In the second word contest sponsored by the Girl Scout magazine Daisy for kids under twelve, the grid size grew as well as the challenge. Contestants now had to fill in a 4-by-4 grid with letters of their choice and find the ten longest words that could be spelled out moving in any direction between letters (up, down, right, left, or diagonal) as in a game of Boggle. No letter in the grid could be used more than once per word, and all the words had to be different. The value of each of the ten words depended on its length, with words of 1, 2, 3, ..., 16 letters worth 1, 2, 3, 4, 6, 9, 13, 18, 24, 31, 39, 58, 69, 81 and 94 points, respectively. Thus, the highest score we could get would be 940 using ten sixteen-letter words.

When we started working on the contest, we thought of the longest word we knew that had lots of other long words in it: PREARRANGEMENTS. Because this was only fifteen letters long, we added a D as the sixteenth letter and started finding words:

<table>
<thead>
<tr>
<th>Word</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>PREA</td>
<td>81</td>
</tr>
<tr>
<td>NARR</td>
<td>39</td>
</tr>
<tr>
<td>GEME</td>
<td>31</td>
</tr>
<tr>
<td>DSTN</td>
<td>39</td>
</tr>
<tr>
<td>PREA</td>
<td>69</td>
</tr>
<tr>
<td>NARR</td>
<td>69</td>
</tr>
<tr>
<td>GEME</td>
<td>58</td>
</tr>
<tr>
<td>DSTN</td>
<td>39</td>
</tr>
<tr>
<td>PREA</td>
<td>39</td>
</tr>
<tr>
<td>NARR</td>
<td>48</td>
</tr>
<tr>
<td>GEME</td>
<td>48</td>
</tr>
<tr>
<td>DSTN</td>
<td>48</td>
</tr>
</tbody>
</table>

Total 504, Average Word Length 12.1

With our first try, we were over halfway to 940!

Then we tried adding affixes to the word EVOLUTION. We added D and R to the front and -ISTS and -ISMS to the end at the same time:

<table>
<thead>
<tr>
<th>Word</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>REVOLUTION</td>
<td>69</td>
</tr>
<tr>
<td>REVOLUTIONIST</td>
<td>58</td>
</tr>
<tr>
<td>REVOLUTIONISTS</td>
<td>69</td>
</tr>
<tr>
<td>REVOLUTIONISMS</td>
<td>58</td>
</tr>
<tr>
<td>DTUL</td>
<td>58</td>
</tr>
<tr>
<td>EVOLUTION</td>
<td>48</td>
</tr>
<tr>
<td>EVOLUTIONIST</td>
<td>48</td>
</tr>
<tr>
<td>EVOLUTIONISMS</td>
<td>58</td>
</tr>
<tr>
<td>EVOLUTIONISMS</td>
<td>58</td>
</tr>
<tr>
<td>OITS</td>
<td>48</td>
</tr>
</tbody>
</table>

Total 593, Average Word Length 13.1

With our second try of 593, we were three-fifths of the way to our goal.

Next we used the longest anagrams we could think of, CONVERSATIONISTS and CONSERVATIONISTS. They turned out to be fantastic: we could find a lot of long words in them without changing the letters around too much. All the words even began with the same three letters, CON-, so we didn’t have to look anywhere else in the dictionary:
PART 2

magazine

were the chal-

lenges of their

moving (diagonal) as

more than once

of each of the

16 letters

and 94 points,

be 940 using

the longe

RANGE

arranges 39,

the longest

arranged a D as the

beginning.

S

arranges 39,

management 58,

148,

Length 12.1

We added D

time:

isms 69,

onist 58,

68,

Length 13.1

Some examples we

found in the dictionary were ASS’S-EAR, HESS’S LAW, and ROSS’S GOOSE.) With -LESSNESSES we only had to anagram four to six letters to get anagrams fourteen to sixteen letters long. But we also had to make a list of words ending in -S’S. The suffix -LESSNESSES was ten letters long, and it also had two long suffixes inside it, -LESSNESS and -LESSNESS’ S. (Singular possessives ending in -S’S were okayed by the judges over the phone. Webster’s Third allows them in its section on punctuation, Part 14.2.2. It says that sometimes words ending in S add either an apostrophe or an apostrophe and S to form the possessive, and it lists WAITRESS’S. Some examples we found in the dictionary were: WAITRESS’S, TEAR, HESS’S LAW, and ROSS’S GOOSE.) We also looked for -FULNESSES and -ISHNESSES words.

