SURVEY OF LITERACY INSTRUCTIONAL PRACTICES FOR SECONDARY - BIOLOGY

This survey was developed through a joint WestEd and CRESST/UCLA project. It may be used without permission if changes are not made to its content. If you need to alter this survey in any manner, please contact the WestEd or CRESST/UCLA offices, either Cynthia Greenleaf, cgreenl@wested.org or Joan Herman, herman@cse.ucla.edu. Survey constructs and items maps are available upon request.

1. Name (Last, First, Middle Initial) _____

2. School District _____

3. Complete School Name _____

CLASSROOM PRACTICES

4. During the last school year, how often did **YOU** use the following science reading materials and texts in your instruction? (Choose only one number per question.)

	Never	Rarely (e.g., a few times a year)	Sometimes (e.g., once or twice a month)	Often (e.g., once or twice a week)	All or almost all lessons
a. Course textbooks	①	②	③	④	⑤
b. Science journals	①	②	③	④	⑤
c. Newspaper or magazine articles	①	②	③	④	⑤
d. Reference materials (e.g., dictionaries)	①	②	③	④	⑤
e. Science-related trade books and magazines	①	②	③	④	⑤
f. Written lab procedures	①	②	③	④	⑤
g. Handouts about science content (e.g., commercial reproducibles, teacher-generated outlines)	①	②	③	④	⑤
h. Models of assigned writing (e.g., lab reports)	①	②	③	④	⑤
i. Graphs, illustrations and science models	①	②	③	④	⑤
j. Science tests	①	②	③	④	⑤
k. Internet Resources	①	②	③	④	⑤
l. Science software (e.g., simulations)	①	②	③	④	⑤
m. Student-generated texts (e.g., lab reports)	①	②	③	④	⑤

5. What biology **textbook**, if any, do you use in teaching Biology?

_____

6. Do you use the Teacher's Edition that accompanies your textbook?

○ **YES** ○ **NO**

If so, briefly describe how you use it.

_____

_____

_____

7. Do you use supplemental resources that accompany your textbook?

○ **YES** ○ **NO**

Please briefly describe which resources and how you use them.

_____

_____

_____

8. During the last school year, how often did your **STUDENTS** engage in the following reading-related activities? (Choose only one number per question.)

	Never	Rarely (e.g., a few times a year)	Sometimes (e.g., once or twice a month)	Often (e.g., once or twice a week)	All or almost all lessons
a. Read for homework assignment	①	②	③	④	⑤
b. Read assigned materials silently in class	①	②	③	④	⑤
c. Read self-selected science materials in class	①	②	③	④	⑤
d. Read aloud in pairs or small groups	①	②	③	④	⑤
e. Take turns reading aloud in whole-class setting	①	②	③	④	⑤
f. Listen to teacher read-aloud in whole-class setting.	①	②	③	④	⑤
g. Listen and take notes on teacher lecture on reading in whole-class setting	①	②	③	④	⑤

9. During the last school year, how often did **YOU** do the following in your reading instruction? (Choose only one number per question.)

	Never	Rarely (e.g., a few times a year)	Sometimes (e.g., once or twice a month)	Often (e.g., once or twice a week)	All or almost all lessons
a. Choose a variety of science reading materials based on students' reading levels and interests	①	②	③	④	⑤
b. Discuss homework reading assignments in teacher-supported, whole-class setting	①	②	③	④	⑤
c. Share your own interest in reading science with students	①	②	③	④	⑤
d. Present the important information verbally to make sure everyone gets it after a reading assignment	①	②	③	④	⑤

10. During the last school year, how often did your **STUDENTS** engage in the following reading-related activities? (Choose only one number per question.)

	Never	Rarely (e.g., a few times a year)	Sometimes (e.g., once or twice a month)	Often (e.g., once or twice a week)	All or almost all lessons
a. Explore and discuss self-image and goals as readers of science	①	②	③	④	⑤
b. Explore and discuss what was easy or challenging about reading science	①	②	③	④	⑤
c. Think aloud while reading science materials	①	②	③	④	⑤
d. Take notes focused on <u>how</u> as well as <u>what</u> students understand (e.g., reading logs)	①	②	③	④	⑤
e. Respond to open-ended prompts about reading and thinking processes (e.g., I was confused when…)	①	②	③	④	⑤

11. During the last school year, how often did **YOU** use the following approaches in your instruction? (Choose only one number per question.)

