## **Explicit Attention to Concepts**

Instructional practices for making mathematical connections explicit and public.



Specifically connecting to more than one representation of an idea



Connect symbolic and visual representations

Create visual representations of word problems

5 Practices Framework, Card Sort, Color Coding, Compare and Connect, Gallery Walk, Jigsaw, Number Webs, Placemats, Which Doesn't Belong

3

Discussing the mathematical reasoning that underlies a procedure

Α

Connect a representation to the steps in a procedure



3-Act Structure, Number Talks, Sentence Stems



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and how it fits into a bigger picture

Explore how the main idea of a

lesson is used in other contexts

lesson to a prior math concept

Quick Checks, Sentence Stems, Thinking Maps, Which Doesn't Belong

Connect the current main idea of a



B

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## **Student Opportunities to Struggle**

Instructional practices for encouraging persistent & productive mental exertion.



Assigning contextualized problems with multiple solution strategies



Students generate questions to investigate within a context

B Students work to solve an open task with minimal teacher intervention

Color Coding, 3-Act Structure, Notice/Wonder, Placemats, Swap Meet, 3 Reads

3

Asking students to look for patterns and make conjectures



Students name what is changing and staying the same in a context

B Students interact with examples / data to generate & test conjectures

Card Sort, Color Coding, Sentence Stems, Strings / Number Talks, Visual Pattern Protocol, Which Doesn't Belong



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Each student explains their thinking out loud



2

4

Students analyze and explain a given solution to a math problem

3-Act Structure, Color Coding, Concentric Circles, Flip Grid, Placemats, Sentence Stems, Strings / Number Talks, Think/Share/Compare, Which Doesn't Belong

## Promoting discourse around emerging ideas / points of confusion

Students discuss a solution with errors and/or struggles

B Students share ideas with peers prior to completing a problem

3-Act Structure, 4 Corners, Color Coding, Concentric Circles, Favorite No, Gallery Walk, Jigsaw, Placemats, Sentence Stems, Silent Discussion, Swap Meet



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