I recently wrote this in response to an email I received, and figured this would be helpful for the group at large. It's a somewhat detailed description of how I made this <u>puzzle</u>, and hopefully large parts of it are applicable to other themed puzzles.

<sup>1</sup> P	$^{2}$ R	<sup>3</sup> F	<sup>4</sup> G	<sup>5</sup> O		6	<sup>7</sup> O	<sup>8</sup> Z	<sup>9</sup> E		10 <b>D</b>	11 N	12 <b>A</b>
13		_		$\overline{}$		14					15		
S		Х	Е	R	47	U	N		Х		R		M
<sup>16</sup> S	С	0	Т	С	17 H	Т	Α	Ρ	Е		<sup>18</sup> <b>A</b>	Χ	Ε
<sup>19</sup> T	Е	Z	S		<sup>20</sup>	R	_	S		<sup>21</sup> C	Μ	0	Z
		<sup>22</sup> E	Α	<sup>23</sup> S	Т	Е	R		<sup>24</sup> S	L	Α	Z	D
<sup>25</sup> C	<sup>26</sup> U	R	Т	1	S			<sup>27</sup> <b>T</b>	Е	Е			
<sup>28</sup> A	Н	Α		<sup>29</sup> L	0	<sup>30</sup> U	<sup>31</sup> D		<sup>32</sup> N	Α	<sup>33</sup> F	<sup>34</sup> T	<sup>35</sup> A
<sup>36</sup> R	0	Т	<sup>37</sup> T	Е	Ν	Т	0	<sup>38</sup> M	Α	Т	0	Е	S
<sup>39</sup> S	Н	Е	Е	Ν		<sup>40</sup> E	G	0	Т		<sup>41</sup> U	Ν	1
			<sup>42</sup> E	С	<sup>43</sup> O			<sup>44</sup> B	0	<sup>45</sup> A	R	D	S
<sup>46</sup> W	47 E	<sup>48</sup> S	Т	Е	Ν	<sup>49</sup> D	<sup>50</sup> G	I	R	L	S		
<sup>51</sup> A	Z	K	Н		<sup>52</sup> T	0	1	L		<sup>53</sup> L	0	<sup>54</sup> C	55 
<sup>56</sup> R	Е	Υ		<sup>57</sup> G	0	0	S	Е	<sup>58</sup> B	U	М	Р	S
59 	М	Р		<sup>60</sup> P	U	N	Т		<sup>61</sup> A	R	Е	Α	S
<sup>62</sup> O	Υ	Е		<sup>63</sup> A	R	Е	S		<sup>64</sup> T	Е	S	S	Α

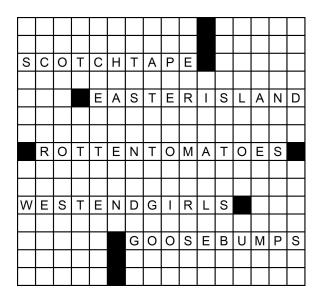
The first part of making a themed puzzle is, naturally, coming up with a theme. I cannot overstate how critical this is; after all, you wouldn't make a themed puzzle if you didn't have a theme. But there's a lot more to it than just coming up with a theme, and I certainly don't mean to make it sound incredibly easy. I wish I knew how it happened more, but the most I can say is that, as with all things crosswords, the more you do it, the easier it becomes (which is not to say it becomes easy). But just keeping an eye out for ideas helps. Anyway, in this case, I decided to use the word EGGHEAD as a hint at other answers containing words that could precede EGG.

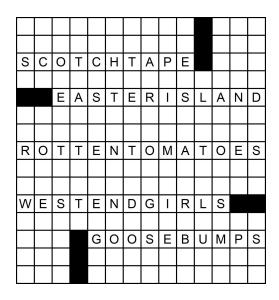
With that idea in place, I started searching for theme answers. Good places to look include <a href="Crossword Nexus">Crossword Nexus</a>, <a href="XWordInfo">XWordInfo</a>, your word lists, and also your own brain. In this case, I think I queried XWI and my word lists for words (phrases, really) of the form "\_\_\_\_ EGG", and then searched Crossword Nexus, XWI, and my word lists for other entries either beginning or ending with the words that filled in those blanks. I ended up with a long list of possibilities, and then added a few from my own brain (if memory serves, either WEST EGG or WEST END GIRLS was added at this point, though it might have been SCOTCH EGGS instead).

