Instructional Guidance Document

English Language Arts
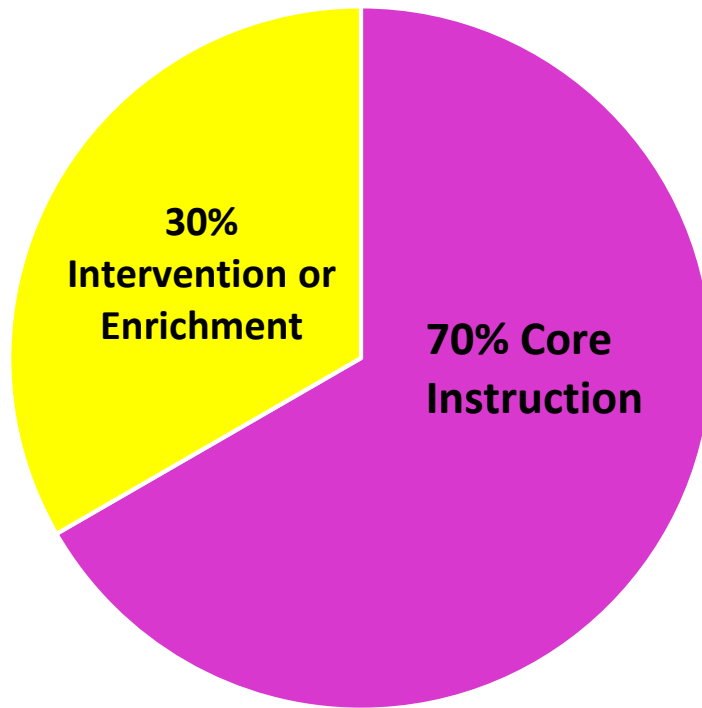## and Mathematics
Middle School

Department of Teaching and Learning

Literacy Block Composition
Middle School

The literacy block should be composed as follows: 55 minutes for Reading and Writing and an *additional* 30 minutes for intervention if needed.   It takes time reading, interacting and discussing books to become literate.

If a majority of Middle School grade students are *below grade level in reading*, additional time with reading instruction can be used through an REP model. Additional reading of text can be coordinated with the science and social studies teachers through teaming.

This chart is the *minimum* suggestion. Instructional minutes should be protected during the Reading Instructional Block. Students need to receive instruction in each area in order to make adequate progress. Students will need the additional intervention time if they are behind grade level in reading.	
Total Minutes: 85	
Daily Reading and Writing Instruction: 55 minutes	Daily Reading Intervention: 30 minutes *During school-wide intervention time OR REP*

Evidence-based Research

English Language Arts- Core Instruction
Middle School

This evidence-based balanced literacy English Language Arts Block is for grades 6-8th. The core instruction includes vocabulary instruction, reading comprehension strategies, and explicit writing strategies for the writing process.

5 | **Word Study Routine**
List of routines for word study can be found in the RCK12 Teacher Toolbox

Students transition quickly to classroom and interact with new words. Read aloud, student friendly definitions, or word sort can be used.

15 | **Whole Group**
Activating Strategy

Direct, explicit instruction on reading comprehension strategy **or** writing strategy for each component of the writing process. Exemplars, complex text and integration of reading and writing are consistently utilized.

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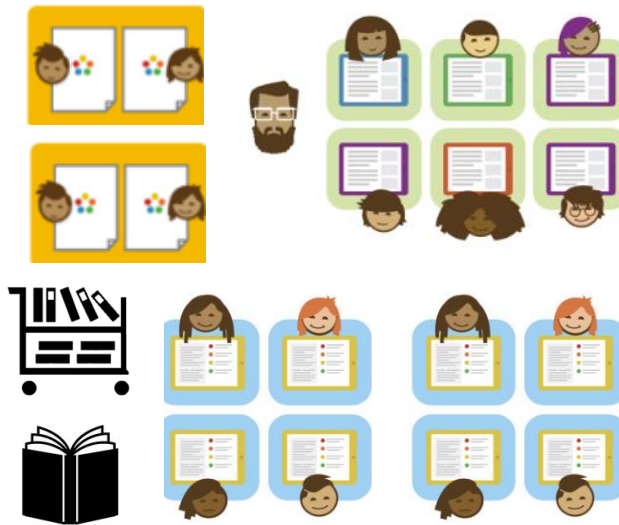
Teacher facilitates a needs-based group to provide modeling and support of the reading or writing strategy OR confers with individual students on goals. Students are typing essays and a classroom library is utilized.

5 | **Closing Routine**
Closing Routines are available in the RCK12 Teacher Toolbox

Closing routines include a summary of learning (i.e. class discussion, sharing of work, assessment).

Revised July 11, 2019

Types of grouping for Middle School Students

In a secondary classroom, effective teachers use a variety of grouping formats to meet individual student needs.

1. **Collaborative Pairs** (Quiet Discussion)
   In pairs, students should engage in discussion that communicates mathematical ideas, strategies and solutions.

2. **Coastline** (Silent, 1:1 Technology Use/Blended Learning)
   All 1:1 technology access happens on the Coastline. Students literally lineup on the walls of the classroom, facing the wall so that the teacher can see their screen from anywhere in the room.

3. **Island** (Quiet Discussion)
   On the Island, students pull their desk or table together to engage in a collaborative discussion. Their discussion could stem from posed questions or working with math tools within their given class. Another option for the Island is to have students work on hands-on, fluency, exploration, multi-step, or investigation tasks. Regardless of what the students are doing though, there is no technology.

4. **Peninsula** (Teacher Instruction, Medium Volume, Discussion)
   The teacher is the base of the Peninsula, as this final station is for a small group or direct instruction. The only technology use in on the Peninsula is a teacher device, like a forward facing laptop or SmartBoard. From his or her position, the teacher should be able to see and monitor the rest of the classroom during this instructional time.

English Language Arts Expectation Rubric – Core Instruction Middle School Grade

The ELA rubric below is used as a fidelity check to monitor specific *success criteria* of the core instruction component of the Language Arts Course.

