Instructional Plan

Concrete Level

Name of Math Skill/Concept: Two digits by one digit multiplication with regrouping using concrete objects.

Prerequisite Skills Needed:

- Multiplication fact families
- Understanding that multiplication is repeated addition
- Grouping of ones and tens
- Multiplying tens
- Multiplying two digits by one digit numbers without regrouping
- Use of place value mats and materials
- Identifying place value to 100's

Learning Objective:

Use concrete objects to solve two digits by one digit multiplication problems with regrouping.

Important Ideas for Implementing This Teaching Plan:

1. Use story problems to provide context

2. Use discrete objects that can be grouped

3. Emphasize use of repeated addition process

4. Emphasize counting by groups

5. This teaching plan is written for the skill of two digits by one digit multiplication with regrouping. Following the same sequence of steps as outlined below, students would have had previous experience with using base ten materials and place value mats to complete multiplication problems involving multiplying tens by one digit numbers, and multiplying two digit by one digit numbers without regrouping.

6. This teaching plan outlines the steps for teaching two digits by one digit multiplication with regrouping. If additional instruction at the concrete level is needed for problems involving multiplying three digits by one digit or two digit factors, the same sequence of steps as outlined in this plan can be followed.

Instructional Phase 1: Initial Acquisition of Skill/Concept – Teacher Directed Instruction

Teach Skill/Concept within Authentic Context

Description: A problem context of shopping and buying items is used.

Build Meaningful Student Connections

Purpose: to help students make meaningful connections between what they have experienced with shopping and spending money and the skill of multiplying two digit by one digit numbers with regrouping.

Learning Objective 1: Use concrete objects to solve two digits by one digit multiplication problems with regrouping.

Materials:

Teacher –

- 3 groups of Baseball cards

Description:

1.) **L** ink to students' prior knowledge of using multiplication to figure out problems.

For Example:

How many of you like to shop? When we shop we need to decide what we want to buy. We also need to decide how many we need or want to buy. Supposed you went to a grocery store with your Mom and she told you that you could get 3 packs of Baseball cards. (Show packs of cards). Each pack had 15 cards. If you get 3 packs of 15 cards, how many cards will you have all together? HMM. – That sounds like a multiplication problem to me. We have 3 packs of cards that have 15 cards each.

2.) **I** dentify the skill students will learn

For Example:

We've been working on multiplication. We have worked on multiplying tens (show example of abstract problem with corresponding concrete and representational display) and we have worked on multiplying two digits by one digit numbers like this (show example of abstract problem with corresponding concrete and representational display). You have done so well solving these problems that today we are going to start working on some tougher multiplication problems. When we do these problems, we will need to make sure that we pay close attention and regroup when we need to. Each of these problems will involve regrouping. To help us start solving problems like this we are going to use our base ten blocks and our place value mats.

3.) **P** rovide rationale/meaning for solving two digit by one digit multiplication problems with regrouping.

For Example:

Knowing how to do problems like this will help us when we need to multiply larger numbers. It will help you when you shop to decide how many of each thing you want to get and how many you have all together.

Provide Explicit Teacher Modeling

Purpose: to provide students a clear teacher model of how to solve two digits by one digit multiplication problems with regrouping using concrete materials.

Learning Objective 1: Use concrete objects to solve two digits by one digit multiplication problems with regrouping.

Materials:

Teacher –

- Base ten blocks, ten sticks, place value mat,
- String or yarn

Description:

A. Break down the skill of multiplying two digits by one digit numbers with regrouping using concrete objects.

1. Identify numbers/factors in problem.
2. On place value mat, show the number of groups.
3. On place value mat, show number of items/group.
4. Count blocks in the ones column.
5. Trade groups of ten for ten sticks..
6. Count blocks left in the ones column.
7. Count ten sticks in the tens column.
8. Say the number that is shown.
9. Repeat the multiplication problem,

B. Explicitly describe and model how to multiply two digits by one digit numbers with regrouping using concrete objects.

1.) Identify numbers/factors:

