



Learning Environment - Contextual Information

Period _____

Period length _____

Number of students _____

Number of teachers/aides _____

Subject

- Literature
- Writing
- Other Language Arts
- Algebra
- Calculus
- General Math
- Geometry
- Trigonometry
- Other Math
- Chemistry
- Earth Science
- Biology
- General Science
- Physics
- Other Science
- Civics
- History
- World Cultures
- Other Social Studies

Access to Technology

This section is designed to gather data on technology availability and placement. After a quick visual scan, check all technologies that appear to be available. If other technologies make an appearance later in the lesson, simply update the list. In this section, record availability, not use. If there is a computer for each student, but during the lesson the students work in groups with a lesser number of the machines, one computer per student would still be entered here.

2. Access to Technology *check (check all that apply)*

- Teacher has access to computer
- Presentation station
- Electronic whiteboard
- Internet access is available to all computers

3. Number of students per computer *(select one)*

- 1 student per computer
- 2 students per computer
- 3-5 students per computer
- More than 5 students per computer

Organization of the Classroom

Once again, complete this as the classroom initially appears. If the arrangement is changed later in the lesson, return to this item and update.

4. Organization of the Classroom

- Traditional rows
- Clusters of 3-5 students
- Science lab
- Desks in rows along the walls
- Students face each other
- Circles, semi-circles
- Computer lab
- Outside of classroom
- Classroom arranged like a lab
- Other _____

First 1/3 of Class Period

Classroom Teacher Activity

Here, we are looking at the teacher activity. The teacher may be working with a small group while other students are working individually. This would be described here as "Working with a small group" as this is what the teacher was doing. Enter a percentage for each activity you see in the first 1/3 of the class.

5. Teacher Activity (%)

	%
Whole class lecture/instruction	
Leading a whole class discussion	
Working with a small group	
Working with individual students	
Walking, observing, and interacting with students	
Working at desk or other professional work not involving students	
Total (must equal 100%)	

Level of Student Engagement

By "engagement" we mean that students are involved in or engrossed by the learning activities and that it appears to the observer that they value the work they are doing.

Outward signs of engagement include attention, participation, focus on the task at hand, and conversation that is obviously on topic.

Signs of disengagement are inattention, attending to an alternative, off-topic activity, off-topic conversation, or misbehavior.

The easiest way to calculate the percentage of students who are engaged is to count those who are not engaged. It is easier to pick out those who are daydreaming, chatting off topic, etc., than it is to count all engaged students. In a class of 20, if I count four disengaged kids, I can set the percentage of engagement of 80%.

To establish the level of engagement, think about, and look for, what you would consider to be the average or typical engaged student and rate on the following scale:

1. Paying attention, but barely. Posture suggests resignation or some boredom, but student is attending. Questions are responded to, but without significant enthusiasm. If working independently, work is on topic but somewhat lackadaisical.
2. Less boredom. Posture suggests higher level of attention, but not excitement. Questions are responded to, but still somewhat casually. If working independently, work is purposeful, but lacking excitement.
3. Interest might be characterized as low-level excitement. Students are leaning forward and there is some competition to answer and contribute. If working independently, there is significant focus on the task, but still some automaticity.
4. Students are definitely engaged and interested, even excited. From comments and responses, it is evident that students value the work independently from the desire to please the teacher. There may be significant competition to respond and contribute. If working independently, focus is evident and comments occasionally reflect the pleasure of discovery or accomplishment.
5. Students are intensely engaged. If involved in group work, the impression may be one of disorder as students are unable or unwilling to contain themselves. Excitement is evident. If working independently, unsolicited comments denoting pleasure or accomplishment are common. Students share findings and successes spontaneously. Conversation is on topic and sounds surprisingly professional.