	Highly Effective	Approaching	Ineffective
Word Study Routine	Teacher: • Quickly reviews the information and how it will pertain to the lesson for today and makes real- life connection.	Teacher: • **Leisurely** reviews the information and how it pertains to the lesson.	Teacher: • **Calls roll** and has students completing busywork/copying notes. • **Wastes** instructional time gathering materials, turning on computer, in hall talking.
	Students: • **Uses** new knowledge in context, with others, and make meaning of the new information.	Students: • **Sometimes** use new knowledge in context, with others, and make meaning of the new information.	Students: • **Hanging out**, playing on their phones. • **Copying** notes from the board.
Whole Group	Teacher: • Provides explicit **vocabulary instruction** on word meanings and parts. • Models explicit **writing strategies** for each part of the writing process. • Uses a variety of written exemplars to highlight the key features of text. • Uses **direct and explicit instruction**, with carefully selected text, for comprehension strategies. • **Models** how to use the strategy with a **Think Aloud**, guided practice and feedback. • **Builds Knowledge** by providing opportunities for extended discussion of text meaning and interpretation through all DOK levels of questioning.	Teacher: • Sometimes provides vocabulary instruction on word meanings. • **Models** one writing strategy for one part of the writing process. • Shows students an exemplar but does not highlight the key features of the text. • Uses **texts** for comprehension strategies. • Models how to use the strategy. • Sometimes leads discussion of text meaning and interpretation through questioning.	Teacher: • No vocabulary instruction. • Does not model the writing strategy. • Only posts, or does not use exemplars in instruction. • Sometimes texts are **not present** for the strategy lesson. • Never models the strategy. • Assigns text questions with no student discussion of meaning.
	Students: • Discuss the vocabulary word meaning and image with peers or in a game. • Make use of writing strategy, mentor texts, anchor papers, rubrics, and checklists to engage in writing process and **type essays.** • **Annotates** key features in the exemplar text in their hands or electronically. • **Practice** reading strategy and interact with text by discussing, citing, analyzing, annotating, summarizing and/or displaying knowledge gained from interaction with text and others. • Free write to all genres and write in response to text.	Students: • Discuss the vocabulary definition. • Practice a writing strategy on a draft, but not full writing process, **and rarely types essays.** • Read an exemplar text. • Practice using a reading strategy by summarizing or answering questions from the text or teacher. • Write to the three tested genres and in response to text.	Students: • **Do not** discuss words. • Attempts to write with no strategy or guidance on the process. • Rarely see an exemplar text. • Follow along to a PowerPoint explaining a strategy. • Sometimes write to one genre but complain to avoid it.

English Language Arts Expectation Rubric – Core Instruction Middle School Grade
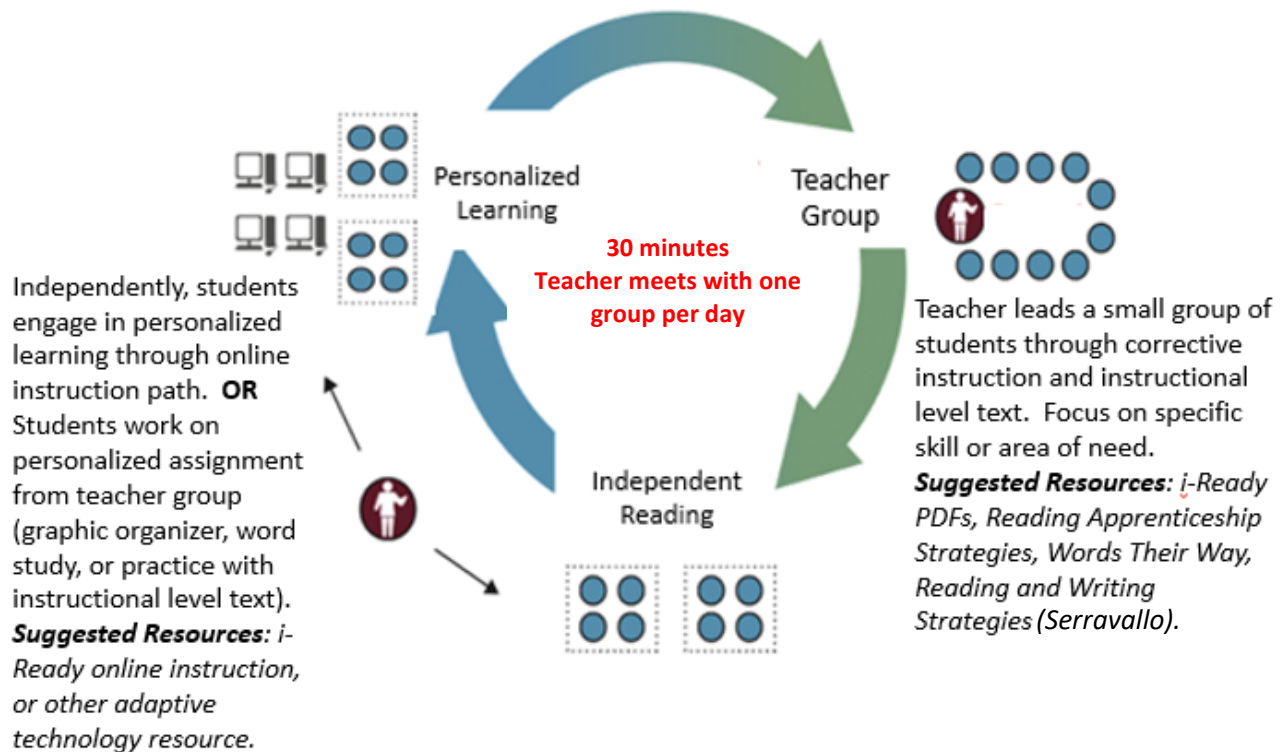
The ELA rubric below is used as a fidelity check to monitor specific *success criteria* of the core instruction component of the Language Arts Course.

