An introduction to morphology - with Michelle Sullivan

Triple R Teaching Podcast #191

Hello, this is Anna Geiger, author of *Reach All Readers* and creator of Reach All Readers. Today I'm kicking off a morphology series.

Morphology is the study of the meaningful units, the meaningful parts of words. For example, in the word "cats," we have two morphemes, cat and the plural ending S. Whereas in longer words, we might have multiple morphemes.

This is a very important topic, especially as it relates to vocabulary and spelling, and so I'm very excited to kick it off with Michelle Sullivan from The Colorful Classroom. She has experience as a reading interventionist and an instructional literacy coach, and now runs her website, The Colorful Classroom.

This episode is meant to be an introduction to morphology and also a place to define many of the words you're going to be hearing over the next couple of weeks. Here we go!

Anna Geiger:

Welcome Michelle!

Michelle Sullivan:

Hi, Anna!

Anna Geiger:

I'm so glad you're here, I've been following you on Instagram for a long time. We've corresponded that way, but this is the first time we've been able to meet face-to-face in this recording. You have so many wonderful insights about teaching reading. I love watching the things that you share.

We're going to get into that, but before we do, could you introduce us to yourself and talk about your history as a teacher?

Michelle Sullivan:

Sure. My name is Michelle Sullivan and I am the face behind The Colorful Classroom where I help elementary teachers build their knowledge around the science of reading, build their teacher toolkits, knowledge included, so that they can be colorful and teach colorfully, both literally and figuratively speaking. Ultimately, I feel like when you have this drive to be colorful and teach colorfully, you're making the biggest impact on your students' literacy development.

This is my 15th year in education, and I've been fortunate enough to spend the past decade-plus of my career in literacy-centered roles, first as a reading interventionist and then as a literacy coach. I'm Orton-Gillingham trained. I'm currently on my LETRS training journey, and my passion for literacy is really rooted in helping teachers feel confident and equipped to meet their students' needs because teaching is hard.

My platform is all about the words. I am really interested in areas of phonics and morphology, etymology, vocabulary, and so I like to consider myself a true word nerd.

In other exciting news I'm about to launch my own literacy podcast as well. It's called Literacy in Color, so stay tuned for that.

In the meantime, I am working from home as a mama of two little girls. It's actually been fun because my older one is starting to read, so teaching her how to read has been a really awesome journey. I've done it for many children over the years, but seeing it with your own blood is something really special.

Anna Geiger:

It is. I always look back, I taught all six of our kids to read, and that was one of my favorite things. I still go out sometimes and I'll see somewhere in big print, like a CVC word, and I'm like, "Ugh! I have nobody to ask to read that!" That's what I used to do. I would always be on the lookout for signs they could sound out, and it was so much fun.

I've noticed in your posts, you've shifted more toward talking about morphology lately.

Michelle Sullivan:

The funny thing is I hadn't even heard the term morphology until a few years ago, and yet I had always taught inflectional endings. I had always taught suffixes. There's a disconnect already when we think about language.

I'd say my journey to morphology began even before I was an educator. Flashing back to my undergraduate days, I was a true history buff. I studied humanities, classics, and religious studies, and I had a handful of professors who would casually drop these fun little nuggets. Maybe they'd say, "This word is from the Latin, blah, blah, blah, which means blah, blah, blah," and I was always so fascinated.

I remember one class in particular, a professor mentioned the Latin word fidelis, which means faithful or loyal, devoted, and of course she mentioned the marine slogan, semper fi, which means always faithful. But then she was like, "Did you ever wonder why so many dogs on television shows or in the classic books are named Fido?"

Anna Geiger:

I never thought about that!

Michelle Sullivan:

Yeah, it's that classic default name for a dog, and it's because dogs have this unwavering loyalty to their owners. I was mind blown about Fido, and we weren't even learning about dogs, but this fueled my fascination with words.

I went on to study Latin in college. I already am bilingual. I grew up speaking Polish. I'm 100% Polish.

Anna Geiger:

Oh, interesting.

Michelle Sullivan:

Yeah, I took Spanish in middle school and high school, and I took Portuguese in college as well. I've always had this interest in languages, although don't be too impressed. I'm not fluent in all of these things, but thankfully I do have some vocabulary.

Flash forward to my interventionist days. I was incorporating inflectional suffixes and common prefixes haphazardly into my guided reading groups or my LLI groups.

