

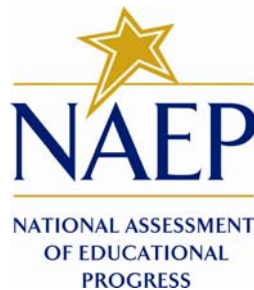
*NATIONAL ASSESSMENT OF  
EDUCATIONAL PROGRESS*

**Wave 1 Submittal for 2011  
VOLUME II**

**Part 2g**

***BACKGROUND QUESTIONS  
FOR 2011 ASSESSMENT***

**Teacher Grade 8 Science Questions**



*Part 2g contains:*

Grade 8 Science Teacher Questions

*The amount of time estimated to complete this form is 20 minutes.*

*March 31, 2010*

# TEACHER QUESTIONNAIRES

## OMB Information on Teacher Questionnaire Cover Page

### **Paperwork Burden Statement**

According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless such collection displays a valid OMB control number. The valid OMB control number for this information collection is **1850-0790**. The time required to complete this information collection is estimated to average 20 minutes including the time to review instructions, search existing data resources, gather the data needed, and complete and review the information collection. **If you have any comments concerning the accuracy of the time estimate(s) or suggestions for improving this form, please write to:** U.S. Department of Education, Washington, D.C. 20202-4537. **If you have comments or concerns regarding the status of your individual submission of this form, write directly to:** NAEP/NCES, U.S. Department of Education, 1990 K Street N.W., Washington, D.C. 20006-5651.

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OMB No. 1850-0790 Approval Expires 05/31/2013

# Science Teacher Questionnaire – Grade 8

## Part I: Background, Education, and Training

For some questions on this survey, you are asked to fill in numbers. For these questions, please print the appropriate number in each of the boxes provided. Please print legibly with a No. 2 pencil. Keep all printing within the boxes, and erase any stray marks.

Using one number per box, fill in every box. For example, 95 students would be written as:

0 9 5

1. Are you Hispanic or Latino? Fill in **one or more ovals**.

VB331330

- Ⓐ No, I am not Hispanic or Latino.
- Ⓑ Yes, I am Mexican, Mexican American, or Chicano.
- Ⓒ Yes, I am Puerto Rican or Puerto Rican American.
- Ⓓ Yes, I am Cuban or Cuban American.
- Ⓔ Yes, I am from some other Hispanic or Latino background.

2. Which of the following best describes you? Fill in **one or more ovals**.

VB331331

- Ⓐ White
- Ⓑ Black or African American
- Ⓒ Asian
- Ⓓ American Indian or Alaska Native
- Ⓔ Native Hawaiian or other Pacific Islander

**Questions 3–4.** For the next two questions, include any full-time teaching assignments, part-time teaching assignments, and long-term substitute assignments, but not student teaching.

VB337243

3. Counting this year, how many years have you worked as an elementary or secondary teacher? If less than 4 months total experience, enter “00.”

Years

VB595989

4. Counting this year, how many years have you taught science in grades 6 through 12? If less than 4 months total experience, enter “00.”

Years

VC309863

5. Did you enter teaching through an alternative certification program?

(An alternative program is a program that was designed to expedite the transition of non-teachers to a teaching career, for example, a state, district, or university alternative certification program.)

- Yes  
 No

6. What type of teaching certificate do you hold in the state where you currently teach?

- Ⓐ Regular or standard state certificate or advanced professional certificate → *Skip to Question 8.*
- Ⓑ Certificate issued after satisfying all requirements except the completion of a probationary period → *Go to Question 7.*
- Ⓒ Certificate that requires some additional coursework, student teaching, or passage of a test before regular certification can be obtained → *Go to Question 7.*
- Ⓓ Certificate issued to persons who must complete a certification program in order to continue teaching → *Go to Question 7.*
- Ⓔ I do not hold any of the above certificates in the state where I currently teach. → *Go to Question 7.*

7. Do you hold a currently valid regular or standard certification from a state other than the one in which you are currently teaching?

