How does a 50-year-old brain present ideas that a 16 or 17-year-old brain will find fascinating, engaging and meaningful? One of the challenges when aiming to engage students’ imaginations in learning as the basis for teaching is trying to figure out what makes a student’s imagination tick! Brrrrrrr!

For example, how do you make viruses and the lytic cycle interesting (or, as my students would say, sick!) for grade 11 Biology students who are constantly asking, “Is this going to be on the test?”. This is the sort of footpath I tread every day in an effort to make Biology meaningful and engaging for my classes.

The challenge - grade 11 Biology students stand on the cusp between a well-established romantic or idealistic understanding of their world and a burgeoning sense of the philosophic: big ideas, anomalies, and a growing sense of wanting to make things happen engage their imaginations.

How do you strike a balance? How do you impress the adolescent mind with an understanding of the remarkable success of the evolutionary strategy of parasitism, while still putting it into a context they will allow them to grasp both the beauty of the idea and the intricacies of the details?

Can you say “007” and “corporate take-over” in the same breath?

When presenting the unit on viruses I needed to capture the students’ imaginations by plying them with a metaphor that they would understand. I provided them with an assignment where they had to infiltrate a megacorporation, housed in a large building, employing a huge, nameless workforce, and find their way to the president’s office to take over the company. Several other key rules were laid out on the overhead. Not a virus in sight!

(Cue “Mission Impossible” theme) “This mission, if you decide to accept it….” Dividing the students into groups of three they immediately set to work on their task. There were many whispered conferences plotting the best way to gain entry into the building, overcome guards, scale the heights, and coerce the president into submission. Elaborate strategizing about the best way to remain hidden, bypass security, find the president, and run the company after the take-over was overheard. Some of the discussions got quite heated and even my quietest students took interest in the planning.

In the end, every group proudly presented their plans with enthusiastic explanations to a skeptical but curious audience of peers. Harry Potter’s invisibility cloak made a cameo appearance. James Bond-style technology and ninja video game assassin tactics were everywhere in evidence. Disguises, stealth, and concealment were the order of the day. Someone even suggested seducing the president (!?). Classmates clamored loudly when their secret tactics were unexpectedly copied (or pilfered) by rival spy teams, catcalls and exclamations of disbelief were voiced loudly when impossible acrobatic and/or technologic feats were suggested, and immediate challenges and questions abounded for every scheme. Everyone was involved, interested, and engaged…and then (Cue dramatic sting ♫. )… the penny dropped! A lone hand in the back, a knowing smile, a note of puzzlement in the voice that asked, “Mr. Davies, is this how viruses make you sick?” (Dum-did-did-da-da-da-dum-da…cue the opening shooting sequence.)