**Overview of the *Talk Frame***

**Pedagogical Routine**

This *Talk Frame,* and other similar pedagogical “tools,” is a routine that can be used to help organize mathematical discussions, keep track of student contributions, and synthesize the mathematical ideas. Note that the teacher can also introduce an idea using another idea card, not shown here.

Question worded using students’ phrasing

Notes representing students’ ideas

(These include correct ideas as well as misconceptions. Also, the number of “talk idea” sections used will vary according to the lesson, student contributions, and teacher’s decisions about how to group ideas.)

Summary of the mathematically valid conclusion agreed upon by the class

We Understand

Think

Talk Idea

Talk Idea

Talk Idea

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**For teachers, the Talk Frame can:**

* Help focus the discussion on a significant mathematical topic;
* Encourage you to concentrate on and make sense of students’ ideas;
* Allow you to formatively assess the class’s and individual student’s depth of understanding; and
* Assist in facilitating the process for the class to come to valid mathematical conclusions.

**For students, the talk frame can:**

* Allow them to see their thinking develop over time;
* Encourage them to rely on their own reasoning;
* Convey that their ideas are important, yet they can change;
* Let them realize that there can be multiple perspectives when solving problems;
* Have them see how different representations, such as drawings, can symbolize ideas;
* Showcase the appropriate use of math vocabulary; and
* Reinforce the eventual need for mathematical agreement.

*Talk frame.* It can be challenging for both teachers and students alike to keep track of all that has been said during a discussion. Developed as part of the *Project M2* units, a *talk frame* helps to keep track of student contributions and revisions to their ideas. The talk frame is a system that helps teachers organize and maintain a more permanent record of the conversation on the board. There are three sections to the talk frame using distinct icons:

1. Establish the topic: Teachers first need to identify the topic of discussion. It should be based on an important mathematical idea of the lesson and one for which students probably will be able to offer different ideas (either because there are multiple solution paths, various correct answers, or current misconceptions and misunderstandings among students).

Think

1. Have students offer, consider and clarify ideas:

Teachers then need to gather different student perspectives. It is important for teachers not to judge their validity at this point, either verbally or through gestures, since students should be encouraged to make sense of the mathematical concepts themselves. Do not erase student ideas as they revise them. A record of the entire discussion should be produced. If necessary, teachers can introduce different perspectives they want students to contemplate through Zani (a character used in the *Project M2* units). It is important that Zani introduces *both* correct and incorrect ideas; otherwise students may assume that anything presented by them is incorrect. Through this entire process, students will clarify their ideas both for themselves and others.

We Understand

Talk Idea

Zani’s Idea

1. Settle on a mathematical understanding: Teachers eventually will guide students to reach a mathematical understanding. Often, students will notice the errors in their thinking given time to debate and justify their ideas. In this section, the new understandings are recorded. Teachers may elicit multiple “we understands” from students, or prompt the class to articulate one key understanding based on the discussion.