

Title of Session: Math Transformers - Quilts

Moderator: Patricia Chen

Title of File: 20080408mathtrans

Date: April 8, 2008

Room: Math Transformers Group

PatriciaCh: Hello Everyone - Welcome ..I'm Pat and I teach middle school math in Florida. Please introduce yourselves

BJB2: you might want to take a look at the resources the Pat has placed in this room for today

ChristiaH: I am student teaching 7th grade math in Houston Texas

GeorginaM: I am currently a student teacher and I teach 5th grade math in houston texas

SharonHe: I teach 7th grade math and a pre-algebra class in East Moline IL

MayraC: I am a 8th grade middle school student teacher in Houston TX.

MichelleLS: I teach 6th grade special education in Peoria, Illinois.

BarbaraAD: Hi I am Barb and I teach 5th grade Special Ed with Michelle.

PatriciaCh: the main focus in this room is how to teach math ... easier and fun

PatriciaCh: tonight's focus is using quilting as a tool to teach math

PamSK joined the room.

BJB2: welcome, Pam. Please introduce yourself

PatriciaCh: welcome ... I'm Pat I teach middle school math in Florida

JeanH: I teach 5th - 8th grades.

PamSK: I am Pam a middle school math teacher from Illinois

PatriciaCh: Please take the time to check out the files and links in this room

BJB2: if you've just entered the room, please introduce yourself

BJB2: and then Pat will start the discussion

SusieS: I teach 4th grade but might be looping with 2nd and 3rd soon. My name is Susie.

PatriciaCh: welcome to MathTransformers

DianaA: I'm student teaching; 7th grade math

PatriciaCh: is today the first time for everyone in this room?

SusieS: it is for me

LuciaGo: Hello, I'm a student teacher at a 8th grade math classroom

DianaA: me too

BarbaraAD: Yes it is.

LuciaGo: it is for me

PamSK: I am new and easily confused

MichelleBl: yes, here I am

GeorginaM: I've only been to tips and tricks

PatriciaCh: I am thrilled to see such a large turn out

PatriciaCh: again ... the main focus is how to teach math in a fun and easier way

PatriciaCh: I have used making a quilt to teach different math concepts...

SharonHe: I have been a quilter for more than 30 years. I have been taking my quilts to school to show the students the geometric properties of symmetry and reflection and also basic shapes. The seventh graders are not impressed. My SpEd kids made a quilt after studying Women in History. They drew pictures and colored with crayons. I set up a quilting frame and my kids quilted around the edges. It hangs in my classroom.

PatriciaCh: you can make it age appropriate

PatriciaCh: good for you Sharon ...

PatriciaCh: I do paper quilting with my students

PatriciaCh: it starts with a lesson in tessellations ...

PatriciaCh: they draw out the tessellated shapes color it in ... then create a pattern to work with

PatriciaCh: they make a template in this process .. you can incorporate the concept of measurement

MichelleBl: I like to teach math in my science lessons

PatriciaCh: any one has questions or comments?

ChristiaH: It sounds pretty cool.

DianaA: yes it does

PatriciaCh: this is one way of differentiating instructions

LuciaGo: I like this idea

SusieS: should I be seeing anything else besides just what you are typing? Sorry if this is a dumb question.

MichelleBl: science is a great way to use measurement and teach metrics, units

SharonHe: I have transferred their work and fused it to fabric for more quilt like products

PamSK: I have used this idea with making unit tiles using tessellations. You can find a lot of samples of geometric shapes in floor or ceramic tiles online.

ChristiaH: If you detach your chat in the actions menu then you can explore the files and links in the room while you chat

DianaA: how long do you do this activity

PatriciaCh: Susie ... you should see words ... I have lessons plans and links in the about me room

PatriciaCh: it depends on the students and what other extension I want to add on

MichelleBl: my husband had his students design kites where they had to measure and build the kite. you could do a tessellation on the kite

PatriciaCh: yes you can ...

SusieS: should I look at those links when we are finished chatting or was I already supposed to have looked at them

GeorginaM: That's cool I like the kite idea...

