

The Flipping Classroom
by
Peggy Drolet,
Audrey McLaren McGoldrick,
and Kerry Cule



About us

- Where we teach
- What we teach

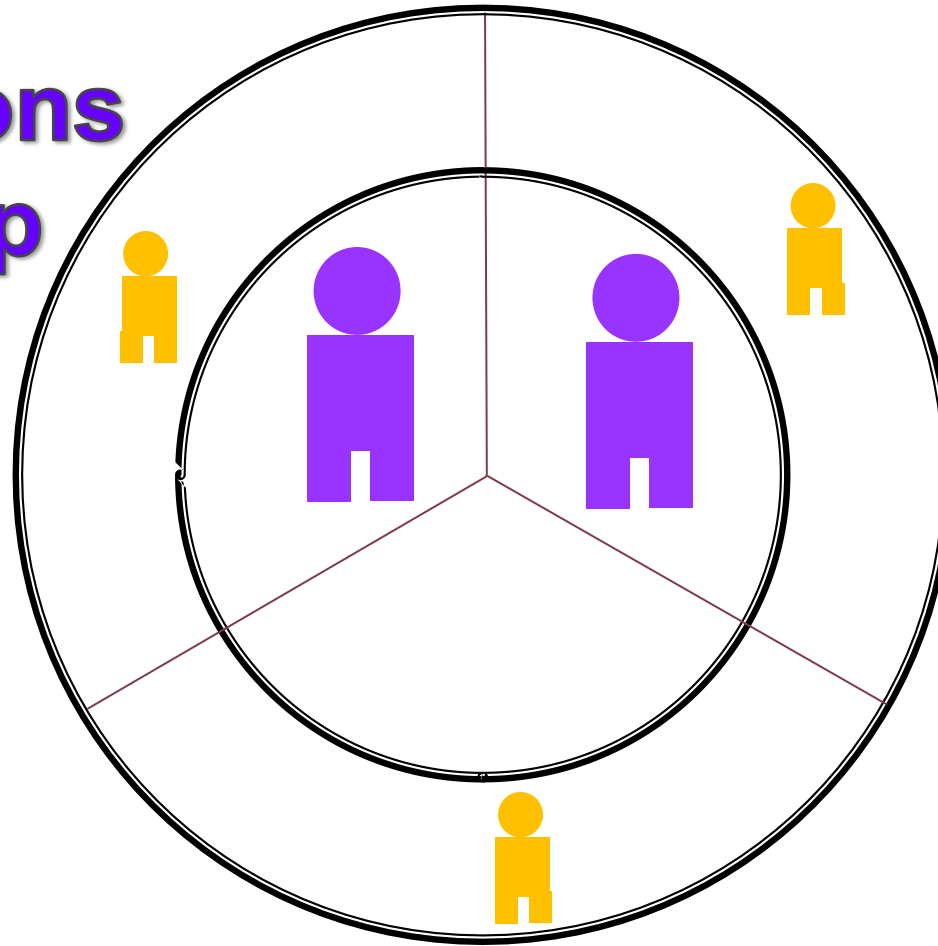


My one burning question about
“Flipping the Class” is.....



Teacher-centered traditional classroom:

