

**Title of Session:** Math and Science Special Needs Resources from ENC

**Moderator:** Gail Hoskins

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Room: After School Online Room

**BJ:** Welcome to tonight's discussion from ENC on Math and Science Special Needs Resources

**BJ:** we usually start discussions in Tapped In with brief introductions...

**BJ:** I know Gail has some wonderful resources for us!

**BJ:** I'm an art teacher in Pennsylvania and a helpdesk volunteer for Tapped In

**BrandinD:** I am Brandin a student at U of H

**SandyG:** I am the math specialist for a K-8 district in New Jersey

**AnnEKW:** I'm a student teacher at UH

**KarinaJC:** I'm Karina also a student from U of H

**DebriccaA:** Hi! I am a Child Care Provider from Louisiana. I am currently working at a daycare.

**CherylWi:** I am a preservice teacher in Houston TX

**TianaV:** I am preservice 4-8 science teacher at U of H

**CrystalB:** I am a preservice teacher receiving my masters at GMU and working with those with special needs

**PantelisC:** I am a linguistic student at UWS Swansea and doing research on Tapped In as a Foreign Language Learning tool

**JenniferA3:** I am also a student teacher at UH

**GailH:** I am Gail Hoskins, your presenter. I am the Outreach Coordinator for the Eisenhower National Clearinghouse, a K-12 math and science resource center. We are located in Columbus Ohio. Our web site gets two million page views per month. Our web site (and our print products) are ALL free and advertisement-free. We are funded by the US Department of Education and have been around since 1992.

**KassieS:** I am a SPED teacher in VA and a student in grad school

**KassieS:** I teach English and Civics

**KristenFS:** hi my name is Kristen and I'm a preservice teacher at u of h for middle school science and math

**GailH:** I am so excited to see so many interested folks!

**GailH:** Anyone else to introduce themselves?

**AimeeF** is in the PUMA program @ UH

**AimeeF:** EC-4

**GailH:** I am going to be sharing a number of resources with you today.

**GailH:** Any more intros from those of you just arriving?

**LynnMD:** Sorry I'm late

**BJ . o O** ( a reminder for newcomers to click on detach under the actions menu in the top right of this chat window )

**LynnMD:** I am a student teacher at Robert's Elementary School in Houston, Texas

**MonicaHa:** I am a pre-service teacher from the University of Houston.

**RobinLe:** is this the group for math and science special needs?

**GailH:** That will be particularly helpful, given our large size and b/c at least a few times, I will say something that is a good paragraph long. So use the Detach in the Action pull-down to be able to see more of the chat.

**GailH:** Yes, and I will begin the Math and Science Special Needs now.

**DebriccaA:** Thanks for the reminder.

**RobinLe:** great

**GailH:** I am going to be sharing a number of resources.

**PantelisC:** great

**DanyelleG:** Hello, I am a preservice teacher from the University of Houston

**BJ . o O** ( I'm also going to ask everyone to wait until Gail asks for questions before you type anything )

**SandyG** listens intently

**GailH:** You will get a transcript when you leave the event and...

**BJ:** that will help us all follow the chat

**GailH:** I have a virtual handout (a web address that I will give) that will help summarize what I have said.

**GailH:** I will show a few resources to give you an idea.

**GailH:** I'd like us to look at A handful, plus one, of habitats: now I remember!

**GailH:** The authors of this article have found that memory devices can be helpful to students with learning disabilities. In the context of a study of habitats, the authors suggest specific techniques for recalling and organizing information. Mnemonic techniques such as acronyms and visual imaging inspire creativity, while visual displays help students organize information.