Next, I pared down that list, with a few things in mind. One, of course, is symmetry. Another was deciding on whether to use phrases with the EGG words at the beginning or at the end (e.g. CORNEL WEST); a mix between the two would be inelegant. In the end, I chose to use the EGG words at the beginning since that resulted in livelier, better theme answers.

One other factor was deciding whether to put EGGHEAD in the grid as a reveal or use it as the title; since it's only seven letters long, it was hard to find a theme entry of the same length that I liked to pair symmetrically with EGGHEAD. And I couldn't put it in the center since another answer I liked (ROTTEN TOMATOES) was unmatched in length and thus had to go there. Also, in general, I tried to keep the types of eggs different, as well as the phrases they were hiding in.

In the end, I ended up with two tens, two twelves, and a fourteen; since the fourteen had to go in the center, this required an even width to the grid, and fourteen was easier to work with than sixteen. In particular, going sixteen wide would've forced a lot of squares around the edges and some long answers into all four corners (or a bunch of threes, which I try to avoid--some are fine, but not too many). This is because there would have been two squares already placed on the sides of the grid (see below), which severely limits how I can break the sides up into shorter down entries; this then affects the middle as well.



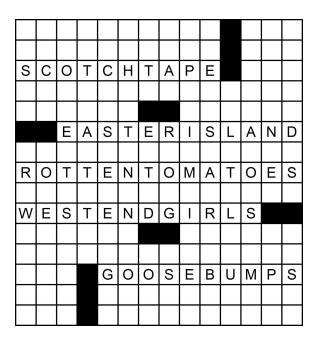


With a width of fourteen, on the other hand, I had more flexibility, even though the theme answers were forced. In the previous grid, note that I could switch the order of EASTER ISLAND and SCOTCH TAPE if I wanted to. Here (see above) I had to put the tens first/last and the twelves second/fourth if I wanted to space out my theme answers as much as possible. Note that the tens are in rows three/thirteen, but the twelves would have to be in four/twelve if they bookended the theme set, and this would've put five theme answers in a nine row span--not advisable. (I've done this before; see <a href="here">here</a>, but there's a lot of luck in getting it to work, let alone working even halfway OK.)

Note that placing the twelves forces two sets of blocks on the left/right side of the grid. In the other grid, there were also forced blocks, but at an unnatural spot (and only one per side). Here, I have two blocks per side, and they're about where I would put blocks anyway to break the sides into three entries each. I can put blocks either below the ROT in ROTTEN TOMATOES or above the WES in WEST END GIRLS; I chose the latter to avoid too many three letter words.

At this point, I then continued placing blocks and made a rough sketch of a grid. A few things I kept in mind while doing so: I could switch GOOSEBUMPS and SCOTCH TAPE, as well as EASTER ISLAND and WEST END GIRLS, without affecting the black square placement. I also, if needed, could shift EASTER ISLAND so that it touched the left side of the grid, with the blocks on the right; similarly, I could right-align SCOTCH TAPE. I didn't do that, for multiple reasons. One, it's nice to have the first and last theme entries be aligned as they are here. And two, more helpfully, having SCOTCH TAPE and EASTER ISLAND aligned to different sides of the grid means there's less overlap between the two entries (i.e. fewer down entries intersecting both), which makes it easier to fill. However, moving those entries around is something I kept in mind in case the current layout didn't work (although I'm glad this one did).

1	2	3	4	5		6	7	8	9		10	11	12
13						14					15		
<sup>16</sup> S	С	0	Т	С	17 H	Т	Α	Р	Е		18		
19					20					21			
		<sup>22</sup> E	Α	<sup>23</sup> S	Т	Е	R	1	<sup>24</sup> S	L	Α	Ν	D
25	26							27					
28				29		30	31		32		33	34	35
36 R	0	Т	<sup>37</sup> T	Е	Ν	Т	0	<sup>38</sup> M	Α	Т	0	Е	S
39						40					41		
			42		43			44		45			
46 W	<sup>47</sup> E	<sup>48</sup> S	Т	Е	N	<sup>49</sup> D	<sup>50</sup> G	-1	R	L	S		
51					52					53		54	55
56				<sup>57</sup> G	0	0	S	Е	<sup>58</sup> B	U	М	Р	S
59				60					61				
62				63					64				