Questions
& Help



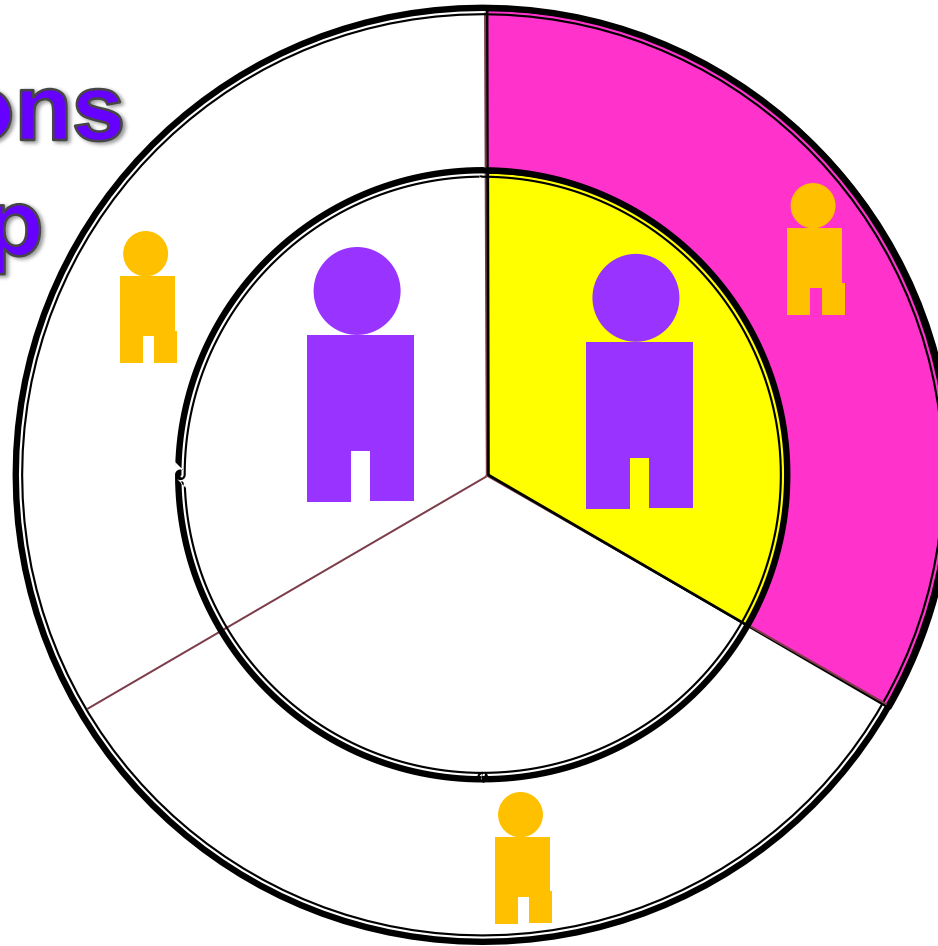
Lesson

Homework



Mismatch #1: lesson time \neq comprehension time for most students

Questions
& Help



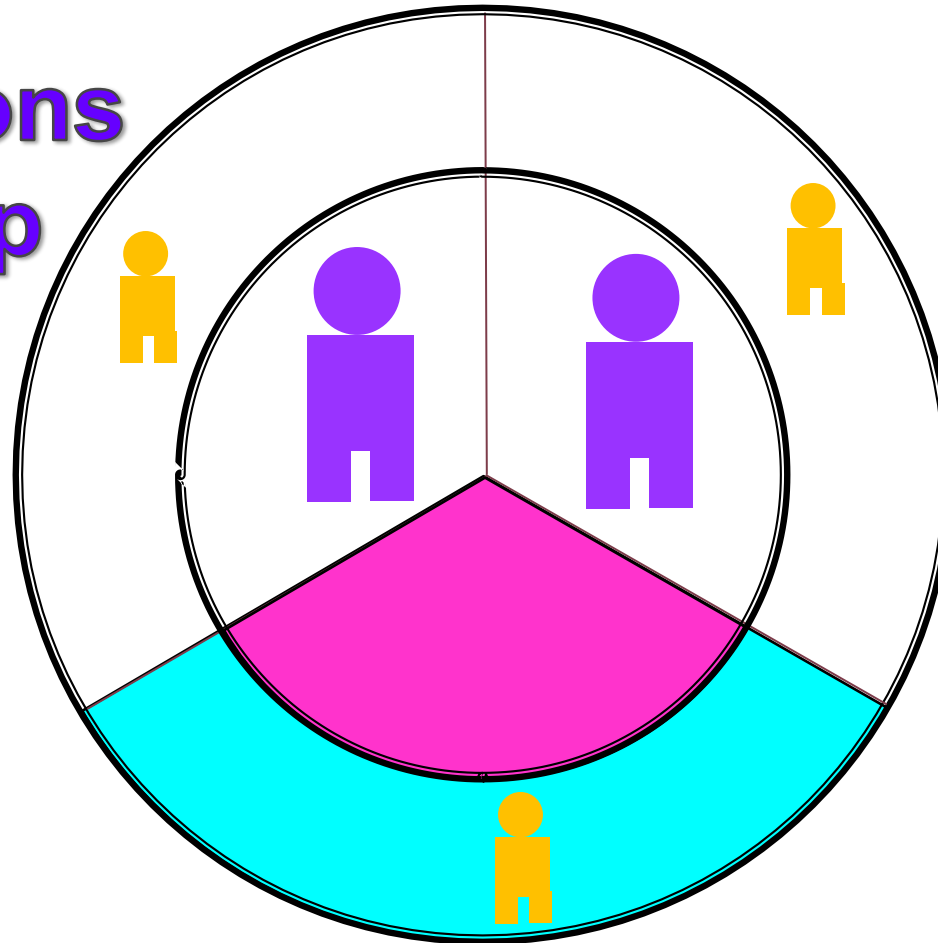
Lesson

Homework



Mismatch #2: students alone doing homework

Questions
& Help



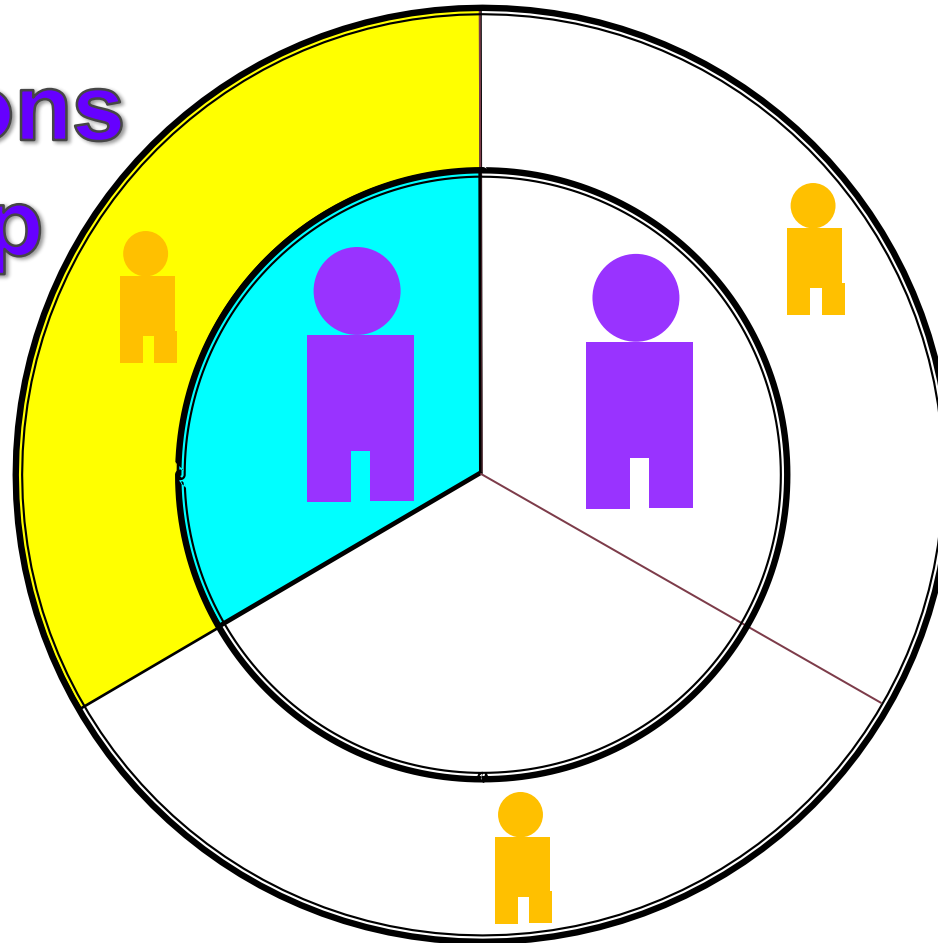
Lesson

Homework



Mismatch #3: 1 teacher, many questions

Questions
& Help



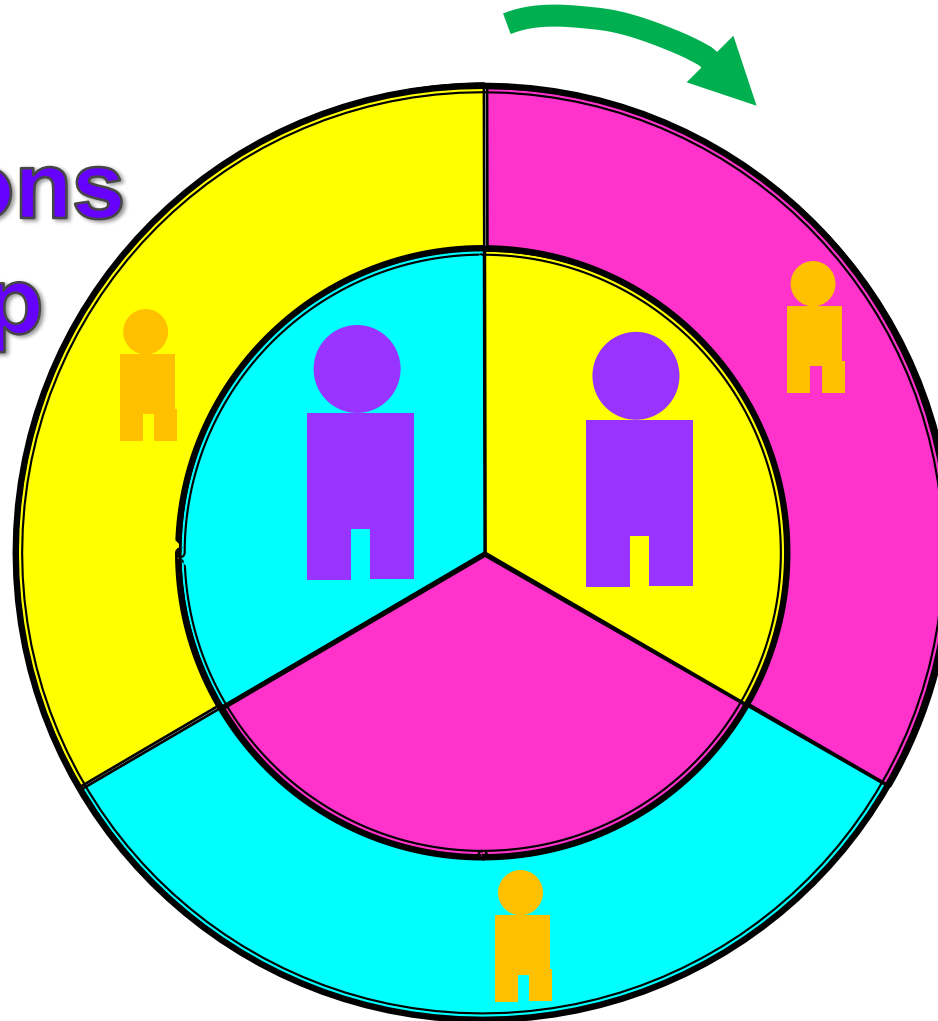
Lesson

Homework



Thanks to technology:

Questions
& Help

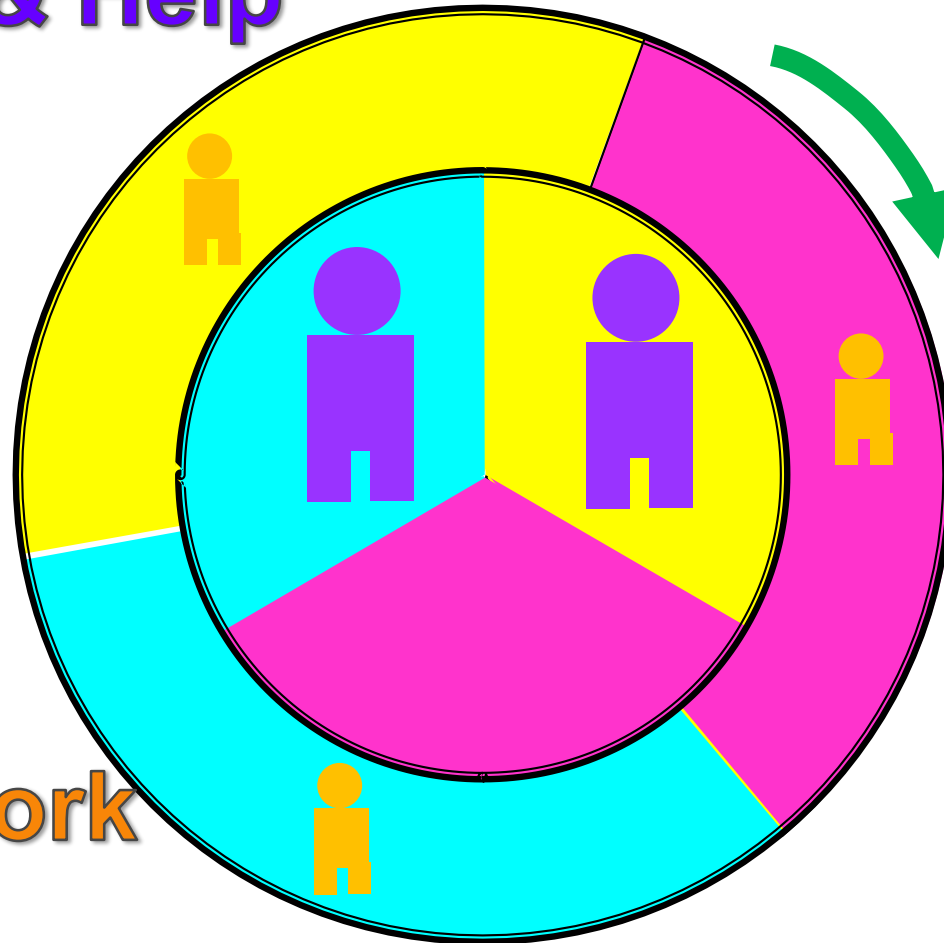


Lesson

Homework



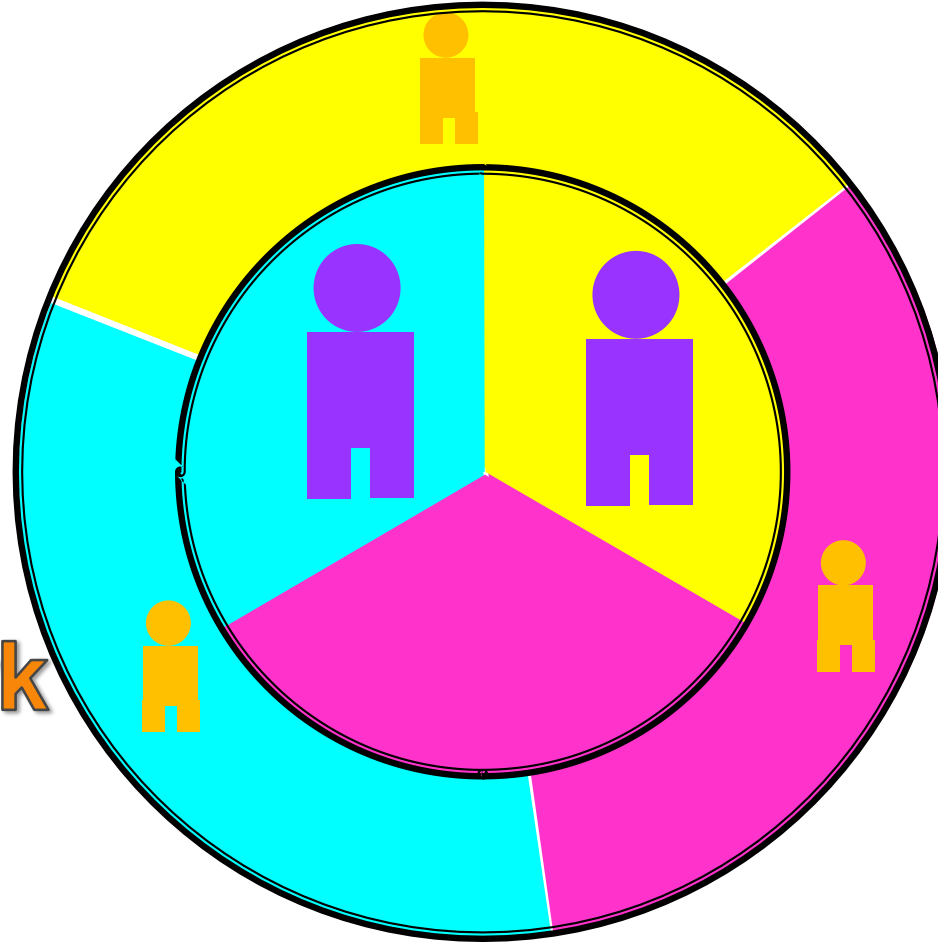
Questions & Help



Lesson

Homework

Questions & Help



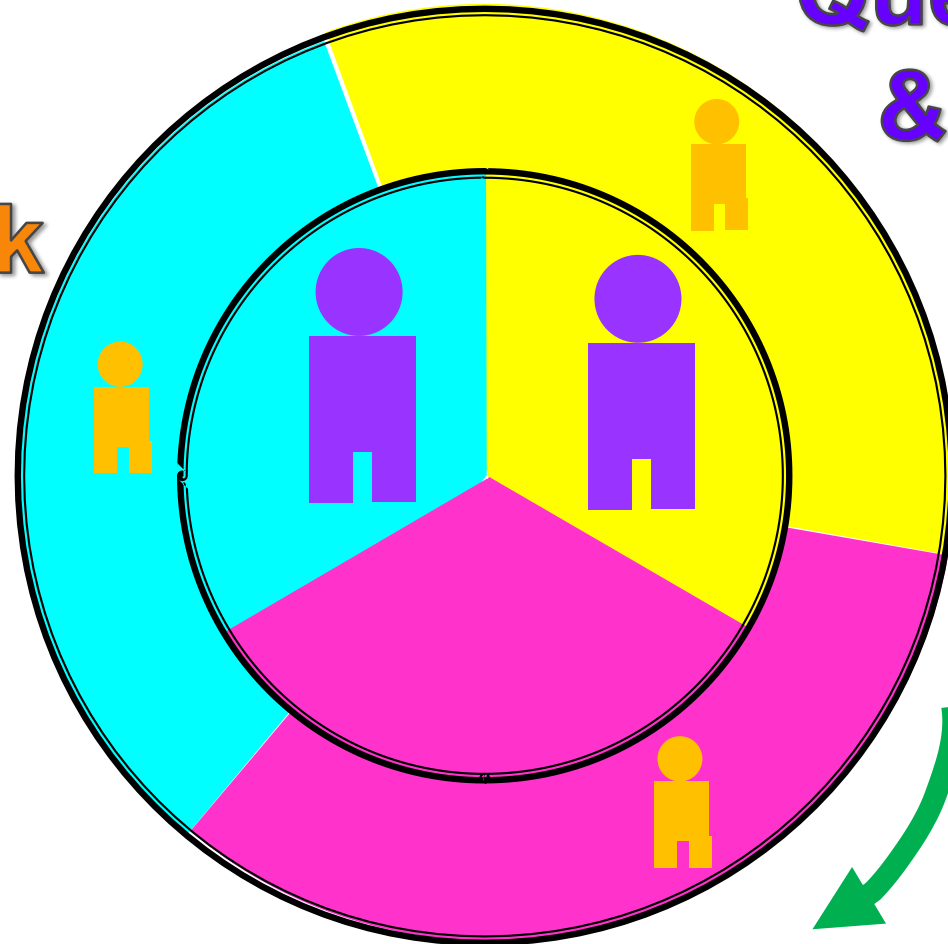
Homework

Lesson

...we can shift the outer circle....

Questions
& Help

Homework

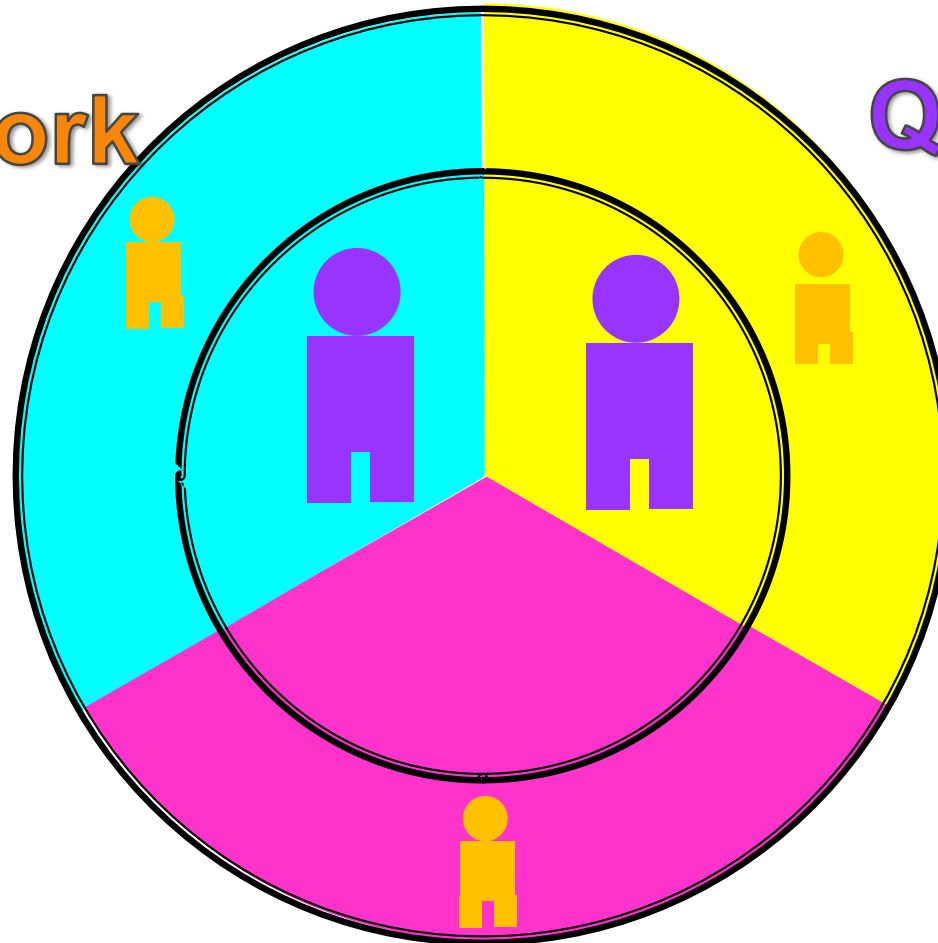


Lesson

Match!