	Never	Rarely (e.g., a few times a year)	Sometimes (e.g., once or twice a month)	Often (e.g., once or twice a week)	All or almost all lessons
a. Demonstrate that reading science is difficult for everyone--including yourself	①	②	③	④	⑤
b. Think aloud to model your own confusions and efforts to make sense of science reading materials	①	②	③	④	⑤
c. Pose questions designed to probe and deepen student thinking about the reading and thinking process of science	①	②	③	④	⑤

12. During the last school year, how often did your **STUDENTS** engage in the following reading-related activities? (Choose only one number per question.)

	Never	Rarely (e.g., a few times a year)	Sometimes (e.g., once or twice a month)	Often (e.g., once or twice a week)	All or almost all lessons
a. Use collaborative meaning-making routines reading (e.g., Reciprocal Teaching)	①	②	③	④	⑤
b. Discuss confusions and ways to make sense of reading materials in a whole class, teacher-supported setting	①	②	③	④	⑤
c. Discuss confusions and ways to make sense of reading materials with partners or small groups	①	②	③	④	⑤
d. Discuss the content of reading materials in a whole class setting	①	②	③	④	⑤
e. Discuss the content of reading materials with partners or small groups	①	②	③	④	⑤
f. Access and build prior knowledge using graphic organizers (e.g., webbing, K-W-L charts) or pre-reading inventories	①	②	③	④	⑤
g. Make connections with prior knowledge, experiences and text	①	②	③	④	⑤
h. Visualize and/or construct visual representations	①	②	③	④	⑤
i. Summarize, write abstracts	①	②	③	④	⑤
j. Apply scientific inquiry processes to the reading of science (e.g., read with attention to evidence and experimentation)	①	②	③	④	⑤
k. Identify and categorize types of questions and their functions (provide example questions, categories and functions)	①	②	③	④	⑤
l. Ask questions about the implications of content of reading material	①	②	③	④	⑤
m. Answer worksheet, study- or textbook questions about reading materials	①	②	③	④	⑤
n. Annotate in the margins (e.g., “talking to the text”)	①	②	③	④	⑤

13. During the last school year, how often did your **STUDENTS** engage in the following reading-related activities? (Choose only one number per question.)

	Never	Rarely (e.g., a few times a year)	Sometimes (e.g., once or twice a month)	Often (e.g., once or twice a week)	All or almost all lessons
a. Use notetaking strategies to (re)organize content of reading materials (e.g., Cornell notetaking, outlining)	①	②	③	④	⑤
b. Use graphic organizers to (re)organize content of reading materials (e.g., Venn diagrams, concept mapping, charts, timelines)	①	②	③	④	⑤
c. Write to open-ended prompts about the content of reading materials (e.g., What ideas in the reading were interesting to you?)	①	②	③	④	⑤
d. Preview text organization, structures and signals (e.g., headings and sub-headings, bolded words)	①	②	③	④	⑤
e. Predict the content of texts from text-signals	①	②	③	④	⑤
f. Analyze figures, models and illustrations in science	①	②	③	④	⑤
g. Analyze scientific symbols, conventions, notations	①	②	③	④	⑤
h. Use a dictionary/glossary to define science words	①	②	③	④	⑤
i. Use context to define unfamiliar words	①	②	③	④	⑤
j. Identify and define familiar words with technical meanings in science	①	②	③	④	⑤
k. Identify, recognize and define Greek and Latin roots and affixes	①	②	③	④	⑤
l. Break up and analyze the meaning of complex sentences in science reading materials	①	②	③	④	⑤
m. Explore and identify similarities between science vocabulary in English and other languages (cognates)	①	②	③	④	⑤
n. Explore scientific concepts, conventions and notations as a common language that bridges languages and cultures	①	②	③	④	⑤
o. Analyze grammatical structures common in science texts	①	②	③	④	⑤
p. Identify noun phrases in science texts (e.g. the forceful flow of blood through the arteries…)	①	②	③	④	⑤
q. Identify technical vocabulary in science texts	①	②	③	④	⑤
r. Identify verbs that signal relationships in science texts (e.g., The mold <u>resulted</u> in a strong smell)	①	②	③	④	⑤
s. Identify grammatical structures that connect ideas from one sentence to the next (e.g., transitional expressions)	①	②	③	④	⑤
t. Identify grammatical structures that generate an impersonal tone (e.g., third person, passive voice)	①	②	③	④	⑤

14. During the last school year, how often did **YOU** use the following approaches in your instruction? (Choose only one number per question.)