One other consideration: EASTER ISLAND and WEST END GIRLS could be shifted one row closer to the center. However, I wanted to avoid this, since that'd result in three theme answers in a five row stretch, including the center row, which makes black square placement very hard without having a lot of answers forced to intersect all three theme answers. That's, generally, asking for trouble; see above, with two down entries forced to span all three, though the black squares could move up/down one. Already that causes problems, even without considering the other twelve columns. So I kept EASTER ISLAND and WEST END GIRLS where they are; even though that means two "close" sets of theme answers as opposed to one, the fact that they're away from the center and only involve two entries makes that much, much easier to manage.

One other note: this grid comes in at 71 words, which is about the equivalent of 74 for a 15x15. The usual limit for 15x15 is 78, so I certainly could've had a few more words, which would've made construction easier, at the risk of having too many short words and too little grid flow.

In any case, this rough grid sketch seemed promising; from the start, the sets of two blocks by EASTER ISLAND and WEST END GIRLS told me I'd likely have two long downs through three theme answers (here, 3-Down and 33-Down). I shuffled the tens and twelves around until finding this; FOURSOMES was forced, or nearly so (in that there may be other entries that fit, but none I'd consider using for an easier puzzle like this). On the other hand, EXONERATES had quite a few other options, which was promising enough to attempt to fill this grid.

1	2	3	4	5		6	7	8	9		10	11	12
13						14					15		
<sup>16</sup> S	С	0	Т	С	<sup>17</sup> H	Т	Α	Р	Е		18		
19					20					21			
		<sup>22</sup> E	Α	<sup>23</sup> S	Т	Е	R	Ι	<sup>24</sup> S	L	Α	N	D
25	26							27					
28				29		30	31		32		<sup>33</sup> F	34	35
<sup>36</sup> R	0	Т	<sup>37</sup> T	Е	N	Т	0	<sup>38</sup> M	Α	Т	0	Е	S
39						40					<sup>41</sup> U		
			42		43			44		45	R		
46 W	<sup>47</sup> E	<sup>48</sup> S	Т	Е	Ν	<sup>49</sup> D	<sup>50</sup> G	Ι	R	L	S		
51					52					53	0	54	55
56				<sup>57</sup> G	0	0	S	Е	<sup>58</sup> B	U	М	Р	S
59				60					61		Е		
62				63					64		S		

As a side note: in making this grid, I tried to avoid an excess of three letter answers, and I tried to keep the grid relatively free-flowing. In this case, four answers (17-Down, 23-Down, 24-Down, and 38-Down, which are HITS ON, SILENCE, SENATOR, and MOBILE in the completed grid) near the middle intersect three answers; I did check these entries, along with EXONERATE, to make sure they had workable letter patterns, and all have quite a few options.

I could have put in more black squares to break up these entries, but then it feels like parts of the puzzle are isolated from the rest. (Visually, the NE and SW corners look that way, and unsurprisingly, they were the easiest to fill.) In addition to checking that these entries had multiple options, I made sure they worked together by running an automatic test fill; I didn't check too closely if it was any good, mind you, but generally speaking, if your program can't autofill the grid, there's a good chance that the grid needs closer inspection (for example, some entries may be constrained by unusual letter patterns). However, in this case, it filled pretty quickly, so I had even more optimism when I started filling manually.

I believe the first slot Crossword Compiler offered was 3-Down. I understand that Crossfire is different, and you can control which entries to fill next, but I likely would've started here anyway, with a long entry already constrained by crossing three theme answers. (If I didn't start there, I'd've started with the other entries that cross three theme entries; they're already constrained, and I wouldn't want to constrain them any further by filling the rest of the puzzle first. In fact, when I went to fill this again just now, it offered 17-Down first instead of 3-Down, but that might be because my word list has changed quite a bit since I first made this puzzle.)