I definitely was more explicit about teaching morphology in my phonics intervention groups, but there were still gaps in my understanding. I taught students how to circle the prefixes and suffixes in more

complex words, but I didn't always teach them what those prefixes and suffixes were. I was just expecting students to know them.

Anna Geiger:

I know how that goes.

Michelle Sullivan:

Really it wasn't until the pandemic where I became knee-deep in the science of reading, I took a deep dive into morphology, and with this deep dive I've really transformed my own morphological awareness.

That's what we want our students to have is this heightened awareness of these structural spelling units, and ultimately these start jumping off the page for you.

In phonics, we're learning all these high-utility graphemes. By second grade, we should be pretty coherent with those, but acquiring morphemes, that's a lifelong journey into adulthood. I feel like I'm learning something new all the time, so my journey to morphology truly is a journey and not just this destination.

Anna Geiger:

Like you, I did not know what the word morphology even was five years ago for sure. It just seemed like something strange I didn't have to think about. To me, what's been the most striking in learning about morphology, it has such an impact in English spelling, it explains so many things.

That would be in a nutshell, what I would say. If I had boil it down to one thing, I would say teachers should understand morphology because it explains English spelling in many different areas, and our students need to understand that we don't spell just because of the sounds, we spell to communicate meaning.

Like you mentioned, there's the inflectional suffixes, like the E-D is the easiest example. We can spell it, we can pronounce it, /ĕ/ /d/, /d/, or /t/, but either way it's spelled ED because that's communicating the past tense, and that's just the beginning.

Then we can get into things like roots and affixes and how the pronunciation of the morpheme can shift, but the base element, but the meaning, stays the same, the spelling stays the same.

Is there anything else that you would like to share before we start getting into some vocabulary about why morphology is important for students and teachers?

Michelle Sullivan:

Yeah, so I think you hit the nail on the head when you were talking about the spelling system, because if I had a dime for every time somebody said, "English is crazy, it doesn't follow the rules," we'd be billionaires over here. Teachers use that kind of language all the time, "That's just a tricky word. You have to memorize that part."

English isn't as crazy as people think. It's just a complex system.

The rules that govern our sounds, that's something called phonology. When you're purely thinking about these sound-spelling correspondences, that's fine if you only look at phonology, if you have a shallow spelling system like something like Spanish where the sounds are really consistent to the symbols, but English has a deeper orthography because we're borrowing from all these different layers of language. We have our Old English, we have French and Latin and Greek, and all of these various layers are contributing to make spelling a lot more complex.

English is also something that what we call a morphophonemic language, it's governed by morphology and phonology, so the meaning units and the sound units. What's interesting is that English spelling favors the consistency with the meaning over the sounds, and I think that suffix E-D is the perfect example of that.

That being said, morphology is so important for teachers and students because it's acting as this glue bridging all these different components of literacy together.

When you're teaching morphology, you're teaching advanced decoding. When you're teaching morphology, you're teaching spelling, you're teaching vocabulary, and you're teaching comprehension. Understanding these word parts is helping students decode and comprehend, but it's giving them tools for reading and writing. It's giving them tools to solve these word puzzles of unfamiliar words when it comes to meaning.

It's just building this deeper understanding of our language, which is really interesting, and English isn't as weird as people make it out to be.

Anna Geiger:

Right, once we understand that it's supposed to be this way, that's the way English works. We're not just influenced by phonology, the spellings, they're also influenced by morphology. Like you said, morphology has the greater influence. We preserve the spelling.

Can you think of an example of a word or maybe a set of words in the same word family, where we have that base element, and the pronunciation changes, but the spelling is retained?

Michelle Sullivan:

I think a great example of this is sign and signature. All of a sudden in sign, we have a silent G, we have these silent and sounded consonants, and yet once you pair it along with another related word, you have that consonant popping out.

Those kinds of things happen all of the time, and I think that's one of the reasons why I'm a big advocate for spelling out your morphemes rather than just pronouncing them.

Anna Geiger:

Yes, can you explain what that means?

Michelle Sullivan:

Yeah, I am on my soap box for this a lot because oftentimes we'll see people say the morpheme rupt or the morpheme ment, and yet, a morpheme doesn't have a pronunciation until it's fixed to a word.