- Visually show the two factors (3 packs, 15 cards in each).
- Use think alouds to describe which number represents the number of groups and which represents the number of items /group.
- Cue students to key features of the problem

For Example:

Let's look again at the problem we talked about. We have 3 packs of Baseball Cards and they have 15 cards each (Point to display of cards). To figure out how many cards there are all together, we need to first identify how many groups we are working with. How many groups of Baseball Cards do I have? Well, I have 1,2,3, packs (point and count packs). Now that I know how many groups I have, I need to figure out how many items I have in each group. Let's see. How many cards are in each pack of Baseball cards? They each have 15 cards. So I will have 15 items in each group.

2.) On place value mat, show the number of groups..

- Use string or yarn to show number of groups
- Link to previous lessons in multiplication

For Example:

I want to buy 3 packs of Baseball cards and each pack has 15 cards. I have decided that I have 3 groups and each group has 15 items in it. Just like we have done with the multiplication problems we have been doing, I am going to make groups on my place value mat. How many groups do I have? (Elicit student response) Right! 3 So I am going to stretch 3 pieces of yarn over the columns of my place value mat to show me that I have 3 groups.

3.) On the place value mat, show the number of item/ group using base ten blocks and ten sticks.

- Model how to use base ten materials to represent number.
- Prompt student responses by using think alouds and questions
- Cue students to columns on place value mat
- Model how to show the number on the place value mat

For Example:

I have made three groups here because I have 3 packs of cards. There are 15 cards in each pack. How many blocks will I have in each group? (Elicit student response) You all are sharp today! I will have 15 blocks in each group. So I know that I have to make 3 groups of 15 blocks. We have learned how to show 15 on the place value mat. The first thing I need to do is figure out how many ones and how many tens there are in 15. Hmm, I could just count out 15 blocks (Demonstrate for children by counting 15 blocks on the table outside of the place value mat.) But, we've learned an easier way to show 15 using ten sticks and blocks. Show me how many ones do you think there are in 15? – Right there are 5 ones. Here are my 5 ones. (Take 5 ones from the group of 15 and count them.) Show me how many tens are in 15? Right again, there is one ten in 15. I am going to use a ten stick to show that there is one ten in fifteen. (Demonstrate to students how you are substituting the ten stick for the remaining 10 blocks on the table). Now I have shown how many ones and how many tens there are in 15. Show me again how many ones are in 15? Good! There are 5 ones and I have shown that with these 5 blocks (point to materials on table outside of place value mat). Show me how many tens are in 15? Great! There is one ten and I have shown that by using one ten stick (point to material).

Now that we have know how many ones and how many tens are in 15, we need to make our groups on the place value mat. We have 3 groups for the 3 packs of cards (Show on place value mat). How many cards are in each pack? Right, 15. So we are going to use base ten blocks and ten sticks to show that they are 15 cards in each of these groups. Hmm, I know that there are 5 ones and one ten in 15, so I am going to put 5 blocks in my ones column, and one ten stick in my tens column for this group. And I will do the same for the second group and the same thing again for the third group. Look, each group has 15 in it. I have made 3 groups of 15 because I have 3 packs of cards and each pack has 15 cards.

4.) Count the number of blocks in the ones column of the place value mat.

- Prompt student responses when counting
- Emphasize need to make groups of 10

For Example:

I have 3 groups of 15 blocks each. I want to see how many I have all together. Where should we start counting at the ones or the tens? Correct! We are going to start at the ones. Help me count all the blocks in the ones column. 1,2,3…15. ! WOAH! We have learned that you can't have more than 9 blocks in the ones column. If we have 10 or more blocks here, what do we need to do? Right! We need to see how many groups of 10 we can make.

5.) Trade groups of ten for ten sticks and place the ten sticks in the ten column of the place value mat.