CONVERSATIONALISTS 94, conversationist 81, conversations 58, conversation 48, conversationists 94, conversationist 81, conservations 58, conversationists 69, conversionist 58, conservatives 58 Total 699, Average Word Length 14.0

With 699 points, we were three-fourths of the way to 940, and we’d just started!

Then we ran out of luck. We couldn’t think of any more long anagrams or long words with long words inside them. And we didn’t know about Word Ways or anagram dictionaries or any other special word lists. Our only reference was Webster’s Third. Since we knew that we’d gotten good scores with affixes, we thought it would be a good idea to find a really long common one. That way, we could make a list of words with that affix and just switch the letters of the short roots to get lots of long words. The longest affix we could think of had eight letters, -IZATIONS. But luckily, while we were looking through the dictionary, we found just what we needed. The suffix -LESSNESSES was ten letters long, and it also had two long suffixes inside it, -LESSNESS and -LESSNESS’ S. (Singular possessives ending in -S’S were okayed by the judges over the phone. Webster’s Third allows them in its section on punctuation, Part 14.2.2. It says that sometimes words ending in S add either an apostrophe or an apostrophe and S to form the possessive, and it lists WAITRESS’S. Some examples we found in the dictionary were ASS’S-EAR, HESS’S LAW, and ROSS’S GOOSE.) With -LESSNESSES we only had to anagram four to six letters to get anagrams fourteen to sixteen letters long. But we also had to make a list of words ending in -LESSNESSES. We didn’t know about reverse dictionaries, so we had to look through Webster’s Third page by page (all 2662 of them, plus the Addenda!). This sounds harder than it was. Long words ending in -LESSNESS were pretty easy to spot even when we were zipping through. It took us almost all of the two months of the contest to make our list. We also looked for -FULNESSES and -ISHNESSES words.

When we were making the lists, we fiddled around with some of the words, and we saw that we could take the E or S (or both) off the end of -LESSNESSES and stick them into the root to make a new word ending in -NESS. This way we had more letters in the root to anagram, with long suffixes still left over (-LESSNESS and -LESSNESS’ S). For example, we soon passed our high score of 699 using THIRSTLESSNESSES, RESTLESSNESS and RESTLESSNESS’ S:

T R E S

thirstlessness 94, thirstlessness 69, thirstlessness’s 81, shirtlessnesses 81, shirtlessness’s 69,

L S I S

shirtlessness 58, stilelessness 69, stilelessness’s 58,

E H T S

restlessness 69, restlessness’s 58 Total 706,

S S N E

Average Word Length 14.1

Why not trace through the grid and see how we used the ES from the end of THIRSTLESSNESSES to make RESTLESSNESS and RESTLESSNESS’ S?

As we worked with -LESSNESSES words, we eventually realized that 940 would be impossible. Even if we could find ten sixteen-letter -LESS-
NESSES anagrams, we couldn’t fit them all into the grid, and so far we hadn’t found any -LESSNESSES, -FULNESSES or -ISHNESSES roots that even came close to having ten anagrams or near-anagrams. 706 seemed to be the best we could do! Here are a few sets of sixteen-letters we thought might work, with roots:

THIRSTLESSNESSES resist, thirst, shirst, cest, rite, stir, tire, ire
SHIRTLESSNESSES resist, shirt, rest, rite, stir, tire, ire, sight, right
PASSIONLESSNESS+E passion, noise, spine, nose, pain, nap, sap, sin
MOTIONLESSNESSES or EMOTIONLESSNESS’S emotion, motion, noise, nose, note, time, tone, sin
STATELESSNESSES or TASTELESSNESSES state, taste, rest, star, tear
WARMTHLESSNESSES master, warmth, heart, shame, water, hate, harm, rest, seam, star, tame, tear, hat, art, war
THRUSTFULNESSES+I thrust, trist, trust, truth, rest, ruth, hurt

None of these could beat 706 because not enough of the possible words could be fit into a grid.

