

Secondary Response to Instruction and Intervention (RtII) Tier 1 Core Instruction

Introduction and Purpose of the Document

Response to Instruction and Intervention (RtII) is an assessment and instruction framework for conceptualizing, organizing, and implementing Pennsylvania's Standards Aligned System (SAS). The overarching goal of RtII is to improve student achievement using research-based curriculum, instructional practices, and tiered interventions matched to the assessed needs of students.

A robust core curriculum (Tier 1) is central to Pennsylvania's Secondary Response to Instruction and Intervention framework. The purpose of this document is to provide supplementary information and guidance to Pennsylvania secondary educators on the definition of the development and implementation of Tier 1 core instruction.

About the Secondary RtII "Core" (Tier 1)

First, secondary schools must identify the core curriculum that serves as the foundation in each secondary classroom. The curriculum in all subject areas must be aligned with and address Pennsylvania standards for reading, writing, speaking and listening (i.e., Reading/Language Arts courses), as well as other content area standards including science, math, and social studies. RtII implementation efforts must consider the course content and focus for Language Arts/Communication Arts/English courses, as well as the integration of a literacy curriculum across all subject areas. Additionally, the secondary foundational core includes the adoption and use of universal instructional design principles and high leverage instructional strategies across all subject areas. These practices provide instructional continuity across the content areas and promote high levels of achievement for all students.

While strong Tier 1 "core" curriculum and instructional practice represent the starting point and foundation of Secondary RtII, an

infrastructure, consistent with effective middle and high school practices, must be in place. Team processes, schedules, and course requirements, and other secondary contextual variables are important to the successful implementation of the Tier 1 core and the overall RtII framework. Formative and benchmark assessment procedures must be in place to monitor student learning in core instruction to ensure the fidelity and effectiveness of instructional practice.

Document Focus

This document highlights universal instructional design principles and several high impact strategies from the research literature. It is not intended as an exhaustive list but rather serves as a starting point for schools/districts seeking to initiate Secondary RtII. Since RtII represents systems change and must be implemented strategically and over time, we encourage schools to select and implement a "critical few" of these strategies (at a time) deeply and with fidelity.

A strong and viable core at Tier 1 includes the recognition, understanding, and application of what we now know about evidence-based instruction. Education has a growing body of knowledge which identifies the instructional principles and strategies which lead to increased student achievement and positive outcomes for all students. These instructional principles and strategies are presented by different researchers in the literature. Secondary schools are encouraged to use the instructional design principles and strategies summarized below to implement an effective Tier 1 foundational core.

Effective Teaching Principles * These 10 principles are empirically supported as effective teaching principles and have been derived from research on behavioral, cognitive, social-learning, and other theories.	
1. Engagement Time	Students learn more when they are actively engaged in instructional tasks. Selected strategies: <ul style="list-style-type: none"> • Think-write-pair-discuss • Response cards (yes, no, why) • Choral responding • Reciprocal teaching
2. Success Rates	Students experience high and moderate success rates, which are correlated positively with student learning outcomes. Selected strategies: <ul style="list-style-type: none"> • Feedback • Skill sequencing • Pacing
3. Content Coverage/Opportunities to Learn	Increased opportunity to learn content is correlated positively with increased student achievement. Selected strategies: <ul style="list-style-type: none"> • Identifying essential content • Reducing transition time • Beginning and ending lessons on time
4. Grouping for Instruction	Students achieve more in classes where they spend most of their time being directly taught by a teacher. The manner in which teachers deliver instruction (i.e., in large/small groups or individually) is an important instructional principle that directly impacts student achievement. Classroom instruction should include: <ul style="list-style-type: none"> • Whole Group Instruction • Small Group Instruction • Individual Instruction • Flexible Grouping
5. Scaffolded Instruction	Students become independent, self-regulated learners through instruction that is deliberately and carefully scaffolded. Teachers provide support and structure, then systematically remove guidance and increase student competence. Selected strategies: <ul style="list-style-type: none"> • Guided Notes • Verbal Prompting • Graphic Organizers • Physical Prompting
6. Addressing Forms of Knowledge	The critical forms of knowledge must be addressed in order for students to become independent, self-regulated learners. They include: <ul style="list-style-type: none"> • Declarative – factual information • Procedural – how to use the knowledge in specific ways • Conditional – knowing when and where to apply the knowledge

* Ellis, E.S., Worthington, L.A. & Larkin, M.J. (January 13, 1994). *Research Synthesis on Effective Teaching Principles and the Design of Quality Tools for Educators*. Technical Report. Effective Teaching Principles.

