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Title I Fall Conference

Make & Take It Session

0011 0010 1010 1101 0001 0100 1011

Lori Gibson
October 8, 2009




0011 0010 1010 1101 0001 0100 1011

Tell me, I forget

Show me, I remember


Involve me, I understand.

Ancient Chinese Proverb



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What do students need in order to devise flexible and effective strategies for basic facts?



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Today ...

- **Practicing Basic Skills While Having Fun**
 - Addition & Subtraction
 - Multiplication
- **Folders**
 - Vocabulary
 - Rounding, ordering decimals, fractions, and whole numbers
- **Foldables**
 - Vocabulary
 - Making connections



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Today ...

- **Paper Folding**
 - Frogs and Lily pads
 - Octagonal Stars
 - Boxes

BECOME FAMILIAR WITH THE GAMES

MAKE THEM


TAKE THEM



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Even/Odd – Who Wins?

- **Odd** – Player 1 will record the number sentence including the sum.
- **Even** – Player 2 will record the number sentence including the sum.



Close to 100

- Deal 6 cards to each player.
- Rearrange four of the cards so that the sum of two double-digit numbers are closest to 100.
- Record your score.
- Deal four more cards to each person.
- Person with the lowest score wins!

Close to 100



Questions to Ask

- What strategies did you use?
- What mathematics are the students learning as they are playing this game?
- What additional questions should we ask students as they are playing and when they are finished?

Close to 10? 1000?

- Refer to sheets for additional ideas.

Tic Tac Toe Sums

- Four numbers in a row.
- Move only one of the paper clips when it is your turn.
- You may place two paperclips on one number.

Sum What Dice Game

- On each turn, the players roll two dice.
- On their strip, they may cover the sum or any two numbers that are still uncovered and that add to the sum rolled.
- Cannot cover the number twice.
- When a player cannot play, he or she is out and has a score of the sum of the uncovered numbers.
- The person with the lowest score wins.

Can You Guess?

- One person is the leader.
- Without looking at the number, place card on forehead so the other player can see their card.
- The leader tells them what the sum is.
- Each player guesses what card they are holding on their forehead.
- Keep the card, if you guess correctly.

Basic Multiplication facts:

Why can some students learn them and some cannot?

What can we do to help?

- Indicates familiar multiplication facts, easy to learn.
- Indicates multiplication facts that are more difficult for students.

Multiplying by 1

x	1	2	3	4	5	6	7	8	9	10
1	1	2	3	4	5	6	7	8	9	10
2	2	4	6	8	10	12	14	16	18	20
3	3	6	9	12	15	18	21	24	27	30
4	4	8	12	16	20	24	28	32	36	40
5	5	10	15	20	25	30	35	40	45	50
6	6	12	18	24	30	36	42	48	54	60
7	7	14	21	28	35	42	49	56	63	70
8	8	16	24	32	40	48	56	64	72	80
9	9	18	27	36	45	54	63	72	81	90
10	10	20	30	40	50	60	70	80	90	100

Multiplying by 2

x	1	2	3	4	5	6	7	8	9	10
1	1	2	3	4	5	6	7	8	9	10
2	2	4	6	8	10	12	14	16	18	20
3	3	6	9	12	15	18	21	24	27	30
4	4	8	12	16	20	24	28	32	36	40
5	5	10	15	20	25	30	35	40	45	50
6	6	12	18	24	30	36	42	48	54	60
7	7	14	21	28	35	42	49	56	63	70
8	8	16	24	32	40	48	56	64	72	80
9	9	18	27	36	45	54	63	72	81	90
10	10	20	30	40	50	60	70	80	90	100

Multiplying by 5

x	1	2	3	4	5	6	7	8	9	10
1	1	2	3	4	5	6	7	8	9	10
2	2	4	6	8	10	12	14	16	18	20
3	3	6	9	12	15	18	21	24	27	30
4	4	8	12	16	20	24	28	32	36	40
5	5	10	15	20	25	30	35	40	45	50
6	6	12	18	24	30	36	42	48	54	60
7	7	14	21	28	35	42	49	56	63	70
8	8	16	24	32	40	48	56	64	72	80
9	9	18	27	36	45	54	63	72	81	90
10	10	20	30	40	50	60	70	80	90	100

Multiplying by 9 (finger and adding up trick)

x	1	2	3	4	5	6	7	8	9	10
1	1	2	3	4	5	6	7	8	9	10
2	2	4	6	8	10	12	14	16	18	20
3	3	6	9	12	15	18	21	24	27	30
4	4	8	12	16	20	24	28	32	36	40
5	5	10	15	20	25	30	35	40	45	50
6	6	12	18	24	30	36	42	48	54	60
7	7	14	21	28	35	42	49	56	63	70
8	8	16	24	32	40	48	56	64	72	80
9	9	18	27	36	45	54	63	72	81	90
10	10	20	30	40	50	60	70	80	90	100

Multiplying by 10

x	1	2	3	4	5	6	7	8	9	10
1	1	2	3	4	5	6	7	8	9	10
2	2	4	6	8	10	12	14	16	18	20
3	3	6	9	12	15	18	21	24	27	30
4	4	8	12	16	20	24	28	32	36	40
5	5	10	15	20	25	30	35	40	45	50
6	6	12	18	24	30	36	42	48	54	60
7	7	14	21	28	35	42	49	56	63	70
8	8	16	24	32	40	48	56	64	72	80
9	9	18	27	36	45	54	63	72	81	90
10	10	20	30	40	50	60	70	80	90	100

How do we help students with difficult multiplication facts?