6. Engagement

% of students engaged _____

7. Level of engagement

- 1 Barely paying attention
- 2 Less boredom
- 3 Low level excitement
- 4 Engaged, interested & excited
- 5 Intensely engaged

Instructional Practices

These characteristics are taken from the Metiri Group's "Range of Use" model that describes technology uses on three axes. More about that model can be found at <http://www.metiri.com/Solutions/RangeOfUse.htm>

Complexity: This measure asks that you characterize the work that is being done in the class on a scale that corresponds to levels of thought such as Bloom's Taxonomy. On the low end would be work requiring memory and simple application of algorithmic skills. On the high end would be work that requires significant critical and/or creative thought.

Instructional Style: Characterize the style on a scale from "Didactic" or teacher-directed to "Constructivist" or student-directed and student-centered. Remember that sometimes, even though students are working independently, the task to which they are attending may have been clearly directed by the teacher.

Authenticity: Does the lesson have a "real-world" context, or is it better characterized as artificial and exercise-based, such as worksheets or essays that summarize content for teacher use only?

8. Instructional Practices

	Basic Skills.....				Higher Order Skills		
	1	2	3	4	5	6	7
Complexity	<input type="radio"/>						

	Didactic.....				Constructivist		
	1	2	3	4	5	6	7
Instructional Style	<input type="radio"/>						

	Artificial.....				Real World		
	1	2	3	4	5	6	7
Authenticity	<input type="radio"/>						

Middle 1/3 of Class Period

9. Teacher Activity (%)

	%
Whole class lecture/instruction	
Leading a whole class discussion	
Working with a small group	
Working with individual students	
Walking, observing, and interacting with students	
Working at desk or other professional work not involving students	
Total (must equal 100%)	

10. Engagement

% of students engaged _____

11. Level of Engagement

- 1 Barely paying attention
- 2 Less boredom
- 3 Low level excitement
- 4 Engaged, interested & excited
- 5 Intensely engaged

12. Instructional Practices

	Basic Skills.....				Higher Order Skills			
	1	2	3	4	5	6	7	
Complexity	<input type="radio"/>							

	Didactic.....				Constructivist			
	1	2	3	4	5	6	7	
Instructional Style	<input type="radio"/>							

	Artificial.....				Real World			
	1	2	3	4	5	6	7	
Authenticity	<input type="radio"/>							

Last 1/3 of Class Period

13. Teacher Activity (%)

	%
Whole class lecture/instruction	
Leading a whole class discussion	
Working with a small group	
Working with individual students	
Walking, observing, and interacting with students	
Working at desk or other professional work not involving students	
Total (must equal 100%)	

14. Engagement

% of students engaged _____

15. Level of Engagement

- 1 Barely paying attention
- 2 Less boredom
- 3 Low level excitement
- 4 Engaged, interested & excited
- 5 Intensely engaged

16. Instructional Practices

	Basic Skills.....					Higher Order Skills	
	1	2	3	4	5	6	7
Complexity	<input type="radio"/>						

	Didactic.....					Constructivist	
	1	2	3	4	5	6	7
Instructional Style	<input type="radio"/>						

	Artificial.....					Real World	
	1	2	3	4	5	6	7
Authenticity	<input type="radio"/>						

Post-Class Wrap-up

Student Work-Products

This section looks directly at program goals through the products that students are creating. Choices of "Don't Know" and "Not Applicable" are included for situations where products are not evident.

17. Student Work/Products

	Yes	No	Don't Know	Not Applicable
A. Students are working on a clearly defined task or tasks.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
B. Students are given the opportunity to demonstrate learning in a variety of ways.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
C. Students can choose end products based on their own interests.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
D. There is a clear rubric that will be used to assess project work.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
E. Students are working on different products.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
F. Students can choose to work on Individual or group products.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
G. Students allowed to work at their own pace.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Classroom Management and Teacher Comfort Level

These two items may seem evaluative in nature, but each is looking specifically at the concept as it plays out in a technology rich environment. A classroom teacher may have excellent management skills in normal situations, but may need to develop or refine those skills to accommodate the technology-rich classroom. These items will attempt to quantify that process of accommodation. The term "Teacher Comfort Level" refers to the comfort that the teacher shows in teaching in a high-tech environment. If the lesson observed does not reflect such an environment, simply check "Could not tell."

