Title: Place Value- “Let’s Party With Place Value”

Brief Overview:

Students will explore place value using number symbols, models, words, and expanded form to determine the value of numbers 0-10,000. Students will apply whole numbers and place value knowledge to a real life situation of attending a party.

NCTM Content Standard

Numbers and Operations:

- Understand numbers, ways of representing numbers, relationships among numbers, and number systems;

Grade/Level:

Grades 2-3

Duration/Length:

5 days (60 minutes each day)

Student Outcomes:

Students will:

- Read, write, and represent whole numbers using symbols, words, and models.
- Express whole numbers using expanded form
- Identify the place value of a digit in a whole number

Materials and Resources:

Lesson #1

·Poster or Transparency of Baker (TR1)
·Betty B. Baker Preassessment (SR1)
·The Case of the Missing Birthday Party, by Joanne Rocklin
·Place Value Mats (Class set)
·Base Ten Materials (base ten blocks, digi blocks, etc.)
·2 sheets of white paper
·Party hats
·Digit Cards (SR2)
·Digit Switch –a-Roo! (SR3)
·Digit decision (SR4)
·Dice
·Markers
·Pauline Invitation (TR2)
·Come to My Party!! (SR5)
·Crayons
·Index Cards
·Scissors
·Transparency Film
·Place Value Chart (TR 3)
·Anecdotal Records (TR 4)

Lesson #2

·Digit cards numbered 0-9 for each group (SR 2)
·Journal Prompt (SR 6)
·Earth Day-Hooray, by Stuart J. Murphy
·Overhead base ten blocks
·Overhead projector
·Digit Cards (SR 2)
·Concept Attainment PV (TR 10)
·Practicing Place Value (SR 7)
·Teacher Observation Checklist (TR5)
·Place Value Chart (TR 7)
·Concept Attainment PV (TR 8)
·Concept Attainment PV (TR 9)
·Concept Attainment PV (TR 11)
·Teacher Observation Rubric (TR6)

Lesson #3

·The Case of the Missing Birthday Party, by Joanne Rocklin
·Dried Fruit-enough for all students to have multiple pieces
·Baggies
·Brown bag
·Index card
·Overhead transparency Base Ten Blocks
·Overhead projector
·Interlocking base ten blocks
·Transparency Practicing Place Value (SR 7)
·Practicing Place Value (SR 7)
·CD-Boogie Fever or Disco Disney
·The Party Planner (SR 8)
· Dancing Digits (SR 9)
·Can't Stop Dancing (SR10)
·The Dancing Digits (TR12)
·The Storyteller (TR 13)
·Dancing Tens (TR 14)
·Blat! (TR 15)
· Harriet Hundred (TR16)

Lesson#4

·Construction Paper- 2 colors
·Glue
·Scissors
·CD-Boogie Fever or Disco Disney
·Overhead Base Ten Blocks
·Overhead Projector
·Blackboard and Chalk/Dry erase and colored pens
·Blank paper
·Pencils
·Volunteer bag (from math last math lesson)
·Dancing Digits Go Home II (TR19)
·I am Still Me (SR 11)
·I Can Dance (SR12)
·Disco Digits (SR13)
·Story Teller (TR 14)
·The Dancing Digits go home (TR 17)
·Dancing Hundreds (TR 18)

Lesson 1 A Place to Party

Preassessment

Inform the students that you will be reading them a story about a birthday party. Ask them what items are usually present at birthday parties. After the students respond, ask them to identify what community worker makes birthday cakes. After a correct response, display a picture of a baker (or make a transparency of TR1) and share the following story:

> Betty B. Baker, is a very busy woman. She bakes several cakes everyday. Since she is always so busy she needs an assistant to help her. Well, her assistant is very nice, but he is a bit scatterbrained and clumsy. He bumps the oven and makes the cakes fall! He drops egg shells into the cake mix! Today, he accidentally drops a cake order form in the cake mixer. Betty B. Baker is so upset when she discovers that the numbers on the order are torn and mixed up. She doesn't know if Mr. Bobblehead wanted a birthday cake or a wedding cake. What will she do? Betty needs your help to fix this mess. What kind of cake should Betty B. Baker bake?!?

Distribute SR1 to each student. Have the students read the clues aloud. Encourage them to try their best to independently use the clues to figure out what kind of cake that Betty B. Baker should bake. (Betty B. Baker should bake a baby shower cake.)

Launch

Advanced Preparation – Make place value mats using construction paper and laminate them for future use.

Example.

Thousands 	Hundreds 	Tens	Ones

Access background knowledge by asking the students to share any experiences they've had with place value and digits. Discuss what these terms mean and ask the students to create a symbol to represent "place value" and a symbol to represent "digits." Create vocabulary cards based on their suggestions. Read The Case of the Missing Birthday Party. Write "5 Twig Street" on the board. Discuss the problem of the story. Ask students to explain how the position of the 5 in a number determines its value. Ask the students what the possible numbers could be if the 5 was in the ones, tens, or hundreds place. Then, write the address "85 Twig Street" on the board,

which is Nick's real address. Ask the students to identify which numbers are located in the ones and tens place. Instruct them to model this number on their mats and tell how many tens and ones blocks were used in each place to make that number.

Teacher Facilitation

Advanced Preparation – Write digits on pieces of paper and attach one to each party hat.

Provide a place value mat and base ten blocks for each student. Choose three students to put on a party hat (one digit on each hat) and stand in front of the class. Instruct the students at their seats to model the number that they see. Once every one has modeled correctly, record the number on the board and asks the class to read the number aloud. Select three new students and tell them to arrange themselves in a different order to make a new number. Repeat this activity until all students have been given a chance to wear a party hat. (Depending on your class size, you may need to reprogram the party hats with new digits in order to give everyone a chance.) By the end of the activity, you should have a list of six three-digit numbers written on the board. Ask volunteers to sequence these numbers from lowest to highest and explain their thinking.

Example.

On the board -	345	543	534	453	354	435
Sequenced-	345	354	435	453	534	543

Student Application

Day 1 **<u>Digit Switch-a-Roo!</u>**

Advanced Preparation – Copy SR2 onto cardstock and cut out the digit cards to create a deck of the digits 1-9 only. Exclude the zeros at this time. You will need a deck for each pair of students.

Provide each pair of students with digit cards and each student with SR3. Have the students shuffle the digit cards and place the deck face down. Instruct them to select three cards and turn them over to reveal the digits. Challenge the children to cooperatively create as many numbers as they can with the three digits chosen. They are to record these numbers as they make them on the lines provided. Once they have created their lists, instruct them to write these numbers in order on the lines provided.

<u>Digit Decisions</u>

Before you begin this activity, determine game rules. For example, you may decide that the highest number wins or the lowest number wins. You may challenge some students by stating that the person closest to a certain number wins. For example, the student closest to 350 wins. Give one die to each group of 2-3 students. Distribute SR4 to each student. Instruct the students to take turns rolling the die. Each time a student rolls the die, he or she will choose to record the digit in the ones, tens, or hundreds place using a marker. Then, the next student rolls the die and records the

digit in his or her place of choice. After each place is filled on each student's recording sheet, a winner is determined. Monitor students as they play. As winners are determined, have students explain why they are or are not the winner.

Intriguing Invitations (Come to My Party!!)

Advanced Preparation – Make a transparency or poster of TR2.

Review the clues that were given to help Betty B. Baker figure out her cake order. Then, display your example of Pauline's damaged party invitation. Inform the students that they will create their own invitations like this one with missing numbers and write clues for friends to figure out their addresses. Distribute SR5 to each student. Make sure that the students include 3 digits no matter what their real address may be. However, they are free to use their real birth date or create one. They are to use crayons/markers to decorate their invitations. Give each student an index card to record his or her address. This card will be used later as an answer sheet. Instruct your students to use scissors to cut holes in a way that will create the illusion that a pet really chewed holes in the invitation. They are to cut out all of the numbers in the address except for one. After the invitation is complete, have the students create clues. Collect the invitations for the warm-up activity on Day 2.

Exit Card

Before your class transitions to another class, lunch, recess, or dismissal, distribute an index card to each student. Write the following question on the board and instruct the students to answer it on the index card.

Which number is greater, 567 or 576? Use what you know about place value to explain your answer.

A completed exit card is a student's "ticket" to exit the room.

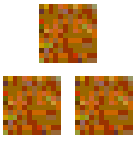
Day 2 **Warm-Up**

Allow the students to exchange their invitations. Instruct them to figure out the address on the invitations by using the clues. Observe the students as they are working. After the students have figured out the addresses, tell them to return the invitation to its author to be corrected. If the student forgot what his address was, he or she can refer to the index card where he or she wrote the address.

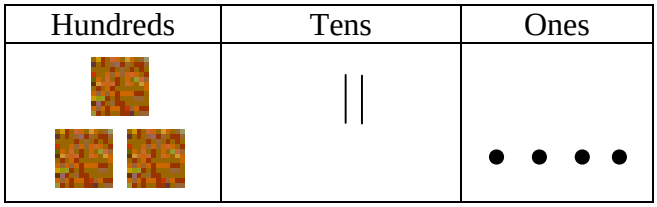
One Digit Per Place Please!

