2012 QuarkNet: Protocol for Reporting Center Site Visit Data

Included in this document are: Questions/Prompts for observation of the institute, Teacher Leader Interview Protocol, Participant Interview Guide, and Mentor Interview Protocol. Please fill out, and send all completed documents to Ginny Beal at yoginny@cox.net

Center:
Date of Observation:
Observer Name & Role (e.g., participant or evaluator observer):
Numbers Attending the Session (Teachers, Mentor(s), graduate students etc.):

1. Evaluation/Observer Activities (interviews, observations):
a. Duration of observation:

b. Role of observer):

c. Teacher Interviews: **Submit Data on the following Documents:**
For teacher participants use and submit Participant Interview Guide (attached)
For teacher leaders use and submit Teacher Leader Interview Protocol (attached)

d. Mentor Interview: Submit Data on the following Document
 (Use Mentor Interview Protocol (attached)

e. Number of teachers who are reported to usually attend Center sessions (information from Mentor and/or teacher leader):

2. Demographics: (for as many teachers as available to ask) **Submit Data on the following document: Participant Interview Guide (attached)**

3. Stated reasons for participating at the Center and how they found out about QuarkNet) - **Submit Data on the following document: Participant Interview Guide (attached)**

4. Implementation (how are teachers stating they are using what they are learning in their classrooms) – Submit on the following documents: Participant Interview Guide, and Teacher Leader Interview Protocol (both attached).

5. Leadership:
a. Teacher Leader(s) role(s) - Submit data on the following documents: primarily the Teacher Leader Interview, and there could be relevant information from the Mentor and Participant Interviews; also consider the following when asking this question:
(i.e. Teacher(s) take on leadership responsibilities in aspects such as program

development, delivery, implementation and follow-up; teachers have input and/or involvement in decisions about the content, process, and implementation of their learning experiences.)

b. Mentor(s) role(s) - Submit data on the following documents: primarily the Mentor Interview, and there could be relevant information from the Teacher Leader and Participant Interviews; also consider the following when asking this question:
(i.e. Mentor provides content and technical support as well as contributing to/leading goal setting and mission; Mentor contributes to teacher professional development through an understanding of school/educational contexts.)

c. Role of and/or support from QuarkNet Staff teacher/Staff - Submit data on the following documents: Teacher Leader, Mentor and Participant Interviews.

6. Mission and/or Focus of the Center:
a. Center model for sessions: (i.e. build detector, lectures, field trip, other)
b. Overall goal or mission: (i.e use and share cosmic ray detector data)
c. Focus of the session:

7. Observation:
a. Key Activities:
(i.e. Does the workshop model teaching principles and strategies that can be transferred to the classroom; allow teachers to actively construct knowledge through hands-on activities; include the use of tools, methods and processes of scientists; include emphasis on "real world" science; include opportunities for teachers to plan for use of new knowledge and skills in their own classrooms, with their own curricula.)

b. Materials Used:

c. Next Steps (what they plan to do in sessions following this one):

8. Comments:
a. Extent to which the session furthers QuarkNet goals (e.g. research—scientific habits of mind, effective classroom practice, cutting-edge physics):

a. Balance of content and transfer to the classroom:

c. Designed for adult learners (e.g. relevant and practical, focus on teachers' interests and concerns, link teachers to resources and support):

d. Characterize attitudes/interactions between the participants and scientist(s):

e. Characterize attitudes/interactions among participants (including the teacher leader):

9. Issues/Concerns:
In addition to issues/concerns you may notice during the visit, it may also be helpful to consider the following, if not answered elsewhere:
Is there a strong Teacher Leader and Mentor?
Do participants meet regularly? When they meet are the meetings helpful, meaningful?
Does the institute address classroom implementation of activities; teacher professionalism (encourage teachers to attend meetings of professional organizations?
Is there support from QuarkNet Staff?
How does the Mentor intend to continue QuarkNet activities at the site?
Is there a stable participant base? Is there an effort to establish a learning community?

QuarkNet Teacher Leader Interview Protocol 2012

Reminder to interviewees: This will take only a few minutes of your time, and responses are kept anonymous. The information we gather is provided to QuarkNet Staff to help them improve the program, and to funding agencies.

Date:
Interviewer Name:
Teacher Name:
Center:

1. **What course(s), grade(s) and level(s) do you teach? Please indicate if the courses are General, Conceptual, Honors, AP, Regents. Check all that apply.**

Course	Grade					Level				
	7-8	9	10	11	12	General	Conceptual	AP	Honors	Regents
Physics										
Chemistry										
Biology										
Mathematics										
Research										
Other science										
Non-science										

2. **How many years have you been involved in QuarkNet?**

3. **a. In the past two years what workshops, including summer institutes or get-togethers during the school year, have you participated in at your QuarkNet Center?**

   b. What type of activity was provided; what happened at the workshop(s) /gathering(s)?

   c. What types of direct connections for how to use this in your classroom were introduced at the workshop(s)?

4. **Which QuarkNet activities have you participated in at the national level? If they need information about national programs visit: http://quarknet.fnal.gov/**

_____ a. Masterclass

_____ b. Boot Camp

_____ c. Cosmic Ray e-lab

_____ d. CMS e-lab

_____ e. LIGO e-lab

_____ f. Teaching & Learning Fellows

_____ g. LHC Fellows

_____ h. Other: which one(s)

5. What are you implementing in the classroom and how often?
Also, when asking this question, consider: (i.e. deep understanding by students of major physics concepts or principles, development of skills and "scientific habits of mind"; a scientific inquiry instructional approach that includes student investigation, discovery and application, using particle physics examples when discussing physics principles such as conservation of energy.)

