

Home Base: Free Instructional Resources for English Language Arts, Social Studies, Science, and STEM

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Dr. Weldon: Good afternoon everyone and welcome to this afternoon's webinar that's being hosted by the instructional content team here at C&I, the Curriculum and Instruction Division here at the Department of Public Instruction. We welcome you to this webinar and we know that many of you are already using Home Base and are familiar with Schoolnet, but wanted to take this opportunity to share with you some of the high quality free instructional resources that are within Home Base this afternoon.

So we have a panel of our instructional content personnel on our team: Kerry Christian, Chuck Henesy, Kenny Wallace, and Shannon Zarb, who will talk to you about their various content areas that we'll cover on today's webinar. Those content areas are English Language Arts, Social Studies, Science, and STEM. So we're excited to share with you this information and this webinar will be recorded in case you want to share it with other in our areas. So let's move on then and share with you what we have.

First of all, many of you are already familiar with Home Base as we said. So this is just a very very basic, short overview of what Home Base is, and that is it's an integrated technology platform for North Carolina educators. Not only is it for educators in North Carolina, but it's also for students and parents.

And Home Base consists of basically three components. One is the PowerSchool component. Most of you are familiar with that. That's the student information system, where you can find student records, where attendance is taken, lunch monies are collected, and teachers communicate with parents. That's one section of Home Base, PowerSchool.

The other one to the far right is the educator effectiveness piece, and that's where teachers and principals are evaluated using the online evaluation system, and where they can receive professional development within this Truenorthlogic system of Home Base, that we call the educator effectiveness piece.

So those two outer components, most people are familiar with this in Home Base, but today's focus will be on the inner core, and that is the instructional tools and resources, primarily Schoolnet. Although we do have standards-aligned content within Schoolnet for assessments, we also have standards aligned content for instruction as well. So we want to share with you today, those resources in those content areas that were mentioned before so that you can find them, use them in you classrooms and see how effective these tools and resources are.

So within the context of Home Base, all of the components are accessed through Home Base. And those three components that I mentioned before, the student information system, the instructional improvement system, which includes Schoolnet, and the educator effectiveness piece, is all accessed through Home Base. And each particular district or LEA has a

unique URL. And you're familiar with this because you already access PowerSchool. But once you access the home page for Home Base, you will access, actually enter your username, password, and it will open up a whole suite of tools and resources for you. So you're familiar with that link, and then we'll move on once you access that link. It opens up the landing page for PowerSchool. On the left hand side, you'll see Schoolnet in the lower left hand corner. That's where all of these instructional materials that we'll share with you today will be found. So if you click on the Schoolnet link, what will open up for you is a whole series of instructional content and assessment banks that you can access through Schoolnet.

So when we're talking about Schoolnet, we're talking about this particular section of Home Base where you can access what we're going to talk about today, which are the instructional materials. So if you hover over that blue band, you'll see one of the instances or components that's called the Classrooms module. That's the section that you will find the instructional materials that we'll share with you today. And if you click on Instructional Materials, you will then find a wealth of, a plethora of instructional materials such as lesson plans, unit plans, activities, videos that you can access from Home Base.

Now we have today about 30,000 instructional materials, however this bank will continue to grow as we count of educators like you to help us populate this bank of resources. We have our teachers who are involved in the Governor's Teacher Network, GTN. We have teachers who are becoming involved with the Global Batching Initiative, and other teachers as well who now have the opportunity to share those terrific lesson plans, those great units that you've developed, with other educators throughout the state. So we are really counting on all of you and all educators throughout North Carolina to help increase this number from 30,000 resources, to many many more, because we know you've got great materials to share with other educators in the state.

Just as a quick high-level overview, what you'll find when you go into Schoolnet, access Instructional Materials, open that up and do a simple search. You'll find over 500 resources that have been tagged and placed there by North Carolina consultants within the North Carolina Departments of Public Instruction. These are unpacking documents, these are curriculum documents, lots of information you are accustomed to finding on Wiki's can be found right within Home Base. So that's a one-stop shop now where you can find all of those materials.

In addition to that, we have 19,000, or probably over 19,000 now, open education resources. These are free resources that you can find on the world-wide-web. We have pulled them into Home Base so that they are accessible and reasonable for you to find. If you look at that chat, you'll find that many of these places you probably already go to find lesson plans, unit plans etc., like engage in maybe, why maybe Learn NC, maybe Smithsonian etc. But these are places that our team here at DPI has gone to find the best of the best resources and have pulled them into Home Base based on a criteria, a

rubric that we've used, the North Carolina summary rubric to find these, to vet these, so that they will become very very accessible for you and you no longer have to do a Google search to find these great resources that are aligned to standards within North Carolina. So we have at least 19,000 of those open education resources that have been gleaned from these sites and many many more.