Advanced Preparation – Make a transparency of a place value chart (TR3).

Display an overhead transparency of a place value chart. Place any amount of base ten blocks in the appropriate columns.

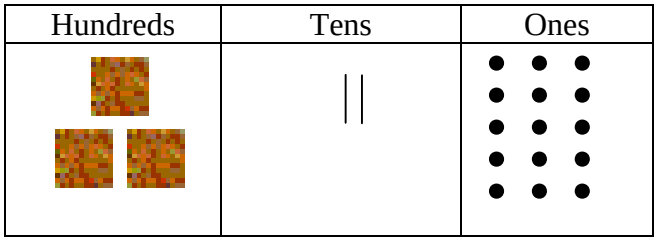
Hundreds	Tens	Ones
		

Ask students to identify the number of ones, tens, and hundreds. Record their responses as they are given. Then, ask students to read the number.

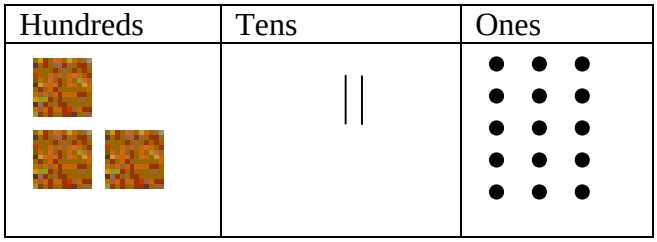


3 2 4

Now, place a new number with more than 10 ones in the ones place.

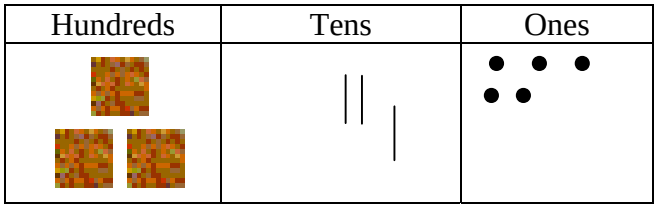


Again, ask the students to identify the number of ones, tens, and hundreds. Record their responses as they are given. Then, ask students to read the number.



3 2 15

Engage the students in a discussion as to why this number is not really 3,215 and what could be done so that this number will be read correctly. During the discussion, the students should discover that 9 is that last digit that can be in any given place. When a ten can be made, you must regroup. Regroup the ones on the overhead by trading ten ones for a ten and placing the ten in the tens place.



3 3 5

Now, ask the students to read the new number. Repeat this activity until students grasp the concept.

Let's Get to 100!

Divide your students into groups of 2 or 3. Give each group two dice. Give each student a place value mat and base ten blocks. Each person will roll the dice twice. The first roll will determine the number of ones to place in the ones column and the second roll will determine the number of tens to place in the tens column. Students are to show their understanding by regrouping as necessary. As you monitor the children at play, ask them to explain what they are doing and why. You may want to use an anecdotal record sheet to record their thinking (TR4).

Embedded Assessment

Digit Switch-a-Roo! - Use SR3 as an assessment piece to determine students' progress.

Digit Decisions - Have students use SR4 to monitor students as they play. As winners are determined, have students explain why they are or are not the winners.

Intriguing Invitations(Come to My Party!) – Use the clues created by the students on SR5 to determine their understanding of place value. After the exchange of invitations, observe how the students use the clues to figure out the address numbers.

One Digit Per Place Please! – Assess your students understanding of regrouping based on their input given and/or questions asked during the discussion of your modeling.

Let's Get to 100! – Monitor the children as they play the game and ask them to explain why they have or have not regrouped the base ten blocks. Use an anecdotal record sheet (TR4) to record their explanations.

Reteaching/Extension

- For those who have not completely understood the lesson, meet with these students in a small group and review how the position of a number determines its value. You may want to guide them in modeling 3-digit numbers on place value mats and play another game of Digit Decisions. You may also want to reteach regrouping of base ten numbers by modeling a number and regrouping it using other base ten materials (straw bundles, digi-blocks, inter-locking base-ten blocks, etc.).

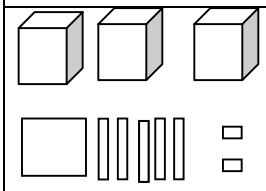
- For those who have understood the lesson, challenge these students to complete the activities in the lesson using numbers that have a thousands place. When playing Digit Decisions, challenge them to determine the winner based on whoever is closest to a specific number. For example, the students whose number is closest to 500 wins. When creating the invitations, challenge these students to create clues that lend themselves to a higher level of critical thinking. For example, they may say that the number in the hundreds place can be divided by 2 four times.

Lesson 2 Fun with Forms (Standard Form, Expanded Form, Word Name, Base Ten Blocks)

Preassessment- Give the students place value mats and a bag containing base ten blocks. Each student will be given a different amount of base ten blocks to put on the place value mats. Give them a set of digit cards to represent base ten blocks. They will put the digit card underneath the base ten block that corresponds with the number. Record the names of the students who were able to represent the numbers correctly.

Launch- Read the story Earth Day-Hooray by Stuart J. Murphy. Discuss with students how the cans are grouped in bags of 10, 100, and 1,000. In this story students understand how place value is key to working easily with large numbers. Introduce new vocabulary to the students: expanded form, standard form, place value model, and word name. The students will write the definitions and an example of each in their math journals.

Teacher Facilitation- On the overhead display the place value chart (TR 7) labeled expanded form, standard form, place value model and word name. Use overhead base ten blocks to model their correct placement. Using the concept attainment-place cards, show the students one example of each form using the cards. (TR8-TR11)

Place Value Model	Word Name	Standard Form	Expanded Form
	three thousand one hundred fifty two	3152	3,000+100+50+2

Have students identify which column the cards will go into using the remaining 12 cards. When all the cards are placed in each column, ask students what they notice about each column? Record their ideas and place their initials next to it. Reveal that the base ten block "models" the number to help students determine its value. The words explicitly name each place value. The expanded form shows the value of each digit. Share that many feel standard form is the easiest, but all forms need to be understood to really know place value. The students will write the number 4,354 in their journals and write it in expanded form, its word name, and draw its base ten model. Ask volunteers to model other 5-digit numbers and write the numbers in expanded form on the board. Ask students to write word names and read them aloud.

Student Application- Have partners take turns assigning each other numbers to model on the place value chart (SR7). Partners should explain their models and then write the number's word name, place value model, expanded form, and standard form. Groups can repeat the exercise, starting with a different student. Students should display at least 10 numbers that represent the number's word name and expanded form. Give them parameters. Numbers should be greater than 1,000, but less than 10,000. Do not use the same digits and for extra credit use a zero in one or more places.

Embedded Assessment- Using a teacher observation checklist (TR5) and rubric (TR6), monitor as the students are completing the activity with their partner. Give each student a number between 1-4 to assess his or her knowledge and understanding of place value. The score of 1: does not show numbers in the expanded form, standard form, or does not identify correct word names. The score of 2: shows some numbers in expanded form, standard form, and gives some correct word names. The score of 3: shows most numbers in the expanded form, standard form, and gives most correct word names. The score of 4: shows numbers in expanded form, standard form, and gives correct word names.

Reteaching/Extension- Write 45,587 on the chalkboard. Ask students to write its word name, expanded form, and represent using base ten blocks that will be drawn on the sheet of paper. Distribute Journal Prompt (SR6) Students will answer the prompt: What is the difference between expressing a number in word name, expanded form, and standard form? How are they the same?

Lesson 3 Dancing Digits

Advanced Preparation: For the preassessment teachers need to prepare a bag of mixed dried fruits. Each different type of fruit will correspond to a number on the place value chart. Give each child a place value chart (SR7). You may choose to use Party Platter (SR8), the accompanying work sheet for this assignment. It has the following fruit assignment: raisins represent ones on the place value chart, apples represent tens on the place value chart, bananas represent hundreds and apricots represent thousands. Each bag of fruit should have a different number of items to assess individual understanding. (If for some reason dried fruit is unavailable, substitute with Skittles candy or with different nuts. Please watch for allergies.)

Get a brown paper bag. Write each child's name on a file card. Fold the card and place it in the bag. Use this to select a student to call upon if there are no volunteers.

For student application, place a different four digit number on each of the Dancing Digit sheets (SR9).

For the Launch, make transparencies of TR-13, TR-14, TR-15, TR-16, and SR-6.

For the Student Application, get a CD with the song " Boogie Fever". (If unable to get this, try for "Disco Disney.") .

Preassessment: Give each child the worksheet Party Platter (SR-8). Their job will be to solve the mystery of Pauline's favorite fruit using their place value mat and the fruit bag. Have each child place a piece of fruit on the mat according to its assigned value. Students are then to figure out the mystery number by adding up the fruit values. Lastly, students tell how they came up with their answer.

