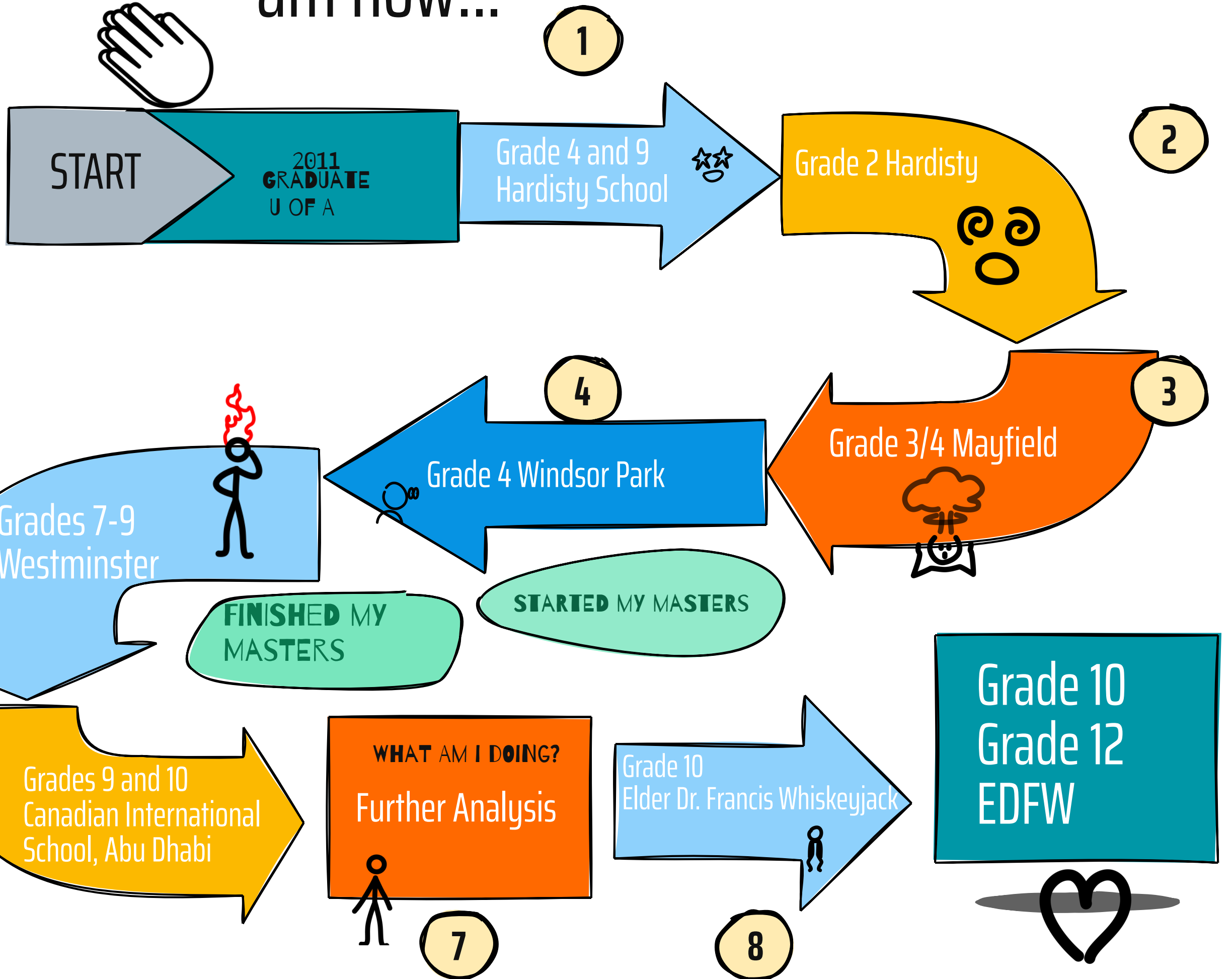
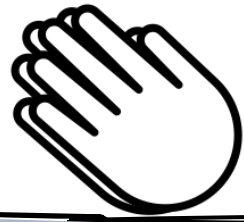


