Grade 1	Lesson: Problem Solving: Make an Organized List	Reference to English

Math Standard(s):   1.NBT.1   Domain: Numbers and Operations in Base Ten

Content Objective(s):	Language Objective(s):
Students will make an organized list showing possible solutions. 我会列出清单来表示所有肯能的答案。	
Essential Understanding: Some problems can be solved by generating a list of outcomes and organizing that list in a systematic way so all outcomes are accounted for.	**Academic Vocabulary:** **Listen:** 大于，小于 **Read:** **Write:** **Speak:** 大于 **Sentence Frame:**
Materials: • **Paper** • **Student workbooks**	**Language and Word Wall:** 绿色
Lesson: Problem Solving: Make an Organized List	**Instructional Time: 30 minutes**

Opening: (5 minutes) –

T:"你已经学会怎么比较和排列数字了。今天你会学习怎么用比较，排列顺序解答问题。你也会用提示来列出所有可能的答案。现在我要给你一些提示，你们看看可不可以解答问题。我在想一个在S和Z之间的字母。这个字母在CAT里。我是哪个字母？(T)."

- Students tell a friend what they think the answer is.

T:"很好! 很多人会用提示来解答这样的问题。你用了哪些提示？

- Students say: the letter is between S and Z in the alphabet, it is in the word cat.

Introduction to New Material (Direct Instruction): (10 minutes)

T:"我们再来做一题。这题的答案是第315页上的一个数字。请把课本打开然后注意听。"

- Students open their books to page 315. Write on the board, "I am thinking of a secret number in a shape that has straight sides. The number is between 20 and 30. What is the secret number?" Read it when you're done.

T:"我要你跟一个朋友一起合作来解答这个题目。"

- Students discuss with each other.

T:"你怎么解答问题的？"

- Students give their explanations.
- When they're finished, write the next riddle on the board: "I am thinking of a secret number in purple. The number is between 1 and 10. What is the secret number?"

T:"我们来讨论我们可以怎么解答这个题目。这里有一些步骤来帮助你。我把它们写在白板上。首先，要写出所有可能的答案。第一个提示告诉你什么？"

- Students read the clue by turning to page 315. They say "the number is purple".

T:"很好，到目前为止，这个清单里有哪些数字？哪些数字是紫色的？我们从小写到大。"

- Students help you write (5, 40) on the board.

T:"好，我们来看第二个提示。秘密数字在1和10之间。两个可能的选择当中，哪个是正确的？"

- Students say "5", guide them to record the answer "5" in Number 2 of page 315.

T:"315页上也有6，而且它也在1和10之间。为什么秘密数字不是6呢？"

- Students say 6 is not purple, clue one said the secret number has to be purple.

Guided Practice: (15 minutes)

T:"我们现在一起来做几题。请翻倒第316页。"

- Students turn to page 316.

Use the modeling cycle:

1. Teacher Does:

T:"好，我来示范第1题。"

- Write the following numbers on the board with the corresponding colors
  - 29 (red), 50 (blue), 22 (green), 46 (red), 24 (blue), 45 (green), 41 (blue), 58 (red), 57 (green)
- Read the directions for number 1. Make your list based on clue 1. Then, as you read the next clues, cross out impossible answers. Model writing the correct answer in the space provided.

T:"我会把提示念给你听。我是绿色的。哪些数字是绿色的？"

S: will respond, "22, 45 and 57 are green"

T:"对, 22, 45和 57 是绿色的。我会把其他的划掉。"

T:"第2个提示：我比45大但是小于60。有哪个数字比45大？告诉你旁边的同学哪个数字大于45但是小于60。"

S: will tell their neighbor, "57 is greater than 45."

T:"哪个数字大于45而且也小于60, 用手指写出数字。"

S: will write 57 in the air.

T:"很好。22大于45吗？"

S: will respond, "no."

T:"不对，22不大于22，所以我会把它划掉。45大于45吗？"

S: will respond, "no it is the same."

T:"没错，我们会划掉45."

T:"秘密数字是什么？"

S: will say, "57."

T:"很好，我们一起来做第2, 3和4题。"

- Go through problems 2,3,4 as a class the same as you went through problem 1.

Closing: (5 minutes)