Launch: To introduce the concept of decomposition of numbers, read to them the accompanying story entitled "Dancing Digits (TR12)." Show them the transparencies to illustrate the story. (TR13-TR16)

Teacher Facilitation: Model number transference using the Overhead base ten transparencies placed on a place value chart transparency. Start off with the number 1,234. Place the appropriate number of units on the place mat. Ask the students to name the number in the hundreds place. Now suppose that one unit wanted to dance with her friends in the tens place, what could she do? Guide the students into saying that she should divide into ten equal parts. Taking the transparency base ten blocks, demonstrate what the division would look like. How many units are now in the tens place? Ask what would happen if the other unit wanted to join them. Using your volunteer bag, select a student to demonstrate what that would look like. Then ask how many units are now in the tens place? Return to the original number. Ask what digit is in the tens place. Ask if one of the three units from the tens place wanted to visit his friend in the ones place. What should he do? Using the bag, select a student volunteer to guide you as you demonstrate the example. How many units are now in the ones place? Select someone to demonstrate what that would look like. Place a cube set of Interlocking base ten blocks on the table. Now ask them what digit is in the thousands place. Have yet another volunteer demonstrate what that digit would do to dance in the

hundreds place. (Be prepared to use the volunteer bag if this student needs help.) Ask how many new units are in the hundred place including the original units. (Hint: Students tend to pay more attention if at the beginning of the lesson they know about the volunteer bag and that they could be called upon at any moment to help out.)

***Student Application*:** Have students break out in teams of two. Group them according to math ability (and social concerns like who works best together, who dislikes each other, who plays together with no work accomplished, etc.). Give the math sheet Dancing Digits (SR-9) to each student and one place value chart mat and a set of interlocking base ten blocks to each team. Have them follow the directions to complete the project. Facilitate and observe what happens as they complete their project. Be sure that each of the students participates in the project.

You play the CD while the students are working.

***Embedded Assessment*:** As students complete each component of the exercise, observe for mastery of concept. Each student must submit a separate sheet even though they are in a group. The written component is to be an individual activity. .

Reteaching/Extension: For each student scoring less than a 3 on the teacher rubric (TR6), have them complete the Cant' Stop Dancing worksheet (SR-10).

Lesson 4 The Dancing Digits Go Home

Advanced preparation: Have ready for each student the I Am Still Me worksheet (SR-11), two sheets of construction paper, scissors and glue.

Make transparencies of the story The Dancing Digits Go Home (TR-18 and TR-19).

***Preasssessment*:** Distribute to each student the two sheets of different color construction paper, a pair of scissors and glue. Have each child draw a picture of Tat at his Tens village (before he divided into ones units). Then, have them draw Tat at the Musical ones village (after he was divided into ones). Next, have the students do the same thing with Harriet Hundreds. Instruct them to cut the characters out and glue them in the appropriate place on the I Am Still Me (SR-11).

Launch: After the students have completed the preassessment, read The Dancing Digits Go Home. (TR-17). Show them the transparency to illustrate the story. (TR18-TR19)

Teacher Facilitation: Using the Overhead Base Ten Block demonstrate how Tat became a whole ten unit again. Select a volunteer to demonstrate how the musicians became a ten unit. Next, put seven different numbers on the board, all in the ones column. Have seven volunteers to demonstrate how each set of ones would become tens. Remind them to leave any unit less than ten in the ones unit. For example, if you put the number 37 in the ones column, there would be 3 tens and seven ones (the seven could not go the Tenth Village right now.) For the students not selected to come to the board, have them complete the assignments on a blank sheet of paper at their desks. Tell them to be ready to help out a neighbor that may need assistance at the board. Then, using the Interlock Base Ten Blocks, demonstrate how Harriet Hundred became a whole hundred unit again. Using the volunteer bag, have a student demonstrate how the guests connected to form hundred units and enter the village. Select another volunteer. Ask them what would happen if 20 dancers from the Toe Tapping Tens wanted to accompany Harriet home. How many hundred units would be formed? Select someone else. Ask them what would happen if 35 dancers wanted to accompany Harriet? Have them demonstrate how it would be done.

Student Application: Have each child individually complete the assessment sheet I Can Dance with Digits (SR-12). Follow the rubric (TR6) to assess student's level of knowledge.

You may choose to play the CD during this lesson.

Embedded Assessment: Observe each student (as time permits) filling out the answer sheet. Monitor for students having difficulty transforming units.

Reteaching/Extended: For those students having difficulty have them complete the Digits Disco project (SR-13). Answers can be found on Teacher Resource Sheet 20.

Summative Assessment:

The summative assessment assesses students' application of place value when completing various math tasks. The test includes multiple choice questions and a brief constructed response question (SR 14). Answers can be found on Teacher Resource Sheet 21.

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Betty B. Baker

Baking bread, rolls, cakes, muffins, and pastries since 1992.

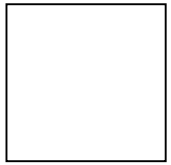
PARTY

5

TWIG STREET

SAT 12PM

Place Value Mat

Hundreds	Tens	Ones
		

Teacher Resource Sheet #4

Anecdotal Record

Lesson _____ Date _____

Teacher Observation Checklist

Name	Score
1.	
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24.	

Teacher Observation Checklist

Rubric:

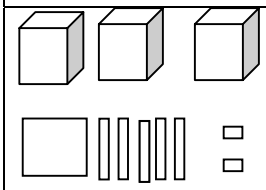
4: Full Understanding- Shows numbers in the expanded form, standard form, and gives correct word names.

3: Substantial Understanding- Shows most number in the expanded form, standard form, and gives most correct word names.

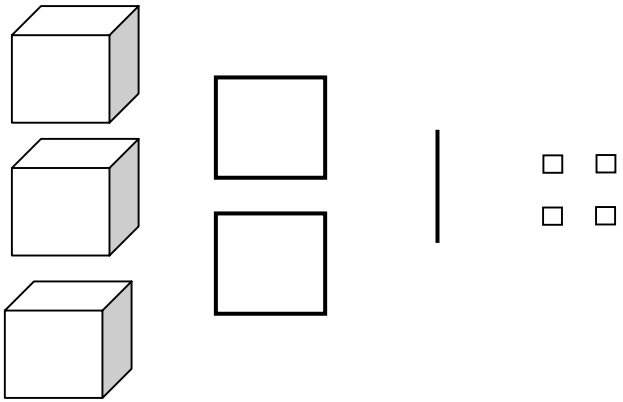
2: Partial Understanding- Shows some numbers in the expanded form, standard form, and give some correct word names.

1: Little Understanding- Does not show numbers in the expanded form, standard form, or does not identify correct word names.

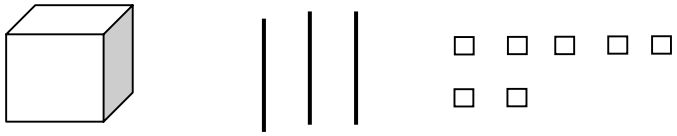
Place Value Chart

Place Value Model	Word Name	Standard Form	Expanded Form
	three thousand one hundred fifty two	3152	3,000+100+50+2