- Ⓐ Yes
- Ⓑ No

VC309886

8. This school year, are you a Highly Qualified Teacher (HQT) according to your state's requirements?

(Generally, to be Highly Qualified, teachers must meet requirements related to 1) a bachelor's degree, 2) full state certification, and 3) demonstrate competency in the subject area(s) taught. The HQT requirement is a provision under the No Child Left Behind (NCLB) Act.)

- Ⓐ Yes
- Ⓑ I meet my state's requirements for a Highly Qualified Teacher in at least one subject that I teach.
- Ⓒ No

VC309891

9. Are you certified by the National Board for Professional Teaching Standards in at least one content area?

(The National Board for Professional Teaching Standards is a nongovernmental organization that administers National Board certification, a voluntary national assessment program that certifies teachers who meet high professional standards. In order to gain certification, the candidate must at least complete a portfolio of classroom practice and pass one or more tests of content knowledge.)

- Ⓐ Yes, I am fully certified by the National Board for Professional Teaching Standards.
- Ⓑ I am working towards my National Board certification.
- Ⓒ No

10. What is the highest academic degree you hold?

- Ⓐ High school diploma
- Ⓑ Associate's degree/vocational certification
- Ⓒ Bachelor's degree
- Ⓓ Master's degree
- Ⓔ Education specialist's or professional diploma based on at least one year's work past master's degree
- Ⓕ Doctorate
- Ⓖ Professional degree (e.g., M.D., LL.B., J.D., D.D.S.)

11. Did you have a major, minor, or special emphasis in any of the following subjects as part of your **undergraduate** coursework? Fill in **one** oval on each line.

	Yes, a major	Yes, a minor or special emphasis	No	
a. Biology or other life science	<input type="radio"/> Ⓐ	<input type="radio"/> Ⓑ	<input type="radio"/> Ⓒ	VB595990
b. Physics, chemistry, or other physical science	<input type="radio"/> Ⓐ	<input type="radio"/> Ⓑ	<input type="radio"/> Ⓒ	VB595991
c. Earth or space science	<input type="radio"/> Ⓐ	<input type="radio"/> Ⓑ	<input type="radio"/> Ⓒ	VB595992
d. Mathematics or mathematics education	<input type="radio"/> Ⓐ	<input type="radio"/> Ⓑ	<input type="radio"/> Ⓒ	VB595993
e. Science education	<input type="radio"/> Ⓐ	<input type="radio"/> Ⓑ	<input type="radio"/> Ⓒ	VB556070
f. Engineering or engineering education	<input type="radio"/> Ⓐ	<input type="radio"/> Ⓑ	<input type="radio"/> Ⓒ	VC304764
g. Elementary or secondary education	<input type="radio"/> Ⓐ	<input type="radio"/> Ⓑ	<input type="radio"/> Ⓒ	VB595189
h. Special education (including students with disabilities)	<input type="radio"/> Ⓐ	<input type="radio"/> Ⓑ	<input type="radio"/> Ⓒ	VE113515
i. English-language learning	<input type="radio"/> Ⓐ	<input type="radio"/> Ⓑ	<input type="radio"/> Ⓒ	VE113516

12. Did you have a major, minor, or special emphasis in any of the following subjects as part of your **graduate** coursework? Fill in **one** oval on each line.

	Yes, a major	Yes, a minor or special emphasis	No	
a. Biology or other life science	Ⓐ	Ⓑ	Ⓒ	VB595994
b. Physics, chemistry, or other physical science	Ⓐ	Ⓑ	Ⓒ	VB595995
c. Earth or space science	Ⓐ	Ⓑ	Ⓒ	VB595996
d. Mathematics or mathematics education	Ⓐ	Ⓑ	Ⓒ	VB595997
e. Science education	Ⓐ	Ⓑ	Ⓒ	VB556072
f. Engineering or engineering education	Ⓐ	Ⓑ	Ⓒ	VC304761
g. Elementary or secondary education	Ⓐ	Ⓑ	Ⓒ	VB595190
h. Special education (including students with disabilities)	Ⓐ	Ⓑ	Ⓒ	VE113560
i. English-language learning	Ⓐ	Ⓑ	Ⓒ	VE113562



13. As part of either your undergraduate or graduate coursework, how many **advanced science** courses (such as physiology, molecular biology, or biochemistry) did you take?

