Administrator Look-Fors for Effective Mathematics Instruction

1. Are your teachers working on building their pedagogical content knowledge?

You might look for:
- teachers are reading, studying, or working with colleagues so they know what math is important
- teachers are aware of different approaches to the important math
- teachers anticipate how students might respond differently, and prepare for those responses

Questions you might ask:
- What approaches to… did you consider? Why did you choose the one you did?
- What common misconceptions about…do your students have? How does that affect your instruction?
- What single statement would you want your students to be able to articulate as the result of the lesson?

2. Are teachers encouraging students to use personal strategies and mathematical communication?

You might look for:
- how often teachers force one strategy
- how often teachers have students share personal strategies
- how often teachers give feedback on those personal strategies
- how much teachers have students build on other students’ thinking
- whether teachers specifically teach communication strategies
- how comfortable students are asking questions
- how often students are asked to explain their thinking

Questions you might ask:
- How are you getting students to listen to each other’s strategies?
- How are you getting students to share their thinking?
- How are you handling situations where the student suggests ideas that are not clear to you when they are first offered?

3. Are teachers using ongoing assessment for learning data to create critical learning instructional pathways?

You might look for:
- how often teachers are changing instructional plans based on prior assessment
- how often teachers change instructional plans based on comments students make
- how often teachers ask questions that evoke student thinking
- how often teachers differentiate instruction
- whether teachers record assessment for learning information

Questions you might ask:
- How are you gathering data on your students’ prior knowledge?
- How are you using that data to change your instructional plans for individual students (or groups)?
4. Are teachers building meaningful success for all learners?

You might look for:
- how often teachers are providing appropriate problem solving activities for all students
- whether students who struggle work on important, but accessible, mathematics
- whether teachers’ attitudes promote confidence in the students
- whether teachers continue to support learners whose ideas are not clear enough right away

Questions you might ask:
  - How are you providing opportunities for all students to be successful in your math classroom?
  - How are you showing your confidence in all your students?

5. Are teachers trying many approaches rather than one approach many times?

You might look for:
- how often teachers are using open or parallel questions
- how often teachers are encouraging self-scaffolding and are scaffolding by leading rather than telling students
- how often teachers offer alternative methods when students struggle with a taught one

Questions you might ask:
  - How often are you focusing on the same big idea at different levels?
  - How do you make sure all your students are asked meaningful, higher level questions?
  - How are you teaching your students to self-scaffold?
  - Do you show an alternate method when students struggle?

Administrator Actions to Support Effective Mathematics Instruction

- Establish mathematics Professional Learning Communities (PLCs).
- Sponsor participation in appropriate professional learning.
- Arrange common planning times with a focus on enriching instruction.
- Offer to co-plan and/or co-teach with a teacher or link the teacher with an alternate coach.
- Make available appropriate manipulatives/technology.
- Build a professional library.
- Include discussions of mathematics teaching in staff meetings.
- Support collegial co-teaching activities, e.g., provide replacement teachers.