In addition to that we have some external resources. We call them External Resources. That's Curriculum Pathways, you're probably very familiar with. Many of you are probably accessing Staff Curriculum Pathways now, either via Schoolnet or some other means, but you're familiar with Staff Curriculum Pathways. That's just one of the external content providers that we have pulled content into within Home Base, within Schoolnet on the More tab. And I'll show you where to find that very easily within the Instructional Materials section of Schoolnet. Not only that, but we also have some content that's provided by Pearson that's called the Online Learning Exchange, we call it OLE, and also a great wealth of resources that has been provided by the North Carolina Department of Cultural Resources. So we have about 11,000 resources that are external. Lot's more will be added, but this just gives you a taste of what you can find today within Schoolnet.

So how do you do that? Where do you go? How do you find all these resources that our team will share with you today? Once you go into Schoolnet, you access the Instructional Materials, you can simply hit the search button there in blue and all of these materials will be presented to you. If you want to refine your search much further, you can search by subject, ELA, math, or whatever the subject is. You can search by grade level. You can search by keyword. Volcanoes, let's say that you're trying to put together a science unit. You can search volcanoes and all of the material tags with that keyword will be presented to you, regardless of grade level, unless you select a particular grade level. So there are many many ways to search and find these instructional materials within Schoolnet that you can use to facilitate your training and learning within the classroom.

I mentioned to you the cultural resources. I mentioned to you Staff and also OLE. If you look at this diagram on the screen, to the far right there's a "More" tab. That's where you'll find those external resources that I mentioned before. You'll also see within Schoolnet, and this is within the search option, you will see the Staff Curriculum Pathways, and you'll see OLE, and you'll see Schoolnet to the far left.

We're going to focus on today the Schoolnet segment, or the Schoolnet tab, and in particular what's provided in the state bank. Now if you look in the lower left hand corner of this chart, you'll see under "Institution" that there are many many materials that you as the teacher can put into your own materials bank. There's a full bank, there's district bank, and there's also a state bank. So what we're going to talk about today are those materials that have been vetted based on a rubric that we use called the North Carolina Summary Rubric and have been checked to be sure that they align to our standards and placed in the state bank. So we're going to focus on the state

bank of resources and materials today.

So in order to showcase all of these materials, or just some of these materials within Schoolnet, we have our panel of content specialists here. And we'll start off talking about ELA, English Language Arts, with Kenya Wallace. So I'll turn it over to Kenya at this time, Kenya?

Ms. Wallace: Thank you LaVerne. Good afternoon. I am Kenya Wallace. I am one of the consultants here at the North Carolina Department of Public Instruction. I want to highlight a few of the learning resources that you'll be able to find. As LaVerne has already said, these resources have been vetted for quality content, to make sure that you have the best resources on hand. I know as a teacher it was frustrating to conduct a search and find a full page not found, or just find content that really was not exemplary, that would not meet my standards or my principal's standards. So you can rest assured that the resources that you will have in Schoolnet are definitely quality lessons. These lessons actually give you the opportunity to extend the student learning, to differentiate their learning, or to reinforce their learning. They also give critical thinking skills and problem solving skills that are relevant to 21st century learning. They are engaging and I think you will find them interesting as well as your students.

If we take a look at Cinderella Around the World, this particular resource actually aligns to Standard 3, comparing and contrasting stories from... the same story from different backgrounds and cultures. With this particular lesson, the outline is very simple. You can actually make it more in-depth if you want, or use it just as it is. But it provides a compare and contrast chart. It's a little different from what I use in the classroom, but it's very comprehensive. It also gives you a background. So this is the compare and contrast chart. Students are able to fill in. Now this can be differentiated. You can have this as a whole group assignment. You could also do small groups or partners or individual students as well. You know your students best, and however it works for you during your classroom, definitely make it work for you.

If we go back to the lesson plan, you'll see the instructional procedures.

There are extensions that can be done with this particular lesson. What I really love and would have appreciated having is the bibliography. I spent hours on end searching Google to try to find other versions of Cinderella, outside of Yea Shin, so I thought this was very helpful to have, and a resource to give you other options to use. And this isn't the only text that you could use with that, but I found this particular lesson plan very interesting and I thought that this would be an appropriate piece to highlight as well.