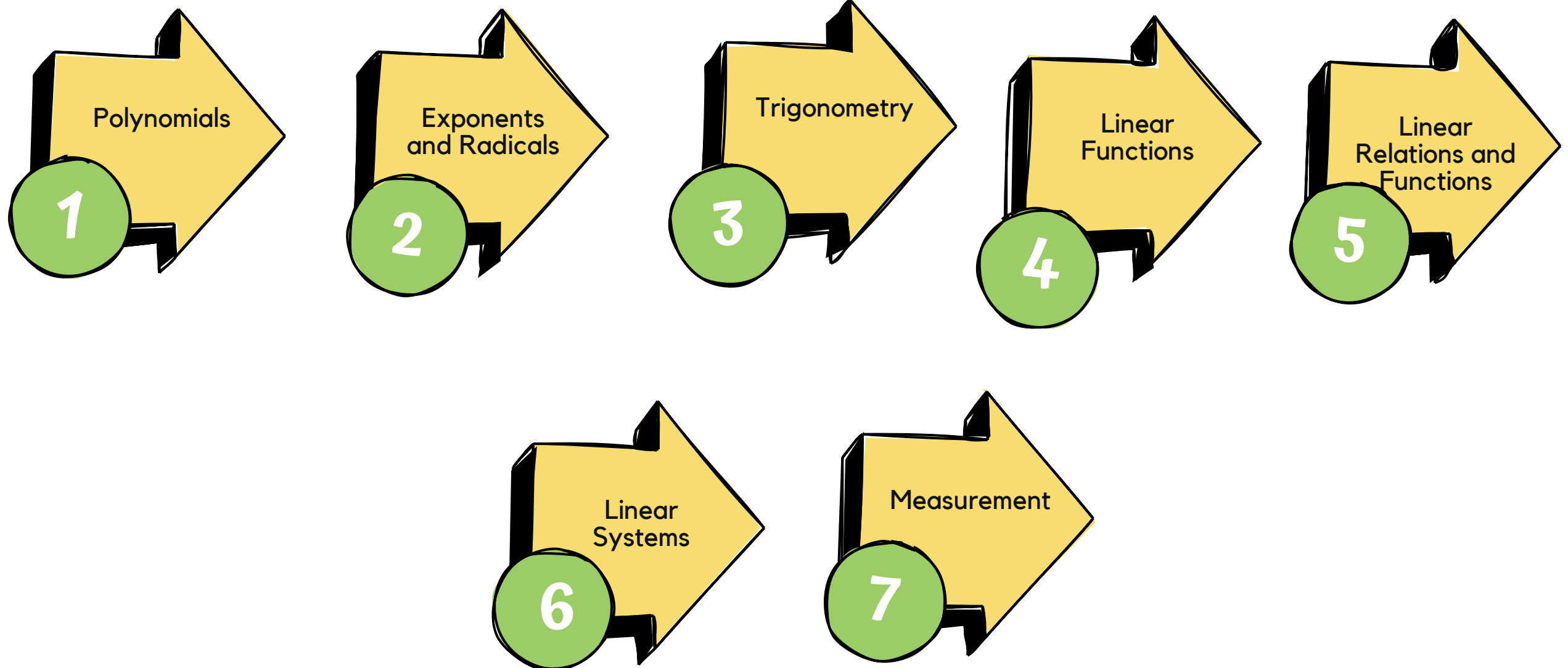


# Where I've been and where I am now...



# I love Math! Let's only teach that!

## Traditional: Math 10C



### Semester Outline :

Unit	Dates
Polynomials	Sept 1-Sept 20 (approximately 3 weeks)
Exponents and Radicals	Sept 23-Oct 10 (approximately 2 weeks)
Relations and Functions	Oct 15 - Oct 24 (approximately 1.5 weeks)
Linear Functions	Oct 25 - Nov 5 (approximately 1.5 weeks)
Trigonometry	Nov 6 - Nov 21 (approximately 2 weeks)
Systems of Linear Equations	Nov 22 - Dec 4 (approximately 1.5 weeks)
AP Unit Sequences & Series	Dec 5 - Dec 17 (approximately 2 weeks)
Measurement	Dec 18 - Jan 14 (approximately 2 weeks)

# Interleaving?

The Effects of Interleaving on Mathematical Understanding  
EDSE 900  
University of Alberta  
Andrea Gleddie  
April 7, 2021