x	1	2	3	4	5	6	7	8	9	10
1	1	2	3	4	5	6	7	8	9	10
2	2	4	6	8	10	12	14	16	18	20
3	3	6	9	12	15	18	21	24	27	30
4	4	8	12	16	20	24	28	32	36	40
5	5	10	15	20	25	30	35	40	45	50
6	6	12	18	24	30	36	42	48	54	60
7	7	14	21	28	35	42	49	56	63	70
8	8	16	24	32	40	48	56	64	72	80
9	9	18	27	36	45	54	63	72	81	90
10	10	20	30	40	50	60	70	80	90	100

Empty the Bowl – Page 163

- How many rolls do you think it will take to empty the bowl?
- What do you think is the most number of rolls it could possibly take to empty the bowl?
- Why couldn't it be emptied in just one roll?
- Why couldn't it be emptied in two rolls?
- What do you think is the fewest number of rolls?

The information on slides 11-16 were taken from *About Teaching Mathematics*, Burns (2000).

The Game of Pig – Page 71

- For two or more players.
- The goal of the game is to be the first to reach 100.
- On your turn, roll the dice as many times as you like, mentally keeping a running total of the sum.
- When you decide to stop rolling, record the total for that turn and add it to the total from previous turns.
- If a 1 comes up on one of the dice, the player's turn automatically ends and 0 is scored for that round.
- If 1s come up on both dice, not only does the turn end, the total accumulated so far returns to 0.

Closest to 100

- The goal of the game is to get closest to 100 without going over.
- With a partner, students take turns rolling a pair of dice.
- They may choose which number will represent the tens place and which number will represent the ones place. If they roll a 5 and a 2, they may choose to make it a 52 or a 25.
- They continue to roll and add their roll to the previous until they choose to stop.
- The closest sum to 100 without going over wins.
- Students need to record and discuss their strategy.

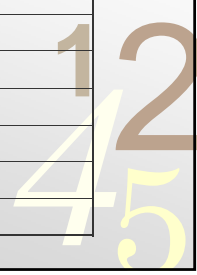
101 and Out – Page 192

- For 2 or more players.
- Each player makes a recording sheet as shown on page 192.
- Take turns rolling the die or spinning the spinner to generate six numbers.
- On each turn, all players write the number in either the tens column or ones column of their recording sheet. Once a number is recorded, it cannot be changed.
- After six numbers, fill in any blank spaces in the ones column with zeros and add.
- The player closest to 100 without going over wins.

101 and out

0011 0010 1010 1101 0001 01

	10s	1s
1)		
2)		
3)		
4)		
5)		
6)		
Total		




Foldables & Other Sites

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<http://www.dinah.com/>

<http://nlvm.usu.edu/>

<http://illuminations.nctm.org/>



Guess My Number

Objective: Reinforce that there are numbers between two whole numbers and that there are numbers between all numbers.....

1. Teacher thinks of a number and writes it down.
2. Students take turns asking yes/no question to determine the correct number. (Go around the room and each student takes a turn.)
3. Students should raise their hand when they want to make a guess out of turn. First hand up goes first. Students can only make two guesses out of turn.

Example: Number 2.3

- "Is the number between one and twenty?" - yes
- "Is the number less than 10?" - yes
- "Is the number less than 5?" - yes
- "Is the number less than 3?" - yes
- "Is the number less than 2?" - no
- "Is the number between 2.5 and 3?" - no
- "Is the number 2.4?" - no
- "Is the number 2.3?" - yes

Start with a whole number and then a decimal number with a tenth, and then numbers with hundredths and thousandths.....

The student guessing the correct answer gets a candy bar - and if the class gets the answer with less than 20 questions they all get a piece of candy.

BUILDING A SYSTEM OF TENS

"Close to 100" Score Sheet

	Score
Round 1: _____ + _____ = _____	_____
Round 2: _____ + _____ = _____	_____
Round 3: _____ + _____ = _____	_____
Round 4: _____ + _____ = _____	_____
Round 5: _____ + _____ = _____	_____
	Total score _____

Used at the Title I Conference, with permission from Virginia Bastable, author of *Building a System of Tens*.

Even/Odd - Who Wins?

You need: a partner

a deck of cards (no face cards)

a piece of paper for recording

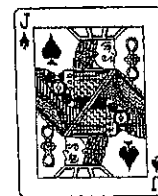
Shuffle the cards then deal them out face down. Each player will stack their cards keeping them face down. One player will be Player 1 the other will be Player 2.

To start, each player takes the top card from their stack and turns it face up. If the sum of the cards is even, Player 1 will record the number sentence including the sum. If the sum is odd, Player 2 will record the number sentence. When all of the cards have been used the player who has recorded more number sentences is the winner.

Is the game fair? If not, how could you make it fair?

What if you used cards labeled 0-9? Fair game?
Labeled 1-9? Fair game?

Why or why not?



Math Activity: Close to 100, 1000, 10^n

1. Play a game of Close to 100 with your partner. As you play note what strategy you are using. After the game, explain in words the strategy you used to try to choose numbers that added as close as possible to 100. Is your strategy the same or different from your partner's? What did each of you focus on? You may wish to play a second game now that you have clarified your strategies.

2. Play a game of Close to 1000 with your partner. As you play note what strategy you are using. After the game, explain in words the strategy you used to try to choose numbers that added to 1000. How does this strategy compare with your strategy for Close to 100? Discuss your strategy with your partner.

3. Imagine these games: Close to 10,000 with two four-digit numbers, Close to 100,000 with two five digit numbers, etc. Work to describe a general strategy for all games involving two addends whose sum is close to a power of 10 or list some components of such a general strategy.