- Use think alouds to describe and model making groups of 10
- Explicitly demonstrate how to count and make groups of ten by linking or grouping ten blocks
- Model how to trade groups of ten in ones column for ten sticks
- Prompt student responses by questions

For Example:

We have more than 9 blocks here. We need to see how many groups of ten we can make and trade them for tens sticks. How many groups of ten can I make from these 15 blocks? Well, let's see. (1,2…10) 10. I have made one group of ten (Link 10 blocks together in the ones column). Can I make any more groups of 10? No, I cannot. I have made all of the groups of 10 I can. I need to trade this group of 10 for a ten stick. I will put the ten stick in the ten column of the place value mat. Here is my group of 10. I will take these blocks out of the ones column and put a ten stick in the ten column (Place ten stick at top of place value mat ten column).

6.) Count blocks left in the ones column.

- Cue students to count

For Example:

How many blocks do I have left in the ones column? Right! 5

7.) Count ten sticks are in the tens column.

- Cue students to count any ten sticks moved over from the ones column
- Prompt students to say number shown by all ten sticks

For Example:

How many ten sticks do I have in the tens column? Well, I have one, two, three from when I made the 15 items in each group. And I need to add this ten stick that I moved when I traded the group of 10 blocks from the ones column. I have 1,2,3, tens plus one more ten stick that moved over. 1,2,3, 4! I have 4 tens. If I have 4 tens sticks in the tens column, how many tens do I have? Right, I have 4 tens. 4 tens is equal to 40.

8.) Say the number that is represented on the place value mat.

- Model how to say number shown on the place value mat
- Point to materials while saying number

For Example:

I have 4 tens and 5 ones, so I have 45 blocks in all. How did I know that it was 45???? (Elicit student response). Well, let's see. 4 tens are 40 plus 5 ones make 45.

9.) Repeat the multiplication problem, saying the answer that is shown by the concrete materials on the place value mat.

- Review problem
- Prompt student responses
- Model checking answer with place value mat

For Example:

We now know the answer to our problem. If we want to buy three packs of Baseball cards, and each group has 15 cards, how many cards will I have all together? (Elicit student response). That's right, 45 cards. We have shown that answer here on our place value mat- we have 4 tens and 5 ones, or 45. So we know that 3 groups of 15 are equal to 45.

10.) Repeat the above activity several more times using a variety of story problem situations and number combinations.

Scaffold Instruction

Purpose: to provide students an opportunity to build their initial understanding of how to multiply one digit by two digit numbers with regrouping using concrete objects and to evaluate your students' levels of understanding after you have initially modeled the skill.

* The following description is for Learning Objective 1: Use concrete objects to solve two digits by one digit multiplication problems with regrouping.

Materials:

Teacher –

- Base ten blocks, ten sticks, place value mat
- Visual display area

Students -

- Base ten blocks, ten sticks, place value mat

Description:

HiGH

MEDIUM

LOW

1.) Scaffold Using a High Level of Teacher Direction/Support

a. Choose one or two places in the problem-solving sequence to invite student responses. Have these choices in mind before you begin scaffolding instruction. (Examples of choices are shown in red.)

- Identify number/factors in problem
    - We have been working on multiplication problems involving regrouping. This time, I am going to work a problem and I want you to help me with part of it. If I went shopping and bought 6 packs of cards and each pack had 12 cards in it, I wonder how many cards I would have in all? I need to figure out a couple of things. The first thing I need to do is see which number stands for how many groups I have. What do you think? How many groups do I have? You are right, I have 6 packs of cards, so I have 6 groups. Now that is my number of groups, but I need another number, I need to know how many items I have in each group. What do you think is that number? Right, 12, because I have 12 cards in each pack. So I have how many packs? And how many cards in each pack?
- On the place value mat, show the number of groups
    - I am going to use yarn to make the number of groups on my place value mat. How many groups should I make? Right 6. I am going put down 6 pieces of yarn across my place value mat.
- On place value mat, show the number of items/group using base ten blocks and ten sticks.
    - Now I need to show how many cards are in each pack. There are 12 cards in each pack. I need to see how many ones are in the number 12. Show me how many ones are in 12. Right, there are 2 ones. How many tens are in 12? Right again, there is one ten. I can show 12 with 2 blocks and 1 ten stick. Well, we know that we have 12 cards in each pack,. What should I

put in each group here on my place value mat? Right, I am going to put 12 in each group. ___ and ____, how do I make 12? You are right; we can show 12 with 2 blocks and 1 ten stick. I am going to put 2 blocks and 1 ten stick here in this group, and in this group, …. There I have made 12 in each group on my place value mat.

