HIGH-SCORING BOGGLE

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Somerville, Massachusetts

The game of Boggle consists of sixteen cubes with letters on each face, which form a random 4-by-4 array when thrown like dice into the holes of a plastic grid. The object of the game is to form as many words as possible in three minutes, using the King’s Move in chess, but without using any cube more than once in spelling out a word. Three and four letter words are scored one point, five letter words two points, six letter words three points, seven letter words four points, and eight letter words or longer eleven points.

With the aid of a computer, Steve Root and I have discovered that the array at the right is very likely the highest-scoring one for words from the Official Scrabble Players Dictionary; a score of 2047 was achieved. The actual OSPD words found are listed below; those with asterisks are not found in Webster’s Third Edition.

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G N I S
E T R P
S E A C
D B L S

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If words from Webster's Third Edition are also admitted, the score for this grid can be increased by 980 to a total of 3027.

For the 5-by-5 grid, I speculate that the array at the right is the highest-scoring one; the Official Scrabble Players Dictionary score for it is 6503. However, it is possible that a better grid can be found; readers are invited to propose better arrays for computer testing.