Scrabble Activity
(potential solution)

Using the TI-84 to randomly pick a word from a dictionary:

{randint(1, # of pages), randint(1, # of columns), randint(1, # of words in column)}
• Sketch the scatter plot created by the TI and include the line of best fit (and it’s equation)

I created the scatter plot and line of best fit using MiniTab 15.

Regression equation:
\[ y = 3.17 + 1.40x \]

• Is there a linear correlation between length of word and Scrabble score?
  There appears to be a slight linear correlation. The Pearson correlation coefficient is 0.721.

• Do there appear to be any outliers in your data? Support your answer.
  The word ‘exhibitioner’ has a length and a score much higher than any of the other words but it
does follow a linear trend so it does not appear to be an outlier.

• What would you expect the Scrabble score to be for a 2-letter word? 5-letter? 7-letter?
  Using the equation for the line of best fit, we would predict the a 2-letter to be worth about 6
  points, a 5-letter word to be worth about 10 points, and a 7-letter word to be worth 13 points.
• Given a random word on a Scrabble word, what would expect the score for that word to be?

The average length of a word was 7.3 letters so we would expect the score to be 13.19 or about 13 points.

• Based on the data you found, what would be your strategy in playing scrabble? Support your answer using your data.

I would try to find long words because they tend to be worth the most points.