GeorginaM: what grade was this done in?

SharonHe: what did he use to build the kites? Paper or cloth? Dowels?

PatriciaCh: the students will measure each block and try to cut out paper and glue down the shapes

MayraC: I have seen some of the schools I observed that they use the tiles on the ceiling and students draw tessellation drawings on them. Looks Neat!

BJB2: . o O (the resources in this room will be here for a month)

MichelleBl: 4th and 5th grade with tissue paper of different colors and dowels

PatriciaCh: for the kite ...fabric, glue, dowels and string works best

PatriciaCh: you can fly the kite ...my daughter constructed one in 6th grade ... and it flies

BarbaraAD: I have had my students use just the plastic shapes to design quilt patterns. all the shapes have to fit in a square .

PatriciaCh: Susie ...go into the welcome tab

BJB2: the links are on the web page that is now behind your chat window if you detached

ChristiaH: The links are on the main room page on the left under the little picture of the room

MichelleLS: I really like the idea in Paper Quilt- sample lesson where the concepts of translation, reflection, and rotation are taught. To be able to see this taking place in a quilt would be helpful to my visual learners. Using quilts to understand patterns and continue patterns is also fun.

PatriciaCh: all you have to do is start with a simple idea ... and it evolves

SusieS: ok, thanks

PatriciaCh: what I like about it ... the students have to measure carefully

BarbaraAD: I like your idea Michelle of using the translation and reflection.

SusieS: sorry...where is the welcome tab...is it behind the detached page

PatriciaCh: yes it is

JeanH: My sister did a history quilt with her second graders. They each got a square of cloth and used the paint that you can use for drawing.

PatriciaCh: you can use this idea in any content area

MichelleBl: I've seen the paint and fabric quilts, they can be very impressive looking

PatriciaCh: and students are very proud to show off their work

PamSK: How long would a project like this take normally?

PatriciaCh: for a simple lesson ...tessellation only ... it can take a week ...

PatriciaCh: I have my students for 45 minutes each day

MichelleLS: I have seen where students can create quilts as a way to introduce themselves at the beginning of the school year. One block is their picture and the other is their information. You tie the entire class together. A great idea for an open house.

SharonHe: At this time I am doing my Capstone project. The students are building scale models of the house they have designed. I used graph paper to draw the rooms and now they must measure and draw the windows and doors on the foam core boards to construct the house in 3d. Most do not know how to use a ruler and it is taking so long.

SusieS: I've made a paper quilt in social studies and the kids had to figure out how many quilt pieces we needed to make a particular size quilt

PatriciaCh: that is the problem ... students do not know how to measure or the differences between customary and metric units

PamSK: Has anyone tried the tessellation quilt idea with 8th graders?

PatriciaCh: I like the quilt to tell a story

SharonHe: Has anyone had any luck teaching measurement? The art teacher is so frustrated because they do not know how to go beyond the 12 inch ruler.

BarbaraAD: I am teaching fractions with unlike denominators using the ruler and denominators of 2,4,8, and 16 to reinforce measuring and adding on fractional parts. I can see having the students measure out each shape exactly and using it in a quilt.

PatriciaCh: I do the project with 7th graders

JeffC: hmmm... get them a 13 inch ruler?

TracyN: For measurement I use I have my students measure with objects.

MayraC: Sharon, what grade do you teach again?

ChristiaH: I did a cool lesson where my class walked around the school to measure the perimeter.

SharonHe: My 7th graders did a good job with their translations. Go big and then they will try small

PamSK: I think they just do not get enough practice measuring anymore

MichelleBl: I have found that they have to keep measuring almost every week to start to get it

SharonHe: I teach 7th

PatriciaCh: Pam you are right ... the kids do not have the practice

SusieS: the paper quilt we made showed various states surrounded by other quilt pieces describing their land forms, natural resources, etc.

PatriciaCh: that is a great one - Susie

SusieS: thanks

JeanH: Some of the quilts have been used for thank you's and for retirement gifts with each one of the students putting a "memory" on it.