If we go back to the side, and let's take a look at Character-Reader Roll on the bottom right corner. Character-Reader Roll is very nice, it's very engaging. This could be a center activity it could be a whole activity. But use it with your stories to help students identify characters. You take a die and roll with it. Your die is associated... each member of the die is associated with a particular activity. Once students have created a stick figure of their

character, they roll the die. For instance if their die lands on 3, that's "word." What does your character say, or what might your character say? Add words to his or her mouth.

So this is more engaging. It's more kinesthetic. It's more tactile. So we're addressing different learning modalities. Students are more engaged. It's designed to create more discussion and collaboration. And I think you will find that it's a really interactive activity. You can also modify this particular activity to fit higher order questions to fit whatever story or activity that you're working with. We really enjoyed in our classroom one of the more popular ones that my students enjoyed. But this is all still an example of what you can find in Schoolnet. So we'll go back and we're going to take a look at our instructional resources.

In Schoolnet as well as lesson plans you also have instructional units and curricular units. These units again are designed to give you information to present strong instruction. If we look at Me, Myself and I, at the top, it's a unit on identity, helping students think about what's unique about themselves. This is from Scholastic, which has a lot of very good information along with lessons, activities, also extra, you can find extra information about your books. For this particular unit it gives you different options and ideas that you can use on the theme of identity. You can actually take it down too, if it's kindergarten or first grade, you can actually extend it for fourth and fifth grade. The teacher here gives you a lot of activities that she's used with her students, and includes pictures. I thought that was very helpful. I am a visual learner, so to get to see different aspects of the plan in action or as it's being done was very helpful. But the students with this particular unit have an opportunity to take a multiple intelligence quiz to at least discover more about how intelligent they are.

They also have an opportunity to create a Wordle, with adjectives describing themselves. So it gives lots of options. There is a writing component to it. So it's not just a plain cut and dry, "My favorite color is blue. My favorite vacation spot is the beach." It's really more in depth. And again, you can take it and do worlds of activities. So you can make it go as far as you need it to go. And it also gives you an idea of different books that you can use. It will give you different books that you can also use to coincide with the particular units so you're not just stuck with one particular book.

We also have unit plans as well. Again, they can be differentiated for grade levels. This particular activity is from Read, Write, Think. I really like Read, Write, Think because it gives you an outline of your standards. It pretty much lays everything out for you. If we scroll down, you'll see where the student objectives are listed. For each section it gives you information on what is covered. This particular unit will talk about text to self connections, text to text connections, and text to world connections, so that students are really able to get an understanding of what they're reading and why they're reading, to make sure what they're reading is actually important to them. Okay? We can move on?

So we also have a plethora of multi-media and planning resources. I taught

2nd grade, so my students were very active, and it was to my benefit to find interactive and engaging resources to help them better understand the skills and content that I was teaching. So in Schoolnet, you'll find that these activities, these multi-media activities, are really fun. Students have more fun learning when it's engaging and captures their interest. These particular activities are really short. It doesn't take a lot of time to complete.

If we look at Word Frog, this is a very interesting game. It's really short and it's on antonyms, synonyms, and homonyms. When you click play, there's an overview that's there. Your students that are your stronger readers won't have a problem reading and understanding the directions. I do suggest that you do a whole class game, as you talk through it with your class, you work with them through it. But as you go on, it gives you an instructions page. Now, some of your higher performing students will probably be able to navigate the keys on the keyboard fairly well. However, I did discover that if you just click the mouse it will still actually select the word for the student. You're able to choose your content type, and you're given a minute to play. So if you click "play" you find the antonym for your word. If you find your word and click on it, the frog eats it up. At the end of your minute, there is a reporting page. For every response that the students did not get correct it will show the correct response and then the student's response, and it will also give you a score report of the percentage correct, which is that immediate feedback that the students really like to have.

We go back... Videos are also part of the multimedia resources. Some of the videos will come from Youtube. The videos that we have vetted do not have the advertisements that you would normally find if you were to just go to the address bar and search and find videos on Youtube, so all of the extra ads have been taken away. They are very brief so that you are actually able to address the content and skill, and the students are actually engaged.

For planning resources we have found a number of resources from different areas that do the job of really helping you with your planning. If we look at the bottom right, this resource is from the state of Illinois, and it's on reading informational text. If you scroll up to the top it gives you strategies and it also gives you formative assessment suggestions. So instead of using the same strategies over and over again for reading informational text or for reading literacy text, this particular document gives you strategies and lesson suggestions for every strand, for every objective. So it gives you something fresh to consider. The hyperlink actually will open to the different documents when you click on them, but also in their appendix you'll also find access to all of their graphic organizers.

This is just a small sample of the resources for kindergarten through fifth grade that you will find in Schoolnet. I suggest that you just take some time and go in and search to find some valuable resources and pieces that will help you. I hope that you have found these resources very helpful, and thank you for your time.