- Ⓐ None
- Ⓑ 1 or 2 courses
- Ⓒ 3 or 4 courses
- Ⓓ 5 or more courses

14. As part of either your undergraduate or graduate coursework, how many **science education** courses did you take?

- Ⓐ None
- Ⓑ 1 or 2 courses
- Ⓒ 3 or 4 courses
- Ⓓ 5 or more courses

15. During the last **two years**, did you participate in or lead any of the following professional development activities **related to the teaching of science**? Fill in **one** oval on each line.

	Yes, I have participated.	Yes, I have led.	No	
a. College course taken after your first certification	Ⓐ	Ⓑ	Ⓒ	VC323264
b. Workshop or training session	Ⓐ	Ⓑ	Ⓒ	VC323266
c. Conference or professional association meeting	Ⓐ	Ⓑ	Ⓒ	VC323269
d. Observational visit to another school	Ⓐ	Ⓑ	Ⓒ	VC323272
e. Mentoring and/or peer observation and coaching as part of a formal arrangement	Ⓐ	Ⓑ	Ⓒ	VC323273
f. Committee or task force focusing on curriculum, instruction, or student assessment	Ⓐ	Ⓑ	Ⓒ	VC323277
g. Regularly scheduled discussion or study group	Ⓐ	Ⓑ	Ⓒ	VC323280
h. Teacher collaborative or network (such as one organized by an outside agency or over the Internet)	Ⓐ	Ⓑ	Ⓒ	VC323281
i. Individual or collaborative research	Ⓐ	Ⓑ	Ⓒ	VC323283
j. Independent reading on a regular basis (for example, educational journals, books, or the Internet)	Ⓐ	Ⓑ	Ⓒ	VC323285
k. Co-teaching/team teaching	Ⓐ	Ⓑ	Ⓒ	VC323286
l. Consultation with a subject specialist	Ⓐ	Ⓑ	Ⓒ	VC323288

16. Consider all of the professional development activities you participated in during the last **two years**. To what extent did you learn about each of the following topics? Fill in **one** oval on each line.

	Not at all	Small extent	Moderate extent	Large extent	
a. How students learn science	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VC304728
b. Scientific inquiry and/or technological design	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VC304729
c. Content standards in science	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VC304730
d. Curricular materials available in science (units, texts)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VC304731
e. Instructional methods for teaching science	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VC304732
f. Instructional methods for teaching technological design	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VC304733
g. Effective use of laboratory activities in science instruction	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VC304734
h. Effective use of information and communication technology (ICT) in science instruction	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VC304736
i. Methods for assessing students in science	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VC304738
j. Preparation of students for district and state assessments	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VC304739
k. Strategies for teaching science to students from diverse backgrounds (including English-language learners)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VC304740

VC304724

17. During the last **two years** have you participated in activities associated with school improvement efforts directed at issues such as adequate yearly progress and state accountability standards?

A Yes

B No

VB598091

18. Do you have special leadership responsibilities for **science education** at your school—for example, responsibilities as a mentor teacher, lead teacher, resource specialist, departmental chair, or master teacher?

A Yes

B No

## Part II: Classroom Organization and Instruction – Science

The following questions ask about the organization of your classroom for science instruction. If you teach more than one eighth-grade class, please choose a single class to use as the basis for answering the questions about classroom organization.

If you do not teach science, you have finished this questionnaire. Thank you for your time.

1. Which best describes your role in teaching science to this class? Fill in **one** oval.

VB598092

- Ⓐ I do not teach science to this class.
- Ⓑ I teach all or most subjects, including science.
- Ⓒ The only subject I teach is science.
- Ⓓ We team teach, and I have primary responsibility for teaching science.

