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 E S D
N T E A
B I R L
S P C
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abed abet abets able able* abler ables ablest absent absent* absenter* absenters* acre acrd* acres alb albs ale alle alert alerting alerts ales aping arc arcs are are* arete aretes ars arsin* arsine* art artel artels arts ates atrip

bal bale baled baleen bale r r baler bales bales bals bar bare bared bares barest baring barite barites barn bars bas bate bated bates bating bats bear bearing bears beat beaten beating beats bed beds beded beds bee been bees beest beets bel bels berate bates bearing beset best besting bestir bestirs bet beta betas betes blue blair blared blares blaring flat blate blats blear blearing blears bleat bleeding bleats bled blet* blets*

cab caber cabers cable cabled cables cablet cablets cabs cap caprine caps car care cared career cares caret cares caring carn carp carpi carpings carps cars cart carte carted cartel cartels cartes carting carting cat cate cater catering caterers cates catnip catnips cats clap claps claret clarinet clarinetts clear clearing clears claret cleating cleats crab crabs crap craping craps crate crated crates crating create creates creatin* creatine creatines creating crest crestal cresting cretin cringe cringes cris* crisp crispat

deal deals dear dears dob debar debars debate debates debating debs dee dees del delate delates delaying dels derat derats des destine
ers on each dice into the as many in chess, a word. Three words two points, nuts, and eight

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

ing alerts lines* art

red bares bates bating s bee been besting blaring blat blest bleet*

cap caprine in carp carps carping carts lap laps claretting cleats create

eating debs destaline

ear earing earn earnest ears eat eaten eating eais eel eels elapine elong elate elates elating elines en long enern ernene ernes easter esters estral estrin eta etas
gas good gees geest genip genips genital genitalia genre genres gent genetics gens gest geste get getable gets

ingest ingesta ingested inter inters irate ire ired ireds its

lab labs lac lacs lap lapin laps lapsing lar laires Larine lares las lat late lated later laten lateri latrine latrines lats lea leap leaping leaps leer learn learnt lears lead lee lees leet leets lest let lets

nee need needs nestnested nesters net nets nip nipa nipas nips nit niter niteris nitres nits

pac pacs pal pale paled paler pales par pare pared pares paring pari pars parsing part parted parting parts pas pat pate pated pater pateras pates patin* patine patines pats pin pine pines pineta* ping pint pintas pintas pirate pirated pirates pirn pis pil pita pitas pits prat prate prated prates prating pratng prats pree preen prees prelate prelates prese present preset preset preprint preprints psi

cap rale rales rap rapine rapines raping raps ras rat rate rated ratel rats rates ratine ratines rating rats real reals reap reaping reaps reb rebate rebating rebating rebates rebating rebs red reds ree rees reest reesting
relapsing relate relates relating res resent reset rest resting ret rete rets ril ring rip rips rite rite

sab* sabe sabed saber sabering sabers sabes sabed sabes sable sabes sables sab* sac sacred sac sal sale sales sap saps sare saree sarees sar sarin saris sat sate sated sateen sates sati satin sating satire satires satis scab scabs scale scaled scaler scalers scales scaping scar scare scared scarces scaring scarp scarping scars scart scarted scarting scarts scat sclera sclerite sclerites scrap scraping scraps scree screes scrip scrips sea seal seals seaw earking seaing seeds seel seels seen seer seers segni* sel seel sent senti ser sera serac seracs seral serin serine sering* sera set seta setal sin sine sines sing singe sinings sint sintar sit sitee sites sit slat slabs slob slaps slat slated slater slaters slates slating slats sled sleds sleet sleeting sleets spa spade spades spale spales spar spare spared spared sparest sparing spade spade spates spats spin spine spines spinet spinets spiracle spiracles spiral spiraled spirals spire spirea spireas spired spire spirt spirted spirits spirit spinal spitals spite spited spites spirt sprats sprée sprees spring springes springe springing springed sprunts sprit sprite sprites sprits sri stab stable stabed stabler stablers staled staled slater star stare stared staring stars steal steals steaps steaps steeps stea stearin stearine steeed steel steels steer steering steers stela stelar stern sting stir stirp stirps stirs strap straps string strip strips
tab taber* tabering* tabers* tabes table tabled tables tabs tae tael
taels t alc talcs tale taler talers tales tap tapping.tapir tapirs tapis
taps tar tare tared tares taring tarn tarp tarpas tars tarsi tas tea teal
teaels tear tearing tears teas ted teds tee teed teen tees teg* tela* ten
tern ternne ternes tin tine tines ting tinges tip tips tire tired
tires tis trap traps tree trees triune trips

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 in-
vited to propose better arrays for computer testing.