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Game Directions: Close to 100

Close to 100 is played with a deck of 44 cards--four cards each of the digits 0- 9 plus four wild cards. Each pair of players needs one deck; each player needs a score sheet.

The object of the game is to create double-digit numbers that sum as close to 100 as possible. Each game has five rounds.

For round 1, deal six cards to each player. Players then choose any four of their six cards to make two two-digit numbers that, when added, come as close to 100 as possible. Wild cards can be assigned any value. Players record their numbers and total on their score sheets. The player's score is the difference between the total and 100. (102 and 98 are both scored as 2.) The used cards are discarded and four new cards are dealt to each player. Each player will have 6 cards at the beginning of a round, two that are left from the previous round and four that are new.

At the end of five rounds the player with the lowest total score wins.

Close to 100 Score Sheet

Score for Round

Round 1 _____ + _____ = _____ _____

Round 2 _____ + _____ = _____ _____

Round 3 _____ + _____ = _____ _____

Round 4 _____ + _____ = _____ _____

Round 5 _____ + _____ = _____ _____

FINAL SCORE = _____

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Game Directions: Close to 1000

Close to 1000

Close to 1000 is similar, but the number of cards dealt is different. Players start with 8 cards, and lay out six of them to make two three-digit numbers that add as close to 1000 as possible. A game consists of 5 rounds and the player with the lowest score at the end of five rounds is the winner.

Close to 1000 Score Sheet

Score for Round

Round 1 _____ + _____ = _____ _____

Round 2 _____ + _____ = _____ _____

Round 3 _____ + _____ = _____ _____

Round 4 _____ + _____ = _____ _____

Round 5 _____ + _____ = _____ _____

TOTAL SCORE = _____

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BUILDING A SYSTEM OF TENS

Number Cards for "Close to 100"

0	0	0	0
1	1	1	1
2	2	2	2
3	3	3	3

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BUILDING A SYSTEM OF TENS

Number Cards for "Close to 100"

8	8	8	8
9	9	9	9
wild card	wild card	wild card	wild card

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BUILDING A SYSTEM OF TENS

Number Cards for "Close to 100"

4	4	4	4
5	5	5	5
<u>6</u>	<u>6</u>	<u>6</u>	<u>6</u>
7	7	7	7

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Tic Tac Toe Sums

You need:

a partner

Tic Tac Toe Sums gameboard

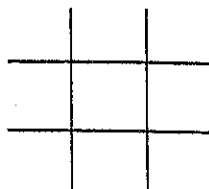
two paperclips

game chips

The goal of the game is to capture four numbers in a row, either horizontally, vertically or diagonally. Each player chooses a color of game chip.

Player #1 places the paper clips on two addends and places a game chip on the game board on the sum of the two addends. Player #2 can move only one of the paperclips, then places a game chip on the sum of the two resulting addends. Players continue to take turns. Play ends when one player covers four sums in a row.

Did you find any particular strategy helpful in playing this game?



Tic Tac Toe Sums

1	24	3	22	5	14
20	8	16	10	12	15
13	23	15	9	17	6
19	7	21	4	23	2
13	20	6	16	17	14
4	19	5	11	18	21

0 1 2 3 4 5 6 7 8 9 10 11 12

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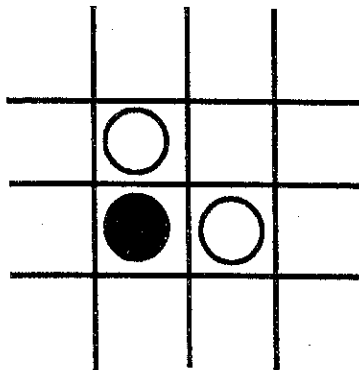
Mathematics Education Collaborative (MEC)

Tic Tac Toe Products

You need:

products board
game chips
a partner

1. Player A selects two factors by placing paper clips on any two numbers (1-9) to multiply. Player A then places a game chip on the grid to cover the product of those two numbers. Note: it is OK to place both paper clips on one number (7x7).
2. Player B moves 1 paper clip to make a new product and places a game chip on the grid.
3. Players alternate moving one paper clip at a time and continue placing game chips until a player has marked four products in a row.
4. After several games, players discuss and record strategies.



Tic Tac Toe Products

1	2	3	4	5	6
7	8	9	10	12	14
15	16	18	20	21	24
25	27	28	30	32	35
36	40	42	45	48	49
54	56	63	64	72	81

1 2 3 4 5 6 7 8 9

Used at the Title I Conference, with permission from Mathematics Education Collaborative (MEC).



Mathematics Education Collaborative (MEC)

Sum What Dice Game

You need:

2 dice

playing strips for each player

game chips

Players take turns rolling two dice.

On each turn the player may cover either the sum rolled on the dice or any two numbers that are still uncovered and that add to the sum rolled.

For example, if a sum 9 is rolled first, the player may cover 9, or 1 and 8, or 2 and 7, or 3 and 6, or 4 and 5.

Later in the game if the sum of 9 is rolled again and the 5 is already covered, the player cannot use the 4 and 5 combination and must play one of the other open possibilities.

When a player cannot play, he or she is out and has a score of the sum of the uncovered numbers.

Play continues for everybody else until everyone is out. The last person to go out will not necessarily win; the person with the lowest score wins.

Play several times. Are there best strategies? Explain your thinking in your menu book.

