

Dear St. John students:

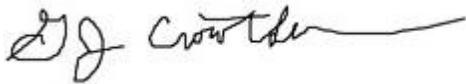
It has been my great pleasure to get to know you and work with you during these past three months. Thank you for your patience in accommodating me while I adjusted to the routines and expectations of your school.

Having transitioned from college to middle school, I'm now heading back to college! I'll be teaching biology at Everett Community College starting in January. That may seem odd, but the bottom line is that teaching is teaching, regardless of the age group. Many of the lessons I have learned at St. John will come in handy at Everett. For example, Mr. Tice's general strategy of lecturing as little as possible and incorporating as many activities as possible is also apt for college students.

Given my fondness for science songs, I thought it would be appropriate to say goodbye with one last song – a song in which a piece of a chromosome known as a chromatid says goodbye to her sister chromatid during the process of mitosis, by which the chromatids separate in preparation for cell division.

Unlike the sister chromatids in the song, we might meet again someday. Who knows what the future holds?

In the meantime, I wish you all the best. Go forth with determination and with joy. Be kind to each other and yourselves. Let your light shine!



## METAPHASE

to the tune of "Loch Lomond"  
new lyrics by Greg Crowther & Monty Harper

It wasn't long ago  
That we said our first "hello";  
Polymerases built us out of bases.  
But time, it marches on;  
Now the nucleus is gone,  
And the two of us are bound for different places.

*Chorus:*

You'll take the left road,  
And I'll take the right road,  
For that is how the mighty spindle pulls us.  
And once we leave this plane,  
We will never meet again  
On the ever-branching paths of mitosis.

With centromeres in place,  
We'll share a last embrace  
As proteins that connect us start to fissure.  
To brand-new cells we'll go,  
With our common genes in tow,  
To further grow our family of sisters.

*Chorus*

We'll bond and split for years,  
'Til we lose our telomeres  
And finally the cycle is subsiding.  
In the end we'll understand  
We were part of something grand:  
All life on Earth is made of cells dividing!

*Chorus*

Figure from Sagar Mahale et al., *Scientific Reports* 6: 22, 2016

