Before turning the tape recorder on:

1. Explain the purpose of the interview.
   Thank you for taking the time to meet with me today. As you know, we are interested in understanding what it means to teach middle school mathematics in your district. I am going to be asking you questions about your teaching responsibilities, how you interact with your teacher colleagues, your views on quality instruction in mathematics, how you work with (your coach and) principal (or assistant principal), and the supports and resources that have been provided to you as a teacher.

2. Consent Process: Please be sure to consent the participant if s/he has not consented before (see Interview Process document). In all cases, tell the participant:

   Before we begin the interview, I want to remind you that participating in this study is voluntary and your responses are completely confidential. At any point during the interview, if you would like me to turn off the recorder, just tell me to do so. Do you have any questions about the study before we begin?

Turn the recorder on (*Ensure you have the mic in the mic jack!):

   This is District _____. It is (date) at (time). This is (interviewer’s name) and I am interviewing (teacher’s first name) at School _____.

Introductory Questions

1. (Just to clarify) how long have you been teaching middle school mathematics?
   a. How long have you been teaching math at this school?

2. Make notes on the teacher’s schedule (for videotaping) as you find out this information. What classes do you teach (e.g., 8th grade algebra)?
   a. Grade level?
   b. Are the classes you are teaching grouped by skill level (e.g., honors, enrichment, inclusion, etc.)?
      i. If so, ask teacher to explain how students are assigned to the classes (e.g., honors, inclusion).
   c. What curriculum or textbook do you use in each type of class?

3. What are the most important challenges of teaching mathematics in your school?
   a. (For challenges particular to students—e.g., motivation, reading skills—ask) Is that a challenge for all of the classes or just some of the classes that you are teaching?
b. (For challenges particular to teacher assistance—e.g., teacher needs help learning how to teach CMP2—ask) Has anybody provided you assistance to address ______?

**Teacher Collaboration**

I’m going to ask a few questions about the opportunities you have to collaborate with other middle school math teachers in your school.

4. What formal opportunities, if any, do math teachers have in this school to meet with one another? Anticipated responses: whole school meetings, grade level, math team meetings, committees, leadership teams, etc.

*Note to Interviewer: Ask this series of questions for each type of meeting in which mathematics teachers meet.

a. Who leads these meetings?
b. Who attends these meetings?
   i. Does an administrator attend these meetings?
      1. If so, what does s/he do in these meetings?
c. How often do you meet?
d. What do you typically do in these meetings?
   i. Ask teacher to explain what they do in the activity (e.g., lesson planning—Can you describe to me how you actually go about lesson planning? What does it look like?).
   ii. If they lesson plan together, please ask about the materials they use (see question #21).
e. What types of materials do you use in these meetings?
   Anticipated Responses:
   1. curriculum framework
   2. student work
   3. assessment data
   4. text books
   5. lesson plans
   i. How do you use these materials in the meeting?
   ii. Do you ever review student work in these meetings?
      1. If so, can you please describe how you do so (e.g., what you look at in the work)?
f. How, if at all, does participation in this meeting/activity influence your mathematics instruction?

5. How often do you observe other math teachers teach?
a. If the teacher does observe others, ask are you expected to observe others or do you do this on your own accord?
   i. If the teacher says s/he is expected to observe others, ask who expects you to do this?
b. What do you focus on when observing?
i. What guidance are you given about what to focus on when you observe others teach or what to talk about afterwards?
c. Do you have any follow-up conversations after your observation?
   i. If so, can you describe a typical follow-up conversation?
   ii. If so, do you use any materials or tools in these conversations, such as an observation protocol?
   iii. How helpful are these observations to you?
      1. In what ways?

Vision of Quality Instruction and Instructional Practices
Now I’d like to ask you a few questions about your view of high quality mathematics instruction.

*Notes to interviewer:
  o Probe on depth/specificity of response until you understand what the participant describes (e.g., If a teacher says “student engagement,” ask “Engaged in what?”).
  o Keep the form/function distinction in mind. Ask participants why they think _____ is important (e.g., Why do you think it’s important for kids to work in groups? Why do you think it’s important to hold a whole class discussion?).
  o If the interviewee talks about the structure of discourse (who’s talking to whom and when) probe on content (and vice versa). If the interviewee says, “Teachers (or students) should be asking questions,” probe to find out the kinds of questions the teacher (or students) should ask and for what purpose, as well as whether they conceive of discussion as happening in whole class settings and/or in small groups alone.

