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# BIG IDEA

**Procedural fluency is the ability to apply procedures flexibly, accurately, and efficiently.**

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## Chapter 1

- Fluency consists of three equally important components: flexibility, efficiency, and accuracy.
- Each component of fluency is evident in a set of actions that must be taught, developed, and assessed.
- Determining reasonableness plays a role in being fluent. It too must be developed.

What instructional practices in our team, school, or district do we need to adopt, adapt, or eliminate so that our approach to procedural fluency is **authentic**?

<b>Adopt</b>	<b>Adapt</b>	<b>Eliminate (or Restrict)</b>

**BIG IDEA**

**Fluency is an equity issue.**

**Chapter 1**

- High-quality fluency instruction is for each and every student.
- Fluency shapes students’ mathematics identity and agency.
- Equitable fluency instruction is realized through effective teaching practices.

What instructional practices in our team, school, or district do we need to adopt, adapt, or eliminate so that our approach to procedural fluency is for **each and every student**?

<b>Adopt</b>	<b>Adapt</b>	<b>Eliminate (or Restrict)</b>

**BIG IDEA**

**Fluency is shrouded in fallacies.**

**Chapter 2**

- Fallacies about fluency are deeply held misconceptions that must be countered.
- Any stakeholder can (and probably does) believe in a Fluency Fallacy.
- Fallacies shape instructional practice and, if unchecked, can undermine your efforts.

What instructional practices in our team, school, or district do we need to adopt, adapt, or eliminate so that our approach to procedural fluency is **accurate and genuine**?

<b>Adopt</b>	<b>Adapt</b>	<b>Eliminate (or Restrict)</b>

**BIG IDEA**

**Fluency begins with essential understandings.**

**Chapter 3**

- Any procedural fluency begins with specific foundational understandings. These Good (and necessary) Beginnings cannot be taken for granted. They must be taught and well understood.
- Conceptual, strategy-based instruction of basic facts contributes to greater fluency. Fact strategies are generalizable.
- Computational estimation, like procedural fluency, includes attention to efficiency, flexibility, and accuracy.

What instructional practices in our team, school, or district do we need to adopt, adapt, or eliminate so that fluency is **grounded in Good Beginnings**?

<b>Adopt</b>	<b>Adapt</b>	<b>Eliminate (or Restrict)</b>

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# BIG IDEA

**There are Seven Significant Strategies that every student needs to know how to use and when to use.**

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## Chapter 4

- The Seven Significant Strategies are Count On/Count Back, Make Tens, Use Partial, Break Apart to Multiply, Halve and Double, Compensation, and Use an Inverse Relationship.
- Strategies must be taught explicitly and conceptually. Strategy instruction must also include *when* to use a strategy (to develop strategic competence).

What instructional practices in our team, school, or district do we need to adopt, adapt, or eliminate so that fluency is **about strategic competence**?

<b>Adopt</b>	<b>Adapt</b>	<b>Eliminate (or Restrict)</b>

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## BIG IDEA

**Automaticity with some select skills is necessary to be able to enact reasoning strategies.**

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Chapter 3 and Chapter 5

- Basic facts are part of a group of ideas that, when automatic, contribute to procedural fluency.
- Constructing strategies requires having utility with the properties and number relations, such as 9 is one less than 10.
- Commonly used actions—such as multiplying by 25s and knowing a combination that equals 100—when automatic, support student reasoning.

What instructional practices in our team, school, or district do we need to adopt, adapt, or eliminate so that fluency is **grounded in Good Beginnings**?

<b>Adopt</b>	<b>Adapt</b>	<b>Eliminate (or Restrict)</b>

**BIG IDEA**

**Fluency must be practiced well.**

**Chapter 6**

- Practice must be focused, varied, processed, and connected.
- Practice can take many forms, including fluency routines, worked examples, games, centers, and independent practice.
- Practice must be consistent and frequent.

What instructional practices in our team, school, or district do we need to adopt, adapt, or eliminate so that **fluency practice is high-quality**?

<b>Adopt</b>	<b>Adapt</b>	<b>Eliminate (or Restrict)</b>

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# BIG IDEA

**Fluency must assess all three components, not just accuracy.**

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## Chapter 7

- All of the components and actions of fluency must be assessed. Assessment cannot rely solely on accuracy.
- A variety of formats should be used for assessment.
- Information from fluency assessments should drive decisions about instruction and reinforcement of strategies and automaticities.

What instructional practices in our team, school, or district do we need to adopt, adapt, or eliminate so that fluency is **assessed well**?

<b>Adopt</b>	<b>Adapt</b>	<b>Eliminate (or Restrict)</b>



**BIG IDEA**

**Families can be powerful partners in fluency.**

**Chapter 8**

- Families have math experiences that create misconceptions and form prominent, frequently asked questions.
- Families need help understanding how strategies work and why they matter.
- There are a variety of approaches to engaging and informing parents that can be modified to feature ideas about fluency.

What instructional practices in our team, school, or district do we need to adopt, adapt, or eliminate so that fluency is **a partnership?**

<b>Adopt</b>	<b>Adapt</b>	<b>Eliminate (or Restrict)</b>