Topics	1-2 lessons	3-5 lessons	1-2 weeks	Long-term Projects
e-lab				
Masterclass				
Particle Adventure				
Standard Model				
"Sprinkling" Examples (especially conservation momentum & energy)				
Research with a Detector				
Other:				

6. In what ways has your participation in QuarkNet events been helpful to your implementing QuarkNet (using resources, sprinkling HEP topics, using a Cosmic Ray Detector, etc.) in the classroom?

7. Do you see an effect on students from using QuarkNet activities and topics? (do they have a greater interest in science/physics/research, change in goals)

8. Since Participation in QuarkNet, have you:
a. been involved in giving workshops to other teachers, and what was the topic?
b. given a presentation and where?

c. attended meetings of professional organizations? (national, local)?
d. been involved in leadership at the school or district level (curriculum committee, technology committee, department chair, teacher liaison, etc.), and in what ways?

9. a. Do participants at your center meet regularly?
    b. How often?
    c. What kind of meetings?

10. Is there a learning community?
    (i.e., do you and other teachers work together to improve teaching and learning of science at your schools and/or conduct outreach to others)?

11. a. Who is in a leadership role at your center? (state the leader's name and role, e.g. mentor or teacher)

12. Explain the roles (what tasks related to the QuarkNet center and institute) and what your interactions are with each of the following:
    - Who is the Mentor/Faculty/Scientist/Researcher, what are their tasks and how do you interact?
    - Who is the Teacher Leader, what are their tasks and how do you interact?
    - Who is the QuarkNet Staff Teacher assigned to your center, what are their tasks and how do you interact?

Also consider the following when asking this question: (i.e. Staff provides specific support such as set up detectors, communication with teachers, attendance at institutes/events).

13. Is there other feedback you would like us to give to QuarkNet that might help improve the experience in the future?

2012 Site Visit – Participant Interview Guide

(Use this for interviewing teacher participants. The number of participants may vary.

Duration of Interviews:

Participant Names:

Question	Teacher A.	Teacher B.	Teacher C.	Teacher D.
1.Grades Taught				
2. Subjects Taught				
3. Years with QuarkNet				
4. Miles traveled to center				

5. Stated Reasons for Participating and how they found out about QuarkNet:

6. What are you implementing in the classroom and how often? (insert the total number of responses for each topic; responses do not have to correspond to a particular teacher)

Topics	1-2 lessons	3-5 lessons	1-2 weeks	Long-term Projects
e-lab				
Masterclass				
Particle Adventure				
Standard Model				
"Sprinkling" Examples (especially conservation momentum & energy)				
Research with a Detector				
Other:				

Also, when asking this question, consider: (i.e. deep understanding by students of major physics concepts or principles, development of skills and "scientific habits of mind"; a scientific inquiry instructional approach that includes student investigation, discovery and application, using particle physics examples when discussing physics principles such as conservation of energy.)

7. **Since Participation in QuarkNet, have you:**
   a. been involved in giving workshops to other teachers, and what was the topic?
   b. given a presentation and where?
   c. attended meetings of professional organizations? (national, local)?
   d. been involved in leadership at the school or district level (curriculum committee, technology committee, department chair, teacher liaison, etc.), and in what ways?

8. *Comment of the support* you receive from the following:*
  a. Teacher Leader:
  b. Mentor/Faculty/Scientist/Researcher:
  c. Staff Teacher(s)

*Note: Support includes: help with technical support, content understanding and classroom implementation.

Also, consider the following when asking this question: (i.e. Staff provides specific support such as set up detectors, communication with teachers, attendance at institutes/events and other)

9. Which QuarkNet activities have you participated in at the national level?

	Teacher A.	Teacher B.	Teacher C.	Teacher D.
a. Masterclass				
b. Boot Camp				
c. Cosmic Ray e-lab				
d. CMS e-lab				
e. LIGO e-lab				
f. Teaching & Learning Fellows				
g. LHC Fellows				
h. Other: which one(s)				

10. Other Comments that will help staff improve the program

QuarkNet Mentor Interview Protocol – 2011-12
Site Visits

Reminder to interviewees: This will take only a few minutes of your time, and your responses are kept anonymous. The information we gather is provided to QuarkNet Staff to help them improve the program, and to funding agencies.

Date:
Interviewer Name:
Mentor Name:
Center:

1. What is the extent of QuarkNet activities at your site?

2. What are you doing to continue QuarkNet?

3. Do you have or seek funding for additional activities?

4. Who is in a leadership role at your center and what is/are their role(s)?
   (probe to find if leadership tends to fall to one person (mentor or teacher leader) or if it is shared)

5. a. How do you recruit teachers for QuarkNet activities at your site?
   b. Are the same teachers returning, or are there new teachers?
   c. How many teachers make up the participant base? Is it stable?

6. a. What support do you get from the QuarkNet staff?
   b. Is it the level of support you expected? (e.g. what help did you need and get, and if you didn't get help, did you make those needs known to QuarkNet staff?)

7. What is your expectation for how teachers will implement what they learn at your center in their classrooms?

8. What do you hear from participants about how they are implementing what they learn?

9. Will you recommend a teacher for me to interview who is integrally involved (has a leadership role) with QuarkNet activities at your site?

10. Is there any other feedback you would like us to give to QuarkNet that might help improve the experience for future mentors?