SPIRAL LEARNING IN SNC 2P

BARB SCOTT COLE (/USERS/BARB-SCOTT-COLE)

I chose to look at spiralling the Academic Grade 10 curriculum from a slightly different perspective. Instead of weekly chunks of each unit, I looked at how the specific curriculum expectations were grouped and compared that to the time I had allocated for each unit in past teachings of this course. I found then, the introductory week for each unit aligned with "Understanding Basic Concepts". With that in mind, each unit introductory week introduced key terms and concepts, and was assessed by a short quiz. The correct answers were posted for students to review at their own pace, knowing that we would be revisiting these idea in four weeks time.

In the introductory week of each unit, I also introduced the investigation students would be exploring as they developed knowledge and competency for the topic. I encouraged them to write down ideas and questions that the first week's lessons engaged, hoping to begin development of self-reflection and self-directed learning. The Unit Challenges, were in brief: Climate Change - make predictions to future effects of climate change on a chosen country or region, based on what exists now and what we know about human and natural factors affecting climate change. This also included a literacy component on learning to write effective reports;

Chemical Reactions - what do you want to learn about the effects of acids and bases in real life situations? Design an experiment to test your ideas and prepare a formal lab report (extension of literacy here as well);

Tissues, Organs, and Systems of Living Things - Show your classmates in any (appropriate) way you choose how the organ systems work together to create a healthy human being.

Light and Geometric Optics - Design and explain a simple optical device.

I found that the "Developing Skills of Investigation and Communication" took 7-10 days instead of a week to provide flow and continuity to student learning. This meant a slight revision to the weekly quizzes. In the attached resources, you will find that Climate Change and Optics do not have a second round of quizzes. In the case of Climate Change, students were researching and analyzing data to prepare their reports by the end of the second round. For Optics, the second round came at my personal crunch time as a teacher, when coaching, SHSM and an FNMI initiative all collided into an intense two week period!

As the class entered the third round of each unit, "Relating Science to Technology, Society and the Environment", students worked on their Unit Challenges and presented them to the class. I was pleased with the reports, delighted with the acid/base lab reports and amazed by the human body creations. The optical devices did not get the time they deserved.

The fourth and final round ended with a shorter unit test, which showed deeper understanding of each topic than the "regular" SNC 2D students in the previous semester. Having four short tests in the last four weeks of class meant exam preparation was easy. Students felt more confident heading to the final exam, which was the same as the previous semester to provide control data. I will use spiralling the next time I teach 2D as I found it an effective method of having students engage in their learning and retain that knowledge

(mailto subject out this (https://www.facebook.com/sharer.php?u=https://connex.stao.ca/classroom-catalyst/spiral-learning-in-snc-2p) (https://twitter.com/intent/tweet?text=https://connex.stao.ca/classroom-catalyst/spiral-learning-in-snc-2p) (https://plus.google.com/share?url=https://connex.stao.ca/classroom-catalyst/spiral-learning-in-snc-2p)

RESOURCES

- SNC 2D Week 1 Quiz (https://docs.google.com/document/d/1MANZZPP4rQMJTlAgtMLQbxbr2jRYs_0Portn_MfQenI/edit)
- SNC 2D Look at that Body (https://docs.google.com/document/d/1JFJS5FkYefrinKq8ukOW23ehNl7B8eTeH684GAl-8xM/edit)

ELEMENT

- Critical Thinking (/expert-elements/critical-thinking)

(/classroom-catalysts) **RETURN TO CATALYSTS (/classroom-catalysts)**

STAO/APSO WEBSITE (http://stao.ca/cms/)
SEARCH (/search)
PRIVACY POLICY (/privacy-policy)
TERMS OF USE (/terms-of-use)
CONTACT (/contact)

FACEBOOK (https://www.facebook.com/STAOAPSO?fref=ts)
TWITTER (https://twitter.com/staoapso)
GOOGLE+ (https://plus.google.com/u/0/+ScienceTeachersAssociationofOntarioDresden/about)
INSTAGRAM (https://instagram.com/staoapso/)