- Count the number of blocks in the ones column of the place value mat.
    - I have made 6 groups of 12. I want to see how many I have all together. Where should I start counting? Right, in the ones column. I will start counting here. 1,2,3,4,5,6,7,8,9,10. Now I have 10 blocks in the ones column. I think I need to do something. What should I do? Right, I need to make groups of 10.
- Trade groups of ten for ten sticks and place the ten sticks in the ten column of the place value mat.
    - I need to take this group of ten blocks from the ones column and trade it in for a ten stick. Should I move my ten stick out of the ones column? Yes, I need to put my ten stick at the top of my tens column like this.
- Count blocks left in ones column
    - Now I need to count my blocks in the ones column. Can I make any more groups of 10? No, I can't. I have 2 blocks left in my ones column.
- Count ten sticks in the tens column
    - I've counted my ones, now what should I do? Right, I need to count my tens. I have 1,2,3,4,5,6 sticks in my tens column (point to sticks) plus one more that I move over (point to stick at top of tens column). How many total ten sticks do I have? Right 7.
- Say the number that is represented on the place value mat.
    - How many tens do I have? Seven tens are what? Right 70. Plus 2 ones (point to ones) makes 71, and 72. I have 72 blocks in all.
- Repeat the multiplication problem, saying the answer that is shown by the concrete materials on the place value mat.
    - Now I know the answer to my problem. If I buy 6 packs of cards and each pack has 12 cards in it, how many cards will I have all together? Right 72 cards. Six times 12 is 72.

b. Maintain a high level of teacher direction/support for another example if students demonstrate misunderstanding/non-understanding; move to a medium level of teacher direction/support if students respond appropriately to the selected questions/prompts.

2.) Scaffold Using a Medium Level of Teacher Direction/Support

a. Choose several more places in the problem-solving sequence to invite student responses. Have these choices in mind before you begin scaffolding instruction.

- Identify number/factors in problem

- You are doing a great job figuring out these problems. This time, I 'm going to ask for even more of your help. Let's say that we have 3 bags of suckers and each bag has 14 suckers in it. We want to find out how many suckers we have all together.. The first thing we need to do is see which number stands for the number of groups. What do you think? How many groups do we have? Why do you think that? You are right, we have 3 bags, , so we will have 3 groups. Now that is our number of groups, but we need to know something else. We need to know how many items we have in each group. What do you think is that number? Right, 14, because I have 14 suckers in each package. So I have how many packs? And how many cards in each pack?

- On the place value mat, show the number of groups
    - What should I do first on my place value mat? Right, I need to use yarn to make the number of groups on my place value mat. How many groups should I make? Right 3. Why 3? Because we have 3 bags of suckers. I am going put down 3 pieces of yarn across my place value mat.
- On place value mat, show the number of items/group using base ten blocks and ten sticks.
    - Now that we've shown our groups, what should we do next? You are right, we need to show how many suckers are in each bag. There are 14 suckers in each bag. we need to see how many ones are in the number 14. Show me how many ones are in 14. Right, there are 4 ones. How many tens are in 14? Right again, there is one ten. ___ and ____, would you please come show me 14 using the ten blocks and ten sticks? We can show 14 with 4 blocks and one ten stick. Now we need to put show hom many items are in each group on our place value mat. _____ show me what we are going to put in the first group. Is he right boys and girls? Great! _____, show me what we are going to put in our second group. How about it, did she do it correctly? We are on a roll. ____, what should we put in our third group? Right, we are going to put 4 one blocks and one ten stick to show that we have 14 in this group also. ____, There, we have made 14 in each group on the place value mat.
- Count the number of blocks in the ones column of the place value mat.
    - We have made 3 groups of 14, and we want to see how many we have all together. _____, where should we start counting? Right, in the ones column. ____ and _____, please count the ones for us. They counted 12. Is there anything they need to do? Right, they need to trade a group of 10.
- Trade groups of ten for ten sticks and place the ten sticks in the ten column of the place value mat.
    - _____ and _____, show us what to do with this group of 10 in the ones column. Great, they took the ten ones and traded it for a ten stick. Where should that ten stick go? Right, at the top of the tens column.
- Count blocks left in ones column
    - ____ and ____, how many blocks do we have left in the ones column?
    - Count ten sticks in the tens column