Anyway, I chose EXONERATE for that slot, partially because of the X, but also because I like the answer. The immediate concern after that was the NW corner, with EXONERATE, SCOTCH, and (to a lesser degree) EASTER already in place, as well as having to deal with the X. Luckily, that filled in pretty nicely; if it hadn't, I'd've had to go back and replace EXONERATE. From there, 17-Down becomes the next key entry: not only is it already constrained by crossing three theme entries, but it also intersects 25-Across (which has to cross EXONERATE / GETS AT) and, more importantly, 20-Across, which straddles the two theme answers. So I made sure that all of that worked together next and tried to fill those parts cleanly.

I ended up with the below, though looking back now, there are quite a few other options. Today, I might try to use HAT PIN or HATE ON instead of HITS ON, and SIDE EYE is probably a better answer than SILENCE. In any case, I left 37-Down incomplete, as there's a few options there, and filling it in now might constrain what happens in that bottom middle section. You could quibble whether EXE is good fill, especially crossing UNIX, but I liked getting Z and X in that small region along with nice answers like OUTRE, ON AIR, and ZIPS IT (which could also be ZIPS IN; however, I think ZIPS IT is a much better answer than ZIPS IN that it's worth filling that in and trying to get that fill, as opposed to the aforementioned 37-Down).

<sup>1</sup> P	$^{2}$ R	<sup>3</sup> E	⁴G	<sup>5</sup> O		<sup>6</sup> O	<sup>7</sup> O	<sup>8</sup> Z	٥E		10	11	12
<sup>13</sup> S	1	Х	Е	R		<sup>14</sup> U	Ν	1	Х		15		
<sup>16</sup> S	С	0	Т	С	17 H	Т	Α	Р	Е		18		
<sup>19</sup> T	Е	Ν	S		<sup>20</sup>	R	I	S		21			
		<sup>22</sup> E	Α	<sup>23</sup> S	Т	Е	R	I	<sup>24</sup> S	L	Α	Ν	D
<sup>25</sup> C	<sup>26</sup> U	R	Т	1	S			<sup>27</sup> T					
<sup>28</sup> A	Н	Α		<sup>29</sup> L	0	30	31		32		<sup>33</sup> F	34	35
<sup>36</sup> R	0	Т	<sup>37</sup> T	Е	Ν	Т	0	<sup>38</sup> M	Α	Т	0	Е	S
<sup>39</sup> S	Н	Е	Е	Ν		40					<sup>41</sup> U		
			42	С	43			44		45	R		
46 W	<sup>47</sup> E	<sup>48</sup> S	Т	Е	Ν	<sup>49</sup> D	<sup>50</sup> G	-	R	L	S		
51					52					53	0	54	55
56				<sup>57</sup> G	0	0	S	E	<sup>58</sup> B	U	М	Р	S
59				60					61		Е		
62				63					64		S		

At this point, with FOURSOMES already in place, I should have filled in the lower right corner next. Instead, I worked left from there and tried to fill in 24-Down and 38-Down and connect that to what's already there. Generally speaking, it's better to fill in the middle first and end up in the corners rather than start in the corners and work to the middle, since the middle (usually) connects to more of the puzzle and has more outside constraints. Here, though, since the middle is a lot of short answers, I would have been better served to leave that for last.

Anyway, some trial and error resulted in the below; at the time, I found MOBILE / SENATOR my favorite option, especially with respect to which entries showed up at 44-A (I think I had a lot of two word phrases that aren't really used that often come up as options, and I didn't want to use those, which limited my choices). Again, I probably could have come up with other things, especially with a different word list. Otherwise, not too much else to add, other than that I'm not as happy with DOONE or GISTS as I am with OUTRE, ON AIR, ZIPS IT. (Not that there's anything bad about those entries, though YMMV, but they're not as flashy IMO.)