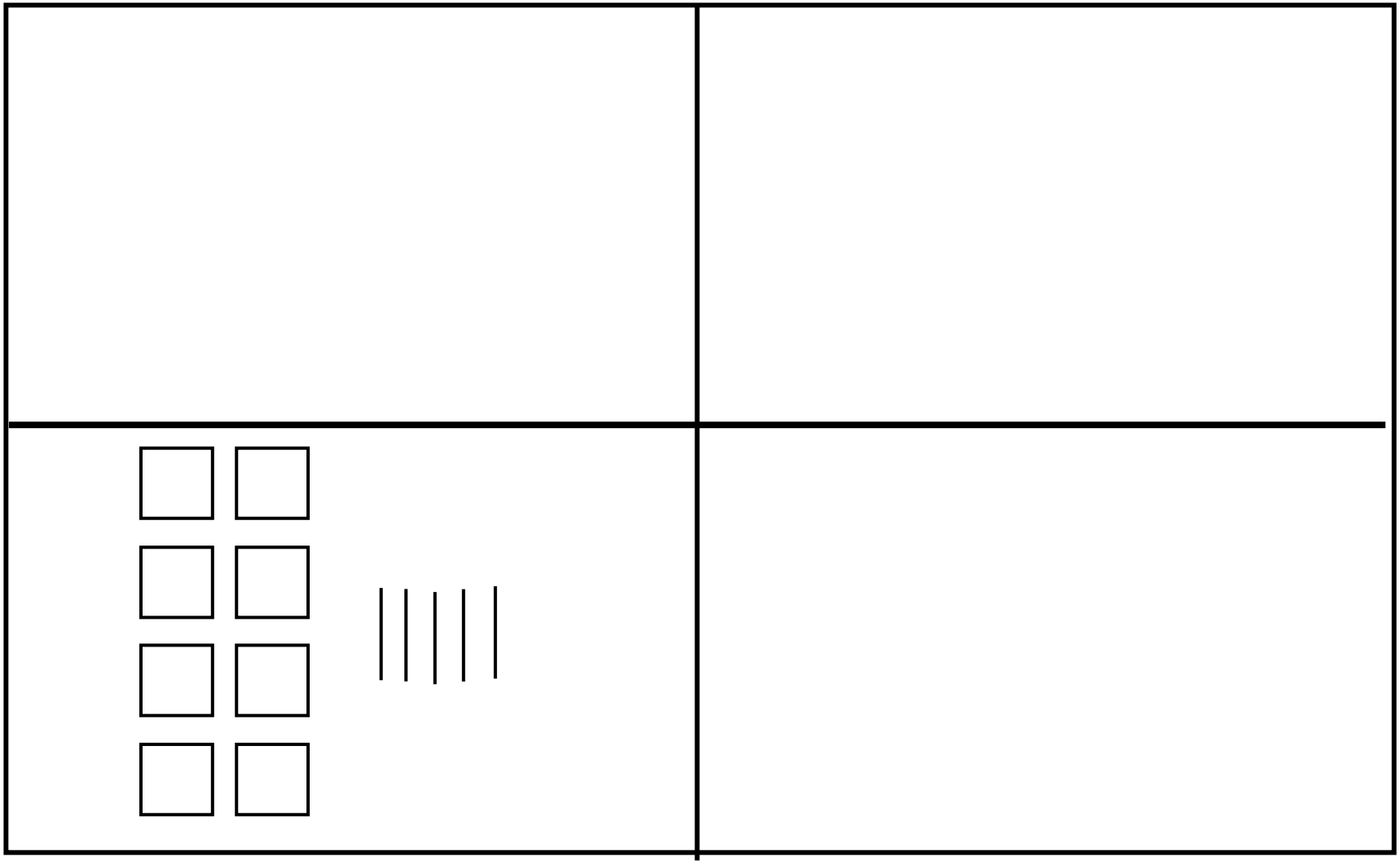
Concept Attainment – ***Place Value***



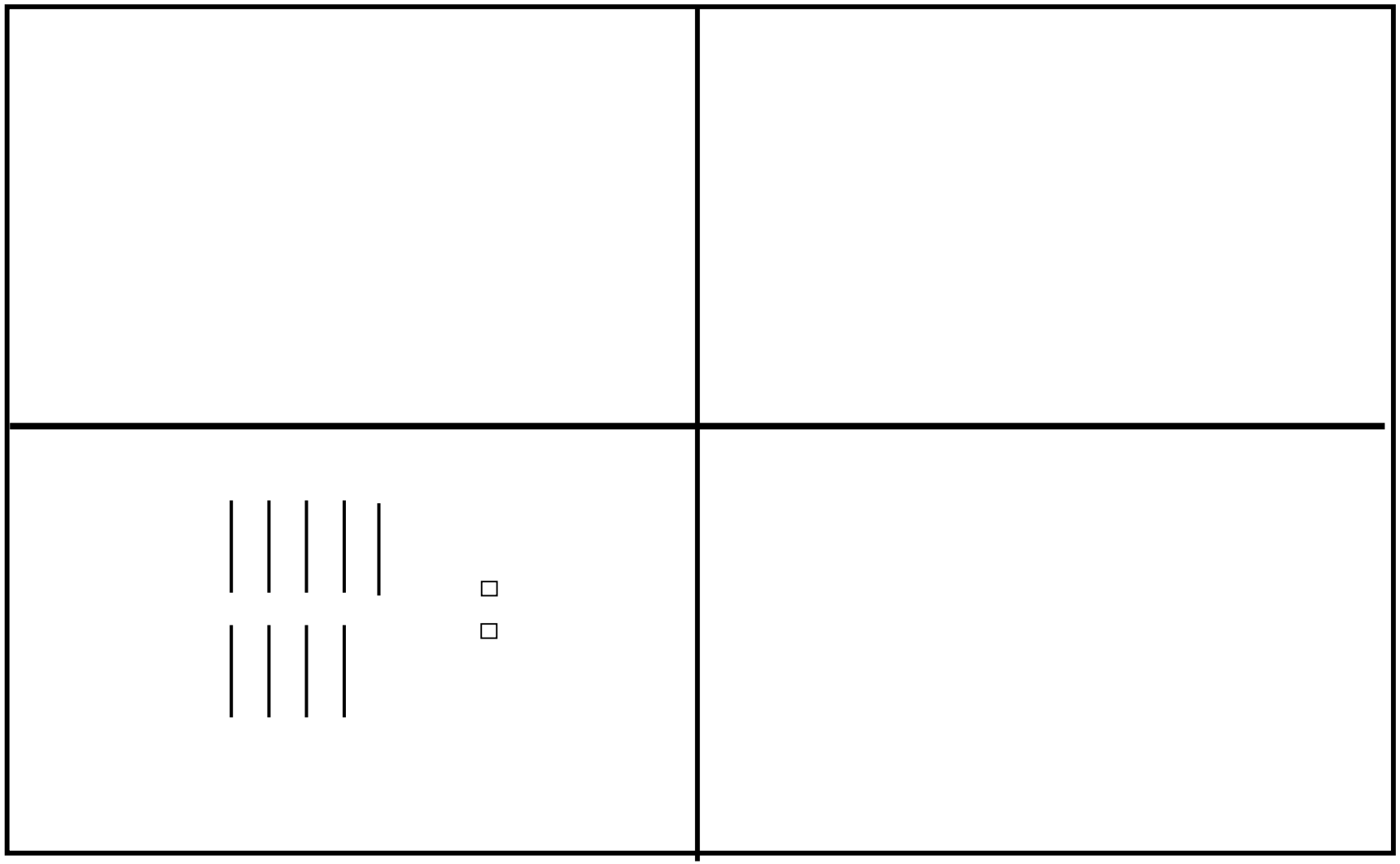
Concept Attainment – ***Place Value***



Concept Attainment – ***Place Value***



Concept Attainment – ***Place Value***



Dancing Digits

(Display the first transparency, (TR-13) before you begin the story.)
Remember the story "The Missing Birthday Party" that you heard recently. Well there was one part that they did not tell. While at the party, there was a mysterious visitor. He was dressed in red tights, a gold and red cape and a puffy hat. He was The Storyteller. He told the party guest that he had a tale to tell about an adventure he had. The story went like this:

When he was a little boy, he heard of a land that was divided into three distinct villages. The people of the first village were very jolly. Talented one and all, they sat all day and played musical instruments. In fact, they played so much and so happily that there village was called the Musical Ones.

Their closest neighbor was a village of dancers. These dancers were talented, one and all. They danced to the sound of rain. They danced to the sound of the ocean. They even danced to the sound of the wind. In fact, they danced so much that they were called the Toe Tapping Tenth. (Teacher- TR-14.)

One day in the Tenth Village, the sounds stopped. There was no rain and the ocean was very still. Even the wind refused to blow. The Queen of the Tenth Village sent her fastest runner to the Village of the Musical Ones to beg for a few instruments that they may dance again. Tat, the fastest runner, took off at once.

He ran all day and all night. Finally he arrived at the Musical Ones Village. Immediately, Tat became terrified. He realized that he was just too big to enter the village. He tried to bend down. He tried to roll over. He tried to double-up. This was all to no avail. Discouraged, Tat began the long journey home.

Along the way, Tat encountered an old man. The old man asked why Tat looked so sad. Tat told his unfortunate tale. The old man said "Cheer up my boy! I love music and would love to help you." He sprinkled some dust on Tat and **BLAT!!!** Instantly Tat fell into 10 equal parts. Tat yelled "Thank you old man!" and ran as fast as he could back to the Music Village. (TR-15)

Meanwhile, in the land of Happy Hundreds, there was much sadness. They could not for the life of them think one happy thought. Once upon a time, all they did was laugh and sing. They would sing to the same rhythm as their neighbors, the Tens, danced. Now because those neighbors did not dance, the Hundreds could not sing.

The King of the Hundreds dispatched his fastest singer, Harriet Hundreds to find out why the dancing had stopped and what could be done about it. Harriet took off for the Tenth Village. She ran as fast as she could. She ran all day and all night until she reached the Tenth Village.

Upon arriving, Harriet was horrified. She was just too big to enter the village. She tried to bend down. She tried to roll over. She tried to double-up. This was all to no avail. Discouraged Harriet began the journey home.

Along the way, Harriet ran into an elderly man sitting on the road. Needing someone to talk to, she told him her tale. He said, "Cheer up young lady. I helped someone with a similar problem as yours earlier today and because I love singing I will help you." The old man sprinkled dust on Harriet and **BLAT!!!** Instantly she broke into ten equal pieces. (Display TR-16.) Yelling "Thank you old man" Harriet returned to the Village of the Toe Tapping Tenths.