Like you said, no one says we have the suffix /ĕ/ /d/, they say we have the suffix E-D. That's natural to us because the phonology tells us that we have three different sounds for this spelling, whether it's /d/ or /t/ or /ĕ/ /d/, and yet for some reason, it feels so unnatural for us to spell other morphemes that are less common.

I mean, I could take a look at some of our Latin roots. In many of our Latin roots we don't have vowel teams, so a lot of them end up being closed syllables, and they just feel so easy for us to pronounce like rupt or script or cred.

But then watch how the pronunciation shifts when you put it along with a word relative. We have erupt with a /t/, and rupture, which suddenly I hear /ch/ instead. We have script and prescription. Now that T-I is making the /sh/ digraph sound. We have credit and we have credence. The vowel is changing from

short to long. Another example I love is dictate versus indict, right? You have that D-I-C-T morpheme, and they're glaringly different.

Ultimately that morpheme is retaining its spelling, even when the pronunciation shifts. Honestly, when we have students spell out the morphemes, it's reinforcing the proper spelling in their brains, which is boosting their orthographic memory, which is cool to think about.

Anna Geiger:

So when would you have them spell out the morpheme?

Michelle Sullivan:

I think right from the start when I'm introducing the morpheme. There are a number of different ways you can introduce a morpheme. Sometimes you can have a set of word relatives on display. Sometimes you can speak out a set of word relatives. When I'm speaking them out, I'd rather them have similar pronunciations, but as soon as they're learning the morpheme I would have them spell it out, and then we're going to create new words with it, depending on how your lesson is going to go.

Anna Geiger:

I would guess that there are some programs that teach morphemes and they have them on flashcards and the kids read them, I assume?

Michelle Sullivan:

Yeah.

Anna Geiger:

Here's the tricky part for me, that's hard for that. We know that T-I-O-N is not a suffix, right?

Michelle Sullivan:

Yeah.

Anna Geiger:

The T is always part of a root, but at the same time, when you sound out a word, it's pronounced /sh/ /ŭ/ /n/. So how do we balance that? How do we emphasize the spelling, but also teach them how to read these chunks in these longer words? Do you know what I'm saying?

Michelle Sullivan:

Yeah, that's a great question. There are a number of morphemes or syllables, actually in Wiley Blevins' book for word study geared towards upper elementary he gives a lot of great charts where he lists out syllables and morphemes that have a consistent pronunciation pattern.

There are some that can hold true to that, but we do want to still give them opportunities to spell it out because that's what's going to build that orthographic memory, especially when you have those pronunciation shifts.

When you have those types of flashcards, you're taking in the visual input, you want to pair it with the pronunciation, but you do want to be flexible. I'd say for prefixes, most prefixes are consistent with our pronunciation a majority of the time, we just have to be more mindful of our roots and our suffixes.

Anna Geiger:

Before we get more into specifics about teaching them, let's back up and do a big vocabulary lesson for people. Coming after this is Pete Bower's interview, and he gets into all the words, the big words, and I wouldn't have understood any of it five years ago, so I just want us to break it down.

We're going to start real basic with phoneme grapheme. Can you start with those two?

Michelle Sullivan:

Yeah. We could use morphology to explain all of these words. In phoneme, you have that Greek element, P-H-O-N, meaning voice or sound. That little chunk E-M-E means a unit or a little bit. So it quite literally means a little bit of sound. It's the smallest unit of sound in our language.

Yet when we have G-R-A-P-H, that has to do with writing, something written down, so a grapheme would be the smallest unit of letters representing that sound. It's a written symbol representing a speech sound.

When you have phoneme and grapheme correspondences, it's this reciprocal relationship of matching the sounds to the symbols and the symbols to the sounds.

For example, if I have the phoneme sound /ch/, I can match it to the corresponding grapheme C-H, and vice versa. If I have the grapheme E-A, it can be the sound /ē/, like in eat. It can be the sound /ĕ/, like in bread, or it can be the sound /ā/, like in steak.

Anna Geiger:

One thing I've learned recently, I think from Lyn Stone and from Pete Bowers, something I hadn't really thought about before, was that most of the time the purpose of a grapheme is to represent a phoneme, but some graphemes do not represent a phoneme in a word. They're used for connecting it to meaning or because of an etymological reason.