Ms. Zarb: Kenya, thank you so much. I'm going to take over now. My name is Shannon Zarb. And I'm a content specialist at DPI. Today we will be reviewing Schoolnet resources for the middle and high school English Language Arts classroom. Right now Schoolnet has over 1,146 resources available for the English Language Arts classroom, and more are being added every day.

Okay, so the first collections we're going to take a look at are literature guides and resources. We have hundreds of teacher guides and lesson plans for a wide range of fiction and non-fiction reading. These include hard-to-find resources and materials for contemporary novels and the classics of literature. Again, all of these materials have been carefully vetted for usability and quality and current state ELA alignment. And these resources are driven by teacher content needs. One of the more unique aspects of Schoolnet is its' ability to stay current and timely by providing teachers with materials that may be hard to find. Of course we do look for those materials that are the mainstays of the curriculum, *To Kill a Mockingbird*, *Lord of the Flies*, Shakespeare, etc. But just as important are locating resources that might not be so readily available to teachers.

The first one I'd like to take a look at with you is actually *The Kite Runner*. This is a wonderful resource. It's from Amnesty International. It has critical thinking and discussion questions that can guide student through both the novel and the self. There are cross-curricular connections to social studies. There are historical overviews and timelines of the events in Afghanistan. It also has a section on human rights challenges that are still faced in the region today. So not only does this guide come from a trusted and conscientious source, any teacher can use this in the classroom right now.

We also have materials for other contemporary reads, and some of them are here. We have *The Fault of our Stars Unbroken*, *Speak*, which you know is contemporary-ish, but we do start to bring some contemporary reads into our collection because we know that they're more difficult for teachers to find.

Another resource that I'd like to take a look at and to mention is *To Kill a Mockingbird*. I think I taught this novel for 16 years in my entire term. And you won't have trouble finding resources for *To Kill a Mockingbird*. I think in a last search it turned up over 31,000 hits for lesson plans on *To Kill a Mockingbird*. And that can be burdensome too. The trouble with that is the quality. This is a quality resource: Harper's Perennial Press. It contains assist for vocabulary. It contains chapter-by-chapter discussion questions, essay and debate prompts, activities, and so much more. My favorite thing about this resource, it's common core aligned, but more importantly it's aligned line-for-line, question-by-question, activity-by-activity. There's no confusion about the standard you're addressing as you work your way through this novel.

The last one from this section I'll take a look at with you is actually *The Grapes of Wrath*. Now this one I linked right to the National Endowment for the Arts "Big Wreath Project" because I really wanted you to see some of the

other resources that we've tagged. There are approximately 40 or so novels that are already on the NEA site, and Schoolnet has tagged many of these invaluable assets. The one we'll take a look at a little bit more closely is actually one of my favorite novels, and that is *Their Eyes Were Watching God*. You can see that there is a reader guide. There is a teacher guide, and there are media connections also.

These reader's guides are fantastic. They have lessons. They have suggested essay topics. They have multimedia assists within them. If you look to the left there, there are discussion questions that go along with it, historical background information, author's information. There's also a great little resource if you'll go up to the top a little bit, and you see the media connection. These are a treasure trove. They really are.

The media connections also have audios, and a lot of time they'll have other authors speaking about the profiles of the author or they'll have actual audio from the authors. It really depends on which pieces you are looking at. These are all under creative commons licensing. They are all free, and again, another great resource. Things are aligned, they're engaging. They're comprehensive time savers for teachers in need of any number of supplemental items that you may need or be thinking of using.

The next part of the ELA collection, and one of my favorites are really the primary and research support materials. These can add authenticity, relevance, and increase student engagement and also address the course and ELA literacy, to increase writing from sources. These primary sources have an endless amount of materials and lessons to choose from, including photos, documents, maps, audio, video, and so much more. We have sources from the 9-11 memorial museum. We have sources from archives.gov and Library of Congress, just to name a few. They can add interest, engagement, and relevance to any classroom.

But what's most exciting about these documents, of what we've found in archives.gov, we can go right to that little stack of paper... These are reusable document analysis worksheets. And these are a fantastic resource that you can use in your classroom right now. When used in conjunction with primary sources that we have on Schoolnet, these worksheets address multiple standards including close contextual reading, determining central ideas, author purpose, and of course using diverse media format. And as you see it's a worksheet and students just work through a set of specific questions. They can use any maps to do analysis, photographs, audio, video, documents, speeches. They have any number of reproducible items that you can use in the classroom.