2. How many students are in this class?

VB473856

- Ⓐ 15 or fewer
- Ⓑ 16–18
- Ⓒ 19–20
- Ⓓ 21–25
- Ⓔ 26 or more

3. About how much time in total do you spend with this class on science instruction in a typical week?

- Ⓐ Less than 1 hour
- Ⓑ 1–2.9 hours
- Ⓒ 3–4.9 hours
- Ⓓ 5–6.9 hours
- Ⓔ 7 hours or more

4. Are students assigned to this class by ability?

- Ⓐ Yes
- Ⓑ No

5. Do you create groups within this class for science instruction on the basis of ability?

- Ⓐ Yes
- Ⓑ No

VB610542

6. How often do you use each of the following to assess student progress in science? Fill in **one** oval on each line.

	Never or hardly ever	Once or twice a month	Once or twice a week	Almost every day	
a. Multiple-choice tests	<input type="radio"/> A	<input type="radio"/> B	<input type="radio"/> C	<input type="radio"/> D	VB610543
b. Short written responses (e.g., a phrase or sentence)	<input type="radio"/> A	<input type="radio"/> B	<input type="radio"/> C	<input type="radio"/> D	VB610544
c. Long written responses (e.g., several sentences or paragraphs)	<input type="radio"/> A	<input type="radio"/> B	<input type="radio"/> C	<input type="radio"/> D	VB610545

VB608618

7. In this class, about how much time do you spend on each of the following areas of science? Fill in **one** oval on each line.

	None	Little	Some	A lot	
a. Life science	<input type="radio"/> A	<input type="radio"/> B	<input type="radio"/> C	<input type="radio"/> D	VB608619
b. Earth and space science	<input type="radio"/> A	<input type="radio"/> B	<input type="radio"/> C	<input type="radio"/> D	VC759072
c. Physical science	<input type="radio"/> A	<input type="radio"/> B	<input type="radio"/> C	<input type="radio"/> D	VB608621
d. Engineering and technology	<input type="radio"/> A	<input type="radio"/> B	<input type="radio"/> C	<input type="radio"/> D	VC759073



8. About how often do your science students do each of the following? Fill in **one** oval on each line.

	Never or hardly ever	Once or twice a month	Once or twice a week	Every day or almost every day	
a. Read a science textbook	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VC767837
b. Read a book or magazine about science	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VC767838
c. Work with other students on a science activity or project	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VC767839
d. Prepare a written science report	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VC767841
e. Watch a movie, video, or DVD about science	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VC767843
f. Watch a science teacher do a science activity	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VC767845
g. Do hands-on activities or investigations in science	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VC767846
h. Talk about the measurements and results from students' hands-on activities	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VC767849
i. Take a science test or quiz	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VC767850
j. Identify questions that can be addressed through scientific investigations	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VC767851
k. Discuss the kinds of problems that engineers can solve	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VC767852
l. Figure out different ways to solve a science problem	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VC767854
m. Present what they have learned about science	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VC767856



9. To what extent do you emphasize each of the following objectives in teaching science to your eighth-grade class? Fill in **one** oval on each line.

	Not at all	Small extent	Moderate extent	Large extent	
a. Increase students' interest in science	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VC976015
b. Teach scientific facts and principles	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VC976017
c. Teach scientific methods	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VC976018
d. Prepare students for further study in science	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VC976019
e. Develop inquiry skills	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VC976020
f. Develop problem-solving (design) skills	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VC976021
g. Develop skills in lab techniques	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VC976022
h. Increase awareness of the importance of science in daily life	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VC976023
i. Develop systematic observation skills	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VC976025
j. Learn about applications of science to environmental issues	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VC976026
k. Develop scientific writing skills	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VC976027



10. How much of the following instructional materials and other resources does your school system provide you with to teach science to your eighth-grade class? Fill in **one** oval on each line.

	None	Little	Some	A lot	
a. Science textbooks	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VC976031
b. Science magazines and books	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VC976032
c. Supplies or equipment for science demonstrations	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VC976034
d. Supplies or equipment for science labs	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VC976035
e. Space to conduct science labs	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VC976036
f. Computers for students' use in class	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VC976037
g. Computer labs	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VC976039
h. Computers for teachers' use	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VC976040
i. Computerized science labs for classroom use	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VC976041
j. Audiovisual materials	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VC976042
k. Science kits	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VC976043
l. Scientific measurement instruments (e.g., telescopes, microscopes, thermometers, or weighing scales)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VC976045

11. To what extent do you use each of the following technological resources for eighth-grade science instruction? Fill in **one** oval on each line.