For example, in the word two, we would say that the W is not helping spell /t/, and it's not helping spell /oo/. It is a grapheme, but it's being used to connect it to words like twin and twice.

I have another question for you about this, as long as you're talking about phonemes and graphemes. I know for a long time what I would see a lot on your Instagram was mapping of tricky words. You've moved more now toward talking about morphology, but I think phoneme grapheme mapping and this idea where you write the spelling of a sound in a box or in a space is very valuable.

But I've also questioned it sometimes when I'm trying to help someone map something and I think, well, that doesn't really... Like in the word Wednesday, is the D-N, is that really spelling /n/?

What are your thoughts on that? Would you say, "Well, we just don't map that word, " or would you say, "Well, we could map it, but we'll put this letter in parentheses because it's really not representing a sound." Have you thought that through?

Michelle Sullivan:

Yeah, I am a huge proponent of phoneme grapheme mapping. I love the heart word method. I love all the things, but for me, it's just one tool in your toolbox. I think when teachers can feel equipped in tackling a word in more than one way, we're better off.

For some students, mapping the phonemes and looking at the tricky part with the heart part is going to work for them. For another student, checking out the morphological aspects of a word is going to work for them. Whatever you can use to help students come to the end goal of reading and writing correctly. Whatever you can use to get students reading and writing proficiently, I think is a great tool to use.

But it does bring up the aspect of irregular words, and what does it mean to be truly irregular? I'm huge on using language precisely, and many teachers throw around the term irregular just willy-nilly. We are slapping hearts on everything and saying there are heart parts, but what is irregular means that it's not regular based on the phonology.

If something doesn't follow the rules, it's irregular. If it's just something that students haven't learned yet along their phonics scope and sequence, maybe it's just tricky, instead of saying it's irregular. Do we need to look at morphology to understand this word?

I think back to in our LETRS training, we learned that only 4% of words in the English language are truly irregular. A majority of words can be explained away. Either they're completely regular based on sound-spelling correspondences, or there's a good chunk of words that maybe the vowel is just a tricky part because we have that set for variability or we have to shift our pronunciation for that. Many words can be explained with word origin and etymology.

I think that when we're just putting hearts over all of these parts, we're sending that message to students that English is crazy.

I think the perfect example of this is when we see the word does with that heart over the O-E. Really this is a perfect way to introduce word relatives because essentially this word is the base element do with the suffix, E-S. It's just that the pronunciation has gone awry and is a little bit obscure to us, but it's perfectly regular when you look at the morphemes.

It goes back to that sense that English is a morphophonemic language. We can't just look at the phonology, we have to take into consideration morphology as well.

But I think a lot of teachers are afraid of this because they're not familiar with the information themselves. Teachers are not linguists. What if I don't know the etymology of this word? Am I going to be sitting on the internet all day looking up words to figure out where they come from?

I think these kinds of things take time, and when teachers start building their knowledge and feeling more comfortable, it's going to be an easier thing to tackle with their students.

I wouldn't say that mapping words in sound boxes is a bad thing to do when you have words that can be explained away with morphology, but sometimes there is a better way to tackle it that'll make more sense.

Anna Geiger:

Just to take it to real life, so the teacher's teaching the word two as in the number two, and they've been mapping all their high frequency words because that's helpful, but they're not sure what to do with it. They've learned that well, that W, there's no such thing as T-W spelling /t/, and there's no such thing as a grapheme of W-O, so what do they do?

Michelle Sullivan:

Yeah, we look at words like twin and twice and twilight and twine and all of the words that are related to that so that they can see the relationship that, "Hey, in these words, with the meaning aspect, they all have something to do with two."

Anna Geiger:

So would they just not map it at all, for the phoneme grapheme mapping? What would be your advice? What would they say to the students?

Michelle Sullivan:

I think my advice is to go the morphology route. I don't think there's harm in mapping it and putting a heart over it. I don't think you're going to ruin anything.

Anna Geiger:

Sure.

Michelle Sullivan:

But I think the story makes a lot more sense. Kids connect to stories, and if they can see that connection, ultimately you're starting to build these word networks in their brains too, where they become more attuned. Next time they're going to come across a T-W word, they're going to be like, "Hmm, I wonder if this also has something to do with that two meaning."