1	2	3	4	5	6	7	8	9
---	---	---	---	---	---	---	---	---

1	2	3	4	5	6	7	8	9
---	---	---	---	---	---	---	---	---

1	2	3	4	5	6	7	8	9
---	---	---	---	---	---	---	---	---

1	2	3	4	5	6	7	8	9
---	---	---	---	---	---	---	---	---

1	2	3	4	5	6	7	8	9
---	---	---	---	---	---	---	---	---

Can You Guess?

You need: a deck of cards (with face cards removed)
a group of three

One of you will be the leader. The other two will be the players. The leader will shuffle the cards then deal a card face down to each player.

Players must not look at their cards. Instead they are to place the card on their forehead so that the other player can see their card. The leader then tells the players what the sum of the two cards is. Each player then tries to guess what card they are holding on their forehead.

If a player guesses correctly then the player keeps the card.

Keep playing until each member of the group has a chance to be the leader and each leader has dealt all the cards in the deck.

???

Can You Guess? Challenge

You need: a deck of cards (with face cards removed)
a group of four

One of you will be the leader. The other three will be the players. The leader will shuffle the cards then deal a card face down to each player. Players must not look at their cards. Instead they are to place the card on their forehead so that the other players can see their card. The leader then tells the players what the sum of the three cards is. Each player then tries to guess what card they are holding on their forehead.

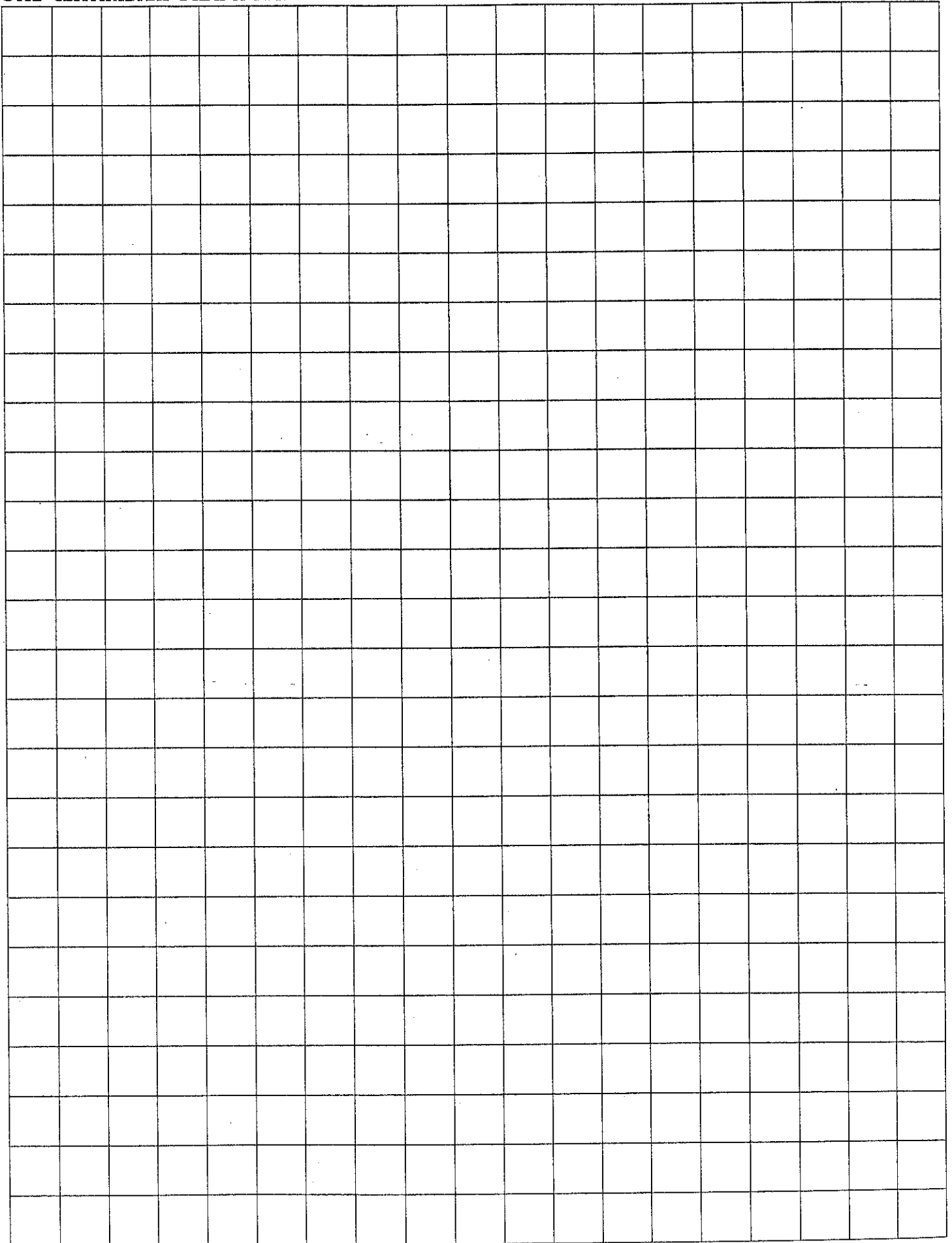
If a player guesses correctly then the player keeps the card.

Keep playing until each member of the group has a chance to be the leader and each leader has dealt all the cards in the deck.

Challenge #2: Play the game counting black cards as positive integers and red cards as negative integers.

?????

