

## Soup Teacher's Model of Teaching and Learning through Inquiry

*Chaos theory: a field of study in Mathematics that studies the behaviour of nonlinear, dynamical, interacting components that form a larger whole or system. Due to feedback or multiplicative effects between the components, **the whole becomes something greater than its individual parts**. The outcome from this interaction is highly sensitive to initial conditions. – Extracted from Geoff Boeing 's work, Chaos Theory and the Logistic Map*

When I first started on my path as an educator, I realized I always tried to bring different ingredients to my classroom, mixing different subjects and so on, just like you do when you are making soup. For a while, the idea of me being a soup teacher rang true, but soon, I started to realize that I was not following my original idea. As it turns out, I provide merely the original ingredients, criteria and support, while the real soup makers are the students themselves. My model, therefore, is the evolution of my original idea, where the learning process is guided by the students, at their pace and based on their own unique interests, passions and background. It is based in part on the Constructivist theories of Piaget, which considers secondary students as able to think abstractly as well as build upon previous knowledge.

This model works as follows:

1. A beginning **Inspiration session**. This introduces them to the main ingredients of their soup, or topics they needed to touch upon, a clear rubric as well as exemplars.
2. Initial brainstorming. Students come up with a “**what if**” question, derivation or field they would like to explore, while still holding on to the required main ingredients. **CHECKPOINT.**
3. Students **gather resources** without sorting through. **CHECKPOINT.**
4. **Recipe planning**. Students visualize the outcome, and decide to keep, discard or modify a resource. **FINAL CHECKPOINT – Proceed to soup making!**
5. **Students make the soup**. I provide support as needed, guiding students towards the best version of their original idea possible on an individual basis (formative assessment).
6. Students write a **reflection**. This is an important part of their grade.
7. Students **share** their soup and marvel at each other's' unique accomplishments; a final grade for the project is given (summative assessment – high-level, tailored to each project).
8. The project goes into a **permanent online bank**, where it can serve as a resource to future students. It also serves as a resource for myself, for my own growth as a teacher – what worked really well? What didn't work? What can I do differently to improve students' experiences next time?

At the centre of it all is what I call “controlled chaos” – which is something that came to my mind while in the middle of one of my noisiest inquiry projects. From an outsider's viewpoint, the whole process may seem disorganized, but in fact, students are still under my guidance and thriving under my support. I thoroughly enjoy the energy and life that this process brings to the classroom, and also marvel at the students' discoveries and products. In fact, my favourite part of teaching is the bubbly, lively creativity that ensues when students are given the leeway to explore. It is my hope that I can help them share their soup – their creations, passions and discoveries - to others online, and that we all continue to grow and discover together.