<sup>1</sup> P	$^{2}$ R	<sup>3</sup> E	<sup>4</sup> G	<sup>5</sup> O		<sup>6</sup> O	<sup>7</sup> O	<sup>8</sup> Z	<sup>9</sup> E		10	11	12
<sup>13</sup> S	1	Х	Е	R		14 U	Ζ	Ι	Х		15		
<sup>16</sup> S	С	0	Т	С	<sup>17</sup> H	Т	Α	Р	Е		18		
<sup>19</sup> T	Е	Ν	S		<sup>20</sup>	R	Ι	S		21			
		<sup>22</sup> E	Α	<sup>23</sup> S	Т	Е	R	Ι	<sup>24</sup> S	L	Α	Z	О
<sup>25</sup> C	<sup>26</sup> U	R	Η	-	S			<sup>27</sup> T	Ш				
<sup>28</sup> A	Ι	Α		<sup>29</sup> L	0	30	31		32 <b>N</b>	Α	33 F	<sup>34</sup> T	<sup>35</sup> A
<sup>36</sup> R	0	Т	<sup>37</sup> T	Е	Ν	Т	0	<sup>38</sup> M	Α	Т	0	Е	S
<sup>39</sup> S	Н	Е	Е	Z		40		0	Т		<sup>41</sup> U	Z	I
			42 E	С	<sup>43</sup> O			<sup>44</sup> B	0	<sup>45</sup> <b>A</b>	R	D	S
<sup>46</sup> W	<sup>47</sup> E	<sup>48</sup> S	Т	П	Ν	<sup>49</sup> D	<sup>50</sup> G	I	R	L	S		
51			Η		<sup>52</sup> T	0		L		53	0	54	55
56				<sup>57</sup> G	0	0	S	Е	<sup>58</sup> B	J	М	Р	S
59				<sup>60</sup> P	U	Ν	Т		61		Е		
62				<sup>63</sup> A	R	Ε	S		64		S		

The hardest part left was the lower right, with FOURSOMES / GOOSEBUMPS locked in place, and 45-Down pretty much forced to be ALBUMS, ALLUDE, or ALLURE if I wanted clean fill. Note, in general, that working around intersecting entries is hard; it's even harder in a corner where there's more restrictions on where black squares can go (this is another reason I should have filled this sooner). Some trial and error came up with the below; LOCI isn't the best answer, but it's valid. I can see some solvers getting stuck on the crossing of ISSA and TESSA, though that crossing continues to improve with age, and A is the most obvious guess there; ultimately, I decided it was fair, though other constructors (or editors, or solvers) might disagree.

<sup>1</sup> P	<sup>2</sup> R	<sup>3</sup> E	<sup>4</sup> G	<sup>5</sup> O		<sup>6</sup> O	<sup>7</sup> O	<sup>8</sup> Z	<sup>9</sup> E		10	11	12
<sup>13</sup> S	I	Χ	Е	R		<sup>14</sup> U	N	-	Χ		15		
16 S	O	0	Т	С	<sup>17</sup> H	Т	Α	Р	Е		18		
<sup>19</sup> T	E	Z	S		<sup>20</sup>	R	1	S		21			
		<sup>22</sup> E	Α	<sup>23</sup> S	Т	Ε	R	l	<sup>24</sup> S	L	Α	Ν	D
	<sup>26</sup> U	R	Т	_	S			<sup>27</sup> T	Е				
<sup>28</sup> A	Ι	Α		<sup>29</sup> L	0	30	31		32 N	Α	33 F	<sup>34</sup> T	<sup>35</sup> A
<sup>36</sup> R	0	Т	<sup>37</sup> T	Е	Z	Ţ	0	<sup>38</sup> M	Α	Τ	0	Ш	S
<sup>39</sup> S	Ι	Е	Е	Z		40		0	Т		<sup>41</sup> U	Z	1
			42 E	С	<sup>43</sup> O			<sup>44</sup> B	0	<sup>45</sup> A	R	D	S
<sup>46</sup> W	<sup>47</sup> E	<sup>48</sup> S	Т	F	Z	<sup>49</sup> D	<sub>50</sub> G	I	R	L	S		
51			Н		<sup>52</sup> T	0	I	L		<sup>53</sup> L	0	<sup>54</sup> C	55 
56				<sup>57</sup> G	0	0	S	Е	<sup>58</sup> B	U	М	Р	S
59				60 P	U	Ν	Т		<sup>61</sup> A	R	Е	Α	S
62				<sup>63</sup> A	R	Ε	S		<sup>64</sup> T	Е	S	S	Α

With that done, the easiest part was, as previously noted, the NE / SW corners. In the SW, by this point, ECO / TEETH had been filled in from filling in the bottom middle; I liked the combo of ANKH / WARIO to go with that and fill the corner. In the NE, I had more options (CLEAT could have been changed to a few other answers), but I decided to put a Q there. Wasn't satisfied with the results, so I switched to J and then X and got the corner as it is now.