ONE-CENTIMETER GRAPH PAPER



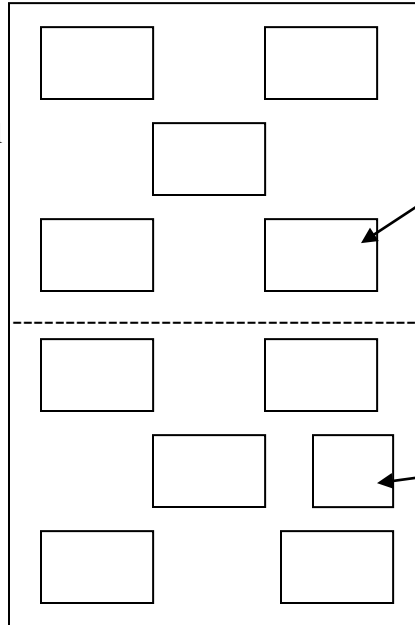
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Vocabulary and Math Activity Folders

The following are a few examples of how the folders can be used.

Reinforcement of Vocabulary Words

The definitions are typed or written on shipping labels and the words are typed on clear address labels or written on small Post-It notes. Students take the pile of Post-It notes and begin matching them with the definitions.

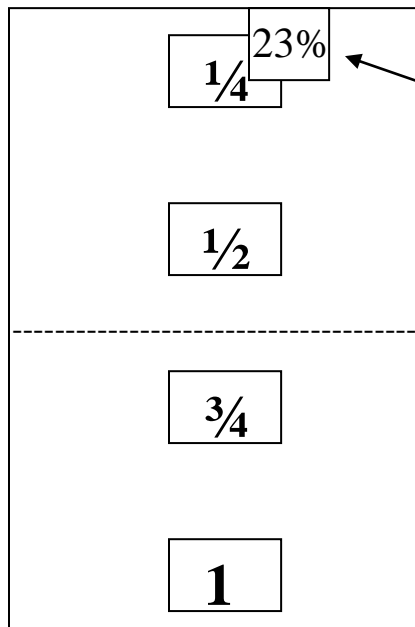


Shipping labels with definitions

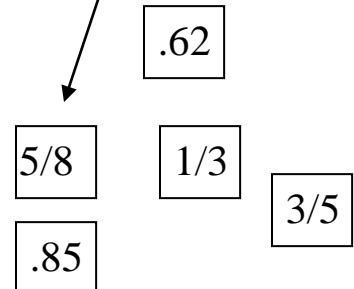
Pile of Post-It notes with words on them.

Reinforcement of Math Concepts

Students will place the Post-It notes in order with fractions, decimals, or percents written on them.



Six to eight Post-It notes are made with decimals, percents, or fractions written on them. A few examples are provided for you.



0

$\frac{1}{2}$

$\frac{1}{4}$

$\frac{3}{4}$

1

20

30

40

50

60

4

4.2

4.6

5

4

4.2

4.6

5

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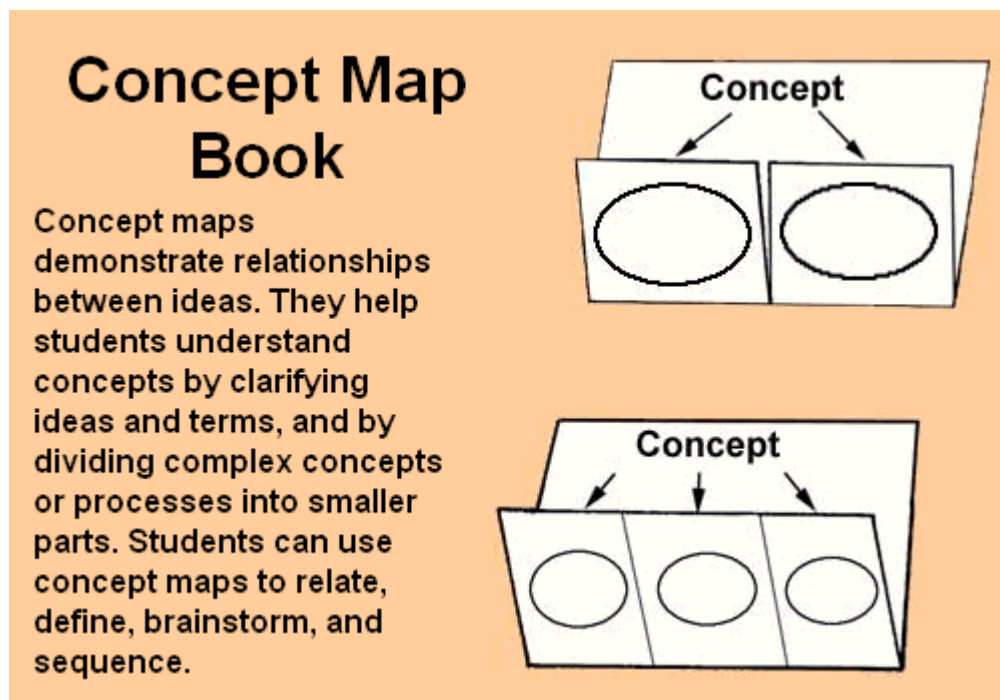
Foldables

Make and Take Session

For more information, go to <http://www.dinah.com/>

On this site, you will find colored elementary and secondary examples, free catalog, and more information on foldables. Below is just one example that can easily be made and used by your students.