When we finished making the lists, we had about 220 -LESSNESSES words, 140 -FULNESSES words, and 110 -ISHNESSES words. But we still couldn’t seem to beat 706. Then one day we suddenly improved our score by 60 points! We scored 765 with FATHERLESSNESSES and its sixteen-letter anagram, FEATHERLESSNESS’S:

<table>
<thead>
<tr>
<th>Word</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>fatherlessnesses</td>
<td>94</td>
</tr>
<tr>
<td>fatherlessness’s</td>
<td>81</td>
</tr>
<tr>
<td>fatherlessness</td>
<td>94</td>
</tr>
<tr>
<td>fatherlessness</td>
<td>81</td>
</tr>
<tr>
<td>heartlessnesses</td>
<td>94</td>
</tr>
<tr>
<td>heartlessness’s</td>
<td>81</td>
</tr>
<tr>
<td>heartlessness</td>
<td>94</td>
</tr>
<tr>
<td>tearlessness</td>
<td>81</td>
</tr>
<tr>
<td>tearlessness</td>
<td>94</td>
</tr>
<tr>
<td>Total</td>
<td>765</td>
</tr>
<tr>
<td>Average Word Length</td>
<td>14.6</td>
</tr>
</tbody>
</table>

The other roots we didn’t use were HATE, REST, STATE, TREE and HAT.

The contest deadline came even though we could have worked a lot longer. We had to be satisfied with only 80 per cent of 940. Just as we did in the first contest, we sent in several entries. Some of them had -LESSNESS’S possessive words, and some didn’t, just in case the judges changed their minds about allowing possessives. We won the contest with our CONVERSATIONISTS grid of 699 points, but we never found out how the judges ruled on our -LESSNESSES entries. The next best entry was 592.

After the contest, we found ENCYCLOPAEDIASTS. Right next to this word in the dictionary, there are many other very long words almost spelled the same. We used them to make a grid scoring 729 without even using possessives:

<table>
<thead>
<tr>
<th>Word</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>encyclopaediasts</td>
<td>94</td>
</tr>
<tr>
<td>encyclopaediast</td>
<td>81</td>
</tr>
<tr>
<td>encyclopaedia</td>
<td>69</td>
</tr>
<tr>
<td>encyclopaediat</td>
<td>69</td>
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<tr>
<td>encyclopedias</td>
<td>58</td>
</tr>
<tr>
<td>encyclopediat</td>
<td>58</td>
</tr>
<tr>
<td>encyclopedists</td>
<td>81</td>
</tr>
<tr>
<td>encyclopedist</td>
<td>69</td>
</tr>
<tr>
<td>cyclopaediast</td>
<td>69</td>
</tr>
<tr>
<td>Total</td>
<td>729</td>
</tr>
</tbody>
</table>
and so far

SEES roots

ams. 706

sixteen-let-

tir, tire, ire, ire.

nap, sap, nap, motion, taste, rest, water, hate, ruth, hurt

ible words

LESSNES S
d. But we

proved SNESSES and

fatherless- ness 81, earlessness- 8 Total 765,

TREE and HAT.

worked a lot!

Just as we

of them had

case the judges

found out how

est entry was

ght next to this

rds almost 29 without even

encyclopae-

s 81, encyclo-

ists 81, en-

il 729

We still aren't sure that this is the best, but there are ten more long

words in the grid that would surely make it the best if the contest were

for the twenty longest words:

ENCY encyclopedist 58, encyclopaedia 48, cyclopaedists 58,
POLC cyclopaedist 48, cyclopedists 48, cyclopedist 39,
A E I I cyclopaedias 48, cyclopaedia 39, cyclopedias 39,
S T S A cyclopedia 31 Total (20 words) 1185, Average Word
Length 13.0

For readers interested in long anagrams, here's a list of the best
ones we found:

ruthfulness/hurtfulnesses 13
tirelessnesses/ri-telessnesses 14
encyclopaedists/encyclopediasts 15
motionlessnesses/emotionlessness's 16
ruthlessnesses/hurtlessnesses 14
tastelessnesses/statelessnesses 15
devotionists/consevationists 16
fatherlessnesses/featherlessness's 16

We also found some long beheadments:

LF-lawlessnesses 14 t-i-relessnesses 14 t-ruthlessnesses 15
w-agelessnesses 14 s-toplessnesses 14 p-lucklessnesses 15
w-irelessnesses 14 t-ruthfulnesses 14 f-rightfulnesses 15

Strangely, TOPLESSNESS is in the Pocket Dictionary but not in Web-
ster's New Collegiate or Webster's Third!

EPONYMS

Eponyms -- words like GUILLOTINE, BOYCOTT and NICO-
TINE, which are derived from person's names -- constitute
fewer than one-tenth of a per cent of the English language.
However, tales of their origins are among the most interest-
ing. Take My Word For It (Dodd, Mead, 1981: $7.95 in paperback),
by Vernon Fizer, is a small book telling some of these tales of
familiar and obscure eponyms. It is not a scholarly book, but
it is interesting and well-written. It is well worth the price
for an afternoon of relaxed reading (M. Brooke).