

# TEACHER'S GUIDE

## A better way for children to learn math facts. A better way to find out if children know their facts.

*Too many children needlessly suffer from math anxiety because they do not know basic facts. This is a tragedy, and an opportunity. If we provide effective practice tools, and strategies on how to study and learn, we can empower children in math, and in life.*

My name is Mitchell Mark. When I taught Third Grade, I tried everything to help my students learn math facts. However, at the end of the year, too many students were still counting on their fingers.

Online programs do some things well, however, many children use these programs, and still struggle with math facts. Children need both fluency and automaticity.

I developed a new kind of flashcard. Children personalize these cards to include information that helps them to understand each fact. The flashcards give them an alternative to counting. There is no paperwork for teachers to collect or correct.

Children use an answer form to record questions, hints, and answers. The answer form improves engagement, and shows if children understand the fact. The following resources are available free online at [studysmart.com](http://studysmart.com):

- Printable flashcards with instructions on how to prepare them.
- Answer forms with instructions on how to use them alone, with a partner, and with videos.
- Video flashcards that children can watch alone, in small groups, or as a whole class activity. Each child writes their answer, and receives immediate feedback after every question.

### **To test this cost-free approach:**

- 1) Print flashcards and answer forms.
- 2) Show the video on how to use them.
- 3) Assign flashcard practice at home, and/or have guided practice in class. See page two.

If you have any questions, feel welcome to contact me at: [MitchellMarkTeacher@gmail.com](mailto:MitchellMarkTeacher@gmail.com).  
Welcome!

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# An effective classroom practice routine.

## Prepare flashcards

Students cut and fold the flashcards.

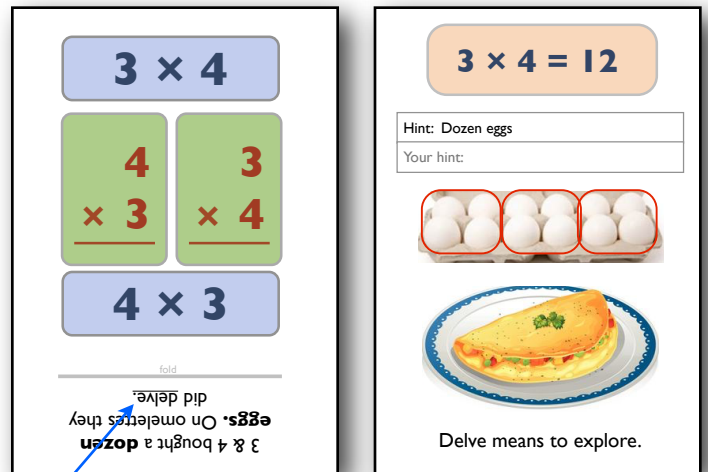
They review the hints, graphics and strategies.

They can choose to add additional hints to:

1) **The front flap** includes a rhyme. This flap is hidden. If students need a hint, they unfold the flap and read the poem. They can add a few key words to the hint.

2) **The back of the card** includes the answer, a hint, and graphics. Students can add their own hint.

3) **The flashcard opens like a book.** Students can add hints and strategies to the inside of the cards.



The underlined word rhymes with the product. The word in **bold** is the hint. If students look at the fact, and do not know the answer, instead of counting, they unfold the flap and read the poem. The poem is upside down so that the study partner can read it while holding up the card.

Flashcards include things children understand, like a dozen eggs, half an hour, a quart of milk, etc

## A six-minute routine.

Assign study partners. Students do not need to be at the same level.

Assign study stations. Two or three pairs of students practice at each station.

When you signal, students get their flashcards and answer forms, and go to their study station.

They begin practicing independently, using their answer forms.

If they complete all the facts, they shuffle the cards and start again.

Teachers can circulate and provide feedback. See the check list on page three.

After two minutes, signal students to switch to the next activity.

One partner holds the flashcards, and reads the poem (if requested).

The other partner writes the factors, hint, and product on the answer form.

The partner holding the cards can use the check list on page three to provide feedback.

After two minutes, signal students to switch to the next activity.

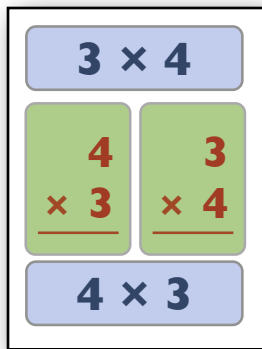
Partners reverse roles. The partner that was holding the cards, is now answering.

Students learn how to study independently, and with a partner.

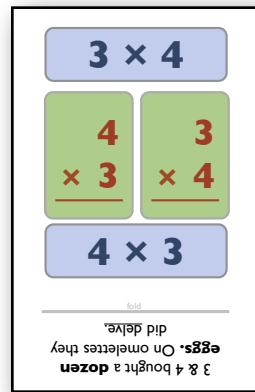
When students have the routine down, you can assign home practice.

Students practice at home, and bring in their answer forms as proof.

# How to Use Flashcards and Answer Forms



If you do not know the answer, take a moment and think. If you cannot think of a hint or a strategy, use the hint. Do not count.



If you need a hint, and you are using the cards by yourself, unfold the poem and read it. If you are practicing with a partner, put a ? in the hint box, and ask your partner to read the poem to you. The answer rhymes with the last word.

If you know the product, write it. Check your answer.

Factors				Product	Check	Hints
3	x	4	=	12		-

**Check your answer.**  
If the answer is correct, place a check in the Check column.

Factors				Product	Check	Hints
3	x	4	=	12	✓	-

If you need a hint, place a ? in the Hint column.

Factors				Product	Check	Hints
3	x	4	=			?

If not correct, cross out the answer, and write the correct answer in the Check column.

Factors				Product	Check	Hints
3	x	4	=	<del>14</del>	12	

Unfold the poem and read it, or ask your partner to read it to you. If you know the product, write it. Check your answer.

Factors				Product	Check	Hints
3	x	4	=	12		?

### Check List

- Before** turning the card over, Factors and Product are completed.
- If a hint is needed, the user writes a ? the hint box.
- If the product is correct, a check mark is written in the Check column.
- If the product is not correct, the product is crossed out, and the correct answer is written in the Check column.

If you do not know the product, write a ? in the Product column. Check your answer.

Factors				Product	Check	Hints
3	x	4	=	?		?

If you finished answering all the cards, and you have time, shuffle the cards and begin again.

Know this: Each time you answer, correct or not, you learn the fact better!

# Using FastFacts Math for Assessment

One way for children to show they know the facts, is using the flashcards with the answer forms.

Another way, it to use FastFacts Math.

There are four reasons why FastFacts Math works as an assessment tool.

- 1) You can choose individual facts.
- 2) You can set a time limit **per answer**. We suggest three seconds. This is plenty of time to answer, but not enough time to count. On paper and pencil timed tests, students can answer easy questions quickly, and count to answer more difficult facts. They pass the test without knowing the facts.
- 3) Students get immediate feedback.
- 4) There is no paperwork for teachers to collect or correct.

## Procedures

Each pair of students gets the tablet during an assigned time.

They start with 1s and proceed through 10s. They use a three-second time limit.

There are ten questions on each exercise. (1s, 2s and 10s are tested, though there are no flashcards.

If they pass, their partner marks their progress form.

When they pass 10s, they do the 28 Fact Challenge as a review.

There is a manual on the web site.

If you have any questions, you can e-mail, text or call me.

Mitch

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