Anna Geiger:

I could see myself if I really wanted to do the mapping for all of our words, maybe saying, "This W is a special letter," and give that little morphology aside. "I'm just going to put it in these little parentheses inside our sound boxes because we want to show that this letter is here, but it's not really saying /t/. It's here for another meaning." Maybe that would be a way the teachers could approach it if they wanted to incorporate both.

We defined phoneme and grapheme, we talked about phoneme grapheme correspondences, sometimes called grapheme phoneme correspondences, sometimes called PGC or GPC, and we know morphemes are those meaningful parts of words. A morpheme can be a prefix or suffix, which are both affixes.

Then we also know that we can have that base element. There are different, I've adopted the term base element from *Beneath the Surface of Words*, instead of saying base and root, because that's gotten confusing to me.

In my book I wasn't there yet so when I wrote it, I think I used base and root. In the way that I define it in the book, which is how some people do define it, is that a base is a word that can be a word all by itself, but a root is a word that's not a word by itself, like R-U-P-T, like you said. Although that's not a word by itself, is it ever? R-U-P-T?

Michelle Sullivan:

No.

Anna Geiger:

I don't think it is, and D-I-C-T, those examples, but there are other ways that people have talked about it.

I've seen the idea of morphemes being put into two categories, base elements and affixes. Then the base elements can be free bases or they can be bound bases.

Can you talk a little bit more about the subcategories of that base element? What do you call it? What are some distinctions teachers should be aware of?

Michelle Sullivan:

Yeah, so I too was using base word and root until *Beneath the Surface of Words* as well, and I do like base element, but basically a base word is would be a free morpheme. It's something that can stand

alone as a word. Roots typically are those bound morphemes that are rooted in another language, but they all fall under the umbrella of base element because a base element is what would hold that core meaning of the word.

Oftentimes, we are combining our base elements with affixes. Prefixes are coming before the base element. Suffixes are coming after the base element. Those words in and of themselves, they have affixes, pre-fix, suf-fix.

I also am mindful of my language there because sometimes people will say, suffixes come at the end of a word and not necessarily, suffixes come after a base element.

Anna Geiger:

Because there can be a whole set of them.

Michelle Sullivan:

Yeah, you can have several suffixes after a base element, so it's playing around with those language structures.

We also have things like connectives. Those are a little more complicated, but they are sometimes the glue between the base element and a suffix.

Anna Geiger:

Can you give an example?

Michelle Sullivan:

One example is the word curious. That I is acting as a glue between your base element and your suffix.

Oftentimes some of our connectives are an I or an O, and they're just these structural units that are binding your two morphemes together.

Anna Geiger:

There's also the idea of twin bases. Can you talk to us about that a little bit?

Michelle Sullivan:

Yeah, twin bases are when you have two base elements, honestly, sometimes it's even three. We could call them triplets, where they are slightly different in spelling, but they hold the same meaning.

A good example of this is C-E-P-T. We would say cept. Or C-E-I-V-E. We have words like deception and deceit or deceived, reception, receive. They're part of the same word family, but the spelling is slightly different.

Another good example of this is V-O-L-T, V-O-L-V, and V-O-L-U-T. This means to roll or to turn around, and we have words like revolt, revolution, and revolve. That's an example of three bases that hold that core meaning together.

When we're looking at these different forms together in building a single word family, we are building the network out even further for our students.

I believe I read that twin bases are typically Latin in origin.

Anna Geiger:

Another thing we could talk about would be assimilated prefixes, sometimes called chameleon prefixes. Can you talk about those a little bit?

Michelle Sullivan:

Yeah, that is when we have a spelling of a prefix that changes slightly based on the initial spelling of the base element that comes right after it.

A good example of this is the prefix I-N. We have that prefix shift depending on the spelling of that base word, and this is actually largely due to phonology and the articulation and the way our mouth moves.

For example, in the word illegal, we don't say, in-legal because that just feels awkward. We shift it to be il-legal. Irregular is another one. We don't say in-regular, we're saying irregular. There are groups of these assimilated prefixes where they change slightly. The S-U-F in suffix is a good example of an assimilated prefix as well, because it's really S-U-B, which means after or below.

Anna Geiger:

One fun thing about morphology is you never stop learning.

Michelle Sullivan:

Never.

Anna Geiger:

There's just so much to learn. One of my biggest aha's when I was learning about morphology was undoing something I've been taught previously as a kid I think. It's the idea that it's only a prefix if when you take it off, you have basically a free base.