Homework

Questions
& Help

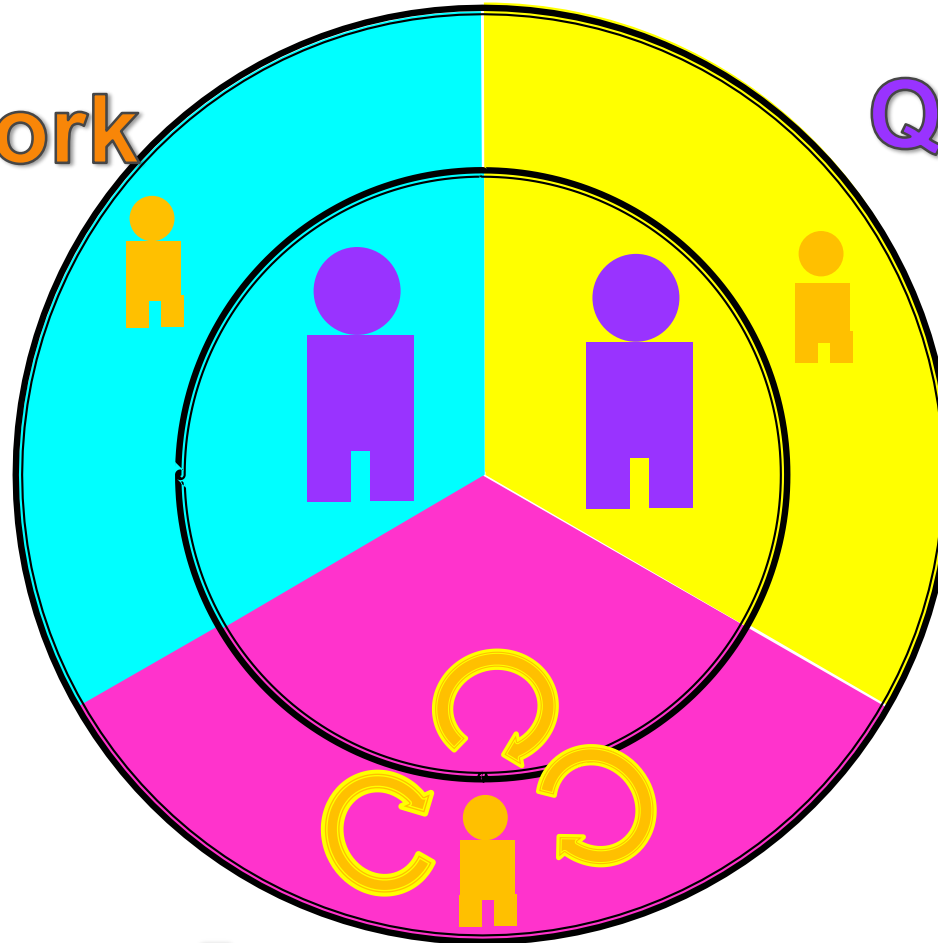


Lesson

Lesson time = comprehension time

Homework

Questions
& Help

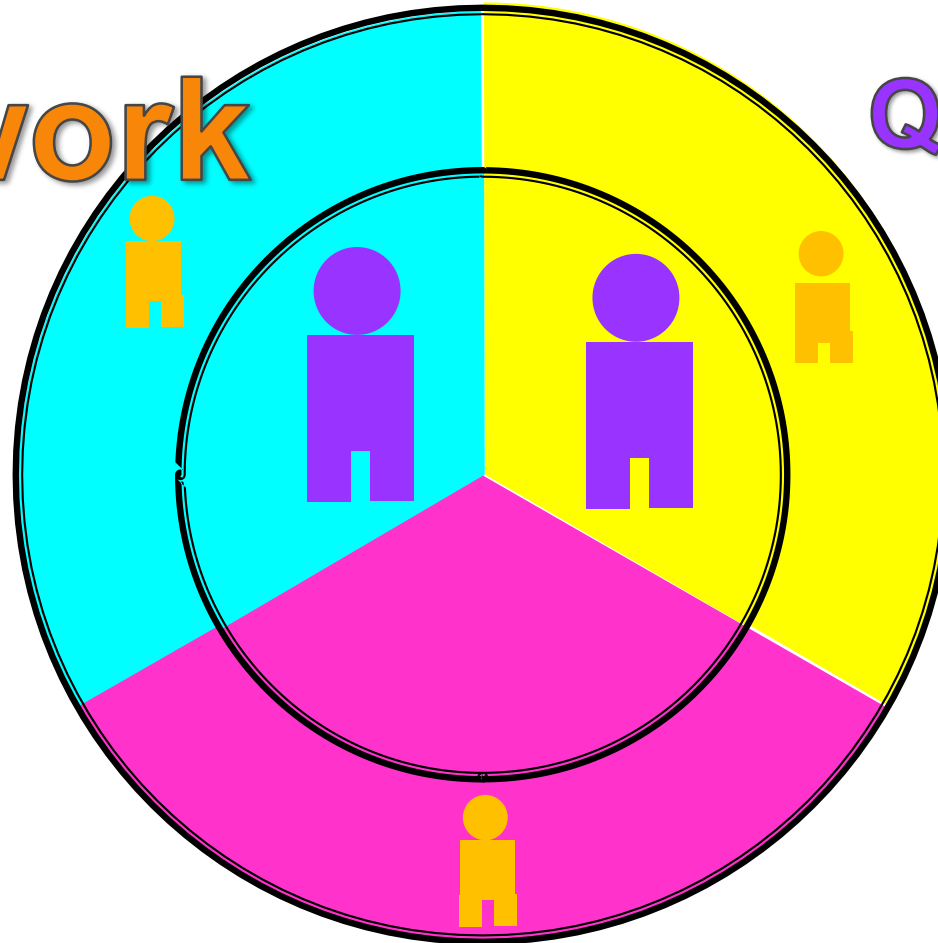


Lesson

Teacher is available:

Classwork

Questions
& Help

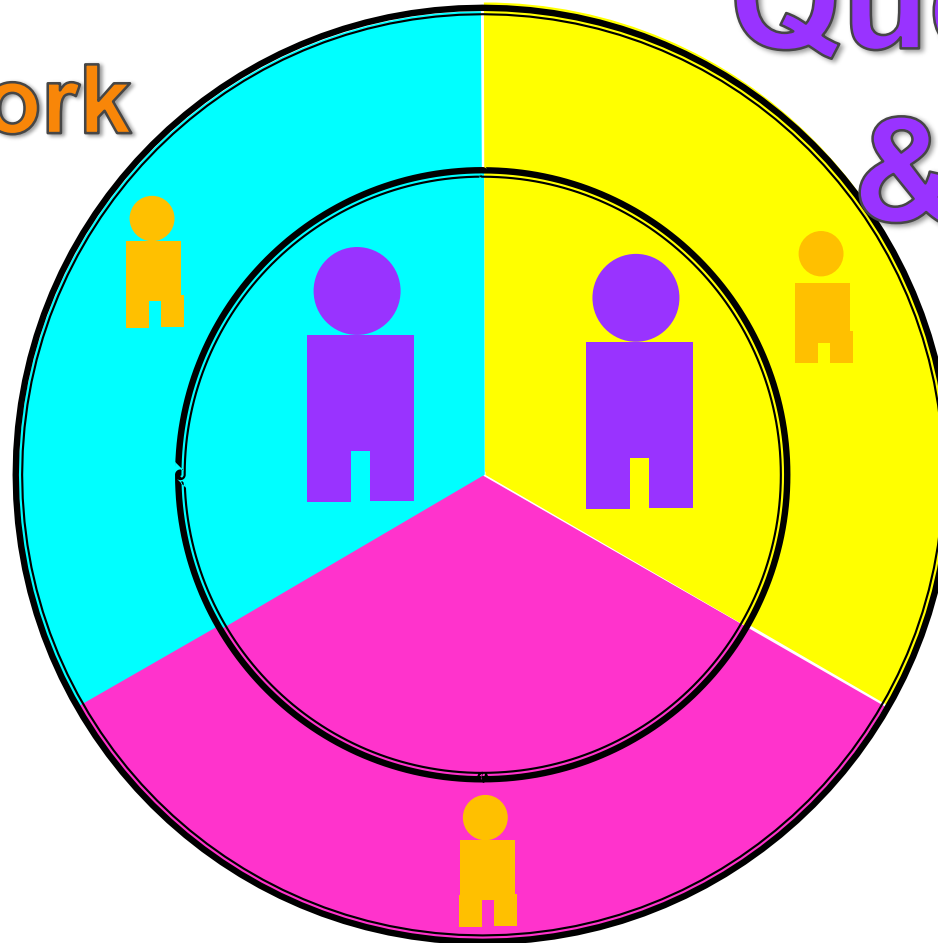


Lesson

...to do just-in-time teaching!

Classwork

Questions
& Help

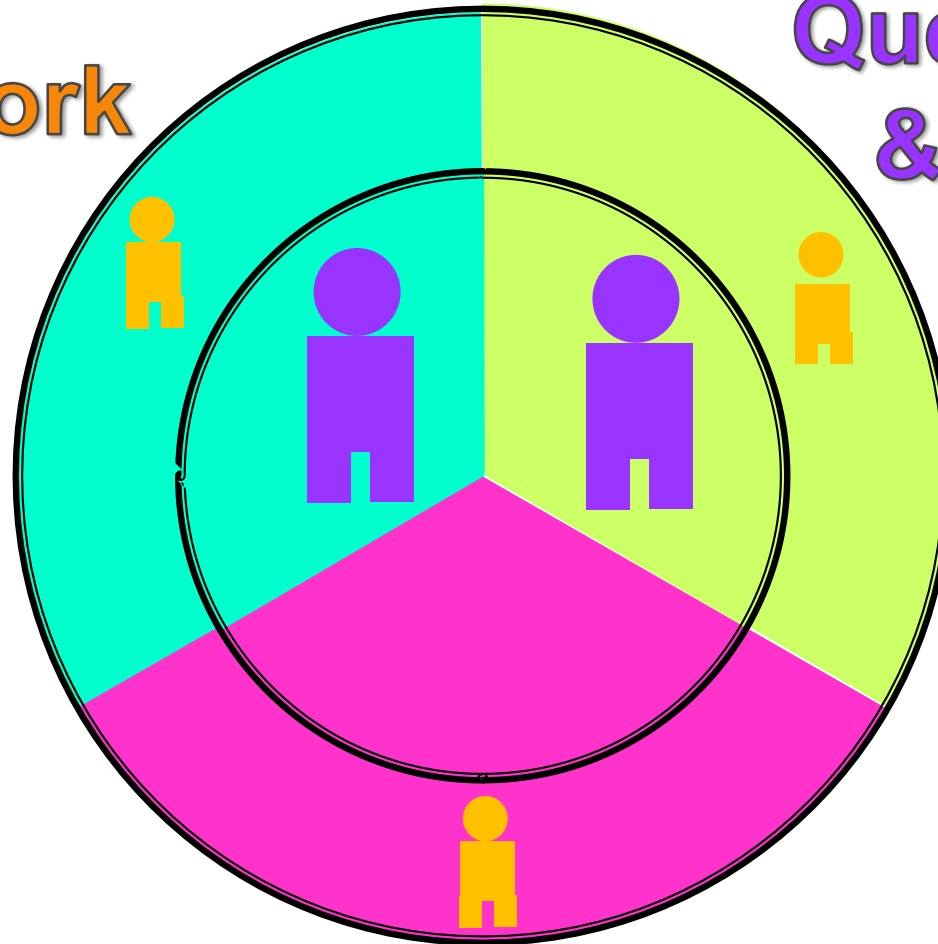


Lesson

But that's not all:

Classwork

Questions
& Help

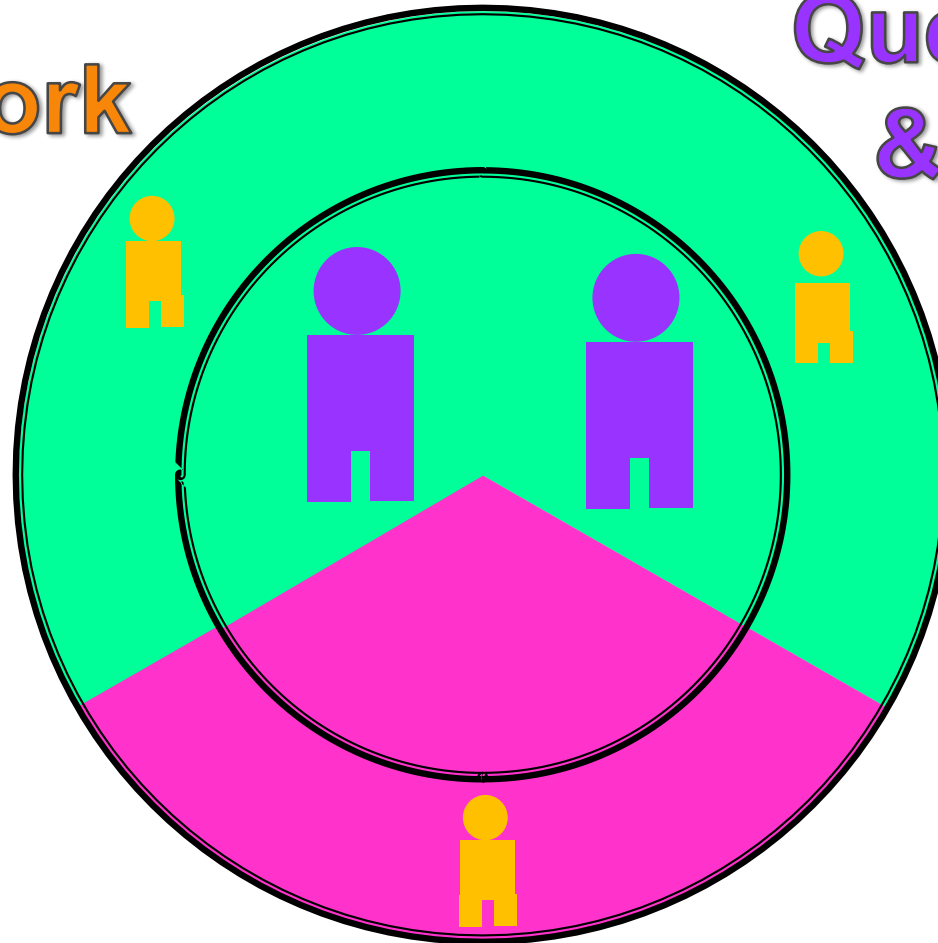


Lesson

But that's not all:

Classwork

Questions
& Help

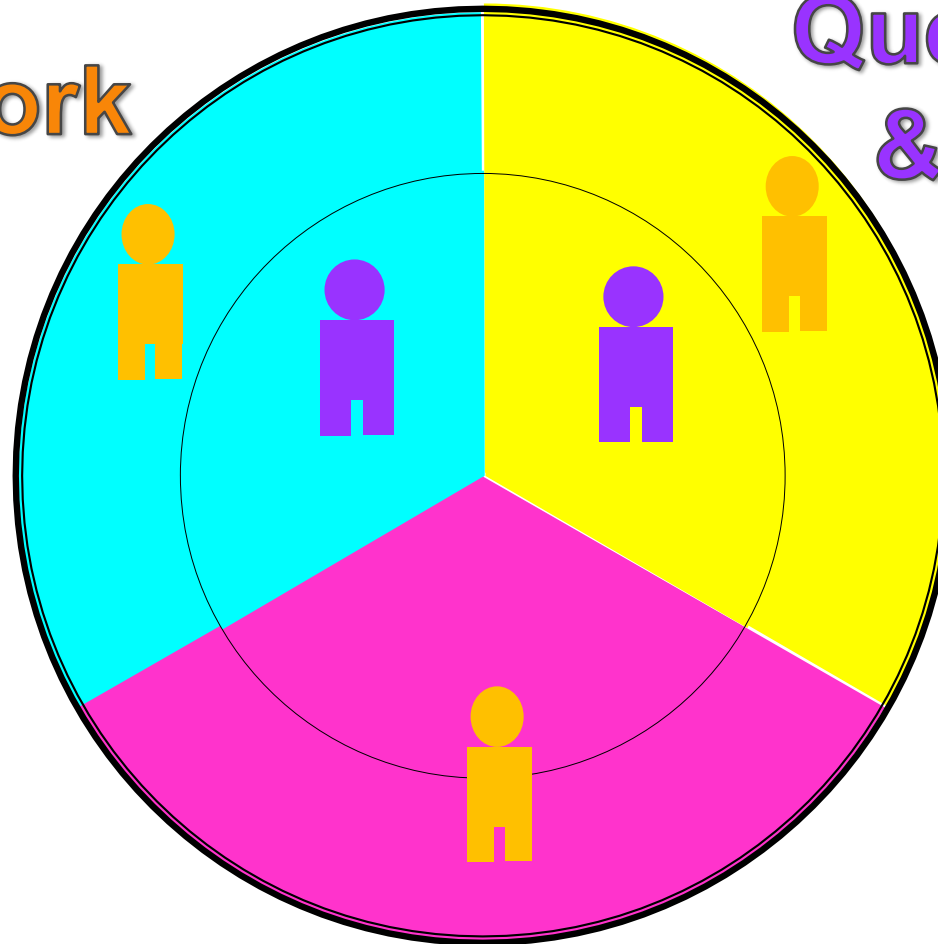


Lesson

And the line between teacher and students blurs...