18. Teacher – Classroom Management

- Excellent
- Good
- Fair
- Poor

19. Teacher – Comfort Level

- Could not tell
- Teacher seemed completely uncomfortable
- Teacher seemed fairly uncomfortable
- Teacher seemed fairly comfortable
- Teacher seemed completely comfortable

20. Use of Hardware:

	Teachers	Students
A. Laptops	<input type="checkbox"/>	<input type="checkbox"/>
B. Desktop Computer	<input type="checkbox"/>	<input type="checkbox"/>
C. PDAs	<input type="checkbox"/>	<input type="checkbox"/>
D. Calculators	<input type="checkbox"/>	<input type="checkbox"/>
E. Cameras, Still or Video	<input type="checkbox"/>	<input type="checkbox"/>
F. TV/VCR	<input type="checkbox"/>	<input type="checkbox"/>
G. Probeware	<input type="checkbox"/>	<input type="checkbox"/>
H. Microscope camera/Projector	<input type="checkbox"/>	<input type="checkbox"/>
I. LCD Projector	<input type="checkbox"/>	<input type="checkbox"/>

21. Use of Software:

	Teachers	Students
A. Management Software	<input type="checkbox"/>	<input type="checkbox"/>
B. Drill & Practice, ILS, or Educational Games	<input type="checkbox"/>	
C. Word Processing	<input type="checkbox"/>	<input type="checkbox"/>
D. Data Management (Spreadsheets) or Graphing, Analysis Software	<input type="checkbox"/>	<input type="checkbox"/>
E. Database Software	<input type="checkbox"/>	<input type="checkbox"/>
F. Presentation Software	<input type="checkbox"/>	<input type="checkbox"/>
G. Email	<input type="checkbox"/>	<input type="checkbox"/>
H. Other Communication Tools	<input type="checkbox"/>	<input type="checkbox"/>
I. Desktop Publishing Software	<input type="checkbox"/>	<input type="checkbox"/>
J. Web Publishing Software	<input type="checkbox"/>	<input type="checkbox"/>
K. Internet for Research	<input type="checkbox"/>	<input type="checkbox"/>
L. Multimedia Reference CDs	<input type="checkbox"/>	<input type="checkbox"/>
M. Simulation/Modeling Software	<input type="checkbox"/>	<input type="checkbox"/>
N. Software for Video, Graphics, and Sound Editing, or Production	<input type="checkbox"/>	<input type="checkbox"/>
O. Probeware	<input type="checkbox"/>	<input type="checkbox"/>
P. Web Based Digital Resources	<input type="checkbox"/>	<input type="checkbox"/>
Q. Other Web Based Resources	<input type="checkbox"/>	<input type="checkbox"/>

Percentage of Student Activity

Based on your observation, make these time estimates for the average or typical student in class.

22. Please indicate the percentage of time devoted to the following instructional activities for the average or typical student in the class (%).

	%
Teacher Lecture or Demonstration	
Teacher-led Low Level Discussion	
Teacher-led High Level Discussion	
Project or Problem Based Learning	
Authentic learning	
Multi-Modal Teaching	
Peer Teaching	
Collaborative Learning (informal)	
Collaboration Learning (formal roles)	
Web Quests	
Learning Centers	
Total (must equal 100%)	

23. How long during the lesson did students use the technologies?

- Not at all
- Briefly during the period
- About one-fourth of the period
- About half the period
- About three-fourths of the period
- Almost the entire period

24. Student Activity Percentages (%)

Activity	%
Listening to the teacher	
Listening to other students (in a large group setting)	
Working independently	
Working in groups	
Talking with the teacher in 1-to-1 or small group conversations	
Off task (not doing what the teacher intended)	
Total (must equal 100%)	