	Not at all	Small extent	Moderate extent	Large extent	
a. Desktop computer	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VC976050
b. Laptop computer	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VC976051
c. Tablet PC (notebook-like computer that allows users to write or draw through the use of a stylus or touch-screen)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VC976053
d. Digital projector (device that connects to a computer to display presentations, or demonstrate lessons, such as an LCD)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VC976054
e. CD-ROM	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VC976056
f. Online software	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VC976057
g. Digital music device (pocket-sized music player used to listen to or create audio files, such as an MP3 player)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VC976059
h. Cable/satellite/closed-circuit television	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VC976061

**Continued on next page.**



	Not at all	Small extent	Moderate extent	Large extent	
i. DVD player and DVDs	(A)	(B)	(C)	(D)	VC976063
j. Digital camera	(A)	(B)	(C)	(D)	VC976067
k. Graphing calculator	(A)	(B)	(C)	(D)	VC976068
l. Handheld device (pocket-sized computing device, such as personal digital assistant or smartphone)	(A)	(B)	(C)	(D)	VC976071
m. Data collection sensors/probes (tool that connects to a handheld device or graphing calculator and detects motion, pH, temperature, light)	(A)	(B)	(C)	(D)	VC976072
n. Online course management system (web-based software used to organize information, assignments, grades, and discussions)	(A)	(B)	(C)	(D)	VC976073
o. Digital whiteboard (computerized display panels that can respond to fingertip command and creates a shared interactive space, akin to traditional chalkboards)	(A)	(B)	(C)	(D)	VC976075

VC976076

12. In your eighth-grade class, how often do your students use a computer or other technological resources to do each of the following? Fill in **one** oval on each line.

	Never or hardly ever	Once or twice a month	Once or twice a week	Every day or almost every day	
a. Conduct a search for science information	<input type="radio"/> Ⓐ	<input type="radio"/> Ⓑ	<input type="radio"/> Ⓒ	<input type="radio"/> Ⓓ	VC976080
b. Simulate a physical or biological process or see how something works (for example, how planets orbit the sun, how gas expands)	<input type="radio"/> Ⓐ	<input type="radio"/> Ⓑ	<input type="radio"/> Ⓒ	<input type="radio"/> Ⓓ	VC976081
c. Make a chart or graph that shows results of science projects	<input type="radio"/> Ⓐ	<input type="radio"/> Ⓑ	<input type="radio"/> Ⓒ	<input type="radio"/> Ⓓ	VC976084

HE001022

13. Which of the following statements is true about how well your school system provides you with the instructional materials and other resources you need to teach your class?

- Ⓐ I get all the resources I need.
- Ⓑ I get most of the resources I need.
- Ⓒ I get some of the resources I need.
- Ⓓ I don't get any of the resources I need.



14. When you teach science to your eighth-grade class, do you do any of the following? Fill in **one** oval on each line. VC976085

	Not at all	Small extent	Moderate extent	Large extent	
a. Use a different set of methods in teaching some students	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VC976086
b. Supplement the regular course curriculum with additional material for some students	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VC976088
c. Pace my teaching differently for some students	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VC976091
d. Have some students engage in different classroom activities	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VC976092
e. Set different achievement standards for some students	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VC976094

15. How often do you meet with students one-on-one to review their work and evaluate their progress in science? VC767810

- Ⓐ Never or hardly ever
- Ⓑ A few times a year
- Ⓒ Once or twice a month
- Ⓓ Once or twice a week
- Ⓔ Every day or almost every day

16. How often do you do each of the following with individual students to evaluate their progress in science? Fill in **one** oval on each line.

	Never or hardly ever	A few times a year	Once or twice a month	Once or twice a week	Every day or almost every day	
a. Discuss the student's current level of performance	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VC767830
b. Set goals for specific progress the student would like to make	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VC767831
c. Discuss progress the student has made toward goals previously set	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VC767832
d. Determine how to adjust your teaching strategies to meet the student's current learning needs and to reflect the student's future goals	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VC767834