	Highly Effective	Approaching	Ineffective
Teacher Group	Teacher: • **Meets daily with one needs-based small group or confers with individual students** to provide support in reading and writing. • **Determines students' needs** and regroups students on the basis of systematic observation and assessment data. Keeps track of student progress. • Scaffolds reading and writing by use of modeling, discussion, repeated readings, advance organizers, DOK 1-4 questions and goal setting around mentor text in gradual release model. • **Provides opportunities** for students to apply and practice modeled strategies and **gives corrective feedback verbally or electronically**.	Teacher: • Meets with a few students individually to give feedback. Selection of students may or may not be based on data. • Determines students' needs based on assessment data, and sometimes groups students. **Keeps track of progress** through screener data only. • Scaffolds reading and writing by use of modeling and asking questions around mentor text. • Sometimes provides opportunity to apply and practice strategies and gives feedback.	Teacher: • **Inconsistently, rarely or never** meets with students in a small group or individually. • Often does not know what students need based on **inconsistent use** of data. • Asks students to read or write **without modeling** or opportunity to discuss meaning or interpretation. • Does not provide opportunities for practice nor feedback.
	Students (in teacher group): • **Read** and annotate instructional level text. • Practice and apply reading and writing strategies. • **Engage** in peer-to-peer, teacher-to-student, and student-to-teacher discussion that makes inferences, generalizations and interpretations of text • Write short constructed responses or essays to demonstrate understanding of text.	Students (in teacher group): • **Read** a text. • May engage in some reading strategies. • **Respond** to teacher prompts, cues and questions. • May or may not write the responses or essay.	Students (in teacher group): • **No text** present; words are read in isolation. • Do not engage in reading strategies. • Answers questions **without referring to the text.** • **Do not write**.
Independent Groups	Students (independently or in small groups): • Read independently and annotate text or make notes of evidence to include in writing. Utilizes vocabulary strategies to define unknown words or word analysis. • Partner read book/article and discuss the meaning and interpretation of text following the teacher provided task or discussion protocol. • Work on daily writing in writing process and type essays. • Utilize technology to research/gather multiple information sources, conduct short research projects that use several sources and to build knowledge through investigation of a topic or personalized learning.	Students: • Read independently. • Partner read book/article and discuss the basic meaning of text. • Work on daily writing in some of the writing process but rarely type essays. • Utilize technology for one research activity or basic recall activities.	Students: • Read when prompted by teacher. • Do not engage in peer to peer-to-peer conversations related to the text or task. • Writing only consists of short constructed responses or filling in worksheet with a sentence or two. • Do not use technology.
Closing Routine	Teacher: • Facilitates a summary of the learning with a sharing of student work and class discussion to reinforce purpose.	Teacher: • Guides a summary of the learning with a sharing of student work and class discussion but does not reinforce purpose.	Teacher: • May or may not summarize the lesson without student input.
	Students: • Participate in the summary of the lesson, ask and answer questions.	Students: • Listen to the summary of the lesson, and answer questions if asked.	Students: • Do not participate in the summary of the lesson.

ELA Block Intervention
30 minutes – Middle School

Tier 2 and Tier 3

During intervention time, students have **explicit, direct instruction** in a small group setting. They are given time and opportunity to learn and practice skills and strategies to build literacy with peers. Careful selection or student selection of highly motivating text is used to increase engagement and motivation.

Personalized Learning

Teacher Group

30 minutes Teacher meets with one group per day

Independently, students engage in personalized learning through online instruction path. **OR** Students work on personalized assignment from teacher group (graphic organizer, word study, or practice with instructional level text). ***Suggested Resources:*** *i-Ready online instruction, or other adaptive technology resource.*

Teacher leads a small group of students through corrective instruction and instructional level text. Focus on specific skill or area of need. ***Suggested Resources:*** *i-Ready PDFs, Reading Apprenticeship Strategies, Words Their Way, Reading and Writing Strategies (Serravallo).*

Independent Reading

Students are reading independent level books; responding to text in writing or in group discussions (partner or book club), are responding to the text in some authentic way (creating book review or comprehension activity).

Suggested Resources: *Classroom Library, Media Center, reading logs, teacher provided prompts, graphic organizers.*

Evidence-based reference

Reading Intervention Expectation Rubric – Intervention

The ELA rubric below is used as a fidelity check to monitor specific *success criteria* of the core instruction component of the reading block.

|	Highly Effective	Approaching	Ineffective
Learning Environment	• Small groups are present (personalized online learning station, independent station, and teacher station). • Current data is available to support grouping structures. • Students are aware of personal achievement level, set and monitor individual goals. • Exemplars are continually available for students to reference. • Directions and tasks are available for students to reference during their independent practice time. • Rotation schedule is posted and referenced. • All students engage in discussions about text; student to student, student to teacher.	• Some small groups are present (personalized online learning station, independent station or teacher station). • Out of date data is available to support grouping structures. • Students are aware of personal achievement level but do NOT set and monitor individual goals. • Exemplars are available, for students to reference, however they are not aligned. • Some directions and tasks are available for students to reference during their independent practice time. • Rotation schedule is posted but not referenced. • Some students engage in discussions about text, but mostly teacher to student.	• No small groups are present • Data is not available to support grouping structures. • Students are unaware of personal achievement levels. • Exemplars are not available for students to reference. • No directions and tasks are available for students to reference during their independent practice time. • No rotation schedule is posted. • No students engage in discussions about text.
Independent Reading And Personalized Learning Stations	• **Actively engaged** in independent reading or personalized online learning. • **Reading** books and **responding** to text in writing. • **Passing** online lessons with >80% accuracy.	• **Some students are engaged** in independent reading or personalized online learning. • **Reading** books and rarely **responding** to text in any way. • **Passing** online lessons with 50-79% accuracy.	• **Not engaged** in independent reading or personalized learning. • Students are not reading books but rather walking around, playing/distracting others. • **Passing** online lessons with less than 50% accuracy.

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Reading Intervention Expectation Rubric – Intervention

The ELA rubric below is used as a fidelity check to monitor specific *success criteria* of the core instruction component of the reading block.

	Highly Effective	Approaching	Ineffective
Intervention Teacher Station	Teacher: • **Provides** step-by-step demonstrations and modeling of literacy concepts and how it connects to text. • **Observes all** student participating in oral reading. • **Interacts** with all students to teach, prompt, or reinforce effective reading behavior. • **Provides** constant feedback to all students to clarify misconceptions. • **Consistently engages** students with text-based discussion around focus skill/strategy. • **Consistently progress monitors** students.	Teacher: • **Provides** some step-by-step demonstrations and modeling of literacy concepts and how it connects to text. • **Observes some** oral reading. • **Interacts** with some students to teach, prompt, or reinforce effective reading behavior. • **Provides** some feedback to students to clarify misconceptions. • **Inconsistently engages** students with text-based discussion around focus skill/strategy. • **Inconsistently progress monitors** students.	Teacher: • **Does not provide** step-by-step demonstrations and modeling of literacy or how it connects to text. • **Does not observe** oral reading. • **Does not interact** with students to teach, prompt, or reinforce effective reading behavior. • **Does not provide** feedback to students to clarify misconceptions. • **Does not engage** students with text-based discussion around focus skill/strategy. • **Does not progress monitor.**
	Students: • **Practice** focus skill/strategy by reading and writing. • Consistently apply the focused literacy skill in reading a text. • **Consistently monitor progress** and verbalize misconceptions around focus skill/strategy.	Students: • **Listen and** observe focus skill/strategy but have minimal practice time. • Inconsistently apply the focused literacy skill in reading a text. • **Inconsistently monitor progress** and sometimes verbalize misconceptions around focus skill/strategy.	Students: • Sit passively or put head down while teacher talks at them. • **Do not apply** the focused literacy skill in reading a text. • **Do not monitor progress** and do not verbalize misconceptions around focus skill/strategy.