21st Century Skills

The instructions on these items are crucial. In order to “count” in any category, the teacher must SPECIFICALLY PROVIDE INSTRUCTION IN, OR EMPLOY STRATEGIES TO DEVELOP the skill. Allowing students to do a Powerpoint or Keynote presentation is not sufficient to develop Visual Literacy, for example. That will simply provide the opportunity for those who are already effective visual communicators to “show their stuff.” The teacher must provide guidance or instruction in the skill. For example, if the teacher provides, at the outset, instruction on “10 Tips for Effective Visual Communication” and then assesses the visual quality of the presentation, that would qualify as building the skill, “a lot.”

21st Century Skills Explanations

The brief explanations below are designed to help CFF observers know what to look for in order to identify instruction aimed at any of the "21st Century Skills" in the CFF list.

Ability to Produce High-Quality Products: Look for evidence that the learning experience is designed to help students understand the concept of "quality" and to strive for high levels of it.

Creativity: Look for evidence that the learning experience is designed to help students learn to bring something new and original into existence. This can be new personally (original only to the individual) or on a broader scale.

Cultural Literacy or Global Awareness: Look for evidence that the learning experience is designed to help students understand and appreciate similarities and differences between the customs, values, and beliefs of their own culture and the cultures of others (cultural literacy), or to recognize and understand relationships among international organizations, nation-states, public and private economic entities, or socio-cultural groups and individuals across the globe (global awareness).

E-communication Skills: Look for evidence that the learning experience is designed to help students develop *skill in communicating* using any of a broad range of contemporary tools, such as, but not limited to e-mail, online chats, video or audio conferencing, web meetings, blogs, phones, or any Web 2.0 technology aimed at promoting communication.

Higher Order Thinking: Look for evidence that the learning experience is designed to help students understand and operate at the higher levels of "Bloom's Taxonomy," using cognitive processes of analysis, comparison, inference/interpretation, evaluation, synthesis, and creativity.

Planning, Prioritizing, and Managing Work: Look for evidence that the learning experience is designed to help students organize to efficiently achieve the goals of specific projects or problems.

Scientific Literacy: Look for evidence that the learning experience is designed to help students develop the knowledge and understanding of scientific concepts and processes required for personal decision-making, participation in civic and cultural affairs, and economic productivity.

Self Direction: Look for evidence that the learning experience is designed to help students develop the ability to set goals (perhaps related to learning), plan for the achievement of those goals, independently manage time and effort, and independently assess the his or her efforts and any products that result.

Social or Personal Responsibility: Look for evidence that the learning experience is designed to help students learn to promote the public good and protect society, the environment, and democratic ideals (social responsibility) or develop depth and currency of knowledge about legal and ethical issues, combined with an ability to apply this knowledge to achieve balance, integrity, and quality of life as citizens, family and community members, learners, and workers (personal responsibility).

Teaming or Collaboration Skills: Look for evidence that the learning experience is designed to help students cooperatively interact with one or more individuals, or to work with others in order to solve problems, create novel products, or learn and master content.

Use of Real World Tools: Look for evidence that the learning experience is designed to help students learn to use real-world tools (i.e. the hardware, software, networking, and peripheral devices used by Information Technology (IT) workers to accomplish 21st century work) to communicate, collaborate, solve problems, and accomplish tasks.

Visual Literacy: Look for evidence that the learning experience is designed to help students interpret, use, appreciate, and create images and video using either conventional or 21st century media in ways that advance thinking, decision-making, communication, and learning.

25. 21st Century Skills

	None	A Little	A lot
A. Visual Literacy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
B. Scientific Literacy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
C. Cultural Literacy or Global Literacy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
D. Teaming or Collaboration Skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
E. E-Communication Skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
F. Social or Personal Responsibility	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
G. Self-Direction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
H. Creativity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I. Higher Order Thinking	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
J. Use of Real World Tools	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
K. Ability to Produce High Quality Products	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
L. Planning, Prioritizing, and Managing Work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>