6. If you were asked to observe another teacher's math classroom for one or more lessons, what would you look for to decide whether the mathematics instruction is high quality?
   a. What are some of the things you would expect to find the teacher actually doing in the classroom for instruction to be of high quality?
   b. What kinds of problems or mathematical tasks would you expect to see the students working on for instruction to be of high quality?
      i. Can you please describe a _____ [use the word or phrase—e.g., “task” or “problem”—that the participant used for “task”] that you would consider to be of high quality?
   c. Can you please describe what classroom discussion would look and sound like if instruction were of high quality?
      i. Would you expect to see the entire class participating in a single discussion, or would students be talking primarily small groups?
      ii. Why?
   d. Is there anything else you would look for?
      i. If so, what?
      ii. Why?

7. To what extent do others in your school (math teachers, the coach, the principal) differ in their view of high quality math instruction from what you just described?
a. How do you know?

8. Do you feel you need to adjust your instruction for different classes? If the teacher teaches different “tracks” of students, ask specifically whether the teacher teaches differently in the different classes (e.g., “Do you find you teach differently in your honors class than you teach in your regular class?”).

*Note to Interviewer: Pick up on the labels and the names that the interviewee uses. Probe for what s/he means by the words s/he uses. For example, “I hear you saying that with the ‘advanced group’ you are able to hold a whole class discussion whereas with the ‘regular group’ you can’t. Why do you think that is?”

a. If not, why not?
b. If so, for which classes?
c. Why do you find you have to adjust your instruction?
   i. Are all of the students in your classes motivated? If not, why not?
d. How do you adjust your instruction?
   i. How about with pacing?
   ii. Do you use different tasks? *(Please ask for examples).*
   iii. Do you group students? If so, how?
   iv. Other ways?

9. Do you feel you need to adjust your instruction for different groups of students within a class? Why or why not?
   a. If so, for which groups of students? How do you adjust your instruction?
   b. We are aware that disparities exist regarding African American students and English Language Learners’ achievement in math in your district. Do you have any concerns regarding low-performing African American students in your classroom?
      i. Depending on what the teacher tells you, probe regarding why/the source of the problems s/he describes.
   c. Do you have ELLs in your classes?
      i. If so, Do you have any concerns regarding the ELLs in your classroom?
         1. Depending on what the teacher tells you, probe regarding why/the source of the problems s/he describes.
            a. Does their participation vary by language group?
               i. In what ways?
            b. Does their participation vary by ethnic or national origin?
               i. In what ways?
            c. Does their participation vary depending on their prior schooling experiences?
               i. In what ways?
10. Has your principal or math coach offered you any instructional support or professional development to help you work with groups of low-performing students (e.g., ELL, low-performing African American students)?
   a. If so, can you please describe these supports?
   b. To what extent have the supports helped you in your classroom?

_School Leader-Teacher Relationship_

Now I’m going to ask you about your relationship with your principal, his/her expectations for your job, and specifically how s/he supports math instruction. Before I ask those questions, I want to clarify which administrator, or administrators, is responsible for math instruction. Besides the principal, is there anyone else? If there is someone besides the principal, ask Who evaluates you?

[*Note to Interviewer: Make sure you ask this set of questions about the principal. However, if the interviewee tells you another administrator is responsible for math instruction, ask about that person too (e.g., assistant principal).]

11. Can you please describe what your principal expects you to do to be an effective math teacher in your school?
   a. Does your principal expect you to teach mathematics in a certain way?
      i. If so, how?
   b. Are you expected to collaborate with other teachers?
      i. If so, what are you expected to collaborate on?
   c. How does your principal typically communicate his/her expectations?
   d. What happens if you do not fulfill your principal’s expectations?
   e. Have there been any situations where you did not agree with what your principal expected you to do as a math teacher in your school?
      i. If so, can you please describe one of these situations?

12. Are student assessment results used to evaluate your performance?
   a. If so, how are they used?

13. What does your principal do to support your mathematics teaching?

14. Has your principal come to your classroom to observe you teaching mathematics during this school year?
   a. What kind of feedback do you receive after your principal observes your teaching? Probe on the content of feedback.
      i. Is the feedback written and/or oral?
   b. If the teacher does not receive any feedback, ask: What do you think s/he focuses on when s/he observes your teaching?

_Math Coach-Teacher Relationship_
We understand that your school has a math coach. I’m going to ask you a few questions about the role of the math coach in your school, his/her expectations for your job, and how you typically interact with your coach.

15. Have district leaders or your principal described what the role of the math coach should be?
   a. *If so, what is it (e.g., focus on individual teachers, groups of teachers)?*

16. Can you please describe what your math coach expects you to do to be an effective math teacher?
   a. Does your math coach expect you to teach mathematics in a certain way?
      i. *If so, how?*
   b. Have there been any situations where you did not agree with what your coach expected you to do as a math teacher in your school?
      i. *If so, can you please describe one of these situations?*

17. How often do you seek advice from your math coach about issues related to math teaching?
   a. *(If the teacher doesn’t seek help from the math coach)* Can you tell us why you don’t typically ask your math coach for assistance?
   b. *(If the teacher does seek help from the math coach)* What kind of things do you typically discuss with your coach?