	Never	Rarely (e.g., a few times a year)	Sometimes (e.g., once or twice a month)	Often (e.g., once or twice a week)	All or almost all lessons
a. Read assigned materials ahead of time to identify where students might have problems and to consider which strategies will be most helpful in supporting comprehension	①	②	③	④	⑤
b. Modify instruction based on assessment of students' comprehension of reading materials (e.g., add or reduce support)	①	②	③	④	⑤
c. Listen/ask questions as students work in order to gauge their understanding	①	②	③	④	⑤
d. Provide explicit instruction in reading comprehension strategies	①	②	③	④	⑤
e. Model the use of various reading comprehension strategies	①	②	③	④	⑤

15. How often did your **STUDENTS** engage in the following classroom activities? (Choose only one number per question.)

	Never	Rarely (e.g., a few times a year)	Sometimes (e.g., once or twice a month)	Often (e.g., once or twice a week)	All or almost all lessons
a. Do hands-on/laboratory science activities or investigations	①	②	③	④	⑤
b. Design or implement their own investigation	①	②	③	④	⑤
c. Answer textbook or worksheet questions	①	②	③	④	⑤
d. Record, present and/or analyze data	①	②	③	④	⑤
e. Write reflections (e.g. a journal)	①	②	③	④	⑤
f. Write about biology content using various scientific formats	①	②	③	④	⑤
g. Watch audiovisual presentations	①	②	③	④	⑤
h. Monitor and reflect on progress and set goals for learning	①	②	③	④	⑤
i. Correct tests and assignments for additional credit	①	②	③	④	⑤
j. Prepare for standardized tests	①	②	③	④	⑤

CLASSROOM ENVIRONMENT

16. During the last school year, how often did **STUDENTS** engage in the following activities? (Choose only one number per question.)

	Never	Rarely (e.g., a few times a year)	Sometimes (e.g., once or twice a month)	Often (e.g., once or twice a week)	All or almost all lessons
a. Work in heterogeneous groups	①	②	③	④	⑤
b. Work in groups leveled by student ability	①	②	③	④	⑤
c. Make formal presentations to the rest of the class	①	②	③	④	⑤
d. Report individual or small group learning to the whole class	①	②	③	④	⑤
e. Reflect on how to work together more effectively and productively	①	②	③	④	⑤
f. Critique and challenge one another's ideas or work	①	②	③	④	⑤
g. Read and respond to one another's work	①	②	③	④	⑤

17. During the last school year, how often did **YOU** use the following approaches in your instruction? (Choose only one number per question.)

	Never	Rarely (e.g., a few times a year)	Sometimes (e.g., once or twice a month)	Often (e.g., once or twice a week)	All or almost all lessons
a. Select good students to be group leaders	①	②	③	④	⑤
b. Change student roles regularly in small groups	①	②	③	④	⑤
c. Ask students to explain concepts to one another	①	②	③	④	⑤
d. Refrain from answering questions in order to keep the focus on student thinking	①	②	③	④	⑤
e. Pose open-ended questions	①	②	③	④	⑤
f. Pose questions that have only one right answer	①	②	③	④	⑤
g. Establish conversational routines to promote student to student talk (e.g., think-pair-share)	①	②	③	④	⑤
h. Provide explicit instruction on behaviors that promote academic conversation (e.g., how to civilly challenge and critique others' ideas)	①	②	③	④	⑤
i. Model behaviors that foster instructionally-focused conversations with students (e.g., civilly challenge and critique others' ideas)	①	②	③	④	⑤

18. During the last school year, how often did **YOU** use the following approaches in your instruction? (Choose only one number per question.)

	Never	Rarely (e.g., a few times a year)	Sometimes (e.g., once or twice a month)	Often (e.g., once or twice a week)	All or almost all lessons
a. Teach students who have limited English proficiency	①	②	③	④	⑤
b. Teach students with special needs	①	②	③	④	⑤
c. Provide extra support for struggling readers	①	②	③	④	⑤
d. Respond to student cultural diversity	①	②	③	④	⑤
e. Modify instruction to reach limited English proficient students	①	②	③	④	⑤
f. Adapt content for students at different levels of proficiency	①	②	③	④	⑤
g. Provide students with extra help/support outside of class (e.g., before or after school or at lunch)	①	②	③	④	⑤
h. Allow students to work at their own pace	①	②	③	④	⑤
i. Spend extra time with students who need help acquiring effective learning skills and behaviors	①	②	③	④	⑤

19. During the last school year, how often did **YOU** engage in the following activities? (Choose only one number per question.)