MayraC: That's neat

ChristiaH: My kids have the most trouble with measurement when they have to convert from one unit to another

PatriciaCh: the 8th graders can make a memory quilt ... the years for 6 - 8 grades

JeanH: Measurement is difficult for many of my students. Having more hands on ideas is great!

AnnNg: Anyone has a good trick on teaching metric system?

GeorginaM: Patricia have you tried to reuse the paper quilts to teach a different concept

MichelleBl: conversion is one of those skills where I can do it, but I sometimes have a lot of trouble trying to explain it

PatriciaCh: do the King Henry rhyme and teach them to move units like the decimal system

ChristiaH: I agree with you Michelle

PamSK: I ask the science teacher to handle the bulk of metrics

MayraC: I give my students a warm up in measurement every day so that they keep reviewing

SharonHe: By the end of my project I hope they will know what side of the ruler to use. One student asked how to do this. I said turn the ruler around. They are stuck on left to right

SusieS: I haven't heard of the King Henry rhyme

AnnNg: I tried that and they would forget a few months later

MichelleLS: A family member received a quilt as a gift that had pictures from the past on each square. Now that really told a story.

SharonHe: What is the King Henry rhyme?

TracyN: what is the Henry rhyme?

AnnNg: King Henry Died By Drinking Chocolate Milk

ChristiaH: KHR?

LuciaGo: Yes I want to know too

LuciaGo: Oh

AnnNg: K for kilo, H for hecta , D for Decka, B for base units like meters, liters, grams

PamSK: That is how our science teacher taught metrics

LuciaGo: thanks

PatriciaCh: thanks Ann ... also explain to the students ... they are dividing by 10

MichelleBl: we use metrics in our science experiments and there is a great two page article in our science book examining why the US and only one other country in the world are not metric

TracyN: Oh, easy to remember

ChristiaH: That is cool

AnnNg: Deci, Centi, and Milli

LuciaGo: Or we can make the students come up with one

LuciaGo: rhyme

LuciaGo: I have seen this in 6th grade

PatriciaCh: Or make a song or rap

AnnNg: yeah...but have a hard time remembering where to start

SusieS: songs work well with my sheltered English students

PatriciaCh: the students will remember it much quicker

MichelleLS: I really try to get my students to picture an object that represents a measurement. The numbers are difficult for them to understand, but to say that a mm is the width of a dime makes sense to them.

GeorginaM: i am always asking my students to measure the desk or books or even the windows... they really like it and they are getting better at it.

SusieS: we measured our desks and books today...

PatriciaCh: now ..they can measure and make a quilt

ChristiaH: I put shapes on the floor with tape and have the kids measure those.

DianaA: yes I remember something like King Henry Danced Merrily Down Central Main

PatriciaCh: I like this one ..

LuciaGo: me too

ChristiaH: I stole the idea from a classmate

SusieS: same here

PatriciaCh: ideas are meant to share

JeanH: I have had my students measure three objects in the room using mm, cm, and m.

MichelleBl: they need to see metric applicable to their lives and that is hard because we are not measuring in metric on everything, but now most food and drink packages do have both the metric and customary units on them

PatriciaCh: "King's Foot" is a great short novel to read to the students

DianaA: I've never heard of the book

PatriciaCh: Anyone still do Flat Stanley

GeorginaM: yes it is I have heard of it.....

BarbaraAD: yes but even with the pint, qt, gal measurements the kids had trouble.

LuciaGo: I have not heard about it.

PamSK: Our science teacher plays a game on pick the object in the room that is 3 cm and she then lists 4 objects that she pre-measured. The kids love it.

PatriciaCh: you can have students measure each other's Flat Stanley

PatriciaCh: anyway back to quilting ...

ChristiaH: What is a "Flat Stanley"?

SusieS: he is a character from a book

PamSK: thanks, I was afraid to ask

MichelleLS: Pam I like that idea. The students would have fun. I'll have to try it!