*Note to Interviewer: If the teacher does not mention 1-4, ask specifically if the teacher seeks advice about them.*

1. Advice about which math problems or tasks to use with students?
2. Advice about math content? (E.g., Do you ever do math with your coach?)
   a. Ask what content and exactly what the coach and teacher talk about and/or do together. E.g., Do you work on problems together? If so, what type of problems?
3. Look at student work together?
4. Advice about meeting needs of ELLs and low-performing African American students?
   c. *After teacher finishes telling you what s/he seeks advice about, choose one topic that has the potential to be of high depth, and press for content of conversations. Ask*
      i. Can you give me an example of a recent conversation you had with your coach about ____ *(high depth activity)*?
         1. How did the coach work with you on this?
         2. **How helpful was the coach’s assistance?**
            a. *Is that typical?*
   d. Do you typically initiate these exchanges by requesting assistance from your math coach or does s/he approach you?

18. Does your math coach ever come to your classroom?
a. What is the purpose for his/her classroom visit? *(If the teacher does not mention i-iii, ask explicitly about each option.)*

i. To observe you teach?
   1. What was the purpose of her/his observation (e.g., to support your teaching, to evaluate your teaching)?
   2. What does s/he focus on when s/he observes your teaching?
   3. Do you have a follow-up conversation about the lesson?
      a. *If so, what do you talk about?*
      b. Do you find it useful?
         i. In what ways?

ii. To model instruction?
   1. How do you decide what the coach will model?
   2. Can you give me an example of when your coach modeled instruction in your class?
      a. What did you do while s/he taught?
   3. Did you find it useful?
      a. In what ways?
   4. Did you have a follow-up conversation about the lesson?
      a. *If so, what did you talk about?*

iii. To co-teach?
   1. How do you decide what you will co-teach?
   2. Can you give me an example of a lesson that you co-taught?
   3. Did you find it useful?
      a. In what ways?
   4. Did you have a follow-up conversation about the lesson?
      a. *If so, what did you talk about?*

**Professional Development**

*Now I’d like to ask you some questions about professional development specific to teaching mathematics. I’m going to first ask about district-based professional development and then I’ll ask about school-based professional development.*

19. So far this year, have you participated in _____[about each type of district-level PD]?
   a. Can you describe how the ___ has been so far?
   b. Did you participate in the PD with any other math teachers in your school? *If so, who (e.g., whole department, whole grade team)?*
   c. What was the content of the PD?
      i. Please provide an example of what you did in a session when you ____________________ *(use what the teacher told you in c).*
      ii. In your view, what was the purpose of _____ *(use what the teacher told you in c)*?
   d. How was this useful?
      i. To what extent were you able to incorporate the professional development into your instruction? Why or why not?
20. So far this year, have you had any **district-based** professional development or instructional support specifically targeted at meeting the needs of low-achieving students in mathematics (e.g., ELLs, low-performing African American students)?
   a. **If so,** please describe the kinds of support that were offered.
      i. Who provided the professional development/support?
   b. How have you made use of this support?

21. Has there been any formal **school-based** professional development about teaching mathematics that you have participated in during the past year?
   a. What has been the most useful session about teaching mathematics that you have participated in during the past year?
   b. Who provided the PD?
   c. Did you participate in the PD with any other math teachers in your school? **If so,** who (e.g., whole department, whole grade team)?
   d. What was the content of the PD?
      i. Please provide an example of what you did in a session when you _____________________ **(use what the teacher told you in c).**
      ii. In your view, what was the purpose of _____ **(use what the teacher told you in c)?**
   e. How was this useful?
      i. To what extent were you able to incorporate the professional development into your instruction? Why or why not?

**Materials for Planning Instruction**

*Now I’d like to ask you about your lesson planning.*

22. What materials do you use when you plan for instruction?
   Anticipated responses:
   i. **textbook**
   ii. **pacing guide**
   iii. **curriculum framework**
   iv. **state standards**
   v. **district assessments(e.g., benchmarks)**
   vi. **web resources**
   vii. **lesson plans**
   viii. **students’ notebook or portfolios**
   
   b. **For each material the teacher lists, ask** Can you give me an example of how you typically use _____ when planning for instruction?
      i. **If the teacher does not say #1-5 ask about them specifically.**

**Teacher Networks**

*Last, I’m going to ask you whom you seek out the most in your school for advice about math instruction.*
23. During this school year, who in this school have you gone to most often for advice about mathematics instruction?
   a. What role does that person play?
   b. What do you typically talk about with that person?
      i. Can you give me a specific example of a conversation you had recently with that person?

Closing Question

24. Is there anything that you would like to do instructionally that you feel you can’t do in your classroom?
   a. What?
   b. Why do you feel you can’t _______ in your classroom?