- _____, what should we do next? Right, we count our ten sticks. How many ten sticks do we have? How did you get that number? Right, you counted the number of ten sticks we have in our tens column (1,2,3) and then added one more that we put at the top when we traded. So 3 tens plus 1 ten is 4 tens.

- Say the number that is represented on the place value mat.
  - _____ and _____, can you tell us what number we have shown on our place value mat? Boys and girls, they said we have 42. How many tens do we have? And 4 tens are what? Right 40. Plus 2 ones (point to ones) makes 41, and 42.

- Repeat the multiplication problem, saying the answer that is shown by the concrete materials on the place value mat.
  - Boys and girls, what is the answer to our problem? 14 x 3 is 42 suckers.

b. Maintain a medium level of teacher direction/support for another example if students demonstrate misunderstanding/non-understanding; move to a low level of teacher direction/support if students respond appropriately to the selected questions/prompts.

3.) Scaffold Using a Low Level of Teacher Direction/Support

a. When students demonstrate increased competence, do not model the process. Ask students questions and encourage them to provide all responses. Direct students to replicate the process at their desks as you work together.

- Identify number/factors in problem
  - Let's try another problem. This time, I want you to work at your desks using the base ten blocks and place value mats. I'll work one up here while you work it at your desks. The fourth graders are going to have an ice cream sundae party. We have 3 boxes of plastic spoons and each box holds 15 spoons. We need to see how many spoons we have all together. How many groups do we have? Right, 3. What is the other number we will be working with? Right, 15 because there are 15 spoons in each box.
- On the place value mat, show the number of groups
  - What should I do first on my place value mat? Right, I need to use yarn to make the number of groups on my place value mat. How many groups should I make? Right 3. Why 3?
- On place value mat, show the number of items/group using base ten blocks and ten sticks.
  - Now that you each have 3 groups on your mat, what should you do next? You are right, we need to show the number of spoons. On your place value mat, show me the number of spoons in each box. What number did you show in each group on your place value mat? ____, and _____, could you please come show us on my place value mat.

- Count the number of blocks in the ones column of the place value mat.
    - What should we do next? Right, we need to count. _____, where should we start counting? Right, in the ones column. How many ones do you count? Do you need to do anything with these ones?
- Trade groups of ten for ten sticks and place the ten sticks in the ten column of the place value mat.
    - Show me what to do with the ones in the ones column. _____ , please tell me what to do on my place value mat. Okay, I take ten ones and I trade them in for a ten stick. Show me where should that ten stick go.
- Count blocks left in ones column
    - Tell me how many blocks you have left in the ones column?
- Count ten sticks in the tens column
    - What should we do next? How did you get that number? _____ , please come show me what to do on my mat.
- Say the number that is represented on the place value mat.
    - What number do you have on our place value mat? Tell me what number I have. I have _____ tens, which makes _____, plus _____ ones, so I have _____.

- Repeat the multiplication problem, saying the answer that is shown by the concrete materials on the place value mat.
    - Boys and girls, what is the answer to our problem?

b. When you are confident students understand, ask individual students to direct the problem solving process or have the class direct you: Students ask questions and you and the students respond/perform the skill.