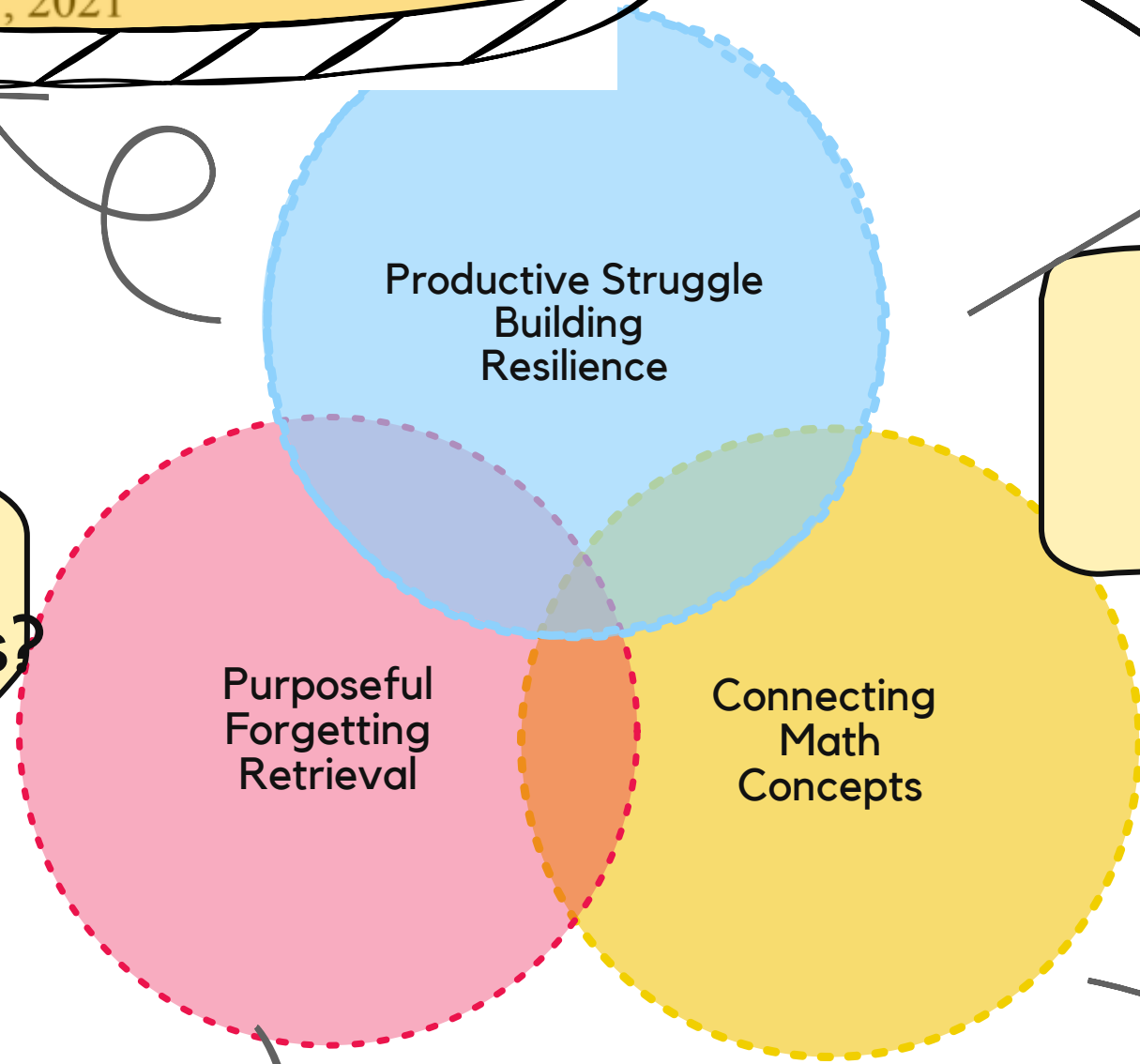
A  
What is it?

B  
How does it work?

E  
How do I convince colleagues?

D  
How do you convince parents?