Mathematics Block Composition – Middle School

The mathematics block should be composed as follows: 55 minutes for core (grade level) mathematics instruction an *additional* 30 minutes for intervention/enrichment if needed. The mathematics block is structured to provide *approximately* 70% core instruction (grade level) and *approximately* 30% intervention/enrichment (below/above grade level) to all students.

Intervention or Enrichment 30%

Core Instruction 70%
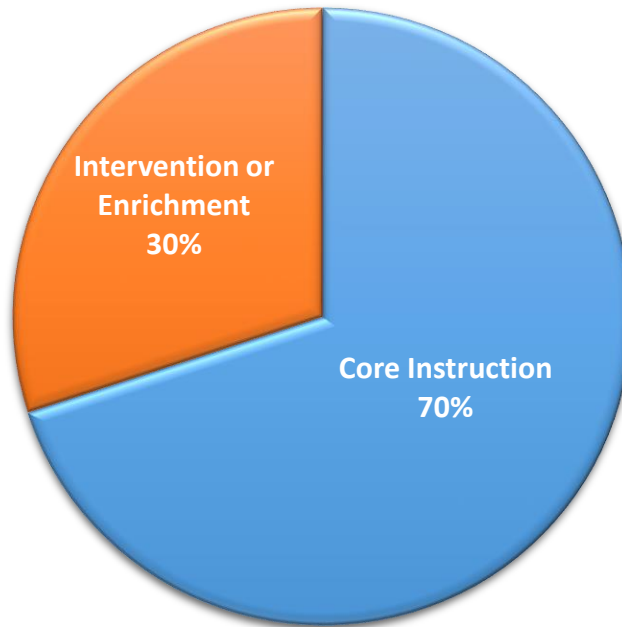
Instructional Minutes

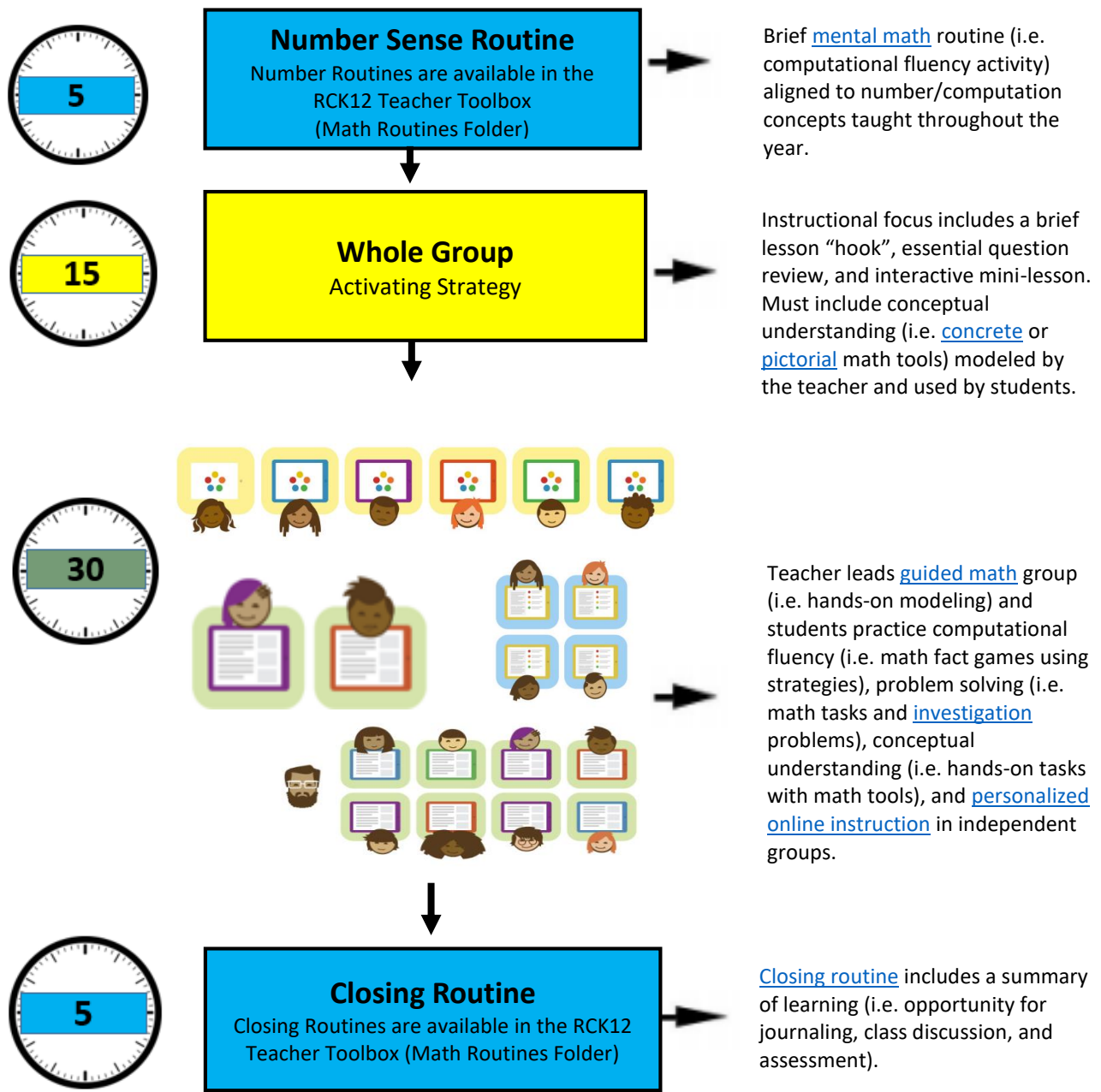| This chart is the *minimum* suggestion. |
|---|
| Instructional minutes may be increased based on your students' instructional needs. Instructional minutes should be protected during the Mathematics Instructional Block. Students will need intervention time if they are below grade level in mathematics. |

Total Minutes: 85

Daily Core Instruction:	Daily Intervention/Enrichment:
55 minutes	30 minutes
	During school-wide intervention time OR REP

Evidence-Based Bibliography

Mathematics Block Expectations – Core Instruction
Middle School

The research-based Mathematics Workshop Model outlines the structure of the core instructional (grade-level) components of the mathematics block. The instructional activities must align to Balanced Numeracy instructional expectations. Balanced Numeracy includes Conceptual Understanding, Computational Fluency, and Problem Solving. The tasks and/or activities for each day should be selected intentionally to support student needs and the goals of the lesson.

5

Number Sense Routine
Number Routines are available in the RCK12 Teacher Toolbox
(Math Routines Folder)

Brief mental math routine (i.e. computational fluency activity) aligned to number/computation concepts taught throughout the year.

