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 how you support middle school math teachers in your role as principal. In this interview I am going to ask you questions about your role in this school and district, to whom you are accountable and for what, your current plan for improvement in mathematics teaching and learning, and the resources and supports provided to school leaders and teachers for improvement in middle school mathematics teaching and learning.

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?

**Introductory Questions**

*Note to Interviewer: Only ask #1b to principals who are new to our study.*

1. How long have you been a principal?
   a. How long have you been a principal at this school?
   b. What grade levels and/or subjects did you teach before becoming an administrator?

**General Information about the Organization of Mathematics Teaching**

I’d like to ask you a few questions about how mathematics classes are organized in your school. If the principal is a returning participant in the study, say the following: We realize we asked these questions last year. We are checking to see if there have been any changes from last year to this year.

2. What courses does your school offer in math grades 6-8?
   a. Do some children receive math twice a day (“double dose”)
      1. If so, what are your goals for having children take math twice a day?

3. Does your school group children by skill level in mathematics?
   a. If so, what are the criteria by which you group?
   b. Are students grouped similarly for reading and math?
   c. What textbooks do the various groups use?
   d. How do you make decisions about how to assign math teachers to different skill level classes?
Goals for Math Instruction, Vision of High Quality Math Instruction, and Assessment of Math Teachers

Now I’m going to ask you a few questions about goals for math instruction in your school.

4. How would you describe the District’s vision of high-quality instruction in middle school mathematics?

5. What do you see as the district’s main strategies for achieving that vision across middle school mathematics classrooms?

6. What are your strategies this year for improving mathematics instruction at your school?

7. What are some of the major challenges you face when working to improve mathematics teaching and learning? (Probe on any responses that relate to hypotheses—e.g., Why do you think students are not prepared well?)

   Anticipated responses:
   1. Lack of resources
   2. Large class sizes
   3. Unprepared students, low skill levels
   4. Teacher knowledge
   5. Resistant teachers
   6. Testing pressures

8. Do you drop in on or formally observe your math teachers?
   a. How often?
   b. If so, what is the purpose of your observations?
   c. Do you ever have conversations about your observations afterwards?
   d. Do you use any forms or rubrics when you observe? (If so, ask the P for a copy.)
      1. How do you use the form/rubric when providing feedback to the teacher?
   e. Do you ever intervene in instruction when you are observing a math class?
      1. Under what circumstances?

9. If you were asked to observe a teacher's math classroom for one or more lessons, what would you look for to decide whether the mathematics instruction is high quality?

*Notes to interviewer:
 o Probe on depth/specifity 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.

  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?

  d. Is there anything else you would look for?
  
  i. If so, what?
  
  ii. Why?

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

a. How do you know?

b. *Ask only if there is a school-based math coach.* Does the math coach at your school share your view of high quality math instruction?

   1. *If not,* how are your views different?

11. What are your expectations regarding how math teachers should adjust their instruction for different groups of students?

a. in terms of the curriculum?

b. in terms of the mathematics tasks the children do?

c. in terms of pedagogical strategies?

d. *Ask specifically about ELL and groups of low performing African American students if the principal does not mention them.*

12. Could you give me an overall assessment of the quality of math teaching in your school in relation to what you have described as high-quality math instruction

a. *(If principal describes any relatively accomplished teachers, ask)* Do you use that teacher as a resource?

   1. *If so,* how?
13. Have you seen any changes in the quality of mathematics teaching in your school from last year to now?
   a. If so, can you please describe the changes?
   b. What do you attribute the change(s) to?

14. Could you describe the gaps in mathematics achievement between various groups of students at your school?
   a. If not already mentioned: Is there a gap between African-American students and others at your school?
      1. Do you have any concerns regarding the low-performing African American students in your school?
         a. Depending on what the principal tells you, probe regarding why/the source of the problems s/he describes.
   b. If not already mentioned: Is there a gap between English Language Learners and others at your school?
      1. Would you please describe the progress that the English Language Learners are making in your school?
      2. Do you have any concerns regarding the ELLs in your school?
         a. Depending on what the principal tells you, probe regarding why/the source of the problems s/he describes.

**Support for Teachers**
Now I’d like to ask you some questions about the supports you have provided for the math teachers at your school.

15. What are you doing in your school to support your middle school math teachers to improve their instruction? Probe on how the principal identifies expertise and/or provides access to expertise to teachers as you ask the questions below.
   a. Is there time provided in math teachers’ schedules for collaboration?
      1. by content area?
      2. by grade level?
      3. Are there specific things you expect teachers to do during collaboration time?
      4. Who leads collaborative time?
      5. What role do you or an assistant principal play in facilitating teacher collaboration?

   b. Does your school provide any in-house professional development specific to math?
      1. Who plans the professional development?
      2. Who leads the professional development?
      3. How often are these sessions held?
      4. Have you attended any math teacher PD sessions?

   c. Do you ever have conversations about how to use materials like math
standards, the curriculum, curriculum frameworks, or pacing guides with the math teachers at your school?