**GailH:** Please click on the blue words that follow, and a new window should open.

**GailH:** <http://www.enc.org/features/focus/archive/equity/document.shtm?input=FOC-001784-index>

**GailH:** When you get it, skim the article, and then come back to this chat window. Just a QUICK skim please!

**AimeeF** hears this weird noise and it doesn't go

**PantelisC:** good for me...interesting

**KassieS:** Skimming

**GailH:** We will be doing this quite a few times, so it helps if we get the bugs worked out now.

**CrystalB:** Got it! Give Thanks

**GailH:** Memory devices can be particular helpful to special needs learners, but how about for everyone else?

**KristenFS:** I still remember many memory techniques teachers used in school

**SandyG:** they help me, i always use mnemonics to remember lists of important facts.

**DebriccaA:** I think that they can be helpful for all learners.

**KassieS:** I have always found them helpful

**AimeeF:** me too

**KarinaJC:** it helps students understand it better

**KassieS:** Please Excuse my dear aunt sally for what you solve first in an equation

**GailH:** So one point I would like us to remember from tonight is this: that many things we may do specifically for a special needs learner will also be good for everyone.

**DanyelleG:** I agree with charts, when I am taking a test I can visualize the charts and remember

**KristenFS:** I still remember the quadratic formula thanks to pop goes the weasel

**AnnEKW:** many times an abstract concept is too far off, memory devices are a strong tool

**GailH:** Parentheses-exponents-multiply-divide-add-subtract -- That's for Aunt Sally.

**LynnMD:** We just did a visual chart in class today and it really helped our children who are struggling

**KassieS:** Sorry I left that part out

**DebriccaA:** That's how I learned the order of operations, too.

**KassieS:** Trying to keep up

**GailH:** I am going to talk about another article, so may I have your attention for a moment.

**KristenFS:** ok

**GailH:** Sami Kahn is a name that some of you may know. She is a big person in Special Education.

**GailH:** She wrote an article for ENC (in our print magazine, that I'll talk about in a moment.)

**GailH:** The National Center for Education Statistics says that almost half of students with disabilities spend 80 percent or more of their day in regular classrooms. The author, Sami Kahn, of this article offers practical advice to help teachers make the standards-based classroom work for every child. She suggests modifications for the inclusive classroom in these areas: vocabulary, instructional delivery, text, materials, and assessment. She then presents a typical elementary science activity and applies the modifications for students with learning disabilities, emotional disabilities, and visual, hearing, and motor impairments.

**GailH:** Can you take another at this next link (in blue)?

**GailH:** <http://www.enc.org/features/focus/archive/special/document.shtm?input=FOC-003135-index>

**GailH:** Three minutes off to scan and return, please!

**LynnMD:** We have two special education children in our classroom. They pull out for certain periods of the day but our with us most of the time

**KassieS:** got and going...

**PantelisC:** In regards with the first article I may say as a foreign student I find it easier to understand when visual displays are shown rather than a simple lecture discourse

**KassieS:** This is a very interesting article

**GailH:** Is much of this article in agreement with what you already know?

**AnnEKW:** yes, mostly

**GailH:** Or is it new or contradictory to your experience?

**DanyelleG:** I like this article because it gives teachers examples of ways to adapt to special needs

**CrystalB:** Pretty much

**DebriccaA:** Yes

**BrandinD:** most of it is

**DanyelleG:** I see a lot of this done in the second grade class I am observing

**KristenFS:** it is

**TianaV:** yes

**AnnEKW:** since I am a bilingual teacher, I need to use as much of that as possible

**KassieS:** I agree with a lot of the comments about accommodations and the difficulties of my LD learners

**JulieGF:** yes

**SandyG:** yes, it's aligned with what I know

**DebriccaA:** I agree with the information

**AimeeF:** it goes along with what students' modifications that I have read are

**CrystalB:** It depends on which type of disability we are talking about-autism, manic with psychotic features etc

**GailH:** ENC produces magazines that are free and advertisement free (b/c of being funded by US Dept of Education.)

**CherylWi:** I like the story about the child who wrote with his feet

**KarinaJC:** I agree with this information

**GailH:** That article is in the issue that we have Mathematics and Science for Students with Special Needs

**MonicaHa:** Yes, it always helps to make the lesson as concrete as possible, especially in the lower grades

**LynnMD:** I think that it is important for all teachers, not just of special needs, to know how to teach these students. We are all going to have to be able to teach them

**GailH:** I will show you a picture of the magazine and you will be able to browse the Table of Contents. Please take a look at that page, and then scurry back. OK?

