Grade 3	Lesson: 3.5 Problem Solving: Draw a Picture	Reference to English

Math Standard(s): 3.NBT.2 also 3.OA.8 **Domain: Numbers and Operations in Base Ten**

Content objective(s):	Language Objective(s):
Students will draw a picture to solve a problem. *I can draw a picture to solve a problem.*	Students will explain how they solve problems after drawing them. *I can explain how to solve problems after I draw them.*
Essential Understanding: Information in a problem can often be shown using a picture or diagram and used to understand and solve the problem. Some problems can be solved by writing and completing a number sentence or equation.	**Required Academic Vocabulary for Word Wall:** **Listen:** **Read:** **Write:** **Speak:** **Sentence Frame:**
Materials: • Whiteboards, erasers, markers • Guided practice page76	**Additional Lesson Vocabulary:** Hockey cards, baseball cards, soccer shirt, shorts, poster, pennant,

Lesson: **Instructional Time: 30 minutes**

Opening: (2 minutes)

T: "You have already learned to make an organized list to solve problems. Today you will learn how you can draw a picture to help you solve a problem."

T: "When in life have you found a picture helpful to understand a situation?"

S: *will respond, "a map" or "how to put something together" or "math problems."*

Introduction to New Material (Direct Instruction): (15 minutes)

Guided Practice:

Use the modeling cycle:

Teacher Does:

- Pass out whiteboards, erasers and markers.

T: "Let me tell you a story. As I tell you the story I need you to draw it on your whiteboard."

T: "An aquarium has 25 guppies, so draw 25 fish on one side of your board."

S: *will draw 25 fish on one side of their board.*

T: "and 18 goldfish in it. Draw 18 goldfish."

S: *will draw 18 goldfish on their board.*

T: "How many fish live in the aquarium? Solve and then turn to your neighbor and tell them the sum."

S: *will solve 25 + 18 = 43 and tell their neighbor, "25 plus 18 equals 43."*

T: "How many fish are in the aquarium?"

- Draw the problem on the board.

T: "We were told that there are 25 guppies and 18 goldfish."

- Draw a bar diagram with only one part. Above the whole bar, show "? Fish in all."

T: "This rectangle represents all of the fish in the aquarium. We are going to draw a line through the rectangle to represent the 2 groups of fish, one for the guppies and one for the goldfish."

- Write "25 guppies" in one part and "18 goldfish" in the other part.

T: "How many fish are there in all?"

S: *will respond, "there are 43 fish in the aquarium."*

T: "Correct."

T: "I am going to tell you another story. And I need two of you to come up and show us how to solve it as a team."

2 Students Do:

- Teacher will choose 2 students to come up and solve the next problem.

T: "While I tell the story these 2 people are going to solve it for us."

T: "Ella has 14 baseball cards and 20 hockey cards. How many cards does Ella have in all?"

T: "Remember to talk to your partner. Draw what you know and solve the problem."

S: *will draw 14 baseball cards and 20 hockey cards on the board while saying, "there are 14 baseball cards. I will draw 20 hockey cards. We need to had them together. 14 plus 20 equals 34."*

T: "That was great! Please sit down."

All Students Do:

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T: "Now it is your turn to solve one more problem with a partner. I will read it and then you will solve it. You will have 3 minutes and then I want you to show me your drawings on your board."

- Draw a soccer shirt, shorts, poster and pennant with prices next to them on the board.

T: "David wants to buy some soccer souvenirs. How much money does David need to buy shorts and a shirt?"
T: "Remember to draw the box separated into parts on your board."
S: *will work in pairs to solve the soccer problem.*

- Teacher will walk around helping students as needed.

T: "Let me see you work?"
S: *will show the teacher their boards.*
T: "Well done."

Independent Practice: (5 minutes)
T: "Now I need you to work independently and solve 4 more questions."
T: "Need you to return to your desk and pull out your textbook."
S: *will return to their desk and pull out their textbook.*
T: "I need you to complete problems 1, 4, 6 and 7. You have 5 minutes" (Write the problems on the board so the students don't forget.)
S: *will complete the 4 problems.*

- Teacher will walk around helping students as needed.

T: "10,9,8,7,6,5,4,3,2,1. Time is up. Please turn in your papers and come sit on the carpet."
S: *will turn in their papers and sit on the carpet.*

Closing: (4 minutes)
T: "We will do on more problem together. I will need you to come up and help me draw the problem."
T: "At the aquarium, Janet counted 12 sand sharks, who will draw the sand sharks for me?"
S: *will come up and draw 12 sand sharks.*
T: "And 9 zebra sharks, who will draw zebra sharks for me?"
S: *will come up and draw 9 zebra sharks.*
T: "And 11 nurse sharks, who will draw 11 nurse sharks for me?"
S: *will come up and draw 11 nurse sharks.*
T: "About how many sharks did Janet count? Let's round each number to the nearest 10. 12 rounds to what?"
S: *will say, "10."*
T: "What about 9?"
S: *will say, "10."*
T: "What about 11?"
S: *will say, "10."*
T: "We have 10 and 10 and 10. That makes it easy to add. ABOUT how many sharks are there? Tell your neighbor."
S: *will tell their neighbor, "about 30 sharks."*
T: "Good job today!"

Assessment:

Guided Practice page 76 and 77

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