1. If so, what have you tried to accomplish in these conversations?

16. Does your school offer any supports to mainstream teachers to help them meet the instructional needs of low-achieving students in mathematics? (E.g., ELL specialist who works with the math teacher in a mainstream classroom, support focused on how to support African American students in mathematics)
   a. Can you describe those supports?
   b. How have teachers responded to ________?

17. How do you work with your assistant principal(s) to support mathematics instruction?
   a. How do you share those responsibilities?

School Based Coach-Principal Relationship
Now I’d like to ask you a few questions about how you work with the math coach at your school.

*Note to Interviewer: Only ask #18 to new principals or principals with new coaches.

18. How was the math coach selected for that position?
   a. If the district selects the coach, what are the criteria for becoming a math coach?
   b. If principal selects the coach, What criteria did you use to select the coach?
   c. Was your current math coach ever a teacher here?
   d. How difficult was the transition for the coach when s/he first arrived or changed from a teacher to a coach?
      1. Is there anything that you try to do to help this transition go more smoothly?

19. How would you describe the role of the math coach? Probe on specific activities the coach might do with the teacher and why these are important.
   Anticipated responses:
   1. Work with teacher
   2. Model instruction for teachers
   3. Have a model classroom

20. What are your expectations for the types of support that the math coach should provide teachers?
   a. Ask about the following goals for support if the principal does not mention them.
      1. How do you expect the coach to help the teachers use the curriculum?
   b. Ask about the following activities if the principal does not mention them.
1. Do you expect the coach to provide one-on-one coaching?
2. Do you expect the coach to meet with groups of math teachers?
3. Do you expect the coach to model high-quality instruction?

21. How do you know if the coach is providing the types of support you just mentioned?
   a. What do you do if the coach does not provide those supports?

22. How would you characterize your working relationship with the math coach?
   a. How do you support the work of the coach?
   b. Do you ever seek the coach’s help when making decisions about issues relating to math instruction?
      1. If so, can you please give a few examples of when you sought the advice of the coach?
      2. Do you ever ask the coach to help you interpret what you observed in a math classroom?
         a. If so, please describe a time when you did this with your coach.
      3. Do you ask the coach for help in assigning math teachers to classes?
      4. Do you ask the coach for help when purchasing instructional supplies for mathematics?
   c. Do you meet with the coach on a regular basis?
      1. What is the purpose of those meetings?
      2. What do you discuss during these meetings?
      3. Do you ever discuss the progress that math teachers are making in terms of improving their classroom instruction?
         a. Do you ever ask your coach to help you evaluate teachers’ performance?
         b. Do you ever discuss why some teachers are not making as much progress?
         c. If so, what are the reasons why some progress more than others?
      4. Do you ever discuss the content of teacher professional development sessions?
   d. Does the coach conduct walk-throughs or observations with you?
      1. If so, how often?
      2. What is the purpose of doing these observations together?
   e. How else do you interact with the coach about instructional issues?
   f. Have you experienced any challenges when working with the coach on issues relating to math instruction?
      1. If so, what have those challenges been?

**Principal Accountability**

*Now I am going to ask you about your relationship with the district central office.*
23. What do district leaders expect you will do to be seen as an effective instructional leader in mathematics?
   a. How does the district monitor that you are meeting those expectations?
   b. If you have difficulty meeting the expectations that the district has laid out, what will happen?

24. At the district level, who evaluates your performance as a principal (e.g., District math leader, superintendent, deputy superintendent)?
   a. What factors are considered in evaluating your performance?
      1. Is there an evaluation rubric? If so, ask for a copy.
      2. If so, how and when do you receive feedback based on the rubric?
   b. How does your school's math performance impact that evaluation?

**Supports and Resources (Principals)**

*Now I would like to ask about the supports and resources that have been provided to you as you work to improve mathematics teaching and learning at your school.*

25. Please describe the kinds of professional development activities in mathematics for principals in which you have participated this year.
   a. Which session was the most helpful?
      1. Why? Who led that session?
   b. Have any PD sessions changed the way you are attempting to improve mathematics instruction at your school?
      1. If so, in what ways?
   c. Has the district offered any supports that are specific to meeting the instructional needs of low-achieving students in mathematics?
      1. If so, please describe them.
      2. How about any supports particular to meeting the needs of ELLs or low-performing groups of African American students in mathematics?

26. So far this year, have you ever asked for additional support or resources for math instruction from the district office?
   a. If so, what additional support or resources did you request?
   b. What happened?

**Principal Networks**

*Last, I’m going to ask you whom you seek out the most in your school for advice about math instruction.*

27. During this school year, who 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?
a. Can you give me a specific example of a conversation you had recently with that person?

Closing Question

28. Is there anything else that I have not asked about that would help me better understand your role in the school and district, your plan for improving mathematics teaching and learning at your school, to whom you are accountable and for what, and what you believe are the necessary supports for improvement at your school?