Now, let's see, the example I was going to use maybe doesn't make as much sense, but let's just take the word disease. I thought that's not the prefix D-I-S, because even though E-A-S-E is a word by itself, it wouldn't quite make sense in this situation, but it is a prefix! The E-A-S-E is the root base element.

There are so many. The word refer, that might be a better example. F-E-R isn't a word in that by itself, but the R-E is still acting as a prefix because we have that bound base that it's attached to.

Was that something that you always knew, or was that something that hit you at one time as well?

Michelle Sullivan:

Yeah, I can't think of when it hit me, but definitely I had this understanding as well because I feel like that's how we're taught in elementary school. We focus on our Anglo-Saxon words, our general words, and we are just adding prefixes or suffixes to them.

I was never taught Latin or Greek roots growing up, and yet we look and this is a standard in upper elementary grades. When you start seeing things that way, they just start popping off the page.

We talk about decoding big words, syllable division, morphemic division, which is more important? Really a majority of our words in the upper elementary grades are multi-morphemic. We want students to get to that point eventually because that's going to give them the best bang for their buck in terms of decoding and comprehending those words.

Anna Geiger:

Well, that moved us into word sums because that is a big one, a very useful thing to teach kids.

I talk sometimes about my younger daughter, she's 10, and I would say my oldest two kids, maybe my oldest four kids are like me where once I see a spelling, I don't usually forget it. Although they say that teaching is the one career where your spelling gets worse because you get used to seeing all these misspellings! So sometimes I'm not so sure, but overall spelling has been very easy for me.

She does just fine, but she does misspell a fair number of words like many people do. What I've found for her has been very helpful is just to take a word off her homework that I noticed was misspelled, and I'll just say, "Hey, let's look at this word," and I'll write a word sum.

I wish I could think of one off the top of my head, but I'm not. It's often words with that /l/ ending, like A-L, but she'll spell it a different way. I'll talk about how this is actually...

Let's say she spelled signal, she wouldn't do this, but with U-L at the end. I could say, "Well, this is actually S-I-G-N plus A-L. We put it together, and this is how we spell it." That's an example of a word sum.

Is there anything you'd like to share about word sums or how teachers can use those with students?

Michelle Sullivan:

Yeah, so I think there are great visual tools, and we think about using them in math, right?

Anna Geiger:

Mm-hmm.

Michelle Sullivan:

We're just adding two things together.

I think Pete Bowers is particular about saying that they're not really equations, so he's not really using equal signs, he's using arrows to point to the end product, but you're testing out the spelling structure and you're seeing, do these components make sense together? We're putting different morphemes, different structural units, together to make a word.

If something isn't a morpheme, you have to double check your understanding of that. What is the spelling structure? Is this correct? Are these the morphemes that are being used?

I think a really great example that popped out to me once was the word really. We have real plus suffix L-Y. How many times have you seen students spell that word with one L? But really, you have your base word real, and you're affixing that L-Y at the end. When you test it out, it does work. It has the double L.

Anna Geiger:

Yeah, that's funny because that's the very first thing we talk about in my interview that's coming the week after yours is that word. That was the word that really tripped Pete Bowers up.

Michelle Sullivan:

Oh, how funny.

Anna Geiger:

When I think about one thing I've learned from some of the things that he shared, and there are different ways to do this. It's not that there's one way to do this, but one way to work with word sums is like you were saying, you talk it out.

For example, let's just take a really simple word like signal from before. You would say, "Base element S-I-G-N plus suffix A-L." Then for that arrow, instead of saying equal, you would say, "Is rewritten as S-I-G-N-A-L."

That's really helpful when you think about having to add an extra letter because of the short vowel and the consonant ending in some part, or dropping an E because you've got a vowel suffix.

That's something that I found very helpful in Pete Bower's book, *Teaching How the Written Word Works*. You can't buy it on Amazon, but you can buy it other places, and I can link to that in the show notes. That is just a very easy basic introduction to word sums.

Is there any other place where you've been really able to improve your knowledge of understanding how all words come together?

Michelle Sullivan:

Yeah, I love Pete Bower's book. I love *Beneath the Surface of Words*. *Backpocket Words* is another good one where she explores some words I would've never even thought were related.