ChristiaH: OK I get it

ChristiaH: thanks

PatriciaCh: Flat Stanley ...is an elementary grade level project ...goes with a book ...

DianaA: oh I see

MayraC: Never heard of it

PatriciaCh: any more ideas we can use to extend the quilting project?

ChristiaH: I went to Elementary school a long time ago in a land far away.

SusieS: I've seen teachers use it in 2nd grade

GeorginaM: how can we reuse the paper quilts... to teach another concept?

MichelleLS: Oriental Trading has a hands-on craft catalog that has good quilting activities and even tessellations with fish. They are very inexpensive and the students enjoy the activity.

PatriciaCh: http://www.pleasanton.k12.ca.us/valley_view/second/wolfe/stanley.html

MichelleBl: our math books use cm graph paper to show percentages and this could be extended to a quilt

JeanH: Why not design with items measuring cm, dm, or even adding mm to a patch?

PatriciaCh: area, perimeter,

ChristiaH: I am reading in the links about how you can use quilts to visualize shapes.

PatriciaCh: you can ... why not??

DianaA: yes!

SharonHe: There are dozens of books for history and patterns go beyond any imagination. Each has a name and a story as to where and why the name is chosen. If any one wants to make a class quilt just contact a local guild grandma and it can be done.

MichelleLS: Good idea Jean. They could also incorporate different shapes into the patches.

PatriciaCh: quilt is a simple idea ... you use it however way you need it

TracyN: that's cute

LuciaGo: Oh that is neat, I love the idea.

PatriciaCh: in history ... make it more pictorial

DianaA: I have to agree

JeffC: here's a redirect for Patricia's flat Stanley project:
<http://snurl.com/flatstanley> [www_pleasanton_k12_ca_us]

SharonHe: I think that quilting is great for fractions. Part of the whole, measuring in quarter inches percent

BarbaraAD: what about using fractions - 1/4 have to be green triangles or something

PatriciaCh: blocks do not have to be tiny squares or triangles

SusieS: my mom is a quilter and I hang a quilt she made me when we talk about shapes (I also used it to teach kindergarteners about the letter q and pretended to be a queen and the quilt was my robe...

GeorginaM: I like that fraction idea....

PatriciaCh: perfect ..Barbara

MichelleLS: In Geography make it the states.

JeanH: Yes, Michelle, and perhaps the shapes could be made with different materials to help with tactile learning.

MichelleLS: I think we're onto something here Jean. We might have to give it a try.

PatriciaCh: as you let the students work on the project ... you will be amazed how fast they learn

PatriciaCh: also jig saw the project

SharonHe: Remember you do not need to sew all can be ironed together

JeanH: If you use velcro, students could make different patterns for their classmates to guess the next pattern and finish.

PatriciaCh: This does not have to be a traditional quilt

MichelleLS: Has anyone used material and actually had someone sew it together? This would be a great display!

GeorginaM: I was just thinking that different groups can create a section and then bring the quilt together to see the whole picture

PatriciaCh: great idea ... about the velcro

SusieS: I like the velcro idea

BarbaraAD: or design patterns

TracyN: I'm just gonna sit back and observe because these ideas are so interesting..

DianaA: Yes I do too

PatriciaCh: it is a great way to do the tessellation too

PatriciaCh: no fair

JeanH: Yes, I have seen one made at the 2nd grade level. I really liked it.

PatriciaCh: you get a transcript of this discussion

PamSK: Can this be done on the cheap? My budget is very low for classroom supplies and I have about 120 kids

ChristiaH: You can do paper quilts.

SusieS: how do we get a transcript

PatriciaCh: you can ask for construction paper

PatriciaCh: Susie it is sent to you automatically

SusieS: thanks

BarbaraAD: or try to get old wallpaper books

PatriciaCh: with that many students.. paper is good ... wallpaper

DianaA: so do the kids glue them together

PatriciaCh: and the students can also work at home

MichelleLS: Pam Check out the oriental trading I mentioned earlier it is cheap!! (and the pieces are cardboard, so they are sturdy. We have had one hanging on the wall the entire year !!