Instructional Phase 2: Facilitate Acquisition to Mastery – Student Practice

Receptive/Recognition Level

Purpose: to provide students multiple practice opportunities to recognize the correct answer for two digits by one digit multiplication problems with regrouping.

Learning Objective 1: Use concrete objects to solve two digits by one digit multiplication problems with regrouping.

Cooperative Learning

Materials:

Teacher –

- Bell or timer
- 5 problem cards, along with materials that represent each problem
- Sheet/chart to record team scores

Students -

- Each team will need 5 place value mats with base ten blocks and ten sticks displayed on mat (You may want to laminate the mats and hot glue or velcro on the materials to keep them from rolling off. Alternatively, you could place each mat in a box lid to help secure it.) Each place value mat should be numbered (1-5).

Description:

Activity:

Children will work in groups of 4 or 5 students. Each table will have 5 place value mats that are numbered and have base ten materials on them. The teacher will choose a problem 1-5. . Each team is to look at the correspondingly numbered place value mat and decide if it shows the correct solution to the problem that the teacher presents. After the teacher rings the bell, one member of each team will announce their decision. Teams can earn points for each correct decision.

Cooperative Learning Groups Steps:

1.) Provide explicit directions for the cooperative group activity including what you will do, what students will do, and reinforce any behavioral expectations for the game.

2.) Arrange students in cooperative groups. Groups should include students of varying skill levels.

3.) Assign roles to individual group members and explain them:

   a. Materials manager (gets the materials – sets of place value mats)
   b. Time Keeper (makes sure that each student at the table gets a chance to share in time allotted)
   c. Reporter (reports group's answer)
   d. Encourager(s) (encourages each person)

4.) Distribute materials.

5.) Model one example of skill(s).

   a. Listen to problem.
   b. Look at corresponding place value mat.
   c. Decide if mat shows solution to problem.
   d. Make sure that the team agrees with the decision before time is called.

6.) Review/model appropriate cooperative group behaviors and expectations.

   a. Agree or disagree with a teammate's decision.

b. Listen while teams are sharing responses.

7.) Provide opportunity for students to ask questions.

8.) Teacher monitors and provides specific corrective feedback & positive reinforcement.

a. Circulate around the tables and check on children's responses.

b. Make sure that each child receives feedback on his/her decision.

c. Ask each child in the class to share his/her decisions at least once either with the entire class or individually with the teacher.

Expressive Level

Purpose: to provide students multiple practice opportunities to solve two digit by one digit multiplication problems with regrouping using concrete objects.

Learning Objective 1: Using concrete objects. to solve two digit by one digit multiplication problems with regrouping.

Cooperative Learning

Materials:

Teacher –

- Bell or timer
- 5 problem cards, along with materials that represent each problem
- Sheet/chart to record team scores

Students -

- Place value mat/team
- Base ten blocks and ten sticks/team

Description:

Activity:

Children will work in groups of 4 or 5 students. Each table will have a place value mat and base ten materials on them. The teacher will choose a problem 1-5. . Each team is to show the solution on the place value mat. After the teacher rings the bell, one member of each team will share their solution. Teams can earn points for each correct decision.

Cooperative Learning Groups Steps:

1.) Provide explicit directions for the cooperative group activity including what you will do, what students will do, and reinforce any behavioral expectations for the game.
2.) Arrange students in cooperative groups. Groups should include students of varying skill levels.
3.) Assign roles to individual group members and explain them:
    a. Materials manager (gets the materials – sets of place value mats)
    b. Time Keeper (makes sure that students are on task and complete each problem in time allotted.))
    c. Turn taker (makes sure that each member of the group gets a chance to solve a problem)
    d. Encourager(s) (encourages each person)
4.) Distribute materials.
5.) Model one example of skill(s).
    a. Listen to problem.
    b. Show solution
    c. Make sure that the team agrees with the decision before time is called.
6.) Review/model appropriate cooperative group behaviors and expectations.
    a. Agree or disagree with a teammate's decision.
    b. Listen while teams are sharing responses.
7.) Provide opportunity for students to ask questions.
8.) Teacher monitors and provides specific corrective feedback & positive reinforcement.
    a. Circulate around the tables and check on children's responses.
    b. Make sure that each child receives feedback on his/her decision.
    c. Ask each child in the class to share his/her decisions at least once either with the entire class or individually with the teacher.