15

Whole Group
Activating Strategy

Instructional focus includes a brief lesson "hook", essential question review, and interactive mini-lesson. Must include conceptual understanding (i.e. concrete or pictorial math tools) modeled by the teacher and used by students.

30

Teacher leads guided math group (i.e. hands-on modeling) and students practice computational fluency (i.e. math fact games using strategies), problem solving (i.e. math tasks and investigation problems), conceptual understanding (i.e. hands-on tasks with math tools), and personalized online instruction in independent groups.

5

Closing Routine
Closing Routines are available in the RCK12 Teacher Toolbox (Math Routines Folder)

Closing routine includes a summary of learning (i.e. opportunity for journaling, class discussion, and assessment).

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Types of grouping for Middle School students

In a secondary classroom, effective teachers use a variety of grouping formats to meet individual student needs.

1. **Collaborative Pairs** (Quiet Discussion)
    In pairs, students should engage in discussion that communicates mathematical ideas, strategies and solutions while working on hands-on, fluency, exploration, multi-step, or investigation tasks.

2. **Coastline** (Silent, 1:1 Technology Use/Blended Learning)
    All 1:1 technology access happens on the Coastline. Students literally lineup on the walls of the classroom, facing the wall so that the teacher can see their screen from anywhere in the room.

3. **Island** (Quiet Discussion)
    On the Island, students pull their desk or table together to engage in a collaborative discussion. Their discussion could stem from posed questions or working with math tools within their given class. Another option for the Island is to have students work on hands-on, fluency, exploration, multi-step, or investigation tasks. Regardless of what the students are doing though, there is no technology.

4. **Peninsula** (Teacher Instruction, Medium Volume, Discussion)
    The teacher is the base of the Peninsula, as this final station is for a guided math (i.e. hands-on modeling) lesson. The only technology use in on the Peninsula is a teacher device, like a forward facing laptop or SmartBoard. From his or her position, the teacher should be able to see and monitor the rest of the classroom during this instructional time.

Mathematics Block Expectation Rubric – Core Instruction – Middle School

The math rubric below is used as a fidelity check to monitor specific *success criteria* of the core instruction component of the mathematics block.

		Highly Effective	Approaching	Ineffective
Number Sense Routine (i.e. Number Talks)		Teacher: • **Facilitates** a whole group mental math activity where students find an answer to a math problem "in their heads". • **Facilitates** by asking students a combination of **low-, mid- and high-level** questions, recording responses, and encouraging students to make meaning of the mathematics through discussion.	Teacher: • **Instructs** a whole group mental math activity where students are **guided** to an answer of a math problem. • **Guides** student thinking to answer questions and records guided responses on the board (teacher is doing most of the thinking).	Teacher: • **Does not** include a number sense routine at the beginning of the math block. • Encourages students to complete unfinished homework problems or other tasks during the number sense routine time.
		Students: • Share **aloud** the **strategies** they used to find the answer. • Practice **explaining their thinking** and asking each other questions.	Students: • Share aloud the strategies they used to find the answer **with teacher prompting**. • Practice explaining their thinking and asking each other questions **with prompting from the teacher**.	Students: • Complete abstract worksheet exercises (i.e. Daily 5 abstract practice exercises). • Completes homework.
Whole Group		Teacher: • Uses **strategies** to activate prior knowledge and draws on **student experience** to engage students. • **Models** the grade-level math standard with concrete or pictorial math tools and **connects to prior learning**. • Talk focuses on **low-, mid- and high-levels** of mathematical thinking and questioning (i.e. DOK 1-4).	Teacher: • **Attempts** to activate students' prior knowledge but fails to go far enough to engage students. • Models the grade-level math standard with concrete or pictorial math tools but **does not** connect to prior learning. • Talk focuses on **low-levels** of mathematical thinking and questioning **only** (i.e. DOK 1 only).	Teacher: • **Does not** attempt to activate students' prior knowledge or acknowledge students' experiences in instruction. • **Does not** include any modeling with math tools. • Does not use math talk or questioning.
		Students: • Use math tools to develop conceptual understanding of the lesson and **communicates** mathematically how and why to use the tool. • Engage in **multi-step** tasks that require **low-, mid- and high-level** cognitive demands, problem solving and reasoning (i.e. DOK 1-4) • Exhibit **strong** perseverance in problem solving by *looking for multiple entry points/solution paths*. • Engage in **peer-to-peer, teacher-to-student, and student-to-teacher** discussions that communicate mathematics ideas, strategies and solutions.	Students: • Use math tools to develop conceptual understanding of the lesson but **cannot communicate** mathematically how and why to use the tool. • Engage in **one-step** tasks that require a **low-level** cognitive demand, problem solving and reasoning (DOK 1 only). • Exhibit **some** perseverance in problem solving by *looking for one entry point/solution path*. • Engage in **peer-to-peer, teacher-to-student, and student-to-teacher** discussions that communicate mathematics ideas, strategies and solutions at a **low-level cognitive** demand (DOK 1 only).	Students: • **Do not** use math tools. • Engage in **naked number exercises** without conceptual understanding. • **Do not** persevere in problem solving (i.e. *students could not figure out how to get started on a problem, or when confronted with an obstacle they stopped working*). • **Does not** engage in **peer-to-peer, teacher-to-student, and student-to-teacher** discussion.