**SandyG:** will do

**DanyelleG:** k

**KassieS:** ok

**AimeeF:** surely

**GailH:** <http://www.enc.org/features/focus/archive/special/>

**GailH:** That whole issue is online but would you like free copies of the real magazine?

**DanyelleG:** I would love a copy

**JulieGF:** definitely

**SandyG:** lots of good articles

**GailH:** If so (and if you live in US), do this....

**CrystalB:** definitely

**AimeeF:** definitely!

**SandyG:** I believe I already have signed up for it

**KarinaJC:** I would love a copy

**MonicaHa:** yes please!

**AnnE:** yes, I would like a copy.

**GailH:** Send an email to <mailto:ghoskins@enc.org> with your complete mailing address, and indicate a number (up to 5) and I will have them sent to you.

**BrandinD:** that would be great

**GailH:** Please do it later, not now..

**KassieS:** I get so many magazines as it is I would much rather surf

**LynnMD:** I did not realize that so many children have been diagnosed with special needs

**SandyG:** can you sign up for this publication by registering on the enc site?

**DebriccaA:** Looks like interesting information.

**GailH:** I hope to show you another resource now. Are we ready for that?

**KarinaJC:** Thank you

**AimeeF:** sure

**DanyelleG:** yes

**BJ:** Yes, Sandy

**DebriccaA:** Yes

**KassieS:** Yes

**TianaV:** yes

**CherylWi:** yea

**CrystalB:** yep

**KristenFS:** wow thanks!!

**AnnE:** yes

**BrandinD:** great

**LynnMD:** yes

**GailH:** Oh, thanks Sandy-- yes, you can sign up -- go to Register on the [www.enc.org](http://www.enc.org) page (later, not now).

**GailH:** That address is in my handout too.

**GailH:** But....

**GailH:** you will get future issues, and to get the one about Special Needs, you'll need to send me an email.

**SandyG:** got it

**CherylWi:** ok

**SandyG:** I have already registered and had the teacher's in my district register last week

**GailH:** I am about to suggest a new site. May I have your attention, please.

**KristenFS:** ok

**GailH:** The next is Plane Math. This Internet site contains tutorial mathematics lessons, group activities, links to other sites, and information for teachers and parents of physically disabled students in grades 4 to 7. The mission of the project is to motivate students with physical disabilities to pursue aeronautics related careers through accessible math education materials on the Internet.

**GailH:** Three minutes off to explore <http://www.planemath.com/planemathmain.html> and then please return!

**GailH:** I suggest the activities for students, but YOU pick!

**KassieS:** I went to that...my net is messing up but this looks really neat. It might actually spark some students' interests

**KassieS:** They always want to do something fun and this looks like it's up their alley

**LynnMD:** This is an excellent site. There is such a wide variety of fun activities for children

**SandyG:** this is a great site

**JulieGF:** this is a really neat site

**CrystalB:** Brilliant idea

**DanyelleG:** I like the interactive ones that require shockwave, this would really intrigue the students

**AimeeF:** oh yeah

**AimeeF** is bookmarking all of this stuff for later

**AnnE:** This looks great.

**KarinaJC:** the activities look interesting. But most of all I like the links they have for technology and disability

**SandyG:** visual learners will like this

**GailH:** There are a lot of really neat resources like that (with the interactivity, etc.) that will appeal to special needs students (and all students).

**LynnMD:** This is excellent for visual learners, and all children really

**GailH:** ENC has done a very good job of organizing and classifying them.

**KristenFS:** I think any student would like this site--not just special needs students

**SandyG** is learning about air pressure and lift!

**AimeeF:** oh I agree Kristen

**BrandinD:** that is what I was thinking also

**DebriccaA:** I agree

**AnnEKW:** awesome resources

**SandyG** applauds the organization of ENC's sites

**GailH:** I am going to display a page that is math specific and suggest you pick one of the more elementary topics and browse in it for maybe two minutes. So go to math to fractions or math to counting and pick a site and look around. OR just browse the list of possible sites.