Instructional Phase 3: Evaluation of Student Learning/Performance (Initial Acquisition through Mastery/Maintenance)

Continuous Monitoring & Charting of Student Performance

Purpose: to provide you with continuous data for evaluating student learning and whether your instruction is effective. It also provides students a way to visualize their learning/progress.

Materials:

Teacher –

- Appropriate prompts if they will be oral prompts
- Appropriate visual cues when prompting orally

Student –

- Appropriate response sheet/curriculum slice/probe
- Graph/chart

Description:

Steps for Conducting Continuous Monitoring and Charting of Student Performance:

1.) Choose whether students should be evaluated at the receptive/recognition level or the expressive level.
2.) Choose an appropriate criteria to indicate mastery.
3.) Provide appropriate number of prompts in an appropriate format (receptive/recognition or expressive) so students can respond.
- Based on the skill, your students' learning characteristics, and your preference, the curriculum slice or probe could be written in nature (e.g. a sheet with appropriate prompts; index cards with appropriate prompts), or oral in nature with visual cues (ask students to tell you which of several visually displayed solutions is the correct solution for a problem), or a combination of written curriculum slices/probes and oral prompts with visual cues (e.g. ask students to demonstrate solution to given oral problem).

4.) Distribute to students the curriculum slice/probe/response sheet/concrete materials.
5.) Give directions.
6.) Conduct evaluation.
7.) Count corrects and incorrects/mistakes (you and/or students can do this depending on the type of curriculum slice/probe used – see step #3).
8.) You and/or students plot their scores on a suitable graph/chart. A goal line that represents the proficiency (for concrete level skills, this should be %100 – 5 out of 5 corrects) should be visible on each students' graph/chart).
9.) Discuss with children their progress as it relates to the goal line and their previous performance. Prompt them to self-evaluate.
10.) Evaluate whether student(s) is ready to move to the next level of understanding or has mastered the skill at using the following guide:

Concrete Level: demonstrates %100 accuracy (given 3 to 5 response tasks) over three consecutive days.

11.) Determine whether you need to alter or modify your instruction based on student performance.

Additional Assessment Activity Appropriate For This Math Skill/Concept

Flexible Math Interview

Purpose: to provide you with additional diagnostic information in order to check student understanding and plan and/or modify instruction accordingly.

Materials:

- Problem bags – bags with packages of gum, cookies, cards, etc.
- Place Value Mats,
- Base ten materials

Description:

With individual students or in small groups, the teacher will take the role of a student. After drawing a "problem bag", the teacher will have the student teach him/her how to solve the problem using the place value mats and base ten materials. The teacher should note errors and/or misconceptions while the student is teaching, but the teacher should not stop the student for correction purposes. By having the student complete the entire explanation, the teacher will gain a better understanding of the student's thinking. The teacher should confer with the student regarding specific errors or misconceptions after the activity is over.

Instructional Phase 4: Maintenance – Periodic Practice to Maintain Student Mastery of Skills

Purpose: to provide periodic student practice activities and teacher directed review of this skill after students have mastered it.

1. Problem of the Day

Materials

- Concrete objects that depict a problem (e.g. 4 packs of 12 pencils).
- Place value mats,
- Base ten materials

Description:

The teacher will present a problem of the day verbally and by displaying the items in a designated area. Students will solve using base ten materials and place value mats. This should initially be done each day, then 2 times/week, weekly, bi weekly, and then intermittently.

2. Multiplication Center

Materials

- Concrete objects that depict a problem (e.g. 3 packs of 24 paper clips) in numbered bags
- Numbered Place value mats,
- Base ten materials

Description:

Students will choose a bag and solve the problem on the correspondingly numbered place value mat. The teacher can then check solutions before the child leaves the center.