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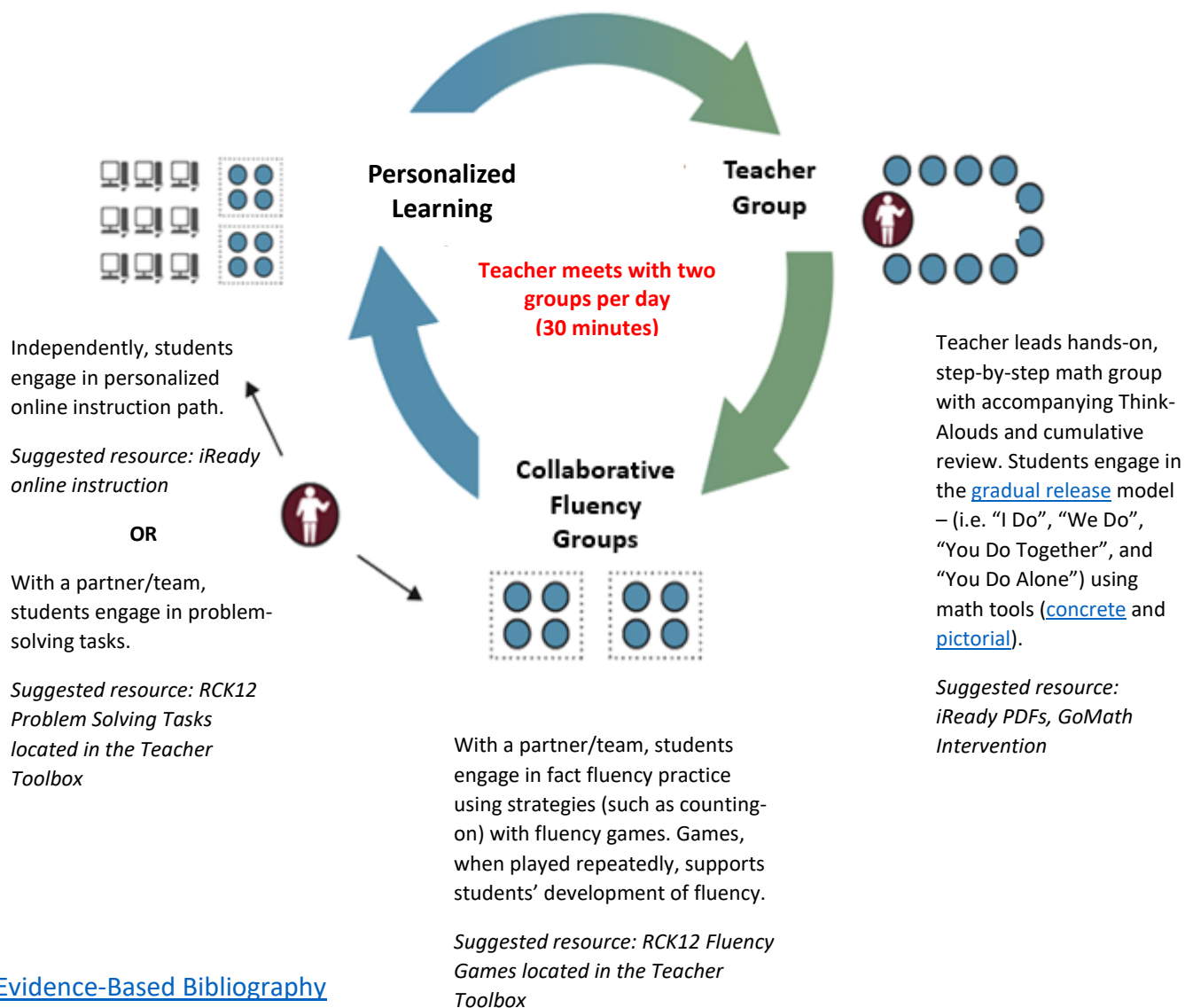# Mathematics Block Expectation Rubric – Core Instruction – Middle School

The math rubric below is used as a fidelity check to monitor specific *success criteria* of the core instruction component of the mathematics block.

	Highly Effective	Approaching	Ineffective
Teacher Group	Teacher: • Meets daily with **multiple** small groups of students and regroups students based on data. • **Continuously** uses concrete or pictorial math tools. • Instructs using **models** of grade-level specific problems with teacher **think-alouds**. • Asks **low-,mid- and high-level questions (DOK 1-4)** to have students talk about the mathematics, **leading** to deepen their understanding .	Teacher: • Meets daily with **one** small group of students and does not regroup students based on data. • **Sometimes** use concrete or pictorial math tools. • Instructs using **models** of grade-level specific problems but students are confused with the model. • Asks **low-questions** (**DOK 1 only**) to have students talk about the mathematics, but it **does not lead to discussion** to deepen their understanding.	Teacher: • **Does not** meet with a small group**.** • **Does not** use concrete or pictorial math tools. • **Does not** include models of grade-level specific problems or teacher think-alouds. • **Does not asks questions.**
	Students (in teacher group): • Engage in **multi-step** tasks that require **low-, mid- and high-level** cognitive demands, problem solving and reasoning (i.e. DOK 1-4) • Use concrete or pictorial math tools to make math connections among multiple representations. • Engage in **peer-to-peer, teacher-to-student, and student-to-teacher** discussions that communicate mathematics ideas, strategies and solutions.	Students (in teacher group): • Engage in **one-step** tasks that require a **low-level** cognitive demand, problem solving and reasoning (DOK 1 only). • Use concrete or pictorial math tools but does not make math connections among multiple representations. • Engage in **low-level peer-to-peer, teacher-to-student, and student-to-teacher** discussions that communicate mathematics ideas, strategies and solutions (DOK 1 only).	Students (in teacher group): • Engage in **naked number exercises** without conceptual understanding. • **Do not** use concrete or pictorial math tools. • **Do not** engage in **peer-to-peer, teacher-to-student, and student-to-teacher** discussions.
Independent Groups	Students (independently or in small groups): • Engage in hands-on, fluency, exploration, or investigation tasks that require **mid- and high-level** cognitive demands, problem solving and reasoning. • Engage in **peer-to-peer** discussions that communicate mathematics ideas, strategies and solutions at a and **mid- and high-level cognitive** demand.	Students (independently or in small groups): • Engage in hands-on, fluency, exploration, or investigation tasks that require **low- level** cognitive demands, problem solving and reasoning (DOK 1 only). • Engage in **peer-to-peer** discussions that communicate mathematics ideas, strategies and solutions at a **mid-level cognitive** demand.	Students (independently or in small groups): • Engage in **naked number exercises without** hands-on experiences, exploration, and investigation. • **Do not** engage in **peer-to-peer** discussions related to the mathematics.
Closing Routine	Teacher: • **Facilitates** the lesson summary with references to student work and reinforces the purpose of the lesson.	Teacher: • **Guides** the lesson summary with references to student work but fails to reinforce the purpose of the lesson.	Teacher: • **Summarizes** the lesson without student input or does not summarize the lesson.
	Students: • Participate in the lesson summary, **ask and answer** questions.	Students: • **Listen** to the lesson summary; **answer** questions if asked.	Students: • Do not participate in the lesson summary.

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Mathematics Block Expectations – Intervention
30 minutes – Middle School

Tier 2 and Tier 3

The research-based Mathematics Workshop Model outlines the structure of the intervention (below grade-level) component of the mathematics block. Students are grouped based on diagnostic and progress monitoring data. Intervention is provided to students to reduce *unfinished learning* (i.e. gap in learning). Daily, the teacher provides hands-on, step-by-step instruction to **at least** two different groups of students during the intervention component of the mathematics block. However, **all** students will visit the teacher-led group at least once weekly to receive step-by-step instruction for their *unfinished learning*.

Personalized Learning

Teacher meets with two groups per day (30 minutes)

Teacher Group

Collaborative Fluency Groups

Independently, students engage in personalized online instruction path.