**LynnMD:** I agree that this site is good for everybody

**GailH:** Two minutes to explore around G

**GailH:** <http://www.enc.org/features/lessonplans/math/>

**MonicaHa:** I really liked that site! Great resource!

**AimeeF:** Wow, LOOK @ all the resources!

**AimeeF:** that's so great!

**PantelisC:** that's very good and enjoyable site

**JulieGF:** I used the ENC lesson site often for my math methods class; it is so helpful

**BrandinD:** how neat!

**KristenFS:** another thing about that previous site--i like how you can actually "meet the people" who designed those activities

**CrystalB:** Awesome Resources!! Definitely great advice and useful tools for teaching

**GailH:** All of the sites are examined by math and science specialists. We are very proud of that.

**DebriccaA:** I visited a site on number concepts. It provided games for young children.

**DebriccaA:** It was really neat!

**MonicaHa:** I love these resources! My students would love these sites!

**GailH:** I am going to show you my virtual handout, but first I want to tell you what I'm going to ask you to do with it.

**LynnMD:** I like how some of the sites are multiculturally based!

**GailH:** May I have everyone's attention for a bit, please.

**KarinaJC:** I love the money site, my students are having a lot of problems with that concept and I think the activities would really help them

**KristenFS:** ok

**LynnMD:** I would definitely use these activities with my classroom

**GailH:** Sometimes at Tapped In discussions we concentrate exclusively on web resources...

**GailH:** but tonight I am also going to ask you to look at some information about some real resources....

**GailH:** where 'real' means things like books or videotapes.

**GailH:** At the bottom of the web address that I'll display in a minute.

**GailH:** you will see a list of about 10 'real' resources.

**GailH:** please remember the ENC sells absolutely nothing.

**KassieS:** I played the birth of a quarter movie under money

**GailH:** We are US Dept of Ed funded and we are an information clearinghouse.

**GailH:** So this is information about some resources that you might find in a library or choose to buy.

**GailH:** I'd like you to pick one and read the information on that page.

**GailH:** Remember that when I (in just a moment)

**GailH:** show the web address, you are getting the virtual handout for the WHOLE evening,...

**GailH:** and we'll try this looking at info about real things.

**GailH:** <http://www.enc.org/conferences/tappedinspecial/>

**LynnMD:** I absolutely love resources that are not just on the Internet - they are available to everybody

**GailH:** Can you go to that, to bottom of that page, see a real resource, read about, and be back in three minutes please/

**AnnE:** Please send all the transcript including what I lost

**BJ:** Here, Ann <http://www.enc.org/conferences/tappedinspecial/>

**LynnMD:** This is a great resource to have. Thank you

**DebriccaA:** I found an interesting book on more science projects for all students. This is a great listing of resources.

**MonicaHa:** I agree. It is so important for teachers to keep current

**AimeeF:** there is SO much on there

**CrystalB:** Thank you Gail

**KarinaJC:** Thanks

**GailH:** Just the title of one of those makes me want to say...

**KassieS:** whoa at the info

**SandyG:** I recently purchased one of the books on this list. Teaching Inclusive Mathematics to Special Learners, K-6. Excellent resource

**GailH:** Isn't it important that we think about "teaching mathematics to students with needs..." not "teaching students with needs".

**AnnEKW:** Well said Gail. exactly

**KarinaJC:** I so agree

**GailH:** And I don't mean just math, but any subject.

**PantelisC:** all students have needs.....

**JulieGF:** I agree. That way all students are addressed.

**KristenFS:** this is a great site!!

**DebriccaA:** I agree

**PantelisC:** However I learned a lot.

**LynnMD:** Every student deserves to receive the best education that they possibly can , no matter how much work it takes

**MonicaHa:** Gail, thank you for providing such great resources!

**MaryPh** joined the room.

**PantelisC:** And much of the staff proposed for a better teaching to students with needs seem to be very similar on what they teach us for Teaching English

**DanyelleG:** I was not aware that there were so many resources available

**GailH:** If we were to think together for a few minutes, of a piece of advice to give to a "regular" teacher to inspire positive working relation with the special ed teacher, what might that be? (And in a bit, I'll asks that question the other way around.