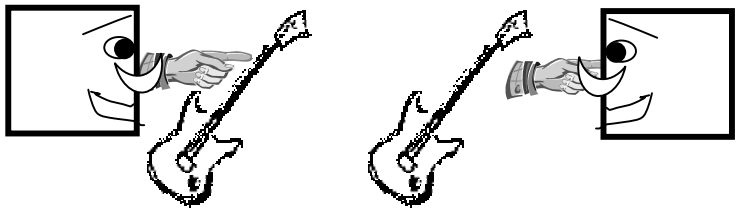
And even though there was much sadness in the villages of Happy Hundreds and Toe Tapping Tenths, Tat and Harriet were very happy making new friends.

With this, The Storyteller became sleepy and took a nap.

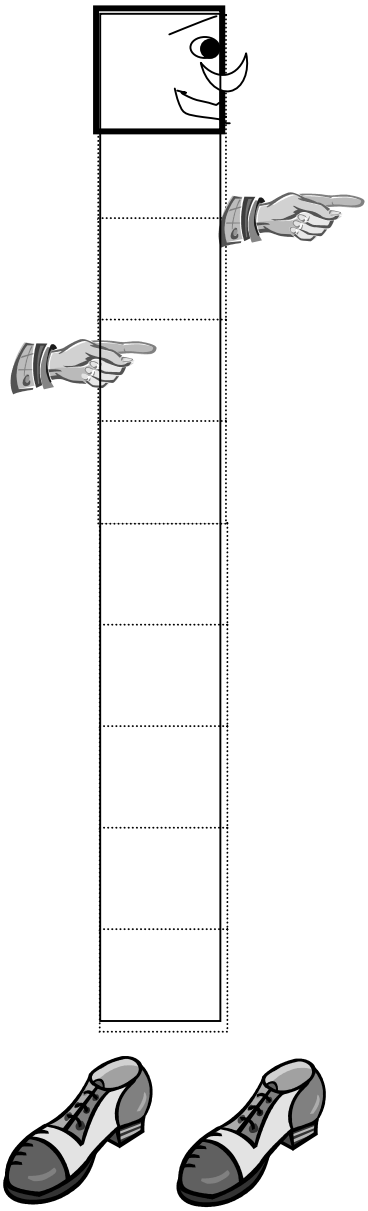
Teacher- Move on to the *Teacher Facilitation* part of the lesson.

The Storyteller

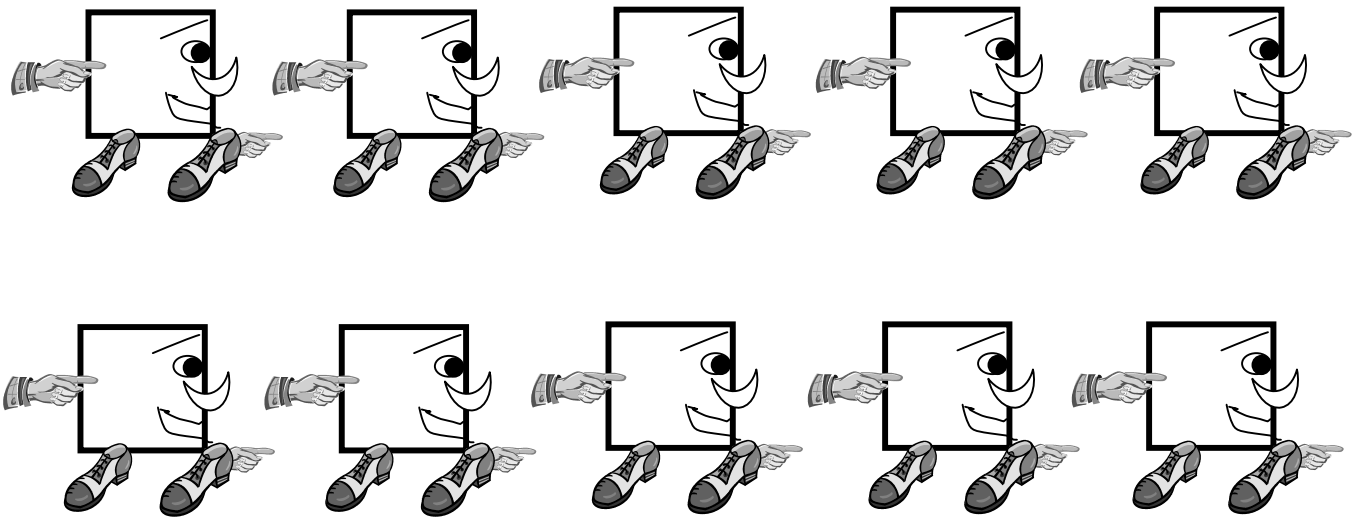
Music Ones



Dancing Ten

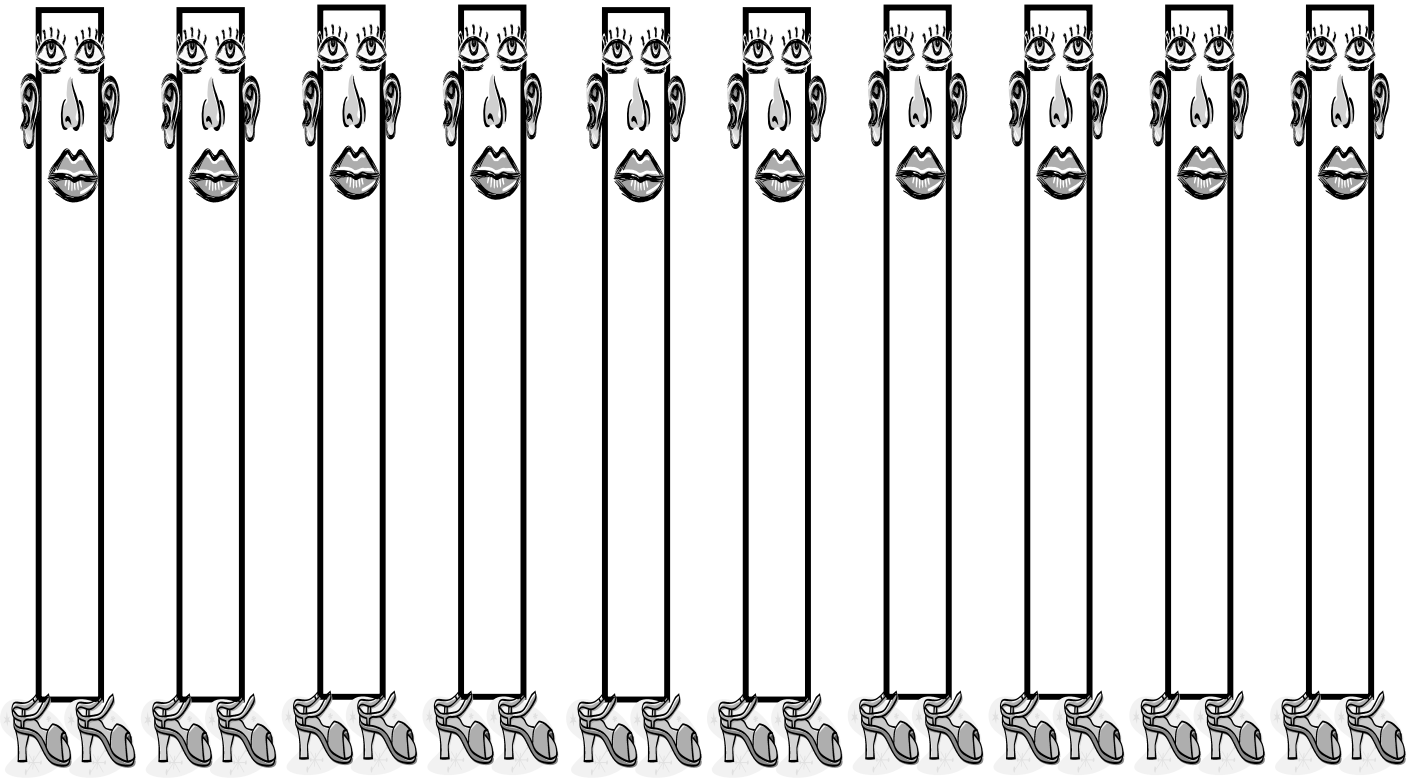


B L A T !!



Harriet Hundred

B L A T !!



The Digits Go Home

(Display The Storyteller transparency –TR-13)

Returning to the story "The Case of the Missing Birthday Party", the guests allowed The Storyteller to rest a bit. They gathered around the cake and sang Happy Birthday to Nick. They went outside and played Pin the Tail on the Donkey. They even had a quick game of baseball before coming inside to more snacks and punch. Afterwards, they noticed that the Story Teller had awakened. First Molly, then Pauline then Henry began to chant, "story…story…story." The remainder of the guests joined in. "Story, story, story," they all chanted. The Storyteller waved his hand and all fell silent.

He began the story. Harriet and Tat were happy indeed making new friends. But as night fell, they became homesick. They began to think of their families back at home and how sad they must be.