	Never	Rarely (e.g., a few times a year)	Sometimes (e.g., once or twice a month)	Often (e.g., once or twice a week)	All or almost all lessons
a. Introduce content through presentations of 30 minutes or longer	①	②	③	④	⑤
b. Introduce content through short mini-lectures	①	②	③	④	⑤
c. Engage the whole class in discussions	①	②	③	④	⑤
d. Join small groups to model and facilitate group conversation and thinking during group work	①	②	③	④	⑤
e. Use small group time for lesson planning, correcting student work, responding to email and other teaching-related tasks	①	②	③	④	⑤
f. Mentor individuals or small groups during class time	①	②	③	④	⑤
g. Model the right way to do a problem, procedure or algorithm	①	②	③	④	⑤

20. During the last school year, how often did **YOU** do the following? (Choose only one number per question.)

	Never	Rarely (e.g., a few times a year)	Sometimes (e.g., once or twice a month)	Often (e.g., once or twice a week)	All or almost all lessons
a. Provide verbal feedback through formal and informal conferencing	①	②	③	④	⑤
b. Read and comment on the reflections students have written (e.g., in their journals)	①	②	③	④	⑤
c. Assess students' behavior and participation in reading-related activities for evidence of reading engagement	①	②	③	④	⑤
d. Assess students' behavior and participation in reading-related activities for evidence of reading comprehension	①	②	③	④	⑤
e. Evaluate reading assignments on completion only	①	②	③	④	⑤
f. Evaluate reading assignments primarily on understanding of science concepts	①	②	③	④	⑤
g. Evaluate reading assignments primarily on student effort	①	②	③	④	⑤
h. Attend primarily to student confusion and sense-making in reading assignments	①	②	③	④	⑤
i. Negotiate assignments, deadlines and policies	①	②	③	④	⑤
j. Accept late work for partial credit	①	②	③	④	⑤

21. In assessing your students' progress, how much emphasis did **YOU** place on each of the following areas: (Choose only one number per question.)

	None	Minimal emphasis	Moderate emphasis	Heavy emphasis
a. Reading materials	①	②	③	④
b. Lectures	①	②	③	④
c. Science labs, demonstrations, investigations	①	②	③	④

TEACHING PHILOSOPHY

22. Please rate your level of agreement or disagreement with the following statements. (Mark only one per item)

	Strongly disagree		Somewhat agree	Agree		Strongly agree
a. Students should be able to read well by the time they get to high school	①	②	③	④	⑤	⑥
b. It is virtually impossible to significantly improve students' reading in secondary school	①	②	③	④	⑤	⑥
c. There is little a high school science teacher can do to significantly improve a student's reading	①	②	③	④	⑤	⑥
d. Some students have learning styles that make it difficult for them to learn by reading	①	②	③	④	⑤	⑥
e. Decoding is the major reading problem for my students	①	②	③	④	⑤	⑥
f. Mispronouncing and stumbling over words is evidence of poor reading ability	①	②	③	④	⑤	⑥
g. If students know the key vocabulary, they can understand the reading materials	①	②	③	④	⑤	⑥
h. Virtually all students need help in acquiring comprehension processes that underlie skilled reading in science	①	②	③	④	⑤	⑥
i. I don't really expect students to do their reading assignments	①	②	③	④	⑤	⑥
j. My students' reading skills are too diverse to productively spend class time reading	①	②	③	④	⑤	⑥
k. Spending class time reading runs counter to the goal of building science knowledge through hands-on science inquiry	①	②	③	④	⑤	⑥
l. Textbooks limit teacher creativity	①	②	③	④	⑤	⑥
m. Textbooks complement hands-on science experiences	①	②	③	④	⑤	⑥
n. The textbook should be the focal point of instruction in biology	①	②	③	④	⑤	⑥

