Name(s): [redacted]		
Grade Level: 3rd	Subject: Math	Lesson Length: 45 minutes

I. Standards (IC1, IC2, IC4)	
Utah State Core Curriculum Strand(s) and Standard(s):	**Standard 3.MD.3** Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step "how many more" and "how many less" problems using information presented in scaled bar graphs. *For example, draw a bar graph in which each square in the bar graph might represent five pets.*
Summative Assessment:	Lesson 19 quiz
Goal Statement/Rationale:	Students will be able to read a bar graph and use the information to solve “How many more” and “how many less” problems. It is important for students to understand this because reading bar graphs will be something students do in subjects beyond math. Students will build on their existing knowledge of picture graphs and bar graphs to represent data. This knowledge will help students further understand how to represent data within graphs.

II. Intended Learning Outcomes (IC1, IC2)	
Learning Objective/Goal:	Know: Students will know how to read a bar graph and understand the data presented. Do: Students will solve “how many more” and “how many less” problems based on the information presented in bar graphs.

III. Assessment of Student Progress	
Pre-assessment:	When showing the example of a scaled graph ask: - Does anyone know what this is? - What does it represent?
Informal assessment(s):	● Listen for discussion and check for understanding as we create our own scaled graph ● Listen to students during same and different
Formal assessment:	Exit ticket

IV. Preparation (LL2, IC4, IP8)	
Students' prior knowledge, skills and assets:	Prior Knowledge: Students have previously worked with picture graphs and scaled graphs Prior Skills: Students can multiply and have worked on one step problems Personal Assets: All students are engaged by hands on activities that allow them to be a part of learning Cultural Assets: All students come from cultures that emphasize learning Community Assets: Students have access to iReady at home
Student preparation:	Pencils, whiteboards and markers if needed
Teacher preparation:	Pass out sticky notes with spiral review
Technology integration:	N/A

V. Instructional Procedures (LL6, IC3, IC7, IP2, IP7*)
**We recommend you label the appropriate competency, using the codes, within your instructional procedure to make that visible to your university supervisor.*

Warm up: Spiral review

Scaled Graph Activity

Start by showing a simple scaled graph (do number of pets)

Explain key parts

- Title (Tells us what the graph is about)
- Categories (What we are measuring)
- Scale (Each symbol represents ?, ex. = 2 points)

Determine how many votes are in each category

Scaled graph example:

Do you have pets?	
Yes	
No	

Key: Each = 2 people

Turn and talk: Why do you think we use symbols instead of counting each vote one by one?

Tell students, “We are going to create our own scaled graph using your favorite treats!”

- Favorite ice-cream flavor: Vanilla, chocolate, cookies and cream, cookie dough (choices will be written on the board)

Each student will vote by writing their name on a sticky note and placing it on their choice on the board (possibly allow for a turn and talk to share their favorite flavor)

Draw a blank scaled graph on whiteboard:

Title	
Flavor #1	
Flavor #2	
Flavor #3	
Flavor #4	

Key: ____ = ?

Label the scaled graph as a class (title, categories, then...) Decide on a scale, say: “Remember we talked about why we use symbols instead of counting each vote. For our graph we are going to do the same and each symbol will represent 2 people.”

As a class count the votes for each category and determine the correct number of symbols for each category. (Check at the end by counting sticky notes and symbols)

Ask:

- Which flavor is the class favorite?
- Which got the least amount of votes?
- How many symbols are in each category?
- If I didn’t know the total number of votes, how could I find it? (If each symbol = 2 votes, how do I find the total number of votes?

How many more/how many less problems:

- How many more students like_____ than _____?
- How many fewer students chose____ than ____?
- If I added 4 more votes to ____ category, how many symbols would I need? (challenge question)

Reinforce how using a scaled graph makes counting easier

iReady book

Same and Different Number Talk

- Give students 1 min to think about the problem without talking
- Have students share with a partner

- Class discussion (Make connections to activity)

Try it
Problem: Cole keeps track of the points scored by his teammates during a basketball game. He records his data in the picture graph shown. How many points did each teammate score?

Read together....underline question and key
Ask:
How can I solve how many points each person scored? Go through each person as a class and solve.

Connect it:
1. Students explain reasoning for how many points each person got. (think-pair-share)
2. A. 2, b. Gil= 10 points, bar graph goes to 10. C. think-pair-share
3. Think-pair-share

Exit ticket:
(Before release to complete exit ticket, tell everyone to write their name on the paper)
Jamilla keeps track of the number of haircuts given in her father's barber shop. She records her data in the picture graph shown. How many haircuts were given on each day?

If time:
iReady on computers

VI. Academic Language		
Language Function:		Solve
Language Supports		
	Vocabulary:	Scaled graph, symbol, key, multiplication, addition
	Syntax:	Mathematical word problems and graphs
	Discourse:	Oral and written (discussion of problems)

VII. Addressing Learners' Needs (LL4, IP1)	
Differentiation/ Individualization:	Students who are not showing mastery of today's objectives will receive a supplemental lesson on iReady. Students will mastery will continue working on my path.

Support for ELLs: Fluency Stage Specific Support: 1. Entering 2. Emerging 3. Developing 4. Expanding 5. Bridging 6. Reaching	Break down the problems and graphs - Reread multiple times - Reiterate important info - Discuss graphs and what each part of it means - Ask questions about the graph
Accommodations/ Modifications for IEPs/504s:	Allow for longer time to interact with math O- Preferential seating, scheduled breaks R- Oral responses L- Breaks when needed, modified work