There are lots of little tidbits here and there that I've picked up, but I really wish there was something a little more teacher-friendly, because a lot of it can feel overwhelming if morphology isn't your thing.

But yeah, there's a lot of great information out there and blogs. That's why I love Instagram for sharing little tidbits as well, because it can be just a fun fact that brings you down the rabbit hole.

Anna Geiger:

One thing you learn too is that in doing this, you're going to make mistakes. I have, I call them word matrices just because I took Latin, so that's what I think of them as. I think you can also say matrixes. I think all those trills are falling by the wayside.

I've had people say, "Well, you shouldn't do this, you shouldn't do that," and that's fine. Sometimes they're definitely right. I made an error, I called something a suffix, but it wasn't. But sometimes I think it's a matter of opinion, like how many bases you put on a matrix.

Just so people who are listening know what I'm talking about with a word matrix, think about a box with three columns. It could be more, but let's just say three. At the very beginning box, you put all the potential prefixes that could be added to this base element, which goes in the middle. A lot of times it will have the meaning of the base element underneath it. Then finally you'd have a list of all the possible suffixes.

These can get very, very messy. You could have a gazillion columns because there are so many different ways you could put the suffixes onto different words. Those are very, very helpful for helping kids understand how words are related and how a prefix can change the meaning and how a suffix can change the part of speech sometimes. That would be where I'd recommend for sure Pete Bowers' book.

In *Beneath the Surface of Words*, I think she has a lot of word matrices in her book too, but what would you say for a classroom teacher who wants to start teaching morphology. We've hinted that this is not just for middle grades. How do we begin? How do we know which morphemes we should teach? How do we put this into the school day?

Michelle Sullivan:

We typically think of morphology as this advanced word study, learning about complicated Greek and Latin roots in upper elementary, but really our youngest learners are already entering school with a level of morphological awareness.

I mean, as a mom, we were talking about my daughters before, I smile when my daughter says cute little things like, "I sleeped really good last night," or, "I swimmed in the pool."

Of course, we can use recasts or embedded connections to correct their language, but honestly, it's a wonderful thing because their little brains are picking up on these meaning units, even if these are not real words, but it's the playful aspect of understanding what it would mean.

That being said, I think morphology instruction can really begin in kindergarten. We think of it first as teaching the language of morphology, like a base word or base element.

We could do this with phonological awareness too, where we're building that word awareness, knowing that a word is a word. As soon as they start reading or hearing words, these are words. These are standalone free morphemes.

I don't think you necessarily have to use the term morpheme in kindergarten, but base, I think, is totally developmentally appropriate.

We talked about these word relatives before. You could do playful activities, even orally, with simple words like, "Cook, cooking, cooked, cooks. Can you think of other words that belong to this family?"

You could play games like odd one out, "If you have cooked, cooking, and bakes, which word does not belong?" They're identifying already what's the base word and what's the core meaning that all of these relatives have in common.

LETRS also gives us a really broad scope for morphology as well. It talks about even incorporating compound words. This is a thing that teachers are already doing, and yet they don't know that it's morphology. You're taking two base elements and you're combining them to make a meaningful unit. Sometimes the meaning ends up not being related at all, like butterfly, but sometimes they do.

We can start even incorporating morphology in print once students have their CVC words down pat. I always suggest infusing morphology right into phonics. We could teach suffix S right away. What a world that opens when they start reading decodable texts. Can you imagine the sentence structure when you can't add those inflections? It makes a world of a difference when they can tackle words with those suffixes. I think that's a good starting point.

Anna Geiger:

I can see you could do a word sum very early. "Let's take cat and make it more than one cat. C-A-T plus suffix S." Then you can read it.

You can also give the example of dog and show how, "Sometimes that S sounds different, the pronunciation of S, but it still means more than one."

That's so basic, but a really important understanding that we can do from the get-go.

I love the way you talked about infusing morphology into your phonics lessons. That makes a lot of sense.

What about when kids get to the point where they're done with phonics pretty much, except for some kids who need extra filling in the gaps. But overall, so by third grade, for sure, we're done with our regular phonics lessons. What might a morphology lesson look like?

Michelle Sullivan:

Yeah, so we look at those third, fourth, fifth grade standards, and they still have foundational skill work. It just shifts a little bit. While they're not working on phonics, we move into the advanced word study where they should be learning explicitly, along some type of scope and sequence, different affixes and

morphemes that can combine together that would help them in this advanced decoding of multisyllabic words, which also leads into vocabulary work.