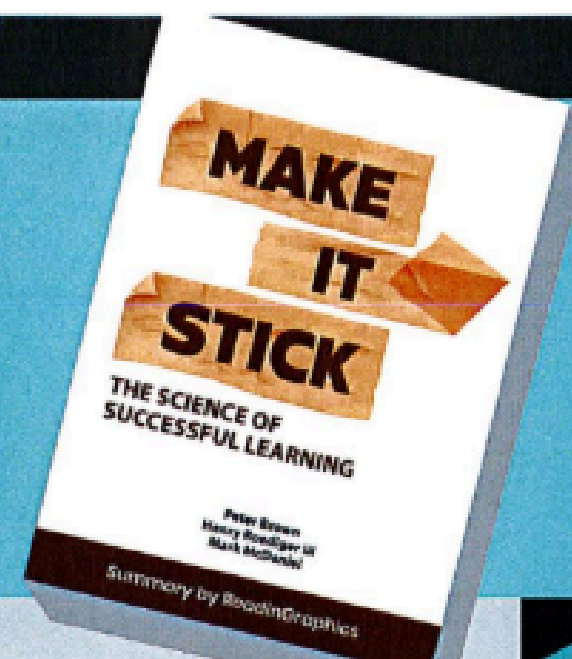
C  
How do you assess?



# MAKE IT STICK

## THE SCIENCE OF SUCCESSFUL LEARNING

Peter Brown, Henry Roediger III, Mark McDaniel



### Course Description:

#### What is interleaving?

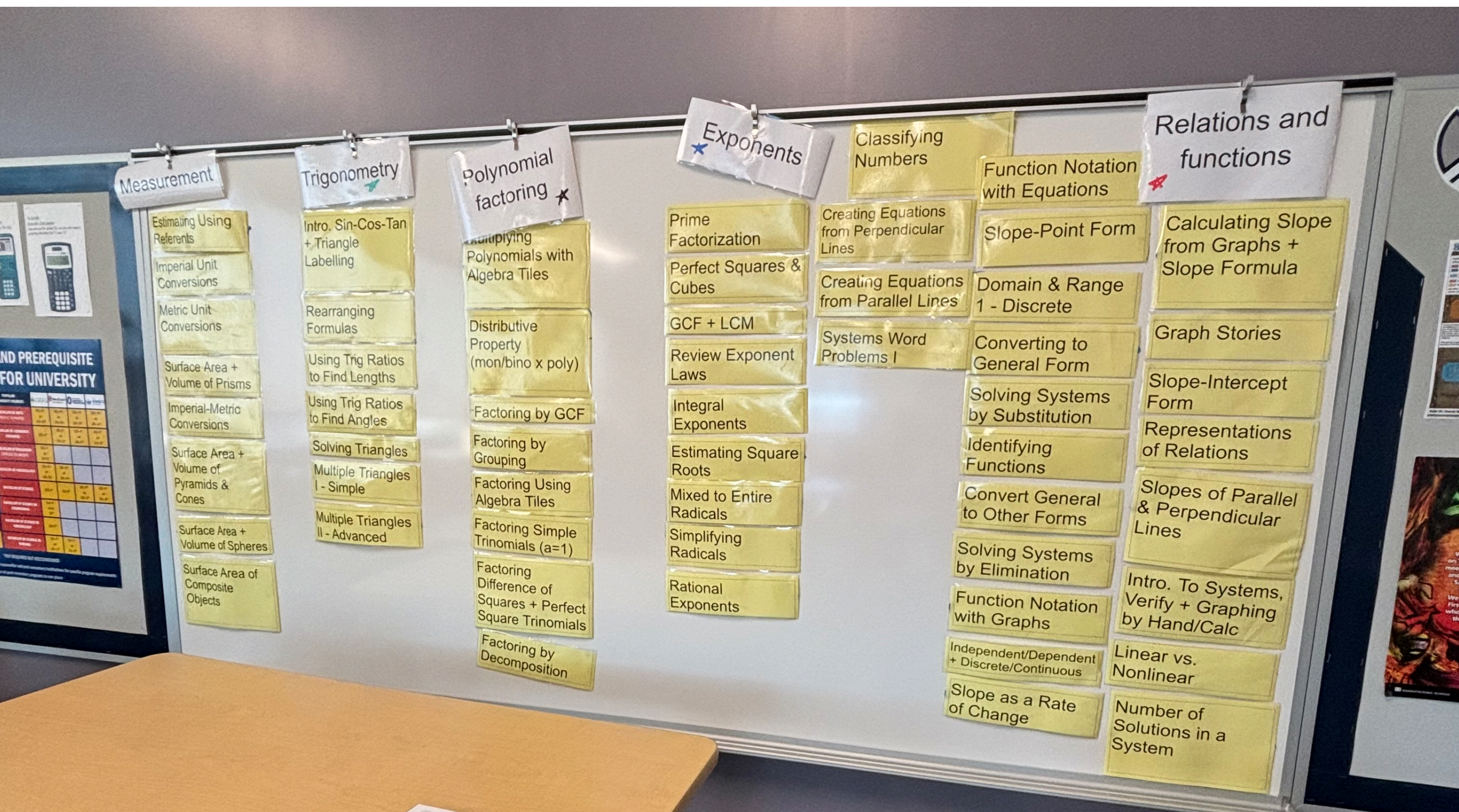
Interleaving involves mixing concepts in a spiral order instead of blocking them as a solid chunk. As a team, we took all the concepts to be taught in Math 10C and broke them down into roughly 60 specific lessons to be interleaved throughout the entire semester. This means that the entire course takes a cumulative nature.