<sup>1</sup> P	$^{2}$ R	<sup>3</sup> E	<sup>4</sup> G	<sup>5</sup> O		<sup>6</sup> O	<sup>7</sup> O	<sup>8</sup> Z	<sup>9</sup> E		<sup>10</sup> D	11 <b>N</b>	<sup>12</sup> A
<sup>13</sup> S	Ι	Х	Е	R		<sup>14</sup> U	N	1	Χ		15 R	-	М
<sup>16</sup> S	С	0	Т	С	<sup>17</sup> H	Т	Α	Р	Е		<sup>18</sup> A	Х	Е
<sup>19</sup> T	Е	Z	S		<sup>20</sup>	R	_	S		<sup>21</sup> C	М	0	Ζ
		<sup>22</sup> E	Α	<sup>23</sup> S	Т	Е	R	Ī	<sup>24</sup> S	L	Α	Ν	D
<sup>25</sup> C	<sup>26</sup> U	R	Т	Ι	S			<sup>27</sup> T	Е	Е			
<sup>28</sup> A	Ι	Α		<sup>29</sup> L	0	<sup>30</sup> U	<sup>31</sup> D		32 N	Α	33 F	<sup>34</sup> T	<sup>35</sup> A
<sup>36</sup> R	0	Τ	<sup>37</sup> T	Е	Z	Η	0	<sup>38</sup> M	Α	Т	0	Ш	S
<sup>39</sup> S	Η	Е	Е	Ν		<sup>40</sup> E	G	0	Т		<sup>41</sup> U	Ν	1
			42 E	O	<sup>43</sup> O			<sup>44</sup> B	0	<sup>45</sup> <b>A</b>	R	D	S
<sup>46</sup> W	<sup>47</sup> E	<sup>48</sup> S	Т	Е	N	<sup>49</sup> D	<sup>50</sup> G	I	R	L	S		
<sup>51</sup> A	Ζ	K	Н		<sup>52</sup> T	0	_	Ш		<sup>53</sup> L	0	<sup>54</sup> C	55 
<sup>56</sup> R	Е	Υ		<sup>57</sup> G	0	0	S	Е	<sup>58</sup> B	U	М	Р	S
59 	М	Р		<sup>60</sup> P	U	N	Т		<sup>61</sup> A	R	Е	Α	S
<sup>62</sup> O	Υ	Е		<sup>63</sup> A	R	Е	S		<sup>64</sup> T	Ε	S	S	Α

After making one last check for dupes in the grid, I moved on to cluing; that in itself should be a post of its own, but some notes here. Some of these skew current; you won't find "Joel Embiid, for one" in any clue database. (Well, you might now, but you wouldn't have when I wrote this.) Some echo each other; ZIPS IT and SILENCE, for example, and also the neighboring WARIO / ENEMY. These weren't intentional, in that I didn't put these entries in the grid thinking about cluing them similarly, but it's something I noticed while cluing, and ran with it. In general, it's best not to think about cluing until after filling the puzzle, though if you can manage it, go for it; in particular, if I had a clue/entry combo I really wanted to use, I probably could've managed to get it to work in the NE/SW corners (assuming the answer was of the right length) because they had very little constraining them.

Anyway, other clue pairs are more subtle: TENS and DRAMA don't share any clue words, but the references to Lin-Manuel Miranda and Hamiltons provide a link. And some clues were intentionally chosen not to link: given the Alabama reference in the clue for SENATOR, I could have easily linked that with MOBILE, but went with a different clue to provide variety among the clues. Otherwise, given the straightforwardness of the theme, I think I tried to keep the clues easy yet interesting; most people probably won't know what moai are, but one makes a nice connection upon figuring out the answer. (Note also that this clue provides the additional hint of "South Pacific"; a clue like "Moai site" would be much more difficult.) Also: I'm big on alliteration / assonance, which shows in places.

There's probably a lot more I could say here, but I think this will help in that it mostly captures my thoughts and processes, most of which apply to most puzzles. I'm sure other constructors will have other things to say, and I probably make it sound easier than it really is in places; in particular, there's a lot of trial and error that I sorta glossed over. But in my opinion, that sort of thing only helps you improve, in that you figure out for yourself what works and what doesn't. And, I hope this helps you improve as well, or at least gives some ideas and assistance.