Classwork

**Questions
& Help**

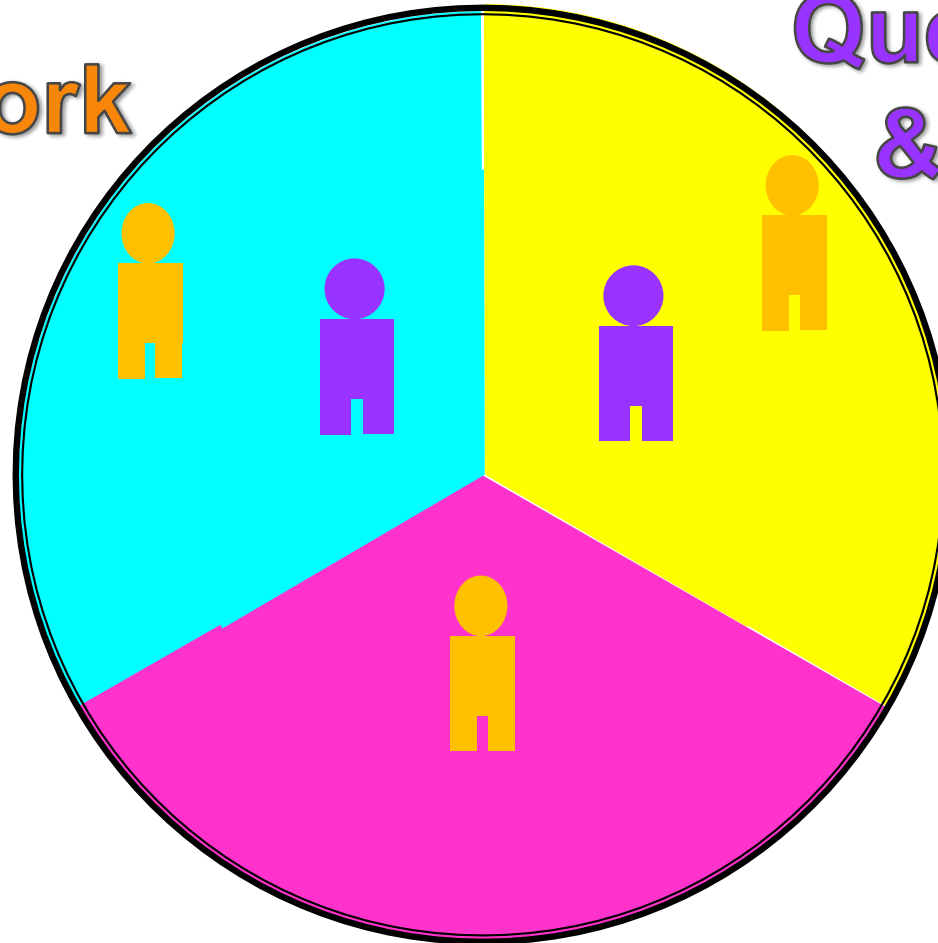


Lesson

As students assume more responsibility for their learning

Classwork

**Questions
& Help**

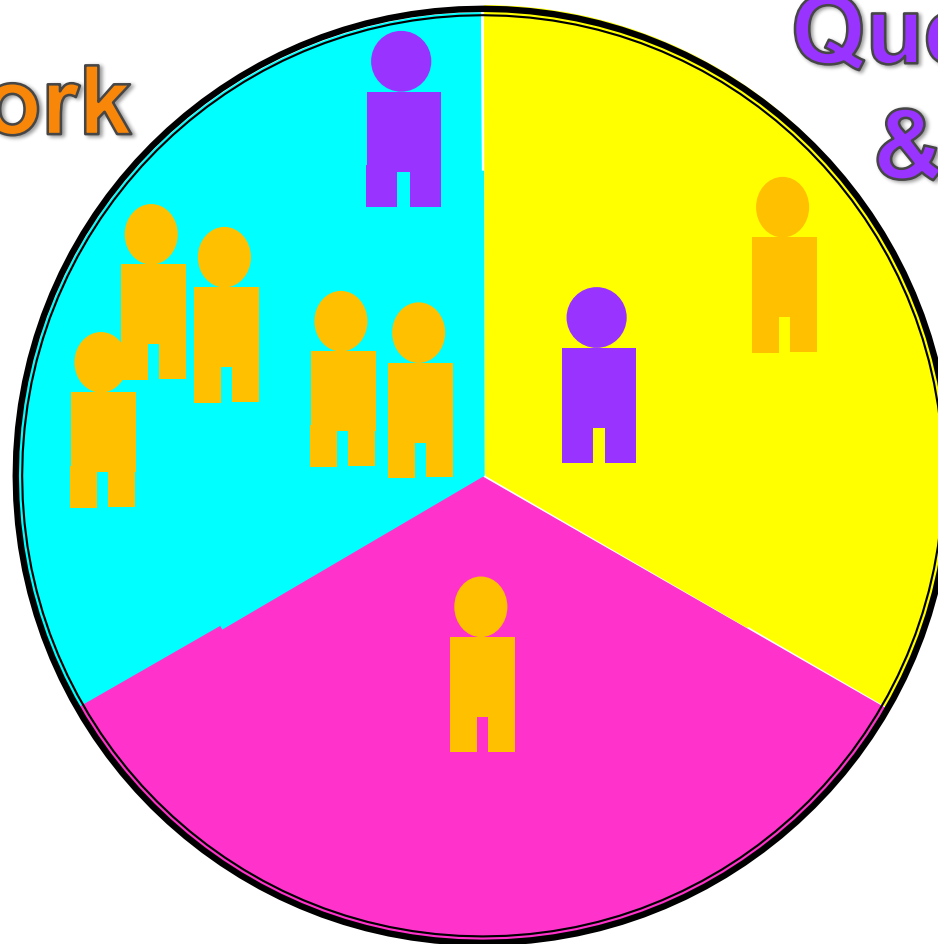


Lesson

Teacher \neq center

Classwork

Questions
& Help

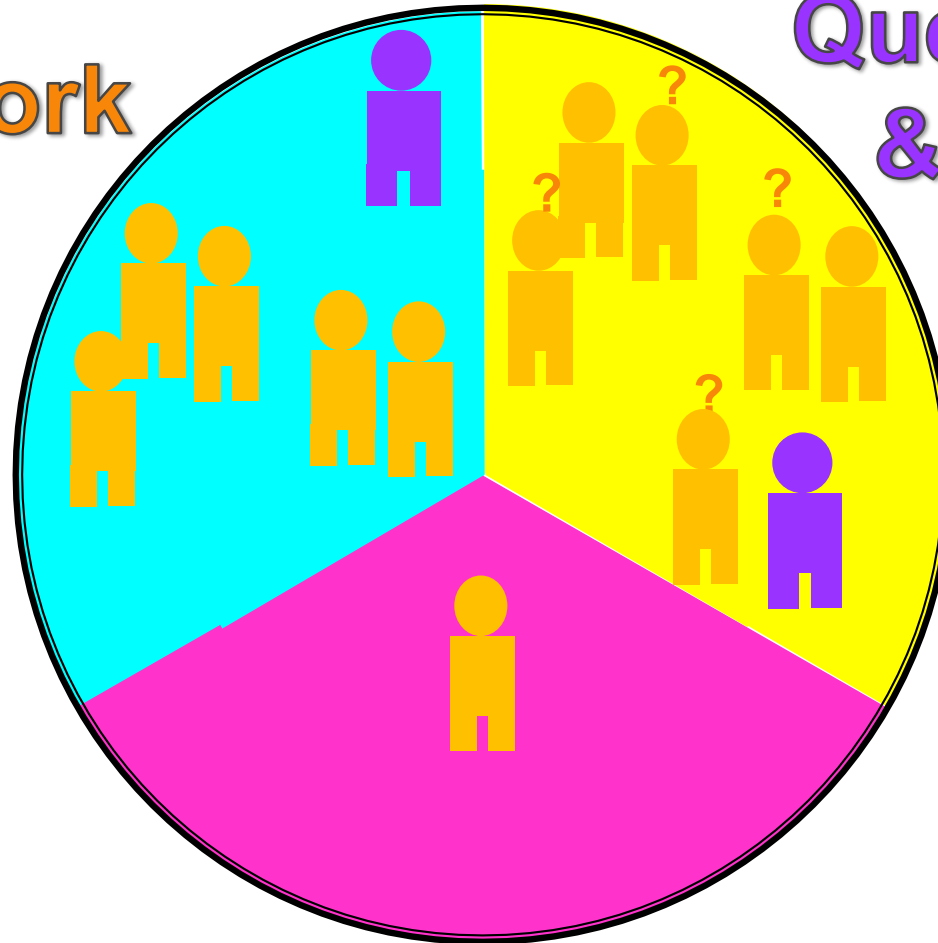


Lesson

More help

Classwork

Questions
& Help

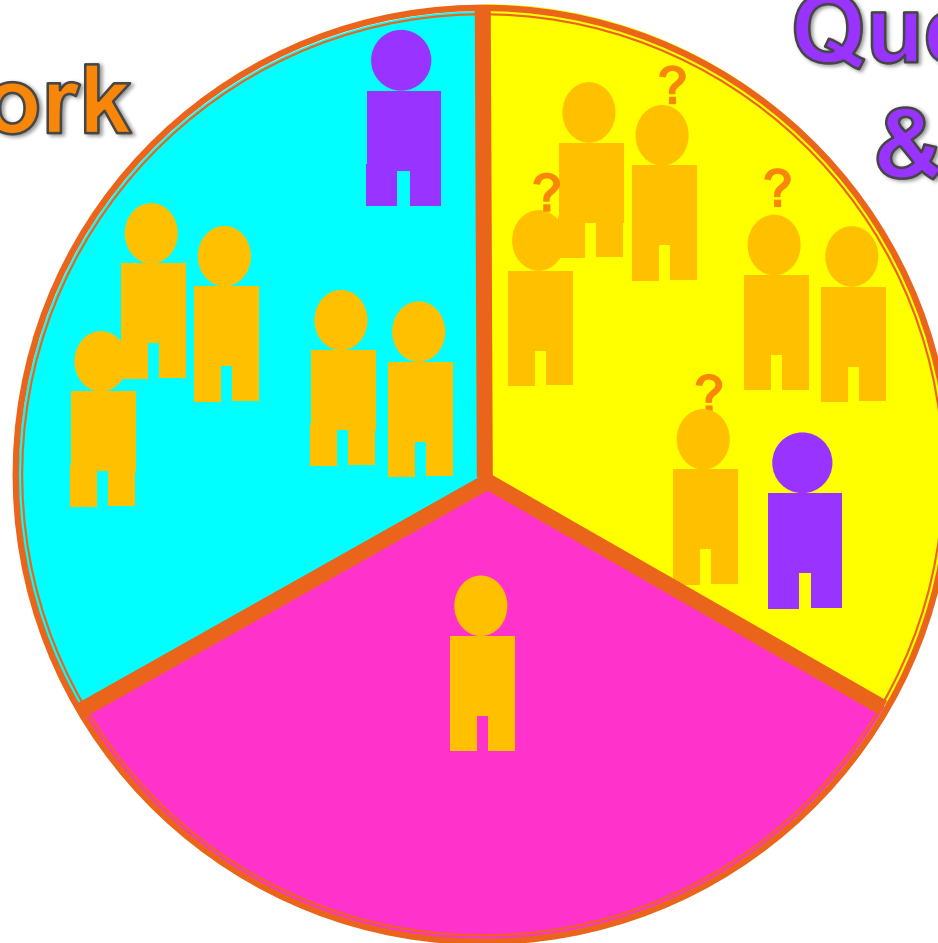


Lesson

Students = centre

Classwork

Questions
& Help

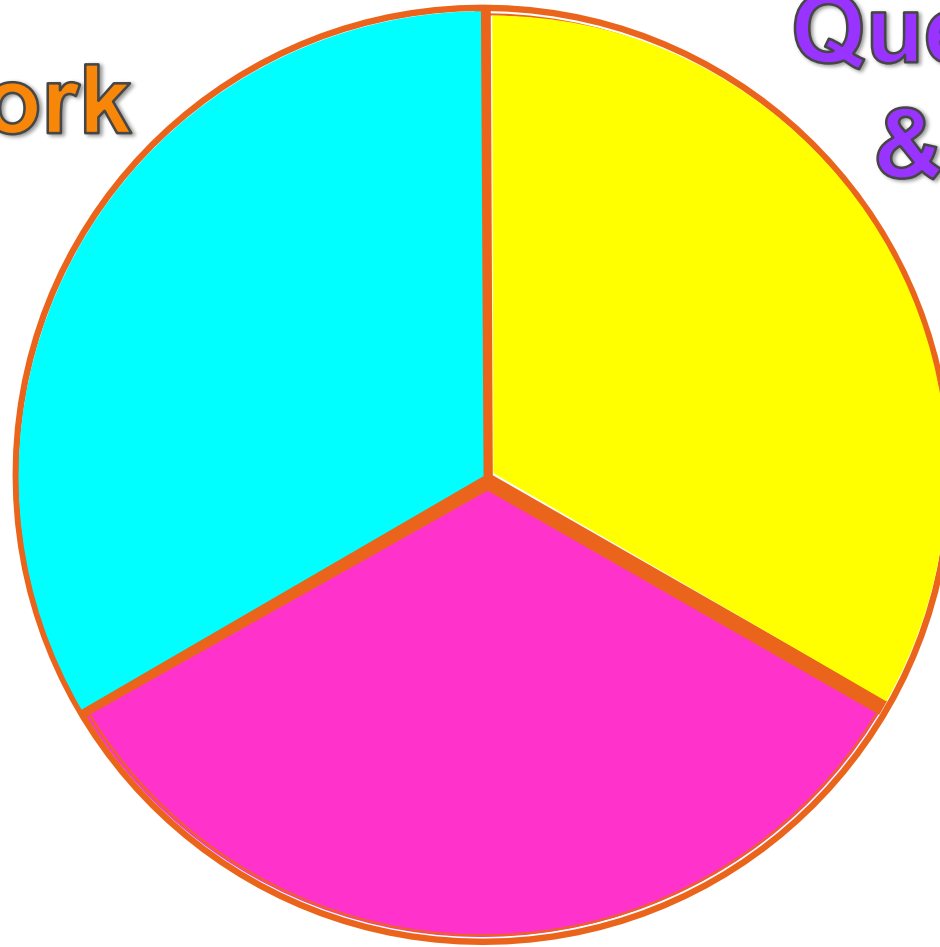


Lesson

This webinar:

Classwork

**Questions
& Help**



Lesson

PowerPoint + VoiceThread

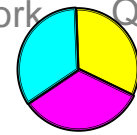
Lesson



+



PowerPoint + VoiceThread



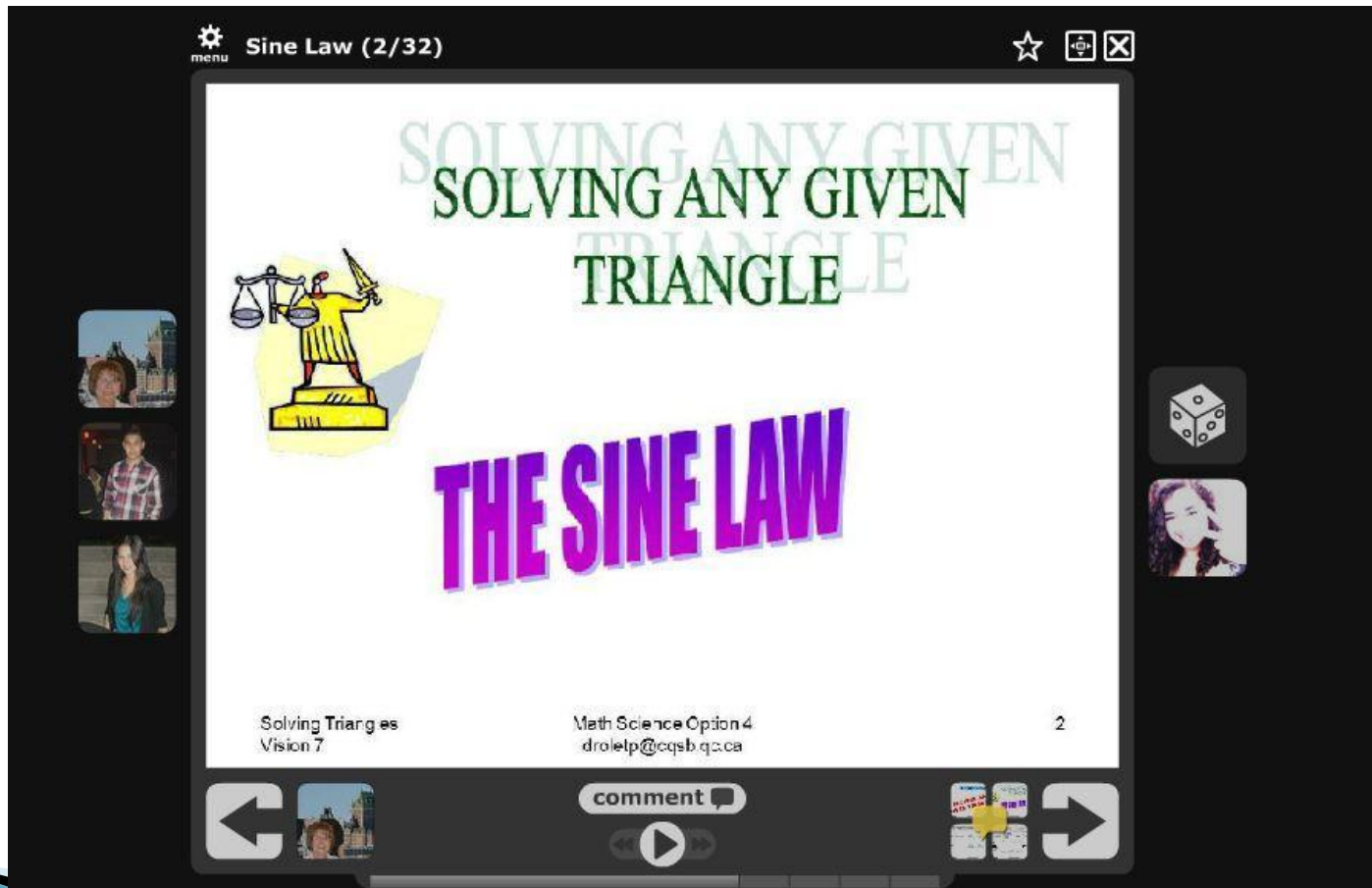
Lesson

The screenshot displays a VoiceThread interface for a lesson. The main content is a map of Quebec, Canada, with a legend in the top right corner. The legend includes symbols for International Boundary, Province Boundary, River, Major Road, Water, National Capital, Provincial Capital, and Other Town. A scale bar shows 0, 100, 200 KM and 0, 100, 200 Miles. The map is titled 'Quebec' and shows various cities and geographical features. The interface also features a 'learn' logo with a tree icon, a search icon, a video feed of a woman, a keyboard icon, a video feed of another woman, a sand timer icon, a 'comment' button, a play button, and navigation arrows.