Suggested resource: iReady online instruction

OR

With a partner/team, students engage in problem-solving tasks.

Suggested resource: RCK12 Problem Solving Tasks located in the Teacher Toolbox

With a partner/team, students engage in fact fluency practice using strategies (such as counting-on) with fluency games. Games, when played repeatedly, supports students' development of fluency.

Suggested resource: RCK12 Fluency Games located in the Teacher Toolbox

Teacher leads hands-on, step-by-step math group with accompanying Think-Alouds and cumulative review. Students engage in the gradual release model – (i.e. "I Do", "We Do", "You Do Together", and "You Do Alone") using math tools (concrete and pictorial).

Suggested resource: iReady PDFs, GoMath Intervention

Evidence-Based Bibliography

Mathematics Block Expectation Rubric – Intervention – Middle School

The math rubric below is used as a fidelity check to monitor specific success criteria of the intervention component of the mathematics block.

	Highly Effective	Approaching	Ineffective
Learning Environment	• Small groups are present (personalized online learning, fluency, and problem solving) **and** teacher group. • **Sufficient** data is available to support grouping structures (ex. iReady Instructional Grouping Profile and Progress Monitoring Checks). • Students are **aware** of personal achievement level, **set and monitor** individual goals (student data notebook). • **Several** worked examples are available for students to reference (ex. Anchor charts). • **Clear** directions, tasks, and math tools are available for students to reference during their independent practice time. • Rotation schedule is posted and referenced.	• Some small groups are present (personalized online learning, fluency, and problem solving) **or** teacher group. • **Limited** data is available to support grouping structures (ex. iReady Instructional Grouping Profile). • Students are **aware** of personal achievement level but **do not** set and monitor individual goals. • A **few** worked examples are available, for students to reference, however they are not aligned (ex. Anchor charts). • **Unclear** directions, tasks, and math tools are available for students to reference during their independent practice time. • Rotation schedule is posted but not referenced.	• **No** small groups are present. • Data is **not** available to support grouping structures. • Students are **unaware** of personal achievement levels. • **No** worked examples are available for students to reference (ex. Anchor Charts). • **No** directions and tasks are available for students to reference during their independent practice time. • **No** rotation schedule is posted.
Collaborative Fluency Groups/ Personalized Learning	• **Most students work** collaboratively in data-based groups at the **appropriate** instructional level (i.e. 4th grade students may work on 3rd grade unfinished learning). • **Most students actively engage** in one of the following groups at the **appropriate** instructional level (fluency, problem solving, or online learning). • **Most students use** pictorial or concrete math tools to understand math concepts. • **All** students engage in math talk (ex. peer-to-peer). • **Passing** online lessons with >80% accuracy.	• **Some students work** collaboratively in data-based groups at the **appropriate** instructional level (i.e. 4th grade students may work on 3rd grade unfinished learning). • **Some students engage** in one of the following groups at the **appropriate** instructional level (fluency, problem solving, or online learning). • **Some students use** pictorial or concrete math tools to understand math concepts. • **Some** students engage in math text talk (ex. peer-to-peer • **Passing** online lessons with 50-79% accuracy.	• Students **do not** work collaboratively in data-based groups **or** students are assigned work at an **inappropriate** instructional level (i.e. students are unable to complete the activity). • Students **do not engage** in one of the following groups (fluency, problem solving, or online learning). • Students **do not use** pictorial or concrete math tools (i.e. base ten blocks, cubes, counters) to understand math concepts. • **No** students engage in math talk (ex. peer-to-peer). • **Passing** online lessons with less than 50% accuracy.

Mathematics Block Expectation Rubric – Intervention – Middle School

The math rubric below is used as a fidelity check to monitor specific success criteria of the intervention component of the mathematics block.

	Highly Effective	Approaching	Ineffective
Teacher Group	Teacher: • Provides **detailed** step-by-step demonstrations and modeling of math concepts with math tools (pictorial and concrete) with accompanying Think-Alouds. • Provides **explicit practice** (i.e. "I Do", "We Do", "You Do Together", and "You Do Alone"). • Provides **continuous** feedback to **all** students to clarify misconceptions. • Asks **multiple** students to explain their mathematical thinking, reasoning, and approaches. • Provides **cumulative review** to solidify students understanding of previously reviewed math topics. • Monitors student progress for **all** students (ex. anecdotal notes, checklist) of student performance. • Asks a combination of **low-, mid- and high-level questions (DOK 1-4)** to have students talk about the mathematics, **leading** to deepen their understanding .	Teacher: • Provides **some** step-by-step demonstrations and modeling of math concepts with math tools (pictorial and concrete) without accompanying Think-Alouds. • Provide**s some** practice but does not allow students to practice together and independently (i.e. "I Do" and "We Do only). • Provides feedback to **most** students to clarify misconceptions. • Asks **at least one** student to explain their mathematical thinking, reasoning, and approaches. • Provides **review** of current math topics only. • Monitors student progress for **some** students (ex. anecdotal notes, checklist) of student performance. • Asks **low-questions** (**DOK 1 only**) to have students talk about the mathematics, but it **does not lead to discussion** to deepen their understanding.	Teacher: • **Does not** provide step-by-step demonstrations and modeling of math concepts with math tools (pictorial and concrete) or accompanying Think-Alouds. • **Does not** provide practice. • **Does not** provide feedback to students to clarify misconceptions. • **Does not** ask students to explain their mathematical thinking, reasoning, or approaches. • **Does not** provide review to further students understanding of concepts. • **Does not** monitor student progress (ex. anecdotal notes, checklist) of student performance. • **Does not asks questions.**
	Students: • **Practice** modeling focus skill/strategy with math tools (concrete and pictorial). • **All** students engage in math talk (ex. peer-to-peer, student-to-teacher). • **Monitor progress** and verbalize misconceptions around focus skill/strategy (i.e. goal setting sheets). • Engage in **peer-to-peer, teacher-to-student, and student-to-teacher** discussions that communicate mathematics ideas, strategies and solutions at a **low-, mid- and high-level cognitive** demand.	Students: • **Listen and observe the teacher** modeling focus skill/strategy with math tools (concrete and pictorial). • **Some** students engage in math text talk (ex. peer-to-peer, student-to-teacher). • **Inconsistently** monitor progress and verbalize misconceptions around focus skill/strategy. • Engage in **peer-to-peer, teacher-to-student, and student-to-teacher** discussions that communicate mathematics ideas, strategies and solutions at a **low-level cognitive** demand (DOK 1 only).	Students: • **Do not** observe or practice modeling focus skill/strategy with math tools (concrete and pictorial). • **No** students engage in math talk (ex. peer-to-peer, student-to-teacher). • **Do not** monitor progress and verbalize misconceptions around focus skill/strategy. • **Does not** engage in **peer-to-peer, teacher-to-student, and student-to-teacher** discussion.

