**Recommendations for PSI-PMI Implementation**

In addition to adopting Progressive Science Initiative (PSI) and/or the Progressive Mathematics Initiative (PMI) curricula and providing professional development to teachers and administrators on how to implement those program(s) in their classrooms and schools, it has been found that successful implementations follow these recommendations.

**Curriculum and Textbooks**

1. Textbooks are replaced by the free digital content at [www.njctl.org](http://www.njctl.org) which is used both in classrooms on Interactive White Boards (IWBs) as well as distributed to students either as printouts or electronically (e.g. laptops, Chromebooks, netbooks, tablets)
2. In high schools implementing PSI, the science sequence becomes physics-chemistry-biology, with all those courses required for all students; and the elective AP course sequence would become AP Physics – AP Chemistry – AP Biology (with each AP course immediately following the introductory course)

**Technology**

1. IWBs are used to efficiently deliver PSI-PMI course content in the classroom
2. Student Responders are used to effectively use embedded formative assessment
3. Teachers are provided a laptop computer with appropriate software so that they can plan at home or in school (or equivalent)
4. Printers are put in classrooms so that needed materials can be printed easily (or an equivalent solution would be provided)
5. Classroom internet access is provided so that course materials can be downloaded and used

**Classroom Furniture and Laboratory Equipment**

1. Five foot diameter round tables (or age appropriate equivalent) are used to promote social constructivist interaction
2. An IWB is the primary means for instruction, on one wall, and a large conventional white board is placed on another wall for ancillary and additional student work
3. Laboratories for PSI science domains (physics, chemistry and biology) are stocked with supplies specified on the PSI website; one set of laboratory equipment is sufficient for five teachers in a subject area

**Scheduling**

1. Mathematics classes meet every day for a minimum of 40 minutes and science classes meet for a minimum of 40 minutes for four days each week and once a week for a minimum of 60 minutes, to provide time for experiments
2. Professional Learning Communities are enabled by providing a class period, at least one day each week, for teachers to collaborate
3. Classes are heterogeneous to the extent practical, and tracking is minimized
4. After-school tutoring sessions are established to enable heterogeneous classes to be successful by providing struggling students a chance to learn from their teachers and/or peers outside of the normal class time, and to take retakes
5. Embedded professional development is in place to enable teachers to learn both content and methods from each other while creating a more open-classroom environment

**Policies and Practices**

1. Grading policies are used that correlate all assessments to the End of Course Assessment for that course by using the PSI-PMI curving program and by basing all grades on the objective outcomes of work done in front of the teacher: no grades are given for homework, participation, behavior, attendance, etc.; only for the results of assessments (with a small contribution from laboratory work in science courses)
2. Retakes of all major assessments are encouraged (with only the highest grade counting) so that the emphasis is on what students learn and not when they learn it…and not “allowing” students to fail by constantly encouraging them to keep trying
3. Common unit assessments are offered on approximately the same day so that all students can study together or get help from any teacher
4. Teaching assignments are made so that all teachers are teaching children with a spectrum of past achievement; as wide a diversity of grade levels as possible; and as many content areas as possible in order to encourage school-wide cohesion and strong horizontal / vertical curriculum articulations
5. Teacher leadership is promoted so that teachers share in both the responsibility for student achievement and the authority to take actions to improve it