23. Please rate your level of agreement or disagreement with the following statements. (Mark only one per item)

	Strongly disagree		Somewhat agree	Agree		Strongly agree
a. It is unfair to expect good students to share what they know with less competent classmates	①	②	③	④	⑤	⑥
b. It is preferable when students can solve a problem by themselves rather than in a group	①	②	③	④	⑤	⑥
c. Solving problems collaboratively usually results in a deeper understanding for all students	①	②	③	④	⑤	⑥
d. Students need a foundation of factual information before they can have meaningful discussions of biology	①	②	③	④	⑤	⑥
e. Stimulating and supporting discussion is a major goal in my classes	①	②	③	④	⑤	⑥
f. Accessing and thinking about one's (and others') thinking processes facilitates learning	①	②	③	④	⑤	⑥
g. It is important to demonstrate to students that I know a lot about biology	①	②	③	④	⑤	⑥
h. Students can learn as much from one another as they can from the teacher	①	②	③	④	⑤	⑥
i. Students should be able to speak English well before taking biology	①	②	③	④	⑤	⑥
j. The most important factor in second language acquisition success is student motivation	①	②	③	④	⑤	⑥
k. When immigrant students have difficulty in mainstream classrooms it is because they have little language or prior knowledge	①	②	③	④	⑤	⑥
l. Special education students are best served in special education classes	①	②	③	④	⑤	⑥
m. When students are in need of extra help, I usually refer them to a resource person outside the classroom	①	②	③	④	⑤	⑥
n. If some students in my class are not doing well, I feel that I should try different ways to teach the content	①	②	③	④	⑤	⑥
o. If I had my choice, I would teach only honors classes	①	②	③	④	⑤	⑥

24. Please rate your level of agreement or disagreement with the following statements. (Mark only one per item)

	Strongly disagree		Somewhat agree	Agree		Strongly agree
a. I spend much of my time thinking about the needs of struggling students	①	②	③	④	⑤	⑥
b. It is unfair to the class to give some students special help or attention	①	②	③	④	⑤	⑥
c. I believe there is a way to reach even the most difficult or unmotivated student	①	②	③	④	⑤	⑥
d. Teachers can do very little to overcome the effects of poverty on student learning	①	②	③	④	⑤	⑥
e. It is my responsibility to help all students achieve to high standards	①	②	③	④	⑤	⑥
f. I am concerned that some racial or ethnic groups are underrepresented in advanced science classes	①	②	③	④	⑤	⑥
g. The most important thing a teacher can do to help low-achieving readers is provide more time for learning basic skills	①	②	③	④	⑤	⑥
h. I usually have a few students who are not capable of learning the material I am supposed to teach them	①	②	③	④	⑤	⑥
i. Students learn better in biology when they are tracked	①	②	③	④	⑤	⑥
j. Many students lack background knowledge necessary for success in biology	①	②	③	④	⑤	⑥
k. Biology affords many opportunities to forge connections with students' background knowledge and experiences	①	②	③	④	⑤	⑥
l. It is nearly impossible to design lessons that reach students of all backgrounds and abilities	①	②	③	④	⑤	⑥
m. Teachers should spend the most time with students who need their help the most	①	②	③	④	⑤	⑥
n. Teachers should try to spend equal time with each student	①	②	③	④	⑤	⑥

25. Please choose your top five student objectives from the list below and rank them from 1 (most important) through 5. For objectives that are not in your top five, please leave the field blank.

l. Increase student interest in science	_____
m. Learn basic science concepts	_____
n. Learn terms and facts of science	_____
o. Learn science inquiry skills	_____
p. Prepare for advanced science classes	_____
q. Learn to evaluate arguments based on scientific evidence	_____
r. Learn to read science materials proficiently	_____
h. Learn to communicate ideas in science effectively in writing	_____
i. Learn to participate effectively in scientific discourse (spoken)	_____
j. Explore the relationship between science and our own lives	_____
k. Learn about applying scientific thinking processes to biology content	_____

26. Please describe any other key objective you might have that is not included in this list.

_____

_____

_____

27. How familiar are you with Reading Apprenticeship (RA)?

No knowledge	○
Have heard of it, but don't really know what it is	○
Know a bit about it, but have never used it in my classroom	○
Know a bit about it and have tried a few RA strategies that I picked up from articles or colleagues	○
Have received RA training and have implemented RA in my classroom	○

28. How familiar are you with the book *Reading for Understanding*?

No knowledge	○
Have heard of it, but have not read it	○
Read it on my own	○
Read it as part of a collegial study group or other professional development experience	○

YOUR FOCUS CLASS

29. Who are the students in your focus class? Please describe class demographics and grade level(s).

_____

_____

_____

30. As you know, this study explores the impact of literacy in biology achievement and learning. Does your district or school have any expectation that biology teachers will be working to support student literacy development in their biology class?

○ **YES** ○ **NO**

If so, does the district or school provide any support or training in content literacy for biology teaching?

_____

_____

_____

31. To what extent are you held accountable for literacy instruction?

Not at all	○
Very little	○
To some extent	○
To a great extent	○

32. How are you held accountable for literacy instruction?

_____

_____

_____

THANK YOU FOR COMPLETING THE SURVEY!