Tat was first to approach the King of the Musical Ones unit. He explained how the people of his village could no longer dance. He begged the king for a few instruments to take home. The King said, "I'll do you one better. Because I understand how important music is, I will not only give you instruments, but 13 of my best players as well to serenade your people." Tat stepped outside the village then jumped back together. He began the journey home, accompanied by the 13 Musical Ones the King had sent. Along the way, the musicians played and Tat danced.

Upon reaching the village, they all stopped and gasped. How were the Musical Ones going to enter the village of the Toe Tapping Tens. The ones were too small and would be crushed by the dancers in the village. Like magic, the old man appeared. He told Tat that he could transfer 10 of the musicians into a Musical Ten and that ten could enter the village. So ten of the 13 musicians were selected and the dust was poured upon them. They became one unit of ten. Tat and the Musician Ten bid a fond farewell to their 3 friends and entered the Tens village. (Display transparency of ones becoming tens unit - TR-18)

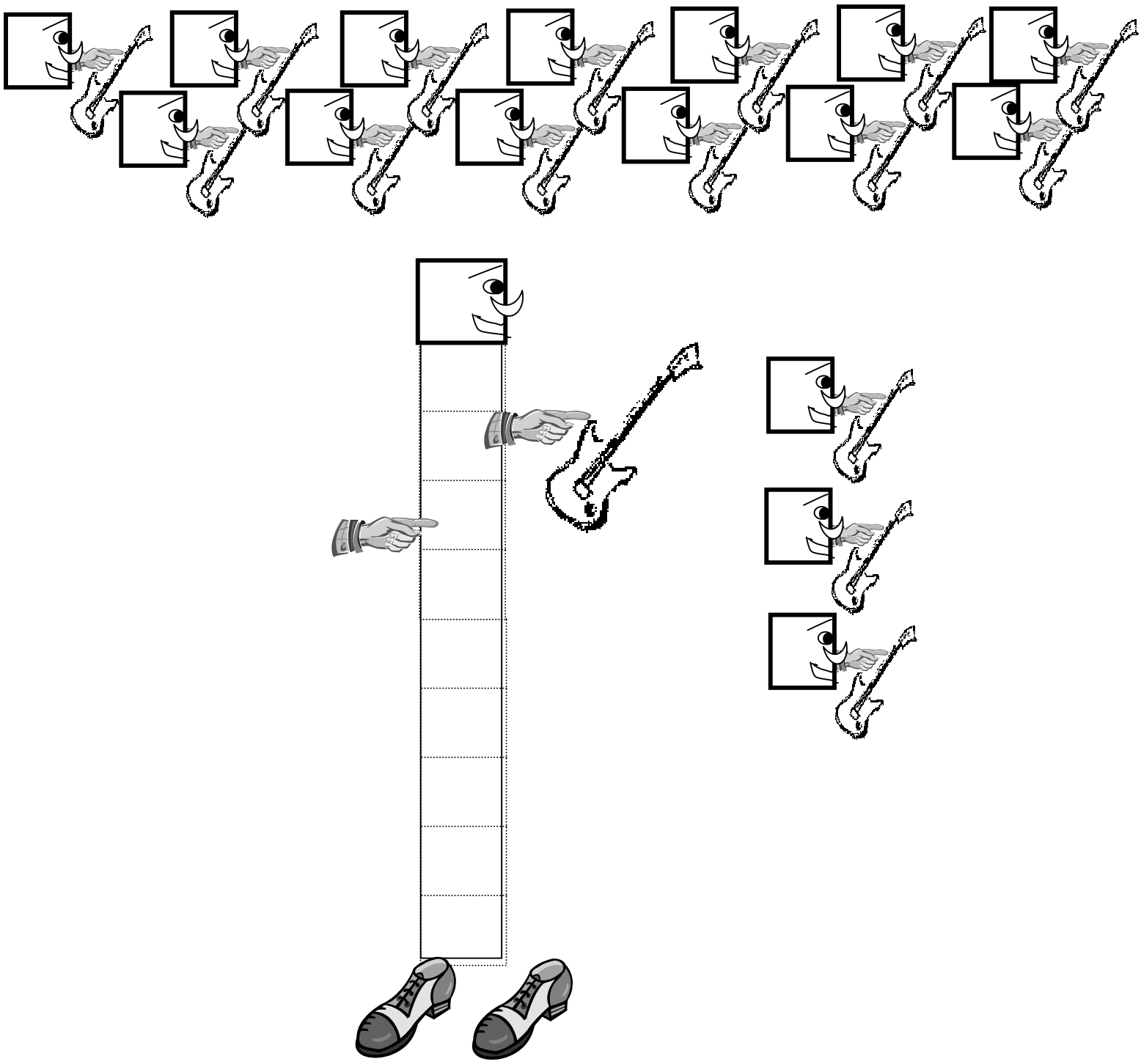
Tat's family was overjoyed to see him and his new friend. When the Musical one began to play, the village danced as never before. All were happy.

Meanwhile, Harriet Hundreds heard the dancing and thought of home. She ran to the King of the Tens village and told him why she was there. She begged him to please make sure his people dance so that the Hundred's village could sing and be happy. The King said, "I'll do you one better. I will send 25 of my best dancers to accompany you so that there will always be dancing in your village." Harriet stepped outside the village, reassembled herself and departed with 25 of her new friends for company.

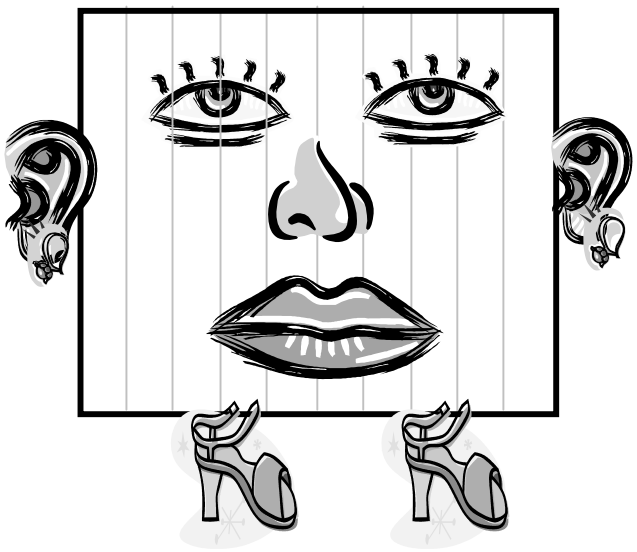
The Tens danced and Harriet sang all the way to the Happy Hundreds Village. Once there the joyous band stopped. How would the Tens enter the village of the Hundreds? They were so small and would be crushed. Like magic, the old man appeared. He told them that he had fixed a similar problem earlier and could help them also. He told them that they must first gather the tens in groups of tens. Each ten would then become a unit of one hundred and could enter the village. They grouped themselves and found that there were 5 left over. The five waved sadly and returned home. (Display transparency of tens becoming hundred unit- TR-19.) As the old man sprinkled dust over the dancers, the ten in the first group became one Hundred. The same thing happened to the second group. The three Hundreds entered the village. There was much happiness and singing and dancing. All lived happily ever after.

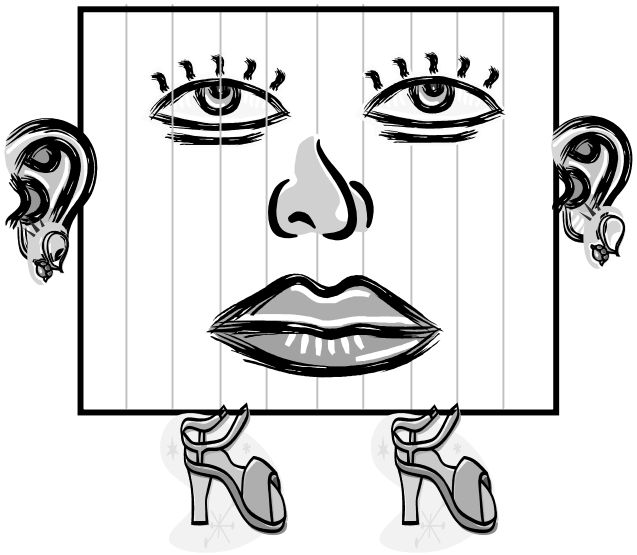
And the old man magically became The Story Teller you see now.

