

WHY DO A SURVEY?

Students' attitudes, interests and liking for a subject have a strong bearing on their achievement. What student's believe about their ability to do math and about math in general, influences what risks they are willing to take and how much time and effort they expend. Unless students are aware of mathematical applications in real life, they are unlikely to make connections, try a variety of solutions, or choose careers involving math.

The results of this math survey can be used to understand the level of confidence students have in their ability to learn or do math, and their perception of the usefulness of math. It can also be used to determine if students understand the value of practice.

Using the Survey:

Based on the results of the survey tutors can work to change students' attitudes and beliefs about math which will in turn have a positive effect on their learning. This survey will be administered at the end of the tutoring period to see if students' attitudes have improved so make sure you address issues raised by your students' survey.

| Attitudes Implied by the Surveys | Positive Attitudes, & Beliefs | How to Change Attitudes |
|---|--|---|
| Math is a solitary, silent endeavor. | Collaboration and communication contribute to mathematical understanding. | Celebrate children's attempts, listen to their explanation of how they attempt to solve problems, have fun playing the games. |
| The teacher is in charge of imparting knowledge. The rewards for developing mathematical expertise are external and are often postponed until the future. | Mathematics involves learners in constructing meaning for themselves. The rewards for developing expertise are intrinsic. (internal) | Involve students through student made problems, teaching games to their parents, incorporating their ideas, completing mail-o-grams. Show them that as an adult, you don't have all of the answers. Admit to being wrong, to learning, or to trying something new |

| | | |
|--|--|---|
| Problems are solved in a quick manner that is either right or wrong. | Problems are solved through flexible use of multiple strategies. The time required to solve problems depends on the complexity of the problem. | Encourage strategy sharing, allow extended time for problem-solving, draw pictures, use manipulatives. Use the question "What if..." to extend or solve problems more than one way. |
| Math is unrelated to other subjects. | Mathematics has real-life application across the curriculum and in contexts outside school. | Use real life problems and manipulatives like money. Ask students for examples of math in real life. Continually draw connections to math in their lives. |
| Mathematics is not something that I am good at. | If I become good at home types of math I am more likely to attempt new tasks. | Graph results and have the student check to see if the graph shows improvements. Ask student "How many more do you think you can do today?", and check their predictions. Compare week to week. |
| Practicing math is boring | Practice can improve certain skills and can help you remember. You can improve through practice | Have the student identify which game they find the most fun or interesting. Offer choice of games or manipulatives |

Adapted from:

Whitlin, P., (2007). *The Mathematics Survey: A Tool for Assessing Attitudes and Dispositions. Teaching Children Mathematics*. Retrieved from: www.eric.ed.gov/ERICWebPortal

We Care About What You Think!

NAME: _____

Please answer the following questions so that we can make our math program better.

NOTE TO TUTORS: If it is appropriate, you can ask the questions verbally and fill in the answers for the student.

1) How good do you think you are at math?



2) Do you like practicing math?



3) When I try new things in math I feel:



4) To be good in math you need to

5) Math can help you

6) Math is hard when

7) If you have trouble solving a problem you can

8) In math I like:

9) My parents do math when they

10) A math tool that has helped me learn is

Tutor's Questionnaire:

NAME _____

Note to Tutors: This questionnaire was designed to prompt you to think about some topics that we will be covering in our course together. It will also help us to get to know you better.

- 1) By Grade 6 students should not need manipulatives (counters, blocks, etc..) to do math.

Strongly agree Agree Disagree Strongly disagree

- 2) Math games are a great way to encourage a positive outlook towards math.

Strongly agree Agree Disagree Strongly disagree

- 3) Math is like reading, students develop their skills and understanding at different paces.

Strongly agree Agree Disagree Strongly disagree

- 4) A person's attitude towards a subject affects how motivated they are to learn.

Strongly agree Agree Disagree Strongly disagree

- 5) Math problems typically have one answer and are often difficult for students.

Strongly agree Agree Disagree Strongly disagree

6) I hope to learn some new ideas about how to teach math to students.

Strongly agree

Agree

Disagree

Strongly disagree

7) When a person experiences success in a math they are more likely to enjoy doing math.

Strongly agree

Agree

Disagree

Strongly disagree

8) I am volunteering to become a math tutor
because_____

9) I think that math
is_____

10) The skills I bring to being a math tutor
are_____
