

# MATH FLUENCY FRAMEWORK

## ESSENTIAL ELEMENTS

1

### Understand

#### Research Framework

- 4 Elements of Fluency
- Cycle of Engagement
- Automaticity
- Practice
- Math Talk
- Modeling Mathematical Thinking
- Students Engagement

#### Shared Definitions

- School Administrators
- Teachers
- Students
- Parents
- Other Stakeholders (school staff & larger community)
- Mission Statement
- Vision Statement

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### Assess

#### Get the Data (build fluency profile)

- 4 Elements of Fluency
- Looking at individuals, classes, grades, grade bands and school trends
- Math Running Records
- Conferring
- Standardized Tests

#### Use the Data

- Make an Individual Fluency Plan
- Student Goal Setting
- Make Acceleration Plans
- Map out Daily Fluency Routines
- Plan Family Math Fluency Days & Nights

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### Prepare

#### Classroom Design

- Differentiated Fluency Workstations
- Fluency Anchor Charts (Class Strategy Models Learning Target/ Success Criteria)
- Classroom Library (section on fluency books)

#### Materials

- Fact Fluency Folders
- Fact Fluency Rings
- Fluency Progressions
- Strategy Anchor Charts
- Model Anchor Charts
- Goal Setting
- Progress Monitoring
- Certificates
- Fact Fluency Parent Brochures/Newsletters by Grade
- Fact Fluency Videos by Operation
- Fact Fluency Website
- Student-created strategy cards
- Core set of manipulatives/ tools (domino, dice, 2 sided counters, cubes, highlighters, colored pencils, different types of paper (grid, centimeter, blank), rulers, number paths, beaded number lines, number lines and hundred grids).
- Plan Family Math Fluency Days & Nights

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### Teach

#### Instruction

- Daily Routines- Whole Group
- Workstations - Individual, Partners, Small Group
- Guided Math Groups
- Personalized Goal Setting
- Homework

#### Assessment (Ongoing)

- Math Running Records
- Entrance/Exit Slips
- Observations
- Anecdotal
- Interviews
- Conferring
- Student Reflection

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### Reflect/Revise

#### Analyze the Data (weekly, monthly, quarterly)

- Individually
- Class
- Grade
- Grade Band
- School

#### Interpret the Trends and Adjust Instruction Accordingly

- Individually
- Class
- Grade
- Grade Band
- School