Concept Map Books

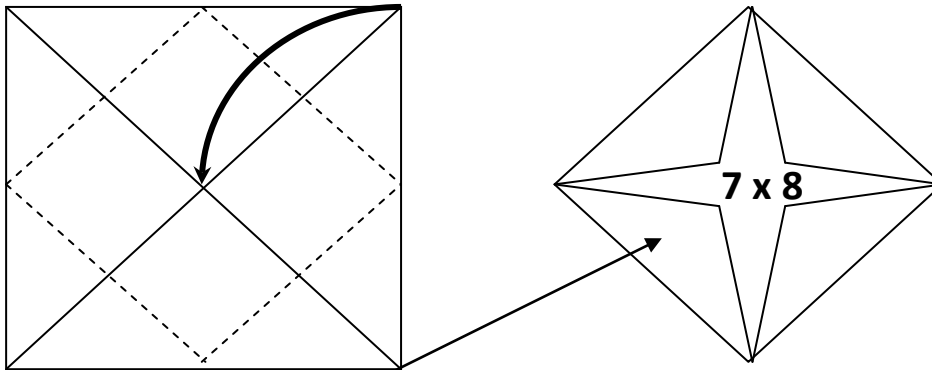


Instructions:

1. Fold a sheet of paper along the long or short axis, leaving a two-inch tab uncovered.
2. Fold in half or in thirds. (Additional tabs can be created by folding into more parts.)
3. Unfold and cut along the inside fold lines to create tabs.
4. Have students identify the concept by writing key words or using pictures on the two-inch tab. Draw arrows from the central idea to the tabs, where students record data underneath each tab.

**Learning Basic Facts
by Making Meaningful Connections
Using Foldables**

Envelope Fold



Outside flaps:

- Titles:
 - Picture
 - Words
 - Numbers
 - Another way (array, story problem, another way to compute)

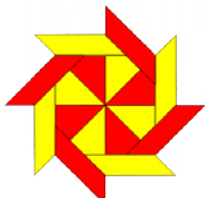
Inside flaps will be the representation of the basic fact that is aligned with the title.

Layered-Look Book

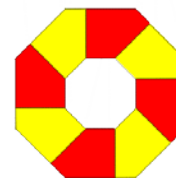


Open the flaps to record the appropriate representations of the basic fact.

Note: Clearer explanation and examples will be provided during the make and take session.



Connecting Octagon Star to Mathematics



Below are ideas to reinforce important mathematical concepts by folding paper.

Measurement

➤ Angles (upper elementary, middle school)

- How many obtuse angles can you find in the star? In the octagon? How many acute angles can you find in the star? In the octagon?
- Are there any right angles?

Note: Teachers, you may want to have them label the angles either by drawing a picture or on the octagon-star.

➤ Perimeter

- If the length of one of the outside octagonal edges is 2 inches, what is the perimeter of the outside edges of the octagon? What is the perimeter of the star? Which perimeter is longer? Support your answer and explain why this may be. (middle/high school)

➤ Area

- Look at the area of the star and the hexagon. Which figure do you think has the larger area? Support your reasoning. (upper elementary/middle/high school - - depending on your expectations)

Geometry

- What shapes can you find in the star? In the octagon? (elementary/middle)
- After you are given the length of one of the outside octagonal edges, without using a ruler, how long are all the edges in the star? This includes the all the lengths of the small hexagon inside the star. (middle/high school)

Number & Operations

➤ Fractions

- If you have students make the star with 3 of one color (blue), 4 of another color (yellow) and 1 of another color (red), the following questions could be asked (upper elementary/middle school):
 - What fraction of the star (or hexagon) is blue? Yellow? Red? How do you know? Support your answer.
 - What percentage of the star (or hexagon) is blue? Yellow? Red? How do you know? Support your answer.
 - How can you represent the blue part of the star (or hexagon) as a decimal? The yellow part? The red part? How do you know? Support your answer.
- In the octagon, do you have more yellow sections or red? How many more do you have? (lower elementary)

Algebra

- If there are eight sheets of paper to make one octagon-star, how many sheets of paper would it take to make 12 of them? Create a table, graph, and algebraic expression to support your answer.

Websites: Paper folding and Mathematics

<http://www.paperfolding.com/math/>

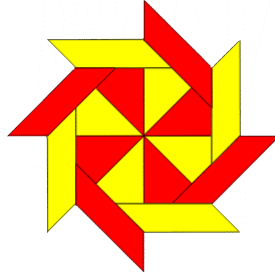
<http://mathworld.wolfram.com/Folding.html>

<http://erikdemaine.org/folding/>

<http://math.serenevy.net/?page=Origami-WhereMath&layout=framed>

If you have questions or comments about this session, contact Lori.Gibson@dickinsonstate.edu or (701) 250-1318.

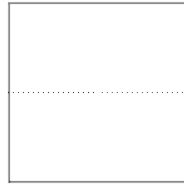
Octagon Star



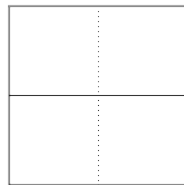
To build the octagon star you need eight pieces of origami paper. You may use either 4 pieces each of two colors or 2 pieces each of four colors. Each piece of origami paper will be folded in the same manner. You will then assemble the folded pieces together, according to the following instructions.

Folding each piece of origami paper:

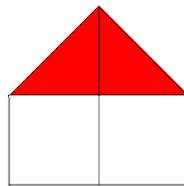
Fold the paper in half and then unfold it. Fold it so that the colored sides remain on the outside.



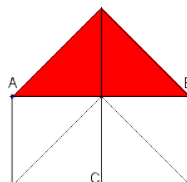
Rotate the paper 90 degrees, fold in half and then unfold. Again, fold so that the color remains on the outside.



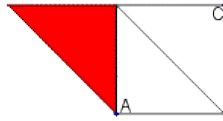
Fold the top two corners down to the center.



