BFF - How to facilitate an **IMAGE TALK**

1. Display the first image (context image) and give students time to explore and make sense of the context

Questions	*Notes*
• What do you notice? • What do you wonder?	The answers do not have to be math-related. They can be recorded on chart paper, a whiteboard, or just discussed orally

2. Display the next set of images, one at a time, pausing for discussion about each image

Questions	*Notes*
• How many __ do you see? • How do you see that number? • What is the same/different between this picture and the previous one? • What is happening each time?	You won't want to ask every one of these questions on every image. Listen for responses that show strategic thinking, connections, relationships, or predictions. Highlight these!

How to facilitate a: **TOOL TALK**

Display the tool talk image and give students time to explore and make sense of the context

Possible Questions	*Notes*
• What do you notice? • What do you wonder? • How many do you see? • How do you see that number? • What is the same/different? • What is happening each time?	The tools and manipulatives being shown should be familiar to students. One less familiar tool is the rekenrek or math rack (it is used in Dreambox!) The goal is for students to make connections between the model and a strategy they have used

How to facilitate a: **NUMBER TALK**

In a number talk, the sequence of numbers is purposeful so that students might notice a pattern or make connections.

Number talks should also always come after an image talk and a tool talk, so that students can lean on those experiences to make sense of the number relationships.

First, give students time to think about the problem(s) and then discuss the strategies they used to solve them. The discussion is not about the final answer, but the process of finding it. This is a time to listen, question, and then help students reflect on efficiency and flexibility.

Teacher Questions to THINK about	***Notes***
• How are students solving the problem? • Is there another way to look at the problem? • Where are students in their progression of thinking? (see this chart - Facilitator Guide P. 7)	

How to facilitate an: **ANCHOR PROBLEM**

(Addition and Subtraction Kit)

Each context has 1-2 anchor problems. You can choose one or consider doing both (on different days). These problems invite you to select numbers that feel appropriate for the group of students working with you.

Anchor problems are written with a 3-part facilitation process in mind, and are meant to take a good amount of time from start to finish:

Planning the Task
Spend a few minutes solving the problem in different ways. How do you anticipate students approaching them? What strategies might they use?

The Launch	
Spend a few minutes launching/reading the story with the students. Do not tell the students what to do, how to start, or what tools to use	Options: • Hide the numbers and talk about what is happening in the problem • Hide the question and ask students to imagine what it could be • Invite students to act it out or draw it out
Student Work Time: Give students a chance to begin on their own. Provide tools such as cubes, counters, ten frames, etc., but do not immediately provide scaffolding, problem-solving templates, or graphic organizers	

Discussion
Let students share their thinking with their partners/peers. Help them describe what strategy they used and connect

students' thinking. You can also use this time to clear up any misconceptions and clarify the answer.

How to facilitate: **GAMES**

Engaging in games is not meant to be an independent activity for students and is very much still part of the learning process. However, avoid pre-teaching strategies and wait for students to notice a pattern (such as when rolling a 6, you can double it to make 12 or halve it to make 3, but when you roll an odd number, such as 5, halving is not an option). When the student makes a connection or recognizes a pattern, highlight this to the whole group.

Utilize recording sheets for students to show their thinking or record responses. Recording sheets can be printed from the BFF website: https://buildingfactfluency.stenhouse.com/

Possible Questions	***Notes***
• What are you hoping to draw/roll? Why? • What are you hoping you won't draw/roll? • What do you think your partner wants to draw/roll? • How are you deciding which ____ to ____? • Is there a way you could block your partner? • What's your strategy? • How come you chose that move?	While students are playing games, teachers have the opportunity to listen in, observe, and confer with students.

How to facilitate a 3-ACT MATH TASK

Not every lesson string will have a 3-Act Math task. They are included in the contexts that were most inviting for storytelling/modeling.

Math tasks will take an entire lesson block to work through and can be done at any point during a lesson string (meaning they do not need to be done last)

Act 1	
Teachers	**Students**
Introduce the problem visually and hook kids' interest about a problematic or perplexing situation **Follow prompts under the video segment for more specific questions relating to each task*	Watch the video and discuss what the students see and are curious about. *What do you notice? What do you wonder?* (usually leading to a math question they will be invested in)
Act 2	
Teachers	**Students**
Discuss the question before Act 2, and then reveal the image. Support students as they represent, talk, share, and revise their thinking using the recording sheet.	Determine what is important and use the provided information to solve the problem. Record thinking on the recording sheet. *What do you need to know to answer your question?*
Act 3	
Teachers	**Students**
Resolve the conflict by revealing the solution, and encourage students to reflect on their thinking and refine it going forward.	Reflect on the tools and the strategies that they used. *Did it work? Was it efficient? Is there another way you could have solved it?*

How to facilitate a: **CONTEXTUALIZED PRACTICE PROBLEM**

These practice problems help students become more flexible and develop a deep understanding of the relationship between addition and subtraction.

The number and type of problems are at the teacher's discretion. Students do not need to know the names of the problem types, but should be encouraged to determine the structure from the question's context.

For many problems, there are multiple sets of numbers for students to choose from (or for the teacher to designate at times). In some contexts, the first choice is a combination within 5; the second choice is within 10; the third choice is within 20; and the fourth choice is a multi-digit problem.

The same problem can be repeated for different purposes; to try out a different strategy, to use different numbers, etc.

The goal of the contextualized practice problem is not to teach a student HOW to solve a problem a certain way, but to help a student think through and make sense of the problem, choose a strategy, and reflect on its efficiency/effectiveness.

Possible Questions before/during:	***Possible Questions After***
• What do you know about this problem? • What information is missing? • What strategy will you/did you try? • Is there a tool/manipulative/drawing that might help you organize the problem?	• How did your strategy work? • Is there another strategy that you could have used? • How did you know that __ is the answer (explain your process)
Student Work Time: Give students a chance to begin on their own. Provide tools such as cubes, counters, and ten frames, if needed, but do not immediately provide scaffolding or direct support.	

Please note: There are multiple questions of each problem type that can be used across the year and across grade levels. Students should not be working through every single problem.