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# SURVEY OF INSTRUCTIONAL CONTENT

IN

## MIDDLE SCHOOL

# **SCIENCE**

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Thank you for your time and patience in completing this survey. The survey was designed with 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.

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:

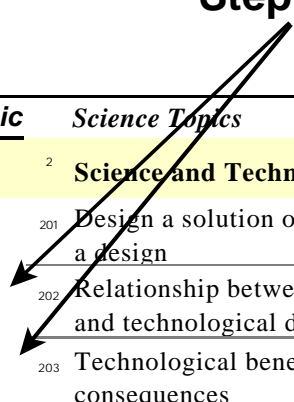
- 0** = None, not covered
- 1** = Slight coverage (less than one class/lesson)
- 2** = Moderate coverage (one to five classes/lessons)
- 3** = Sustained coverage (more than five classes/lessons)

Example:

**Step 2**

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

Step 1



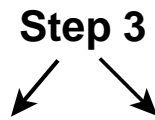
**Step 3; Indicate relative emphases of each student expectation for every topic taught.**

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>	<sup>2</sup> 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 ●	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 ●	203	Technological benefits, trade-offs and consequences	● ① ② ③	① ● ② ③	● ① ② ③	① ● ② ③	● ① ② ③
<none>	<sup>3</sup> 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	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

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#### *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)

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#### *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.)