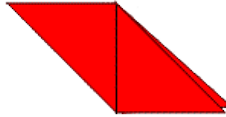
Fold point A down to point C to make the crease in the middle of the left square. Do not crease past the center of the piece of origami paper. Unfold and then do the same on the other square by folding point B down to point C. Unfold this fold. Your origami paper should then look like the following picture.



Rotate the paper 90 degrees and fold it in half.

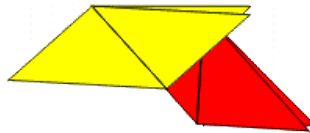


Push the fold inside by pushing point C to point A. This will require reversing the fold that goes down the center of the white rectangle in the previous picture. You will then have a parallelogram. One end of the parallelogram will be made up of two flaps forming a valley.

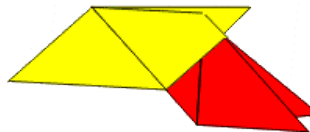


Assembling the pieces.

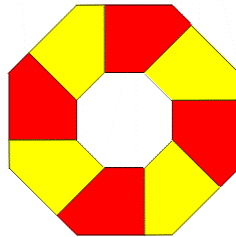
Place one parallelogram inside another of a different color as the following picture indicates. The short side of the second parallelogram should go inside the valley of the first parallelogram.



Fold the tails of the first parallelogram over the second to lock them together. The following picture indicates one of the tails folded into the valley of the second parallelogram.



Repeat this procedure until you have locked all 8 parallelograms to form the resulting octagonal ring. When you hook the 8th with the first, make sure that you fold the tails over only the first parallelogram and not the first and second (you'll have to look carefully at the resulting shape to follow this instruction). The resulting figure should slide together fairly easily to form the star at the top of the assignment.



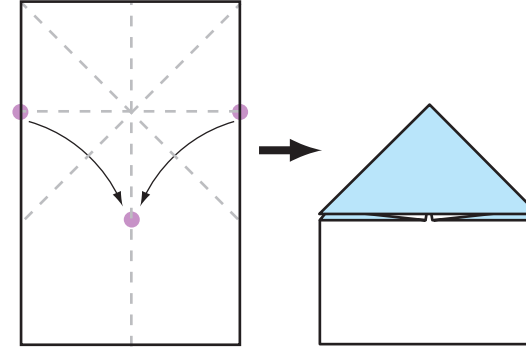
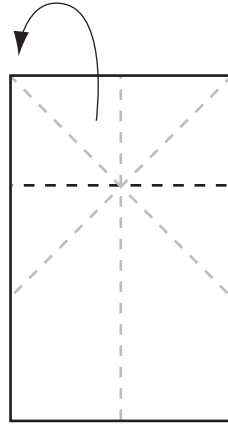
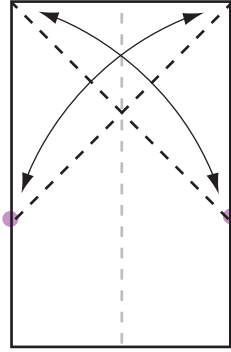
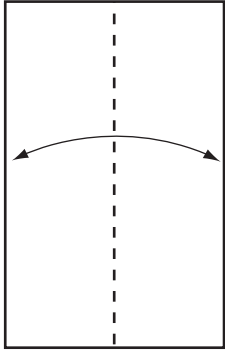
Question: Determine, as a fraction of the length of the side of the origami paper, the lengths of the sides of the resulting parallelogram along with the length of its diagonal. What is the area of the parallelogram, as a fraction of the area of the origami paper?

Note: These directions were taken from <http://sierra.nmsu.edu/morandi/CourseMaterials/OctagonStar.html> with permission.



Origami Jumping Frog

origami-fun
www.origami-fun.com

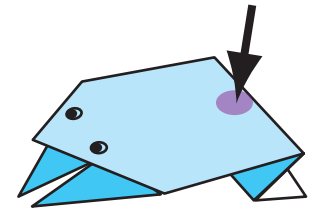
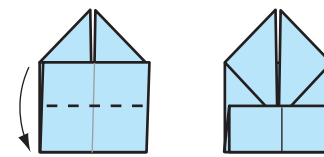
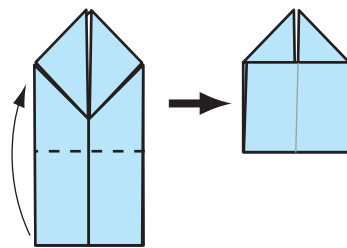
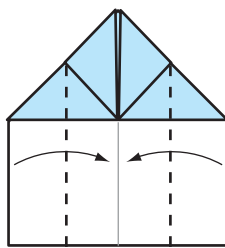
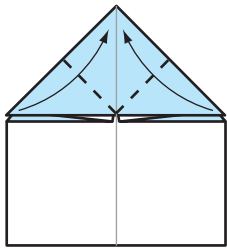


1. Start with a rectangular sheet of paper, white side up. Fold it in half, and open out again

2. fold both top corners to the opposite edge of the paper. Your creases should look like this

3. Where the diagonal creases meet in the middle, fold the paper backwards, crease well and open.

4. Hold the paper at the sides, bring these points down to the centre line, then flatten. The creases should do most of the work here!



5. Fold the uppermost triangles up to the top point.

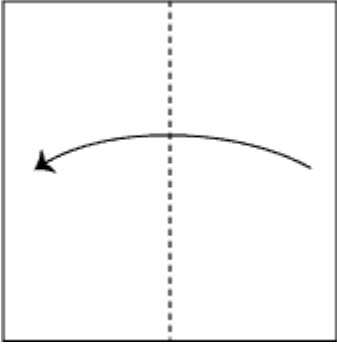
6. Fold sides in to the centre line.