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Glossary

Annotate- to make notes on the texts for building comprehension.

Anchor charts - a tool that is used to support instruction (i.e. "anchor" the learning for students). As you teach a lesson, you create a chart, together with your students, that captures the most important content and relevant strategies.

Anchor Papers-Examples of student work at different levels of performance that, along with rubrics, guide formative and summative assessment.

Anecdotal notes – used to record specific observations of individual student behaviors, skills and attitudes as they relate to the outcomes in the program of studies. Such notes provide cumulative information on student learning and direction for further instruction.

Balanced Numeracy – framework that provides opportunities for students to uncover (the why), construct (the how), and apply (the when) mathematical understandings.

Checklists- A list of items required, things to be done, or points to be considered, used as a reminder.

Cognitive Demand – depth of understanding required to answer, discuss, or explain an assessment-related item or a task.

Comprehension Strategies- Comprehension strategies are conscious plans — sets of steps that good readers use to make sense of text. Comprehension strategy instruction helps students become purposeful, active readers who are in control of their own reading comprehension.

Concrete Math Tools – Concrete is the "doing" stage. Students manipulative tangible objects to solve math problems. Examples of concrete math tools are algebra tiles, geoboards, color counters, etc.

Discussion protocol- An agreed upon set of guidelines for reading and discussing text to ensure equal participation and accountability by those involved.

DOK Levels- Depth of Knowledge is a way to measure the rigor of questions or tasks from basic recall to complex creation.

Exemplars- An example of student work at different achievement levels.

Explicit Practice – Explicit Instructional Practices focus on systemically implemented behavioral practices to teach mathematical concepts.

Goal setting – Students are aware of personal achievement levels and are able to set and monitor goals.

Gradual Release Model – The Gradual Release Model is a best practice instructional model where teachers strategically transfer the responsibility in the learning process from the teacher to the students (Fisher & Frey).

Guided Math – Guided Math is a structure for teaching whereby a teacher supports each child's development of mathematical proficiency at increasing levels of difficulty, within the context of a small group. It is premised on the idea that working with children in small groups, provides powerful possibilities for reaching all children where they enter and taking them to the next level. In Guided Math groups, students engage in standards-based, rigorous, engaging meaning making learning opportunities where the teacher focuses on a particular concept, strategy or skill. Teachers facilitate this learning through hands-on, scaffolded conversations and intensive questioning.

Instructional Grouping Profile – The Instructional Grouping Profile outlines instructional priorities to support teachers in interpreting the data from the Diagnostic and targeting instruction where students need it most. Students are grouped in 5 profiles in i-Ready based on these instructional priorities.

Intervention – Math Intervention is an extension of the regular grade level course that provides students who need it additional focused instruction and support at the needed level of intensity.

Investigation – a situation originating in mathematics or the real world which lends itself to inquiry.

Lesson Closure – what the instructor does to facilitate wrap-up at the end of the lesson - it is a quick review, to remind students what it was that they have learned (or should have learned) and allows you to see where the students are to assist you in planning for the next lesson.

Mental Math – Mental math refers to the practice of doing calculations in your head. It is often used as a way to calculate an estimate quickly through the use of math facts that have been committed to memory, such as multiplication, division, or doubles facts. Students who practice mental math make calculations in their minds without the guidance of pencil and paperwork, calculators, or other aids.

Mentor Text – A text that is used as a good example of a feature of writing.

Misconceptions –a mistaken idea or view resulting from a misunderstanding of a mathematical concept. A mathematical misconception is a misunderstanding that students get when they hear incorrect math, form defective thinking, or are taught shortcuts that remove math concept development.

Multiple entry points – Students identify multiple ways to solve a problem to determine the most efficient strategy.

Multiple representations – Multiple representations are ways to symbolize, to describe and to refer to the same mathematical concepts with different representations (i.e. table, graphs, drawings, equations, and word problem).

Number Sense – Number sense is an emerging construct that refers to a child's fluidity and flexibility with numbers and what numbers mean as well as an ability to perform mental mathematics and to look at the world and make comparisons.

Personalized Learning- Tailoring learning for each student's strengths, needs and interests.

Pictorial Math Tools – Pictorial is the "seeing" stage. Here, visual representations of concrete objects are used to model problems. This stage encourages children to make a mental connection between the physical manipulative and the abstract pictures, diagrams or models that represent the objects from the problem. Building or drawing a model makes it easier for children to grasp difficult abstract concepts (for example, fractions). Simply put, it helps students visualize abstract problems and make them more accessible.

Progress Monitoring – Progress Monitoring refers to the process of frequently gathering student achievement data, analyzing the data in a timely, repeatable manner, and making sound instructional/intervention decisions based on the data.

Reading Strategies- Routines and procedures that readers use to help them make sense of texts. These strategies include but are not limited to summarizing, asking and answering questions, paraphrasing, finding the main idea.

Rotation schedule – The Station Rotation model allows students to rotate through stations on a fixed schedule, where there is at least one teacher station. The number of stations a student may complete in a given day is determined by the amount of time allotted for mathematics.

Rubrics- A rubric is a scoring guide used to evaluate performance, a product, or a project.

Small group instruction – Small group instruction provides students with a reduced student-teacher ratio, typically in groups of two to four students. It gives students more of the teacher's focused attention and a chance to ask specific questions about what they learned.

Unfinished Learning - Unfinished learning refers to any prerequisite knowledge or skills that students need for future work that they don't have *yet* (achieve the core).

Word Study – Students engaged in explicit instruction of words (i.e. sounds, letters, word parts, Greek/Latin roots, vocabulary and spelling).

Writing Process- A series of steps that writers take to compose text. Components include planning, goal setting, drafting, evaluating, revising, editing and publishing. They can occur at any point and student move flexibly through these components.

Writing strategies-A series of actions (mental, physical, or both) that writers undertake to achieve their goals. Tools that help students generate content and carry out components of the writing process. Some examples are but not limited to:

- STOP- Suspend judgement and brainstorm ideas for and against topic, Take a side, Organize ideas, Plan more as you write.
- 3-2-1- Write 3 things you learned,2 things you would like to know more about and 1 question you still have on the topic.
- Color Coding- use different colors to summarize, cite evidence and explain evidence.
- COPS- Capital, Overall, Punctuation, Spelling
- POW TIDE- Plan, Organize, Write, Topic, Important evidence, Detailed explanation, Ending
- RACES- Restate the question, Answer the question, Cite evidence, Explain and Summarize