	① ② ③	① ② ③	① ② ③	① ② ③	① ② ③
① ② ③	302	Environmental health, pollution, waste disposal, resources, conservation	① ② ③	① ② ③	① ② ③	① ② ③	① ② ③
① ② ③	303	Natural and human-caused hazards	① ② ③	① ② ③	① ② ③	① ② ③	① ② ③

Expectations for Students in Science

Memorize

Facts
Definitions, Terms
Formulas

Understand Concepts

Explain concepts
Observe and explain teacher demonstrations
Explain procedures and methods of science and inquiry
Organize and display data in tables or charts

Perform Procedures

Make observations
Collect and record data
Use appropriate tools
Make measurements, do computations
Execute procedures

Conduct Experiments

Generate questions, make predictions
Plan and design experiments
Test effects of different variables
Draw conclusions
Communicate investigations & explanations

Analyze Information

Classify and compare data
Analyze data, recognize patterns
Infer from data, draw conclusions

Apply Concepts & Make Connections

Use and integrate concepts
Apply to real-world situations
Build or revise theory
Make generalizations

Response Codes for Time on Topic

0=None, not covered
1=Slight coverage(less than one class/lesson)
2=Moderate coverage(one to five classes/lessons)
3=Sustained coverage(more than five classes/lessons)

Response Codes for Expectations for Students

0=No emphasis (Not a performance goal for this topic.)
1=Slight emphasis(Less than 25% of time on this topic.)
2=Moderate emphasis(25% to 33% of time on this topic.)
3=Sustained emphasis (more than 33% of time on this topic.)

Time on Topic	Elementary School Topics	Expectations for Students in Science						
<none>	14	Astronomy	Memorize	Understand Concepts	Perform Procedures	Conduct Experiments	Analyze Information	Apply Concepts
0 1 2 3	1401	Stars	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
0 1 2 3	1402	Galaxies	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
0 1 2 3	1403	The Solar System	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
0 1 2 3	1404	The Earth's Moon	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
0 1 2 3	1405	The Earth's motion: Rotation & Revolution	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
0 1 2 3	1406	Location, Navigation, & Time	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
<none>	15	Meteorology	Memorize	Understand Concepts	Perform Procedures	Conduct Experiments	Analyze Information	Apply Concepts
0 1 2 3	1501	The Earth's Atmosphere	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
0 1 2 3	1502	Air Pressure & Winds	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
0 1 2 3	1503	Evaporation / Condensation / Precipitation	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
0 1 2 3	1504	Weather	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
0 1 2 3	1505	Climate	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3

END OF SURVEY

Thank you for your participation!