7. Fold bottom of model upwards so the end sits in the centre of the top diamond.

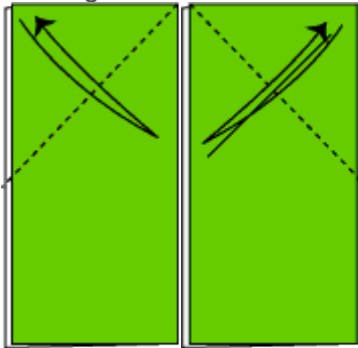
8. Now fold the same part downwards, in half.

9. Turn over and your frog is finished!
To make him jump, press down on his back as shown.

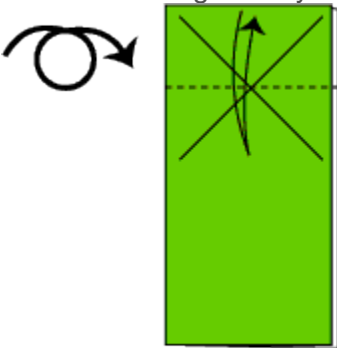
1 Fold the paper in half sideways to make a rectangle.



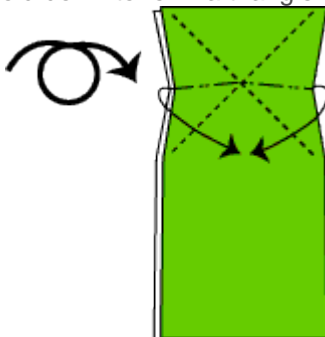
2 Fold the corners down and unfold them right away, repeating this for both top corners of your rectangle.



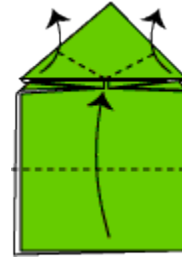
3 Flip the paper over and fold the top of the paper down at the spot where the diagonal creases meet. Unfold right away.



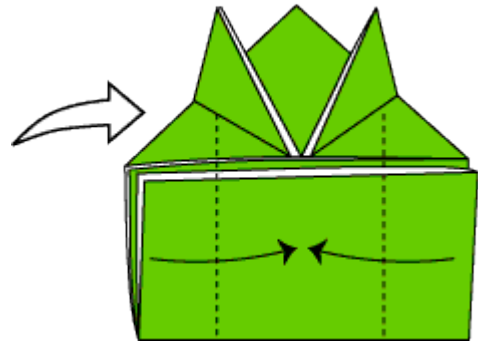
4 Flip over once again, and fold the two edges toward you so they meet each other. The top of your rectangle will fold down to form a triangle.



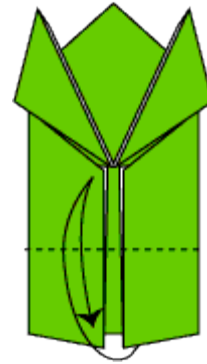
5 Fold the bottom of the paper up so that its edge meets the bottom of your triangle. Fold the two corners of the triangle up to form the "front legs" of the frog.



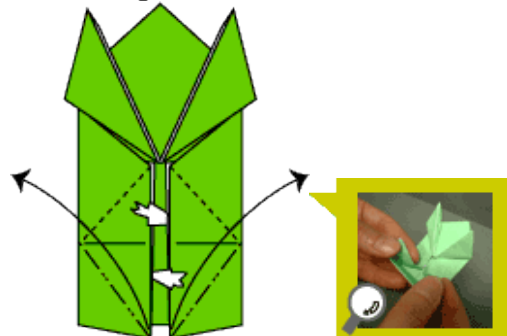
6 Fold the sides inward to meet at the center.



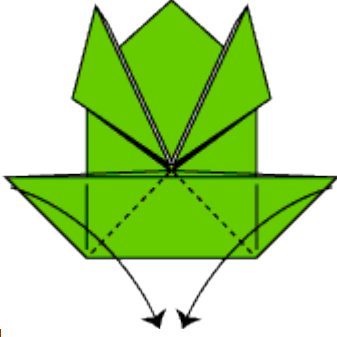
7 Fold the bottom of the paper upward so its edge touches the bottom of the "legs," and unfold right away.



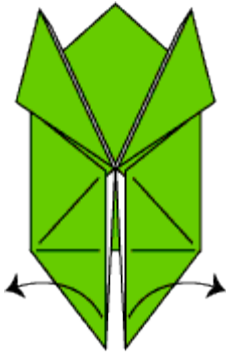
8 Insert your fingers into the inside of the flaps, and pull the bottom corners outward to the sides, so that the bottom edge comes up to touch the bottom of the "legs."



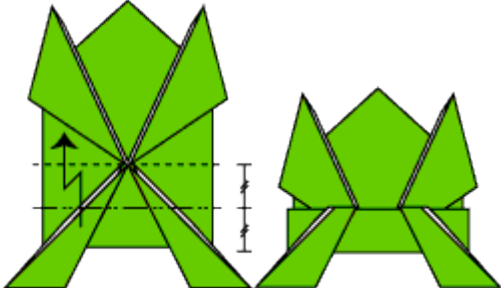
9 Fold the corners down so they meet at the bottom of the figure.



10 Fold the bottom corners outward to form the "back legs" of the frog.



11 Create a zigzag fold at the bottom of the figure, folding the bottom half up and then the bottom quarter back down.



12 Your frog is ready to go.



Press its back and release to make it hop!