#### Why did we choose to interleave?

Studies have shown that the practice of interleaving leads to increased retention and increased discrimination between problem types. The spacing between concepts provides students with a time frame to process the material increasing retention. The cumulative delivery of the material provides students with an opportunity to decipher and sort problem types increasing discrimination. Working with a variety of problems encourages students to select appropriate solving strategies increasing associations between problem types and their strategies.

The course will consist of topics such as measurement, area and volume, trigonometry, exponents and radicals, polynomials, functions and relations, and systems of equations.

---



Lesson 1 - Classifying Numbers

Lesson 2 - Calculating Slope from Graphs

Lesson 3 - Multiplying polynomials with algebra tiles

Lesson 4 - Introduction to trigonometry

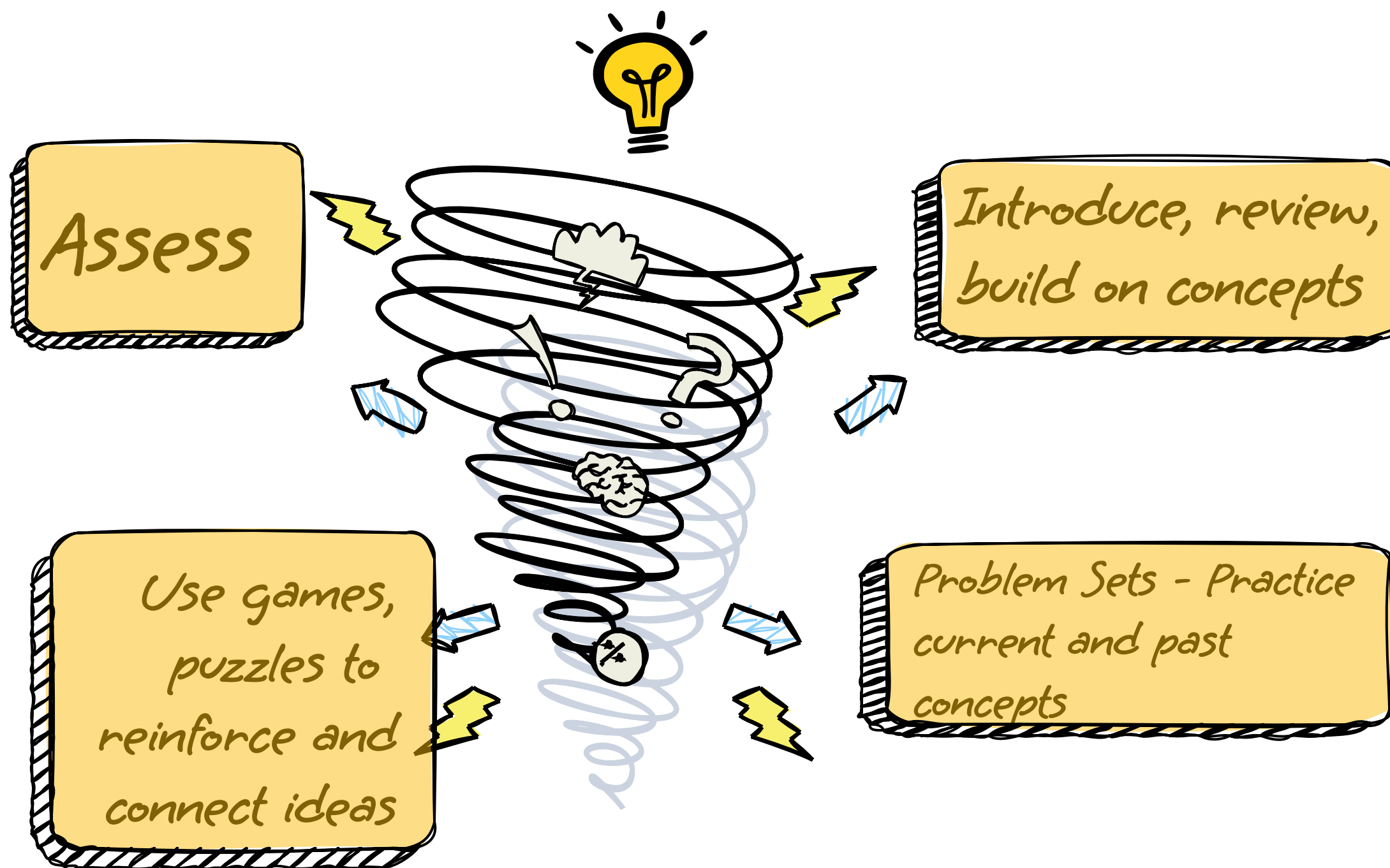
Lesson 5 - Graph Stories

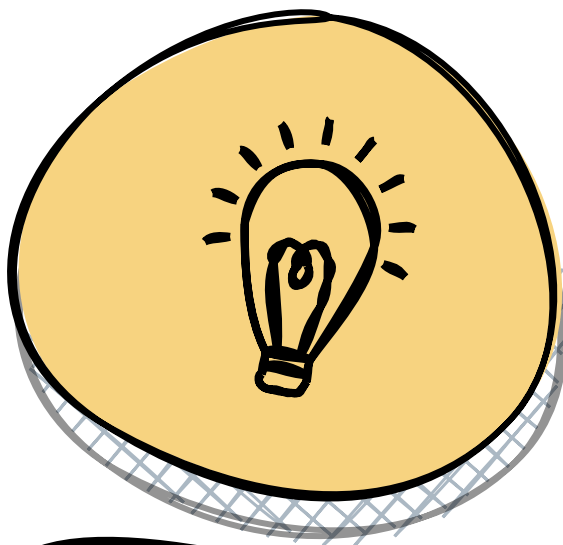
Lesson 6 - Rearranging Formulas

Lesson 7 - Prime Factorization

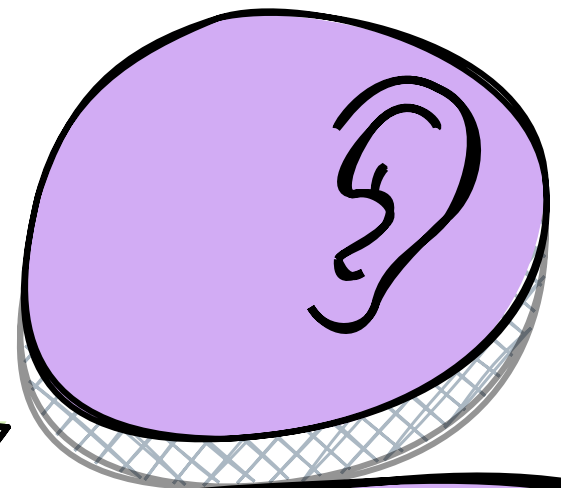
## Assessment Strategy for Math 10C

Minor Assessments		Major Assessments		
Test and Lesson Numbers	Weight	Test and Lesson Numbers	Weight	Final Exam
1 (L1-L5)	3%	1 (L1-L10)	5%	
2 (L6-L10)	3%	2 (L1-L20)	7.5%	
3 (L11-L20)	3%	3 (L1-L30)	10%	
4 (L21-L30)	4.5%	4 (L1-L40)	12.5%	
5 (L31-L40)	4.5%	5 (L1-L55)	15%	
6 (L41-L50)	6%			
7 (L51-L55)	6%			
Total	30%	Final Exam		20%
		Total	50%	20%