The Dancing Digits Go Home

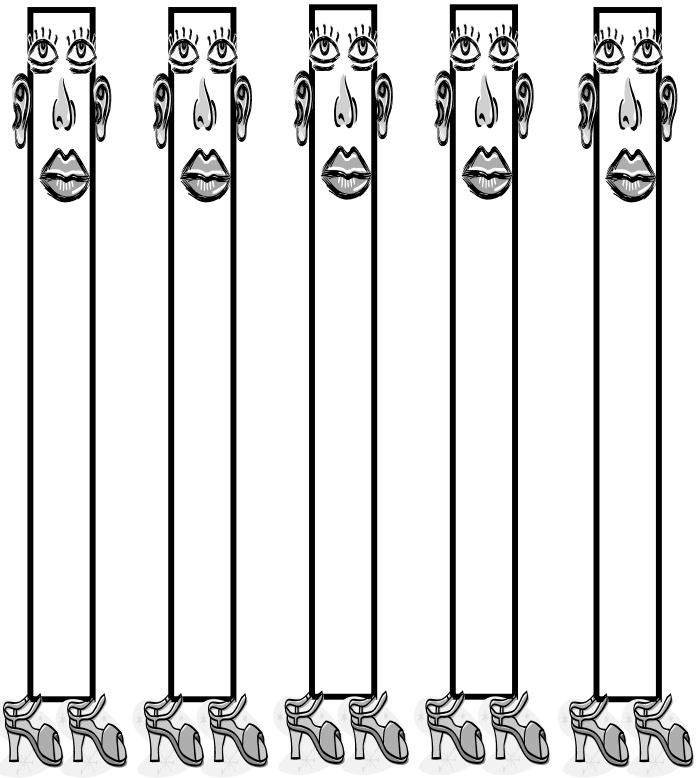


Dancing Hundred Units





Bye Bye !!



Teacher Resource Sheet #20
(Answer Sheet)

Name _____

Date _____

Disco Digits

Instructions: Using your interlocking blocks, rewrite these numbers using hundreds, tens, or ones.

If you have:	***You have:***	
1) 38 tens	___3__hundreds	___8___tens
2) 56 tens	___5___hundreds	___6___tens
3) 42 ones	___4___tens	___2___ones
4) 36 ones	___3___tens	___6___ones
5) 27 tens	___2___hundreds	___7___tens

Pick one of the problems above. Using words or pictures, tell me how you solved the problem.

☆ Bonus!!

If you have:	***You have:***	
26 hundreds	___2___thousands	_6__hundreds

Hint: Use your interlocking blocks.

Place Value Assessment

(Answer Sheet)

Name:_____ Date:_____

Directions: Read each question carefully. Choose the best answer for each question. GOOD LUCK !!!!!!!!

1. Rearrange the digit cards to make the largest and smallest number.

0	3	9	7	1

Largest __97310_____ Smallest _____01319_____

2. Which number represents the tens place in the number 2,894?

a. 2
b. 8
c. 9
d. 4

3. Circle the number that shows 25,863 in expanded form.

a. 200+30+0
b. 20,000+5,000+800+60+3
c. 25,000+8,000+63
d. 20,000+0+800+3

For numbers 4 and 5 write the value of the underlined digit.

4. 7<u>9</u>,452

a. 9,000
b. 9
c. 90
d. 900

5. 86,672
   a. 70
   b. 7
   c. 700
   d. 7,000

For number 6 and 7 write the missing value.

6. **_600___** ones = 6 hundreds

7. 4 tens = 40___ones

8. Which number represents the thousands place in the number 67,238?
   a. 3
   b. 8
   c. 6
   d. 7

9. Given the digits 5 8 0 3 which one has the greatest value?
   a. 5830
   b. 0853
   c. 8035
   d. 8530

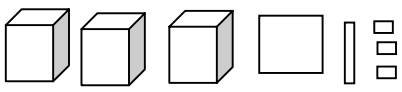
10. Given the digits 9 0 4 5 8 which one has the least value?
   a. 08594
   b. 90548
   c. 04598
   d. 54098

For numbers 11 and 12 write the word name for each number.

11. 85,256 eighty-five thousand two hundred fifty six

12. 25,879 twenty-five thousand eight hundred seventy-nine

13. Which number do the place value blocks represent?



a. 1,529
b. 3113
c. 3111
d. 1113

14. If you have 82 tens, how many hundreds would you have? _____8_____.

How many ten units would be left? _____2_____

15. If you had 11 units in the hundreds column, how many tens would you

have?_____110_____ Then how many thousands?_____1_____ What would be left over?_____1 hundred_____

BCR: Rewrite this number in standard form.

Thousands	Hundreds	Tens	Ones
1	13	0	11

Part A: _____2,311_____

Part B: Using what you know about place value explain how you were able to transform the numbers using words, numbers, and/or pictures. (Answers may vary)

Understanding what I know about place value I know that 11 ones equal 1 ten and 1 one, so I added 1 ten the tens place. I know 13 hundreds equals 1 thousand and 3 hundreds, so I added 1 thousand to the thousand place, which gave me 2 thousands. .

Name_____

Cake Order Mix-Up

Cake Order Numbers

Baby Shower Cake	743
Birthday Cake	374
Graduation Cake	437
Wedding Cake	473

Read the clues to help Betty B. Baker figure out what cake to bake for Mr. Bobblehead.

- Betty B. Baker's scatterbrained assistant doesn't know the number, but he remembers that the number in the ones place is an odd number.
- The digit in the tens place can be doubled to make the number 8.
- Betty B. Baker's scatterbrained assistant remembered something else! The cake order number was greater than 450.

What cake should Betty B. Baker bake for Mrs. Bobblehead?

Betty's assistant isn't so scatterbrained after all!

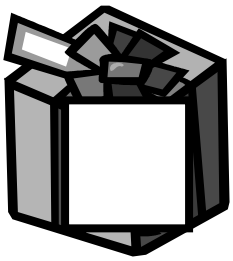
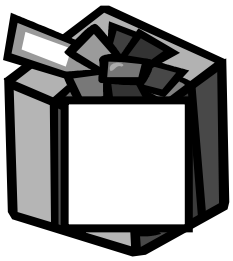
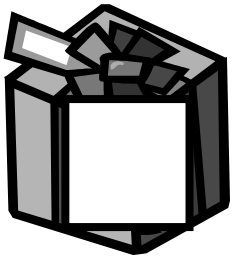
_____

1	2	3	4
5	6	7	8
9	0	0	0

Name _____

Date _____

Digit *Switch-a-Roo*

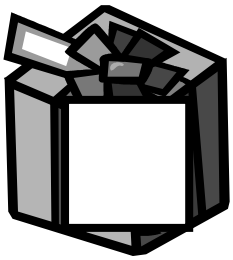
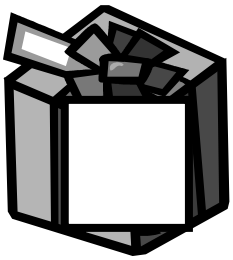
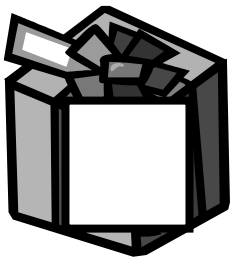




_____ _____

_____ _____

_____ _____

_____ _____ _____ _____ _____ _____

_____ _____

_____ _____

_____ _____

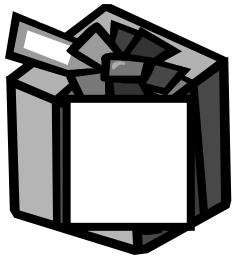
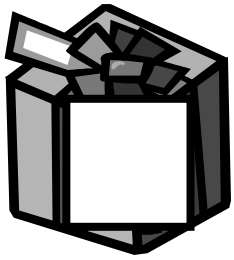
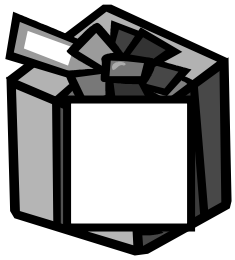
_____ _____ _____ _____ _____ _____

Name _____

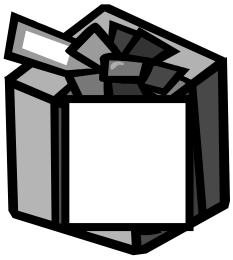
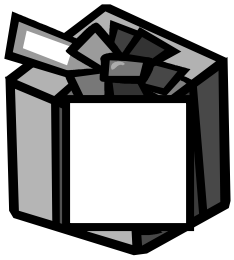
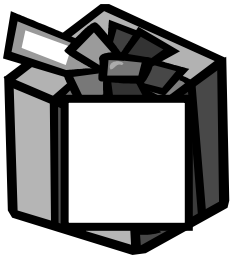
Date _____

Digit *Decisions*

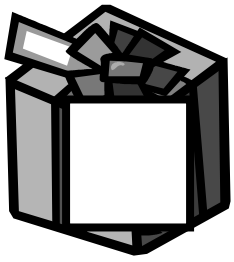
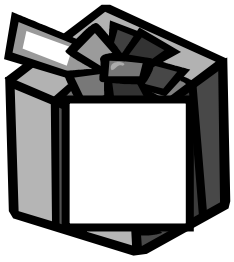
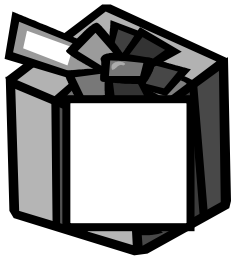
Round 1

Round 2

Round 3

Name_____

Date_____

Come to My Party!!!

If you can find it!