It's a good infusion together, but upper elementary students should still have some type of word study aspect of their literacy block where they get into the nitty-gritty of these words.

I'm reminded in K-2 in the science of reading community, we're hearing the term orthographic mapping all the time. It's that cognitive process where we're mapping words into our brain for that automatic word retrieval, you're building your sight word memory. But when we're spelling out these morphemes, we're also mapping now what's called an orthographic representation of these meaning units.

What's stored in that visual word form area in the back of your brain is not always just your sight words, it's these structural letter strings that hold meaning.

Anna Geiger:

Could you give an example of what you mean by that?

Michelle Sullivan:

Yeah. A great example is just your Latin root R-U-P-T. We have this string of letters that isn't necessarily a word on its own, but you have this orthographic representation in your brain that you can pull from and you know that these letters go together to hold a meaningful unit.

I like to think of orthographic mapping as that process and orthographic representation is the product that's being stored.

Anna Geiger:

Very interesting. I like that.

Michelle Sullivan:

It's learning versus retrieval.

Anna Geiger:

Orthographic representation is another word I had in my word list for us to talk about, because that one comes up a lot next week. Can you break down, I don't think we broke down the word orthography yet. Can you talk about that and what orthographic representation means again?

Michelle Sullivan:

Yeah. Orthography, this is going to be another fun fact. When we look at morphology, we all know what an orthodontist is. It's a type of doctor who helps make your teeth straight. Orthos literally means straight, correct, true. It's the proper way to do things. An orthodontist makes your teeth straight.

Orthography is our proper, and then we have G-R-A-P-H writing, our proper writing system, our orthography is the way that we're spelling words in our language.

Anna Geiger:

When I think of orthography, I think of the CVC pattern, right?

Michelle Sullivan:

Exactly.

Anna Geiger:

We know that if we're going to spell a long vowel, we have to do something different typically, unless it's at the end of an open syllable. But in the word cake, we can't just spell it, C-A-K because that doesn't follow orthographic rules for English.

Michelle Sullivan:

Yeah. It's our spelling system, the rules and conventions basically of our language to spell things. We talked about phoneme and grapheme correspondences when they go into action in our spelling system, that's our orthography, and an orthographic representation is a piece of that puzzle.

Anna Geiger:

I'm going to wrap up some of the things we've talked about, just to put it all together.

We talked about how English spelling is influenced by phonology, which is the sounds of the letters. It's influenced by morphology, which are those meaning units. When you have to choose between one, it's the morphology that wins out, the spelling of the morpheme is retained.

We need to remember that a word is not irregular only because it doesn't match the phonology, because the way our language is supposed to work is that the morphology is supposed to be the greater influence. Your example is the word does. I've often, and I am sure in my book, I include that as an irregular word. I think if we could split hairs with that a little bit and think, based on your current knowledge, it could be irregular. As we add our knowledge, we start to see. I don't want to take that away from somebody, but just understanding that there may be something to dig deeper in and to understand why it's spelled that way.

Then we talked about ways to make morphology visual is with those word sums and those word matrices. Then we got into some picky details about different parts of different types of base elements, different types of prefixes and suffixes.

In the next few weeks, I'll be interviewing more people getting really detailed about this, but this was a great introduction, I think, for people who might be new to it, to see why it's so important, and then to get ready to dive deeper into some other topics.

Thanks so much for coming on. This was really fun.

Michelle Sullivan:

Thank you so much for having me! It was fun. I could talk about this all day.

Anna Geiger:

Yeah, so could I. It's really exciting.

I'll be sure to link to the books you mentioned, and then your podcast, I assume will be out by the time this comes out. I'll link to that and anything else, your Instagram, and the other resources that you share.

Michelle Sullivan:

Fantastic.

Anna Geiger:

Thanks again, Michelle.

Michelle Sullivan:

Thank you.

Anna Geiger:

You can find the show notes for today's episode at reachallreaders.com/episode191. Talk to you next time!

Closing:

That's all for this episode of Triple R Teaching. For more educational resources, visit Anna at her home base, reachallreaders.com, and join our teaching community. We look forward to helping you reflect, refine, and recharge on the next episode of Triple R Teaching.