**KassieS:** oh I am asked this all the time

**AimeeF:** just to keep in mind that you are BOTH working for that child and that needs to remain the focus

**LynnMD:** I would love any advice anybody could give me

**DebriccaA:** Treat every child with respect, regardless of their conditions

**KassieS:** I work with 3 different gen ed teachers all with different attitudes about inclusion

**AnnE:** Begin with the end in mind

**AimeeF:** all the other stuff that goes on, you just need to put it aside, because you HAVE to work together for the benefit of the child

**CherylWi:** have frequent meetings with the sp ed teacher to discuss progress and needs

**CrystalB:** If you cannot work together in order to teach, how do you expect your students to work together to learn? It is a team effort.

**DanyelleG:** listen to what the teacher had to say because she may have really good suggestions that will may your classroom run better

**JulieGF:** think creatively, and think for the child's needs

**SandyG:** provide accommodations for students with special needs without sacrificing the mathematical emphasis of the lesson

**GailH:** quiet a moment please.

**CrystalB:** What is that saying..it takes a community to raise a child...

**KassieS:** One is awesome and we try to team teach so that all the children are treated the same...but the sped students still get their accommodations

**PantelisC:** However we can't ignore individual differences related to difficulties in learning

**GailH:** There have been wonderful things said. Let's pause for a minute and read and then begin again.

**LynnMD:** Thank you so much for the great and helpful suggestions. It means a lot!

**KristenFS:** that they need to work together to succeed with the student

**GailH:** Thanks for the slowing down. Now jump back in and speak!

**KassieS:** I find that sometimes working as a team is a lot easier than my Self contained classes

**CrystalB:** All students are special and all students have needs-its then we can create a positive teaching environment that every child can learn and grow in

**LynnMD:** Sandy, how do you provide accommodations without sacrificing the emphasis of the lesson - example?

**KassieS:** It helps to split the responsibilities and be able to meet more needs

**MonicaHa:** Make every experience as "real: as possible, kids need to see, hear, smell, and touch what you are talking about.

**SandyG:** the article we read earlier showed us some excellent examples

**DanyelleG:** I agree with you Monica

**LynnMD:** Thank you all!

**SandyG:** mnemonics, visual prompts

**KarinaJC:** the more interaction a student is able to do, the more they will learn

**PantelisC:** how do we create this environment which is for all students identical?

**AimeeF:** not possible, Pantelis, we have to create an environment that changes for each student's needs

**MonicaHa:** you have to differentiate your instruction

**DanyelleG:** I don't think you can

**RobinLe:** I don't think it is possible to create an environment that is identical for all students

**SandyG:** you try to provide a learning environment that meets the needs of all students

**KassieS:** Have choices for students

**SandyG:** not an identical environment, one environment that is multi-faceted and works for many

**LibbyGst1:** These "special" techniques can be beneficial to ALL students, not just the sped. Teachers may be amazed at how some of the "accommodations" for one student helps other students learn as well.

**DebriccaA:** Good point.

**BrandinD:** all students need to participate in the learning experience

**AnnE:** You must start where the student is and build in a positive way using whatever it takes.

**KassieS:** we discussed this yesterday in my class about having a writing and oral assignment on the same thing but allow the student to see which weighs more

**PantelisC:** how do we promote a positive way?

**GailH:** OK, let's consider my question the other way. What advice does a "regular" teacher sometimes need or wish to give to the "special needs" teacher? Are there differences in the advice? And let's be realistic -- what would be good to "say" in this context.

**RobinLe:** that's a good idea

**KassieS:** BUT Libby, when it comes to legality and you read aloud tests on a daily basis you can't do that for gen ed students on the fed tests

**MonicaHa:** keep me informed

**CrystalB:** I really don't think that there is much of a difference as far as advice goes

**CherylWi:** The sp ed teacher needs to know how the child is learning and interacting in the classroom. What things they may show interest in.