Create an invitation in the box below. Write clues to help your friends figure out the missing digits in your address. Be sure to include an address with at least 3 digits no matter what your real address may be. ***Remember not to write in the box below your invitation. That space is where your friend will write the answer!***

Clues

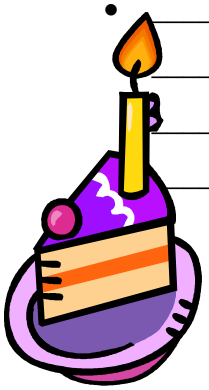
- _____
  _____
  _____
  _____
- _____
  _____
  _____
  _____
- _____
  _____
  _____
  _____
- _____
  _____
  _____
  _____

What is the address of your friend's party?

_____

_____

_____

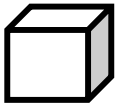


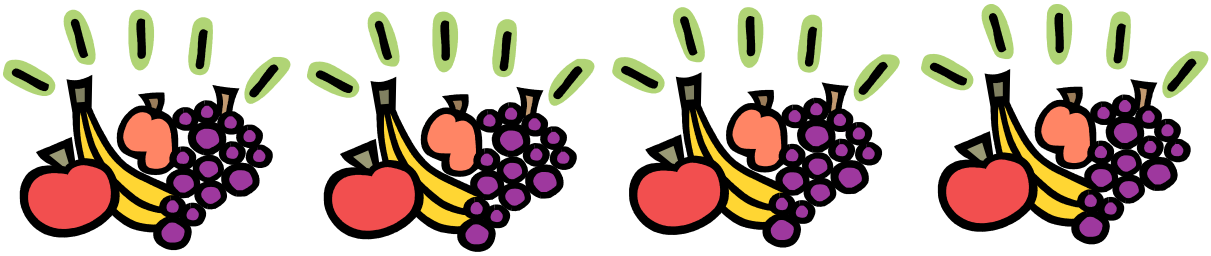
Name: _____

Journal Prompt

What is the difference between expressing a number in word name, expanded form, and standard form? How are they the same?

Practicing Place Value

Ten-Thousands	*Thousands* 	*Hundreds* 	*Tens*	*Ones*



Party Platter

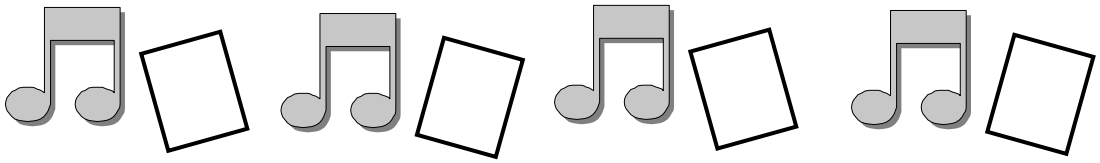
Pauline has another mystery. The magician at her party has turned her favorite number into a bag of dried fruit. Each different fruit in the bag represents a number on the place value chart.

Raisins represent **ones**
Apples represent **tens**
Bananas represent **hundreds**
Apricots represent **thousands**

Using the bag of fruit you have been given, solve the mystery.,

I think that Pauline's favorite number is _____.

I think this because _____
_____
_____
_____
_____



Dancing Digits

Your digit is _____

What number is in the **thousands** place ? _____

What number is in the **hundreds** place? _____

What number is in the **tens** place? _____

What number is in the **ones** place ? _____

First using your place value chart and blocks, arrange the number according to its place on the value chart.

Your digits now have *Boogie Fever.* Help them to dance with their friends at a neighboring place value space. Have the digits in your thousands place visit the numbers in the hundred place. How many new units are now in that space? Draw a picture of what that looks like.

Thousands	Hundreds	Tens	Ones

Go back to the original number and rearrange your digits as you had them before on the place value chart. Now have the hundreds digit visit the tens friends. How many units are there now in that column? _____

Draw a picture of the new column.

Thousands	Hundreds	Tens	Ones

Return again to the original number. Have the tens column visit the ones. What is the new number? _____ Draw a picture of that number.

Thousands	Hundreds	Tens	Ones

Tell what you had to do to each unit to have them visit their friends.

_____
_____
_____
_____
_____
_____
_____
_____

Okay. Boy, you surely have worked hard today! You are awesome!

Expanded Ideas!

3000+200+20+3

Can't Stop Dancing

Examine the number 3223.

What number is in the thousands place? _____
What number is in the ones place? _____
What number is in the tens place? _____
What number is in the hundreds place? _____

Using the place value chart below, put each number is its proper space.

Thousands	Hundreds	Tens	Ones

Using your blocks, place the appropriate unit block on your value chart.
For example, place 3 ones blocks on the ones column of your place value chart. *Continue until all the blocks that represent 3223 have been placed.*

Now it is time to Boogie. Have the thousands digit(s) visit the hundreds column. How did you do this? Explain how you moved your blocks.

_____
_____
_____
_____

Draw me a picture of what your new hundreds column looks like.

Thousands	Hundreds	Tens	Ones

Now let's look at the tens column. *What if only 4 of the units from the tens column wanted to go visiting.* **How would you do it? Explain how you moved your blocks**

_____
_____
_____
_____

Now show me what the tens column would look like.

Thousands	Hundreds	Tens	Ones

Boy! You are good!!!

Lastly, lets see what would happen if 2 of the units from the tens column wanted to dance in the ones space. How would you do it? Explain your thinking.

_____
_____
_____
_____

Now show me. By drawing a picture of the all the units in the ones column now..

Thousands	Hundreds	Tens	Ones

Yep! I can tell. You sure love to Boogie!

Name _____

Date _____

I Am Still Me

Tat at the Tens Village

Tat at the Musical Ones Village

Harriet at the Happy Hundreds Village

Harriet at the Toe Tapping Tens Village

Name _____

Date _____

I Can Dance with Digits

Instructions: Rewrite these numbers using hundreds, tens, or ones.

If you have:	***You have:***	
1) 38 tens	_____hundreds	_____tens
2) 96 ones	_____tens	_____ones
3) 42 tens	_____hundreds	_____tens
4) 37 tens	_____hundreds	_____ones
5) 62 ones	_____tens	_____ones
6) 83 ones	_____tens	_____ones

Pick one of the problems above. Using words or pictures, tell me how you solved the problem.

Bonus!!

☆

If you have:	***You have:***	
38 hundreds	_____thousands	___hundreds

Student Resource Sheet #13
Expanded Ideas

Name _____

Date _____

Disco Digits

Instructions: Using your interlocking blocks, rewrite these numbers using hundreds, tens, or ones.

If you have:	***You have:***	
1) 38 tens	_____hundreds	_____tens
2) 56 tens	_____hundreds	_____tens
3) 42 ones	_____tens	_____ones
4) 36 ones	_____tens	_____ones
5) 27 tens	_____hundreds	_____tens

Pick one of the problems above. Using words or pictures, tell me how you solved the problem.

Bonus!!

☆

If you have:	***You have:***	
26 hundreds	_____thousands	___hundreds

Hint: Use your interlocking blocks

Place Value Assessment

Name:_____ Date:_____

Directions: Read each question carefully. Choose the best answer for each question. GOOD LUCK !!!!!!!!

1. Rearrange the digit cards to make the **largest** and **smallest number**.

0	3	9	7	1

Largest _____ Smallest _____

2. Which number represents the **tens place** in the number **2,894**?
   a. 2
   b. 8
   c. 9
   d. 4

3. Circle the number that shows **25,863** in **expanded form**.
   a. 200+30+0
   b. 20,000+5,000+800+60+3
   c. 25,000+8,000+63
   d. 20,000+0+800+3

For numbers 4 and 5 write the **value** of the **underlined digit**.

4. 7**9**,452
   a. 9,000
   b. 9
   c. 90
   d. 900

5. 86,6**7**2
   a. 70
   b. 7
   c. 700
   d. 7,000

For number 6 and 7 write the **missing value**.

6. ____ ones = 6 hundreds

7. 4 tens = ___ones

8. Which number represents the **thousands place** in the number **67,238**?
   a. 3
   b. 8
   c. 6
   d. 7

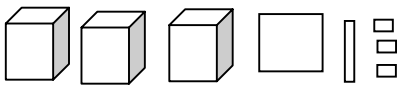
9. Given the digits 5 8 0 3 which one has the **greatest value**?
   a. 5830
   b. 0853
   c. 8035
   d. 8530

10. Given the digits 9 0 4 5 9 which one has the **least value**?
   a. 08594
   b. 90548
   c. 04598
   d. 54098

For numbers 11 and 12 write the **word name** for each number.

11. 85,256 _____

12. 25,879 _____

13. Which **number** do the place value blocks represent? 

   a. 1,529
   b. 3113
   c. 3111

d. 1113

14. If you have **82 tens**, how many **hundreds** would you have? _____.

How many if any ten units would be left? _____

15. If you had **11 units** in the **hundreds** column, how many tens would you have?_____ Then how many thousands?_____ What would be left over?_____

_____

BCR: Rewrite this number in standard form.

Thousands	Hundreds	Tens	Ones
1	13	25	11

Part A: _____

Part B: Using what you know about **place value explain** how you were able to transform the numbers **using words, numbers, and/or pictures**.