Student Perception of Math Challenge Survey Lesson

1. **Audience**: All students who are participating (except those whose parents/guardians returned the opt out form)
2. **Purpose**: To acquaint students with the survey. This is best done when students are taking the survey for the first time so teachers may demonstrate the process and have students complete their first survey.
3. **Time**: 15 minutes
4. **Format**: Whole class discussion and demonstration
5. **Equipment**: Projector and link to survey
6. **Objectives**: By the end of this lesson, students will
   a. Understand the purpose of the Project BUMP UP survey.
   b. Understand how to rate concepts of challenge, new math concepts, interest, and engagement.
   c. Be able to successfully complete the survey.
   d. Know how to get help if they have any difficulty.
7. **Pre-assessment:**
   a. Ask students what they know about rating things or completing surveys. Call on students for responses. Student answers may range from rating items or videos online to knowing about surveys their parents have answered.
   b. Ask students what they know about why we rate things or take surveys. Call on students for responses.
8. **Introduction and Overview**
   a. Based on the pre-assessment, **tell students** about survey items you have recently rated either on paper or online (restaurants, online shopping, etc.) Describe why you did and what was important or helpful about doing so (e.g., rating a restaurant gave the owners helpful feedback about the food, answering survey questions about a new app let the developers know how the app worked).

   b. Share that you are **working with education researchers** about teaching math and researchers are interested in students' experiences in math.

   c. Share the **objectives** in student language. "*Today, we are going to learn about a quick math survey that you will take each unit. It is a way you can let the researchers know your opinion of your math experiences. By the end of this lesson, you will*

know how to take the survey and how to answer questions about challenge, new math concepts, interest, and engagement. You will also know how to tell if you have successfully finished the survey and how to get help if you have trouble completing it."

d. **Reassure** students that:
   - Teachers at the school will not see students' answers.
   - The survey does not count for a grade.
   - These are opinions, so there are no wrong answers. However, the researchers will appreciate careful answers.

9. **Show the Survey:** Project the student survey to show students how to log in.

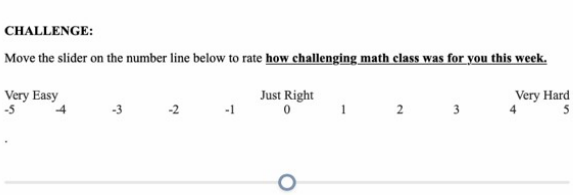
   a. Click on the Project BUMP UP Student Challenge Survey link.
   b. Show them how to enter your classroom Project BUMP UP class information and their student number.
   c. Demonstrate answering the four questions. Encourage students to use the rating that best reflects their opinions. Although there are times to use the highest or lowest ratings, students should also consider the ratings in the middle, as well, if they more accurately reflect the students' opinions. (See attachment, pp. 3–4.)
   d. When finished, show the blue box with white arrow to click on the bottom right corner to submit their answers.
   e. Tell students they will know they are finished when they see the "Thank you!" message.

10. **Troubleshooting:** Ask students if they can think of any problems with completing the survey
    a. If logging in doesn't work, ask the teacher.
    b. Look for the blue box with the white arrow in the lower right corner to click.
    c. If a student is absent, they can take the survey when they return or at the end of the next unit.
    d. If the device freezes in the middle of the survey, try again. If that still doesn't work, let the teacher know. If you cannot get it to work. Let us know at bumpup@uconn.edu

11. **Taking the survey**
    a. Have students log in and take the survey.
    b. Support students with one-on-one assistance.

12. **Accommodations**
    a. Translate directions for English learners.
    b. Provide support to students with special education accommodations.

Attachment: Answering the *Student Perception of Math Challenge Survey* Questions



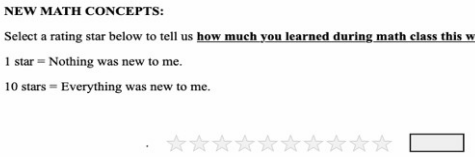
Question 1: Move the slider on the number line below to rate **how challenging math class was for you this week** from very easy (-5) to very hard (5).

a. Ask students what they know about the term "challenge" and take a few responses.

b. Clarify that a challenge is when something is hard or difficult and requires work or effort. Discuss the differences between types of challenges such as an academic challenge versus another type of challenge and good challenges versus uncomfortable challenges.

c. Discuss the levels to rate challenge. For example, if the math lessons that week were very easy and required no effort, that would be -5. If math was very hard that week, that would be +5.

d. What about the middle? Use the spaces in the middle if the math lessons were a little easy or hard. Practice with various scenarios such as: If the beginning of the week was difficult, but then the math got easier with practice, how would you rate the week? They should rate it according to the highest level of challenge they felt that week.



Question 2: Select a rating star below to tell us **how much you learned during math class this week.** 1 star = Nothing was new to me. 10 stars = Everything was new to me

a. Clarify for students that this should be based on whether it is new to them that week. For example, if it was a lesson on addition (which they learned in prior grades) but now it is about adding decimals, they should rate that as new(er) if they had not previously learned about adding decimals.

INTEREST:

Select a rating star below to tell us **how interesting you thought math class was this week.**

1 star = Not at all interesting.

10 stars = Extremely interesting.

Question 3: Select a rating star below to tell us **how interesting you thought math class was this week.** 1 star = Not at all interesting. 10 stars = Extremely interesting.

a. Ask students what it means to be interested in something. Discuss that this interest level is relevant to math instruction and how it might be something that is interesting in a math lesson and merit 10 stars. If the math lessons for the week were interesting, they might choose a rating of 10 stars.

b. Practice some examples of being interested in math.
    1. A new trick to solve a problem
    2. Math that relates to something in their lives

ENGAGEMENT:

Select a rating star below to tell us **how engaged you were during math class this week.**

1 star = Not at all engaged.

10 stars = Extremely engaged.

Question 4: Select a rating star below to tell us **how engaged you were during math class this week.** 1 star = Not at all engaged. 10 stars = Extremely engaged.

a. Ask students if they know what it means to be engaged in terms of something holding their interest or attention.
b. Distinguish between being engaged and liking something. Something might hold your attention or interest even though you do not particularly like it.
c. Practice some examples of engagement.
    1. When time seems to go faster than expected
    2. When your mind doesn't wander
    3. When you keep your focus on the lesson
    4. When you are interested in what someone is saying or what you are doing
    5. When you are curious
    6. When you listen carefully because the information is so interesting
    7. What you really want to learn more so you are paying attention