SusieS: wallpaper books are a great idea

MichelleLS: Great idea Susie!!

PamSK: thanks good idea

PatriciaCh: ask the store to donate it to you

SharonHe: I have more fabric than I will use in my life time. So do most quilters just ask the kids and they will give you fabric.

JeanH: Watch at sales or even garage or store closings. I've found a plastic container of yarn for a few dollars and cloth next to nothing. The yarn makes a good tie off.

PatriciaCh: yes quilters have fabric stashed away

MichelleLS: If you know someone who sews, they always have scraps. My grandma saves her scraps and has been able to make a few quilts.

PatriciaCh: also the remnants are inexpensive at Joann's Fabric

PatriciaCh: old shirts, t-shirts..

DianaA: these are all great ideas

MayraC: Most parents are willing to help out if you ask

LuciaGo: I agree!

JeanH: Also, old books of wallpaper designs can be gotten for free if you ask at those stores. They also have great patterns to discuss as well as being made into quilt squares.

GeorginaM: that true...

PatriciaCh: don't forget to involve the parents too

SharonHe: Fabric that stretches will not do. avoid t shirts

DianaA: why is that

MichelleLS: Make it a part of a wish list for parents at the beginning of the school year.

GeorginaM: why avoid t-shirts

PatriciaCh: you have to be very careful

PatriciaCh: I am involved with high school robotics

PatriciaCh: we made a quilt using the t-shirts of the every team from National Competition

SharonHe: T shirts ravel and stretch. Need to stabilize or your shape will not be a square but a trapezoid

PatriciaCh: and we had to be very careful - not to stretch out the block

JeanH: I wonder if those tablecloth plastics in a roll would make great squares for students to use permanent markers or art supplies that would stick.

SusieS: that could be a good lesson for kids as well

PamSK: Sounds complicated

PatriciaCh: I like paper the best ...

DianaA: sounds a little less complicated

BarbaraAD: so do I

PamSK: That sounds like something I could manage

PatriciaCh: most students will bring home quilt so they can work on it

PatriciaCh: they have the design ... and paper allow them to change colors as they see fit

SharonHe: I have such a hard time getting any student to work at home. Especially 4th quarter. Any ideas?

DianaA: It's neat. I love the fact that the students get so into it

SusieS: I have found paper to be the easiest to get and use with my kids

PatriciaCh: perfect time to do this ...

GeorginaM: paper does sound easier to use.....

JeanH: Michelle had students make a set number of patterns for each geometric concept like perpendicular as well as shapes. Students made a town using these ideas. It would be a great small group project.

PatriciaCh: make a kite ... write a parallel Math Curse ...

ChristiaH: Maybe give the kids a lot of freedom to be creative and then they will put more time in.

LuciaGo: Yeah paper sounds like a better idea.

PatriciaCh: have the students ...create a game.... rules ... and make the game board and playing pieces

DianaA: what is a parallel Math Curse

SusieS: a quilt could be made with all the different geometry concepts displayed and hung in the room for review

GeorginaM: that's true too, if we give them a lot of choices they become more creative

ChristiaH: I like the game board idea.

LuciaGo: I have to say that kids at any grade level love the freedom to work and they can be so creative.

MichelleLS: If my students know that it will be displayed and that if their piece is missing it will stand out, they are always willing to get it done. They are a piece of the puzzle and are needed to make it complete!

JeanH: Percentages too

GeorginaM: I like that geometry review idea...

PatriciaCh: I read the story to the students ... they have to write a story ... math content only ...math riddles

MayraC: probability?

PatriciaCh: they dedicate the book to some one ...illustrate ...etc ...

PatriciaCh: to grade ... create a rubric

MichelleLS: Great idea with the Math Curse. You could also do something similar with the book A Day With No Math.

GeorginaM: a rubric seems to be the best way to go about grading it....

SusieS: rubrics are so helpful and my students usually do much better when we use one

SharonHe: do you use rubistar to create a rubric?