PowerPoint + VoiceThread

Lesson

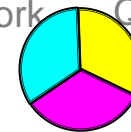


The screenshot shows a presentation slide within a VoiceThread interface. At the top left, there is a gear icon labeled 'menu' and the text 'Sine Law (2/32)'. At the top right, there are icons for a star, a plus sign, and a close button. The main content area features the title 'SOLVING ANY GIVEN TRIANGLE' in green, with 'SOLVING ANY GIVEN' on one line and 'TRIANGLE' on the next. Below this is a cartoon illustration of a yellow figure holding a scale and a triangle. To the right of the illustration, the text 'THE SINE LAW' is written in large, bold, purple letters. At the bottom of the slide, there is a footer with 'Solving Triangles Vision 7' on the left, 'Math Science Option 4 droletp@cqsbc.ca' in the center, and the number '2' on the right. The VoiceThread interface includes a vertical strip of three small video thumbnails on the left, a vertical strip of two more thumbnails on the right, and a bottom control bar with a back arrow, a play button, a 'comment' button, and a forward arrow.

VoiceThread:

- Free but can only make 3 VoiceThreads
- An unlimited account is very reasonable
- To watch, no account needed
- To comment, must have account
- Can have whole school account – teachers and students
- Easy to send link to VT to ALL students with one click
- Available as iPad & iPhone app
(Android not yet unfortunately)





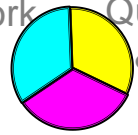
Camtasia

Lesson

Where do

	N
Family	5
Period	2
# Electron Shells	2
Valence Electrons	5

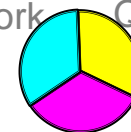
record the screen, video, & audio



Camtasia

Lesson

- ▶ Camtasia not free!
- ▶ Other screen casting tools



Lesson

Camtasia

- ▶ Video on youtube
- ▶ Video on VoiceThread

pre-webinar voicethread (15/17)

Let us Practice Balancing Eq

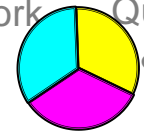
Example #1:

$$\text{H}_2(\text{g}) + \text{O}_2(\text{g}) \rightarrow \text{H}_2\text{O}(\text{l})$$

Example #2:

$$\text{Al} + \text{O}_2 \rightarrow \text{Al}_2\text{O}_3$$

comment



Lesson tips:

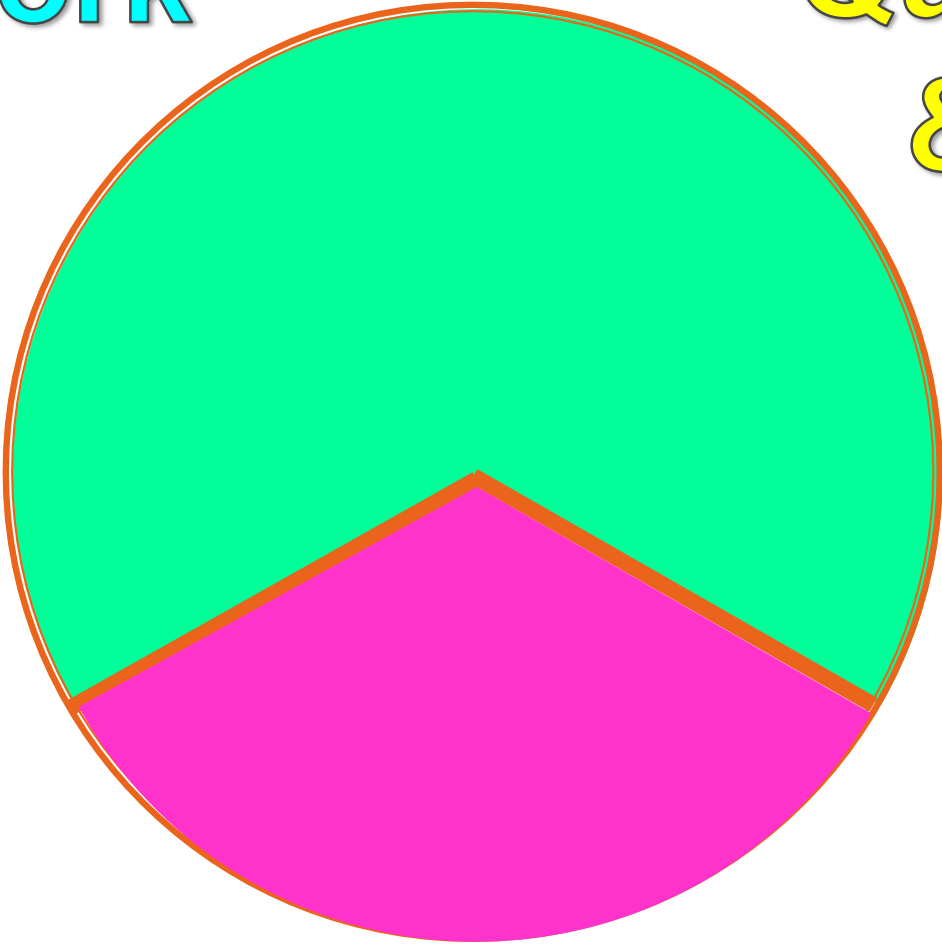
- ▶ Start with one lesson
- ▶ Work with a tool you know
- ▶ Keep it short (10-15 min tops per lesson)
- ▶ No more than 3 in a week.
- ▶ Teachers' shared lessons - Khanacademy
- ▶ Don't be a perfectionist!

Questions/ideas for lesson creation?



Classwork

**Questions
& Help**



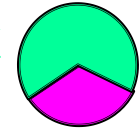
Lesson



I wish there was more time in my class
for my students to



Google Drive



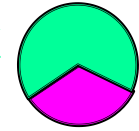
Sit prob exam
prep



calculations come to mind

- highlight formulas and the definitions of their variables
- Read through question(s) a few times to make sure you understand it M.Y
- Double check all your work/calculations, because trust me, little silly mistakes are the worst! KS
- Underline all the important information in the document and even make a table if necessary. P.R.
- Take your time M.Y.↑
- **Don't panic KS**
- **Don't Fail!**↑
- **Make sure you know which parts of a logarithm go where when converting to exponential. Always make sure you substitute the correct variables. P.R.**
- **BC Have your belly full. you can't afford yourself thinking about something else than the exam!**↑

Google Drive



Lesson

$$\frac{\partial}{\partial \theta} \int_{R_n} T(x) f(x, \theta) dx = \int_{R_n} \frac{\partial}{\partial \theta} T(x) f(x, \theta) dx$$

$$\frac{\partial}{\partial a} \ln f_{a, \sigma^2}(\xi_1) = \frac{(\xi_1 - a)}{\sigma^2} f_{a, \sigma^2}(\xi_1) = \frac{1}{\sqrt{2\pi\sigma^2}} \exp\left\{-\frac{(\xi_1 - a)^2}{2\sigma^2}\right\}$$

My Feedback After Vision 4 Evaluation

You wrote an evaluation today. It covered Vision 4, Polynomial Function. You had 4 questions. It is important you reflect on how you can improve. I want to know about your thoughts following this evaluation. What kind of comments? Of course I need specific comments. I do not want to see "It was easy" or "It was hard". Be specific. Such as ...

"At first I did not realize I had tobut after I underlined the key word..... Then I knew I had to I looked at my memory aid and I"

In this form, I am providing some information about each problem so you will remember what the question was all about. I want your thoughts for each problem.

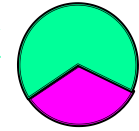
At the end, I have 2 general questions--BE HONEST!!

