Technology-enhanced Learning - Activity Plan

Name: *Robyn McQueen*
Grade / Course: *Grade 9, Mathematics*
Length of Activity: *45 minutes*

Lesson Summary:
Students will learn how to factorise binomials using visual represenations and algebraic expressions of binomials.

Lesson Objective:
To provide students with a visual and algebraic understanding of how to factorise binomials.

Resources/Technology – Teacher
Whiteboard
Online resources:
* https://technology.cpm.org/general/tiles/
* http://www.oercommons.org/courses/polynomial-puzzler/view

Resources/Technology – Students
Computer Lab or Student Laptop setting
Worksheet /Learning Materials:
* http://illuminations.nctm.org/uploadedFiles/Content/Lessons/Resources/9-12/PolyPuzz-AS.pdf
Online Resources
* https://www.khanacademy.org/math/algebra/polynomial-factorization/factoring-polynomials-1-common-factors/v/factoring-and-the-distributive-property-3
* https://www.khanacademy.org/math/algebra/polynomial-factorization/factoring-polynomials-1-common-factors/v/factoring-linear-binomials
* https://technology.cpm.org/general/tiles/

Intended Curriculum Learning Outcomes
* Students will use what they know about simplification / multiplication (using the distributive law) to now do the opposite: factorise.
* Students will develop these skills by watching videos and then applying this knowledge on the computer using a visual represenation of the process.

Instructional Activities
* **Teacher** will remind learners about the distributive law of algebra, especially for binomials. (5 min)
* **Students** will watch the 2 Khan Academy resources to develop an understanding of the new concept: factorising. (10 min)
* **Teacher** will explain how to use the CPM tiles work, displaying the site and examples for all learners to see. (5 min)
* **Students** will use the CPM tiles to make examples of binomials for their friends to then assess and factorise. Each learner must make at least one example and

must solve at least one exmaple of binomial factorising by the end of this session. (15 min)

- **Teacher** will explain the homeowrk.

Learner Assessment

Students will demonstrate their knowledge by completeing the worksheet on polynomials for homework and will show it to their teacher the next lesson. This way, they are required to understand the concepts and apply them.