PatriciaCh: yes it is you can involve your students in creating the rubricI usually do this after we do one project ... so they students are familiar with rubric as a concept

ChristiaH: I have not seen a lot of rubrics where I student teach.

PatriciaCh: not always ...

MichelleLS: Rubistar is a great way to create a rubric on-line. Makes it quick and easy.

SusieS: I've looked at the rubistar site, but haven't used it

MichelleBl: I love rubistar, mostly I just adjust the ones they already have made

BarbaraAD: isn't there a book about a cloak made with different shapes? maybe a story like that with a rubric to assess it.

SharonHe: EASY? I spent 3 hours for 3 rubrics

GeorginaM: yes I like rubistar....

MichelleLS: I find it easier to create a rubric after the first time I do a project also.

PatriciaCh: yes ... Joseph ?

PatriciaCh: I cannot remember now

JeanH: I think the initial time is longer, but it gets faster, plus you can save routine ones.

ChristiaH: The more you do it the easier it gets.

PatriciaCh: I don't like to reinvent the wheel I modify what is there

MichelleLS: There is a book Barb. I have it in my room. It's one of the books I received with that grant.

SusieS: just like anything in teaching...

JeanH: I agree.

TracyN: I agree too

PatriciaCh: also when I use a project that I found online ... I tweak the rubric to my needs

GeorginaM: yes modifying works for me all the time

DianaA: that's definitely true

PatriciaCh: modifications save my time and headaches

BarbaraAD: with my special ed class I am always modifying things.

LuciaGo: I have to agree.

ChristiaH: I am constantly modifying my lessons throughout the day.

PatriciaCh: you can do the same with projects update the links or info

MichelleLS: I was thinking the same thing Barb.

PatriciaCh: that is a occupational hazard

DianaA: even from class to class

PatriciaCh: every class is different ... what worked in one ...not necessary in the next class

DianaA: yes I've come to learn that this semester

PatriciaCh: you have to think fast on your feet

ChristiaH: Luckily my best kids are first so they manage even though my lesson gets better as the day goes on.

GeorginaM: that's very true.... happens all the time

SusieS: I quickly looked at the differentiating instruction for math...can't wait to read it more thoroughly

PatriciaCh: math can be fun I find projects show the students how it is linked to the real world ...

ChristiaH: The differentiated instruction class I took at UH was one of the best classes I had.

MayraC: with DR.O

PatriciaCh: as you said as the day goes on ... you change your presentations

SusieS: we just learned about polygons and I had my students take pictures of polygons in our school neighborhood...which we then made into a classroom book

MichelleLS: The project I am completing for Capstone 1 is linked to the real world. The students really enjoyed it and it had more meaning than just the standard lesson.

PatriciaCh: the students see the application

ChristiaH: Connections are a great tool.

BJB2 checks the clock on the wall

PatriciaCh: we have about 3 more minutes ...

PatriciaCh: any last thoughts?

PatriciaCh: or comments...or ideas?

BJB2: The next Math Transformers will be on May 13. Any topic suggestions?

ChristiaH: I think the quilting sounds cool, I hope to explore it more.

JeanH: I really enjoyed the exchange.

BarbaraAD: Thanks for all the great ideas.

PatriciaCh: there are a lot more lesson plans out there

GeorginaM: thanks to everyone for the many different ideas, which I plan to use the near future

SusieS: thanks...

DianaA: Yes thanks for the ideas

SharonHe: Thanks for sharing everyone.

MichelleBl: thanks everyone

MayraC: I think that it can be a fun project to teach students. Thanks

PatriciaCh: thanks for sharing

ChristiaH: Thank you everyone and take it easy.

MichelleLS: Thank you for all the great ideas everyone!

LuciaGo: Thanks everyone for the great ideas

JeanH: Thank you!

PatriciaCh: hope to see you all in the next chat ..

DianaA: I'm planning to implement many of them

PatriciaCh: let me know how everything turns out

BJB2: Thanks, Pat...lively discussion!