Keep in mind when you submit this information it is strictly confidential. I am the only person that will see this

Reflections after students have written an evaluation



Google Drive



My Feedback After Vision 4 Evaluation ☆

File Edit View Insert Format Data Tools Form (11) Help Last edit was made 133 days ago by peggydrolet097

peggydrolet097@gmail.com Share

Timestamp	A	B	C	D	E	F	G	H
1	Timestamp	This was the multiple choice question. What were your thoughts when answering this question? What strategies did you use?	I have to reveal -- I was very disappointed in your answers for this one. Why was this question unsuccessful for most students (some got it)-be honest. This was the inequality question	This question was about Felix and Gary. If you think you got it right what strategies did you use? If you think you got it wrong why is that so? What information was difficult? nAgain...be honest. It is the only way it will help you.	This question was the dolphin question. Why was this difficult-- if you had a difficult time? Why was it easy-- if you think you got this one correct?	During this vision, you had several activities. The effects of parameters a, h, and k (group project) You created 2 VT form Review Package. What activities helped you? Why? Did you really, honestly do all questions from review package--be honest. Did you copy your answers for the practice test from someone else?	You know what needs to be done in order to be successful. What will you do to change?	Name
2		I went to the first statement and tried to find the zeros. The tried to find out if statements 2 and 3 were either right or wrong. What helped me was that I a similar question in the Review	Right away I knew I had to make one side equal to zero. Then I used the Formula to find my zeros so that I could have (x-#) (x+#). Then I put it in an interval but I	I had trouble with this problem. At first I saw horizontal distance and got all excited and I thought I needed to use my distance formula. Now, after looking at it I	For this question, I saw slanted line and assumed right away that I need to use my sloping distance formula. My trouble for this problem was finding my x and y coordinates for my point on the parabola. I got mixed up and thought, for some reason, that I need	No I did not copy any answers. I found the group project for the parameters was very helpful! Seeing how different people presented a, h, and k helped me understand very well. Watching the other VT's from the review package gave me ideas as how to think when approaching certain questions. I also completed all questions from the	I need to make sure to ask questions when I need help and not just go by it and think I can figure it out. For sure I have to continue doing my homework and complete all worksheets and assignments given. I am also going to start	

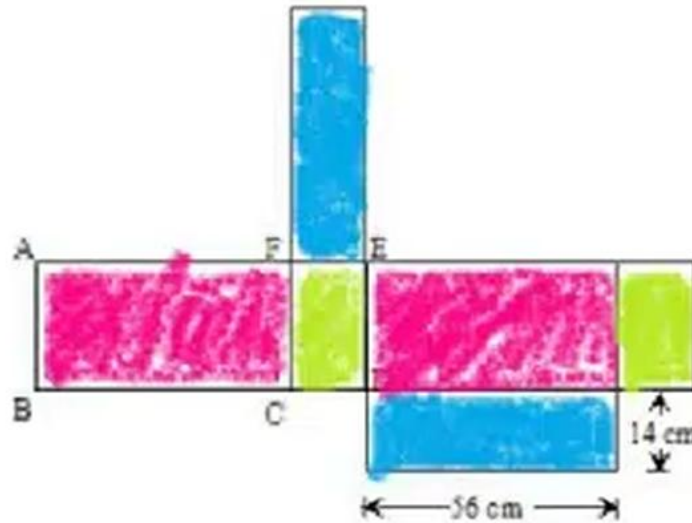


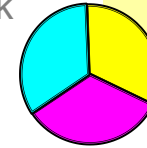
Lab activities

- ▶ Virtual labs: [ExploreLearning](#) or [PhET](#)
- ▶ Pre-recorded labs: [Andy Ross](#) or [Ray Venables](#)
- ▶ Using readily available materials: kitchen science, keep it simple!

Student presentations

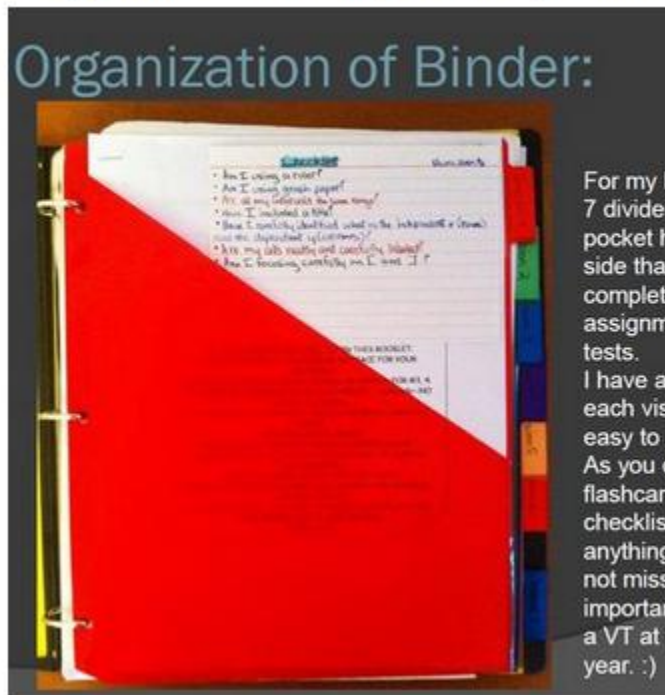
- Since we know that this is a right rectangular prism we know that the base and top, the sides and the lengths are





#SN4Portfolio-Your comments matter- You matter!

#SN4Portfolio "Binder Organization" pic.twitter.com



Organization of Binder:


For my 7 divider pocket has side that complete assignment tests. I have a different color for each vision so that it is easy to access. As you can see my little flashcard I use this as my checklist before I fax anything to make sure I am not missing anything important. I copied this from a VT at the beginning of the year. :)

Extra Reflections:

I find that the only way to be successful in any goal whether studies or life is to put your mind to it and try every possibility and give your all, not at the first sign of difficulty or an obstacle to give up but to keep trying. In math I find the sense of joy and accomplishment once finishing an assignment because I know I gave my all and really put my heart into the work.



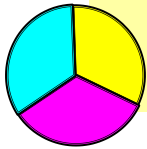
#SN4Portfolio "In order to be successful"
pic.twitter.com/PZTWha4T

 Peggy Drolet

5 days ago

Blogs

Classwork



Lesson

Questions & Help

michaelfarella
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Home About Assignments History Projects History Resources Resume

Uses of gases – Helium

Helium is a common gas that may be used daily for events such as parties with balloons or other objects that may require helium in order to operate. Many people wonder why helium has the ability to make a balloon rise for example, this is due to a characteristic that only helium has out of all gases. Helium is in the 8th group in the periodic table and in the first group. However it only has a total of 2 electrons in its one and only shell however it is still stable. From these characteristics we can conclude that helium is a light gas.

The two main gases in the atmosphere are oxygen and nitrogen. Helium is said to be 7 times lighter than nitrogen and 8 times lighter than oxygen. This allows Helium to have a minimal density compared to that of oxygen and nitrogen. Gravity works in a way that it pulls down things that have more density. Therefore, helium floats! However helium will only have this ability in Earth's atmosphere because of the mass abundance in nitrogen and oxygen, on the moon a helium balloon would sink to that ground as any other object would.

By michaelfarella • Posted in Uncategorized

3 questions square root function

$fx = 0.75\sqrt{x^2 - 36} - 4$

Find the properties of this square root function. (domain, range, etc. . .)

-
- Find fx^{-1} of $fx = 4\sqrt{x^2 - 72} - 6$
-

Solve the following inequality:

$$17 > 9\sqrt{x - 2} + 2$$

itsjessicacatime
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HOME ABOUT HISTORY PROJECTS HISTORY RESOURCES

LOUIS JOSEPH PAPINEAU- INTERVIEW&QUESTIONS POINT OF VIEW RESUME

MATH QUESTIONS :)

Posted on October 31, 2012 by itsjessicacatime

1)a) Find the square root function of the vertex is (-9,4) and the point (10,8)

b) If possible, find the zero and the y-intercept of this function.

Recent Posts
Math questions :)
How the square root function and the standard function are similar!

CuleChem

Just another blogs.learnquest.ca site



Compressibility of gases lab

Posted on October 28, 2012 by Miss Cule



We are going to be making a cartesian diver (instructions are here) to help us investigate the compressibility of gases. You are going to be designing and performing an experiment using the cartesian divers.

Here are some suggestions:

1. Does the size of the bottle affect how hard you have to squeeze to make the diver sink?
2. Does it matter if the bottle is not filled all the way with water?
3. Does the temperature of the water affect the density of the diver?

Suggest other experiments that we can be done with the cartesian diver.

report format to record your findings or you can use the same format for your report instead. I would also like to see digital photos or a video of the cartesian diver in action).

Upcoming Events

- 6 Class Cancelled (School Event)
- Compressibility Lab
- 7 Compressibility Lab
- 12 Compressibility lab final
- 13 Year 10

Tags
archive blog chemistry gases hands-on how-to lab must-do news objectives review

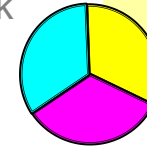
Biogroll
LEARNING Online

Chem A
Elias
Sabrina



Blogs

Classwork

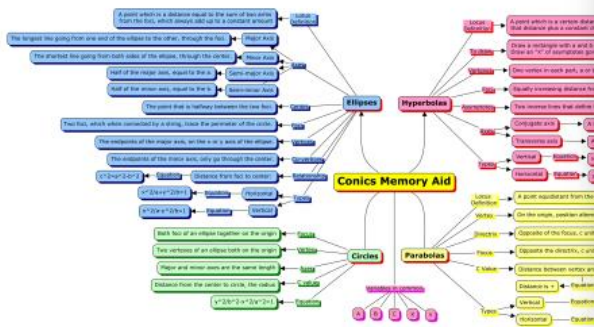


Lesson

Questions & Help

May 9, 2012

Another Cmap, this time as an official assignment memory aid. So not as much spit and polish as my other ones...



CATEGORY: UNCATEGORIZED

Math Put to the Test!

I picked b) from #11 on page 285 from the Carousel book.

Here is the equation:

$$\sin^2 x \cdot \cot^2 x \cdot \sec x = \cos x$$

First things first, let's identify the trouble-makers!

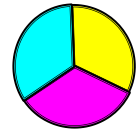
$$\cot^2 x = \frac{\cos^2 x}{\sin^2 x}$$

$$\sec x = \frac{1}{\cos x}$$

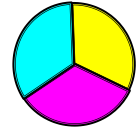
Now that all that is deciphered, we can plug it into the puppy we started off with:

$$\sin^2 x \cdot \cot^2 x \cdot \sec x = \sin^2 x \cdot \frac{\cos^2 x}{\sin^2 x} \cdot \frac{1}{\cos x}$$

Tools, tools, tools!



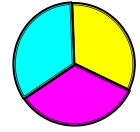
Tips, tips, tips!



- ▶ Student feedback
- ▶ Inform parents
- ▶ Read “Flip Your Class” by Sams & Bergman
- ▶ Join www.flippedclassroom.org forum



Twitter for #flipclass



- ▶ Partner
- ▶ Twitter
- ▶ Follow #flipclass
- ▶ Follow Monday night chats in twitter (8-9PM):

<http://tweetchat.com/room/flipclass> >>



Thanks for coming!

If you try flipping and you have questions, observations, problems flipping or if you want support use #flipclass on Twitter or contact us:

- Audrey's email: amcgoldrick@learnquebec.ca
- Peggy's email: droletp@cqsbc.gc.ca
- Kerry's email: kcule@learnquebec.ca

For more flip class resources, go to:

<http://tinyurl.com/learnflipresources> >>>>



