*Washington Students:*
*World Class Mathematicians*

# A Program to Move Washington Schools and Students to World Class Status

# *Washington Students: World Class Mathematicians*

Two Goals frame the proposed, expanded mathematics initiative - -

- To assist current middle and high school students to be prepared to meet the 2008 mathematics proficiency requirement for high school graduation

- To design and launch a systemic capacity building program to attain mathematics excellence for all schools and students

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The initiative is based on the key components of effective mathematics systems –

- Strong content *frameworks*
- Instructionally sound *textbooks and materials*
- Meaningful and aligned *assessments*
- Well-prepared *teachers*
- Ongoing systems of *professional development*

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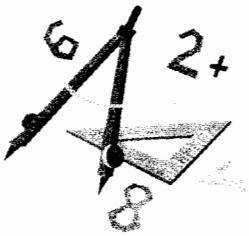
Strong content *frameworks* which –

- Provide additive spiral of core content strands
- Provide clear, coherent topics
- Are limited to provide sufficient instruction to achieve deep understandings, balance of topics, and increasing problem complexity of topics
- Content is supported by visual representations and multiple levels of complexity



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Instructionally sound textbooks and materials which provide –

- Depth of lessons
- Successively deeper topic content across grades
- Balance of topic coverage
- Multiple representations
- Effective instructional strategies
- Increasing problem complexity

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## Meaningful and aligned assessments - -

- State assessments aligned with the standards and mathematics core knowledge
- Classroom assessments to assist in the diagnosis of student needs
- Processes and procedures to analyze and use assessment data

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Well prepared teachers with –

- Strong knowledge of mathematics content across grades and strands
- Developed skills in providing a variety of instructional methods
- Skills in facilitating student discourse
- Ability to relate and respond to students in personal and academic activities.

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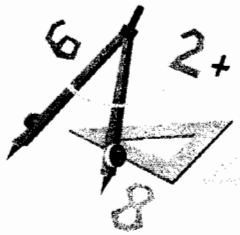
## Ongoing professional development systems which - -

- Provide a balance of content and instructional process
- Are practice based providing knowledge, skills and strategies for struggling, mainstream and gifted students
- Are provided at the school level, district level and state level
- Demonstrate a coherent approach to a cumulative, sequential pattern of learning and growth
- Include teachers, principals, superintendents, and other school staff



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## The needs of struggling middle and high school students will be met by - -

- Continuing identification of research based and effective programs, strategies, texts, and practices
- Provision of instructional modules for summer schools and classroom instruction
- Development of mathematics core knowledge to intensify curriculum and instruction
- Continuing identification and implementation of effective interventions
- Monitoring of interventions to increase quality and effectiveness of programs and interventions

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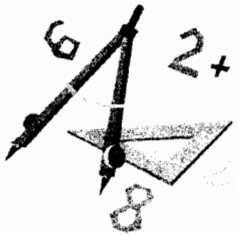
**Mathematics capacity building activities will include - -**

- Organization of a steering committee to represent various education systems
- Development of a tool kit of information, resources and strategies for teaches and administrators
- Development of training modules for ESD and OSPI staff and district staff and installation of professional development systems
- Development of training modules focusing on core knowledge and differentiated instruction
- Design and implementation of summer camps for struggling and gifted students
- Development of mathematics practice based, three year program leading to an MA degree for teachers
- Design and implementation of a student information and leadership program
- Development of a public information and activities program



# *Washington Students: World Class Mathematicians*

## Timelines

Five year program with four phases

- Implementation and development
- Refinement and initial implementation of Goal 2
- Improvement and operational installation
- Evaluation, planning, and renewal

# *Washington Students: World Class Mathematicians*

## Funding

*Current State funding*

- Basic education and program
- Washington Learns - - coaches and professional development days
- Potential program funds

*Federal – Reallocations of current funds*

- Possible Mathematics NOW funding

*Foundations*

- Specific programs and events

*Corporations*

- Specific programs and events

*Educators/Districts*

- Degree tuition