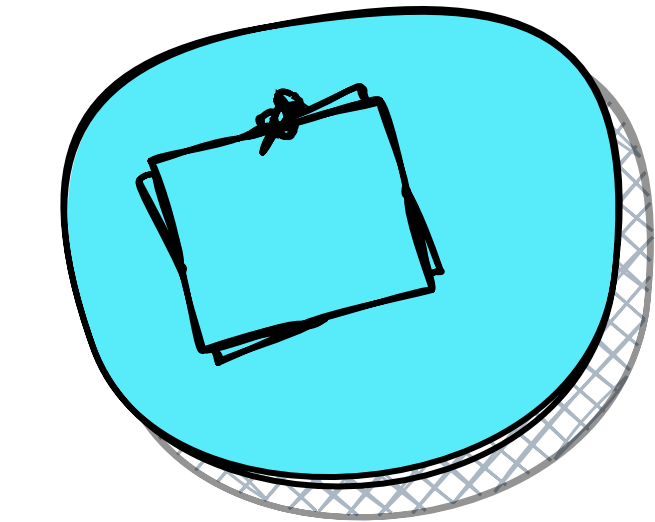


So what materials  
are needed?

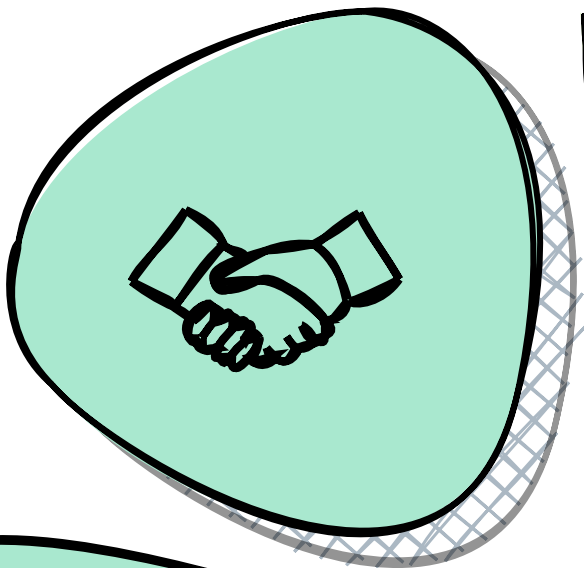


Problem Sets -  
Practice book

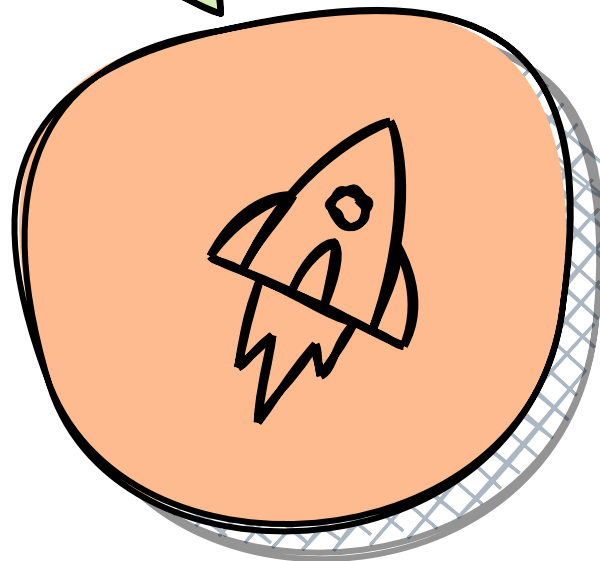
Interleaving  
Materials



Notes - Lessons 1-  
55




Lessons with video  
supports



Lesson order



**SUPERSTARS**



Three Teachers, 3000  
Problems, and the  
Quest to Make Math  
Stick - Interleaving in  
the Math Classroom

By: Jessica Fisher & Fred Kong  
Action Research at Harry Ainlay

 EDMONTON PUBLIC SCHOOLS



**HARRY AINLAY**  
HIGH SCHOOL

4350 111 Street NW  
Edmonton Alberta  
T6J 1E8  
hainlay@epsb.ca  
780-413-2700