**KristenFS:** they need to work as a team

**JulieGF:** There are many constraints on time. Methods need to be very effective.

**AimeeF:** I think a regular ed teacher should just keep the special ed teacher informed of EVERYTHING and the special ed teacher should keep the regular ed teacher informed of EVERYTHING

**DanyelleG:** They could tell the special needs of progress of what is working with the child or concerns they might have

**AimeeF:** if there are things one is missing, how can they work together?

**LynnMD:** Never treat a student or make them feel like they are different than the rest of the class - like they need more help or cannot do as much on their own - encourage them to be independent

**MaryPh:** Communication is key in the gen/ sp ed relationship

**CrystalB:** I agree with Aimee, everyone needs to be informed

**SusanR:** weekly team meetings work

**AnnE:** Communication is vital. Making the student not feel intimidated in the regular classroom

**KarinaJC:** There has to be a constant communication between both teachers.

**RobinLe:** that is true but I think that they both need to realize that they are the same

**AnnEKW:** definitely Karina

**GailH:** Now, what about a message to the NON-special ed students in a class. What can we say to them (or help them discover) that can help enable ALL students to learn their best?

**DanyelleG:** I have been able to witness this in my classroom with a handful of special needs in my class

**KassieS:** one thing that a gen ed teachers advice might not work with is large group activities that you cannot do in small class settings or behavioral issues vary for sped

**TianaV:** assign groups that include all types of learners

**RobinLe:** let's work together as a team

**DebriccaA:** Team work is very important

**AnnE:** Respect, communicate, and help each other to learn

**RobinLe:** I think the phrase, "We are only as strong as our weakest link," is good to use

**JulieGF:** everyone has something they contribute to the class

**LynnMD:** I totally agree with everybody on respect and teamwork - very important, we all help each other

**TianaV:** show videos that depict students working together regardless of their differences

**AimeeF:** they need to also recognize that they're all not exactly the same, none is any better than another, but they are ALL different

**AimeeF:** even the 'regular' ed students

**KristenFS:** why say anything to the other students--have them work in groups where they are mixed and matched

**KassieS:** doing a learning styles test to show everyone's strengths and weakness so they can see that they all have something they are good and not good at

**GailH:** As we get ready to leave, remember that you can go to

<http://www.enc.org/conferences/tappedinspecial/> and see my handout for this session, and my email address, etc. I hope this has been helpful for all of you.

**DanyelleG:** In my class we have two students that come in just for the daily calendar, pe and recess

**BJ** applauds loudly

**RobinLe:** because sometimes students will know that there is something wrong with another even after you have tried so hard to cover that

**SandyG:** thank you Gail for a very informative session

**DebriccaA:** Thanks for the information.

**CrystalB:** Thank you Gail. It has been so helpful

**BJ:** that was wonderful, Gail. thanks!

**LynnMD:** This has been very helpful. Thank you Gail and everybody else for your comments

**AimeeF:** it really has, Gail, thanks a lot!

**AnnE:** Thank you for the information and taking the time

**KarinaJC:** Thank you, the information and the websites are very helpful

**PantelisC:** Forgive me for my ignorance to the subject but I learned a lot today

**GailH:** And I thank all of you for making this such an active and thoughtful session!

**GailH:** I think we all learned some things tonight!

**SusanR:** Super Gail, I picked up quite a few tips

**AnnEKW:** thanks so much Gail. these articles are going to really help me with my end of semester portfolio!

**MaryPh:** I was unable to make this chat on-time, But I found a lot of information in the time that I was able to attend! Thank you!

**GailH:** I hope each of you will explore ENC Online at [www.enc.org](http://www.enc.org) again. There is much much more there than we talked about tonight.

**LynnMD:** I will also share these resources with my peers

**SandyG:** I will be sure to share this information with the teachers in my district. thanks again. bye