Effective Teaching Principles, continued	
7. Activating and Organizing Knowledge	Learning is increased when teaching is presented in a manner that assists students in organizing, storing, and retrieving information. Selected strategies: <ul style="list-style-type: none"> • Graphic/Content Organizers • Mnemonics
8. Teaching Strategically	Strategic instruction is designed to teach students how to apply techniques, principles, or rules in order to solve problems and complete tasks successfully and independently and will help students to become more independent, self-regulated learners. Selected strategies: <ul style="list-style-type: none"> • Ten-Two • Card Sort • Graphic Organizers • Physical Prompting • KWL Chart • Mnemonics
9. Making Instruction Explicit	Explicit Instruction includes: <ul style="list-style-type: none"> • Controlled Instruction and Practice • Demonstrate/Model/I do • Guided Practice • Independent Practice • Instructional level match • Opportunities for maintenance and generalization
10. Teaching Sameness in the Curriculum	Teaching sameness is linking a single concept with many ideas and providing students with numerous examples to promote generalization. By teaching sameness both within and across subjects, teachers promote the ability of students to access knowledge in any problem-solving situation. Selected strategies: <ul style="list-style-type: none"> • Thematic units across subject areas • Teach to generalization and/or transfer • Scavenger hunts • Inspirations software – concept webs, graphic organizers
High Impact Strategies * These nine high leverage instructional strategies were identified through comprehensive meta-analyses. They are organized by effect size.	
1. Identify Similarities and Differences	Identifying similarities and differences enhances students' understanding and ability to use knowledge. Teachers should design classroom and homework tasks and opportunities that involve: <ul style="list-style-type: none"> • Comparing and contrasting • Classification • Metaphors and analogies
2. Summarizing and Note Taking	Summarizing requires the ability to delete, substitute and keep some information in order to synthesize and distill. It also requires analysis at a deep level and awareness of structure of information. Teachers can promote summarizing and note-taking skills by having student to: <ul style="list-style-type: none"> • Generate verbal summaries • Generate written summaries • Take notes and revise their notes correcting errors and adding information
3. Reinforcing Effort and Providing Recognition	Students who believe that effort is the primary attribute of success achieve higher outcomes. Teachers can teach students to change their beliefs about success to an emphasis on effort by rewarding and recognizing student effort.

* Based on:

1. Marzano, R. (2007). *The Art and Science of Teaching*. Alexandria, VA: ASCD.
2. Marzano, R., Pickering, D.J., & Pollock, J.E. (2001). *Classroom Instruction That Works*. Alexandria, VA: ASCD.

High Impact Strategies, continued

<p>4. Homework and Practice</p>	<p>Mastery of skill requires focused practice during which students adapt and shape their learning and should result in extending and refining knowledge. Homework and practice provide opportunities to deepen understanding and skills relative to identified content. Teachers:</p> <ul style="list-style-type: none"> • Provide specific feedback on all assigned homework • Assign homework for the purpose of students practicing skills and procedures that have been the focus of instruction
<p>5. Nonlinguistic Presentations</p>	<p>Two methods are used to store information- semantic and imagery; nonlinguistic presentations represent the imagery mode. In classrooms, teachers may ask students to represent content by:</p> <ul style="list-style-type: none"> • Generating mental images • Drawing pictures or pictographs • Constructing graphic organizers • Making physical models of the content • Making revisions to their mental images, pictures, pictographs, graphic organizers and physical models
<p>6. Cooperative Learning</p>	<p>Students are grouped based on a variety of criteria and may be informal (pair-share), formal (task specific), or time-based (created to provide support throughout semester or academic year). (Johnson & Johnson, 1999). Teachers may choose to use the following criteria to organize students in cooperative groups:</p> <ul style="list-style-type: none"> • Interest • Ability • Demographics
<p>7. Setting Objectives and Providing Feedback</p>	<p>Setting objectives establishes direction for learning and students benefit when they personalize goals set by teachers. Teachers should:</p> <ul style="list-style-type: none"> • Set specific learning goals at the beginning of the unit • Have students set their own goals at the beginning of the unit and • Have students keep track of their progress toward the learning goal and assess themselves at the end of the unit <p>According to Hattie (1992), feedback is a most powerful modification to instruction that enhances achievement. Feedback should be:</p> <ul style="list-style-type: none"> • Formative – provided throughout the unit • Summative – provide feedback at the end of the unit
<p>8. Generating and Testing Hypotheses</p>	<p>Generating and testing hypotheses involve the application of knowledge through inductive and/or deductive thinking. Students must be explicitly taught how to generate, test and explain hypotheses. Teachers engage students in projects that involve students in projects that generate and test hypothesis through tasks that involve:</p> <ul style="list-style-type: none"> • Problem solving • Decision making • Investigations • Experimental inquiry • Systems analysis • Invention
<p>9. Cues, Questions, and Advanced Organizers</p>	<p>Cues, questions and advanced organizers assist students to retrieve what they already know about a topic. Prior to presenting new content, teachers can:</p> <ul style="list-style-type: none"> • Ask questions that help students recall what they already know about the content • Provide students with direct links with what they have studied previously • Provide ways for students to organize to think about the content