So when you take one of these documents and you use it in conjunction with say, we're going to look at the Salem Witch Trial one right there. So when you pair these together, what you've done is provided your students with a rich authentic insight into any period in American History, in this case, one of our most tragic. And this resource is fantastic also. It's providing maps, sermons, speeches, diaries, these are actual documents from Salem.

And we'll go onto the next slide from here. So we of course have reading and

writing support in our collection for ELA as well. Our reading resources support ELA standards for the shifts again, for the textual analysis. And they meet the needs for both again the advanced and the remedial readers. Our writing lessons, assignments, and resources support curriculum foundations and again the shift in the ELA literacy, including writing from sources, research based skills, augmentative and evidence based writing, academic vocabulary, and of course grammar usage.

Our reading supports address a wide range of learning styles as I said. The first one that we're going to look at is actually from the Menza Society, which probably as you know is for high IQ people. But for this particular resource, this I thought was an amazing tool for any ELA classroom. And it uses contemporary music lyrics to teach literary terms. So while your lesson may be geared toward your AG learners, it is so engaging and comprehensive, I think it could easily be adapted for you remedial or you auditory learners in class. It gives you a list of suggested songs. It gives you practice assignments. It gives you rubrics for assessments. It has a comprehensive list of literary terms for the high school and the middle school classroom. And there is a good sampling of the songs that they suggest that you could use for any of these lessons and activities.

Another resource that we have, if you'll open that Pickaxe one, this is from Ted Ed. So while the Menza piece is a comprehensive set of instructional materials that meet in several class periods, sometimes what you're looking for is just a short insight lesson or a video that may work. And Schoolnet provides this type of flexibility. Not only does Schoolnet have units and extended lessons, but it has short instructional videos as well. The Ted Ed piece here is a great example, and in four minutes it will teach students how to find deeper meaning in a text. It's short, it's concise, and most importantly, it allows your teachers the flexibility in choosing the type and the length of the lesson that is best for your particular needs.

So we also have a great collection of writing resources available in varying lengths and abilities as well. One right there, the evidence based learning, evidence based arguments, these come from Odell Education, and these are available for grades 9 through 12. There's a set available for 9th, 10th, 11th, and 12th, and they're about as comprehensive as it gets. A teacher could certainly use this unit to teach several weeks of instruction, and you'd be secure in the fact that you were addressing a comprehensive list of writing, reading, speaking, and listening, and language standards for your classroom. But on the other hand, sometimes you just need a tool for remediation, reinforcement or direct instruction, and the Sinclair Community College source here is really a fantastic resource. It includes reproducible handouts for any number of grammar and syntax concerns. Most importantly these are clear. They are focused. They are articulate. They are out of the box and they address a wide range of grammar and syntax standards.

Finally the last section of the collection we have time to look at, and probably the most engaging of any of the multimedia instructional resources, we have a wide range of multimedia instructional resources to support instruction,

including film, audio, video, and print media. So not only do we have state vetted resources that are aligned to common core standards, we also have a collection of materials that support that instruction as well. So these can be anything from video, audio, any auxiliary materials that enhance instruction, but they may not otherwise be considered in our vetted collection.

So one of my all time favorites is that breaking news. I wish I knew about this when I was in the classroom. This is a current daily news story and it provides news stories on current events. And you can see these are very timely. These are from the last couple of days. We'll take a closer look at the one on net neutrality. These can be used instantly. These are great for an impromptu current event discussion. These are great for substitute teacher plans or any informational reading practice at all.

What they do is they come up with a four-minute video, or around that time. It's an under five-minute video. There's a PDF under support materials of the text of the video that you just watched. Then there's a handout with usually key vocabulary and usually critical thinking questions that go... I can hear the Ooo's in the background. This was just an Ooo moment, when I saw this. This is so fantastic, really an out of the box sort of time saver for a teacher. If you're looking for something on some event that has just happened and you're looking to put something that has some value in it in the hands of a substitute that you know they can easily follow. This would be my go to choice.

Also noteworthy here is the tape-recorder one. I just thought this was so interesting. This is from the International Dialects of English archive. And I've taken you, in case you're trying to place my accent, I've taken you exactly to where we should be, and yes it is a New York accent. I think number 12 is the closest one on the list. But it's a recording of dialects from around the globe. And if you're teaching a novel with a heavy regional accent, like *Their Eyes Were Watching God*, you can listen to the regional dialects from that area, and teach how to listen and have your students discern the differences between dialects. There are special collections here on Native Americans. There are special collections on Holocaust survivors. There are oral histories. There's a fun little diagnostic test to test your ear, how in tune you are to different regional dialects. They are really a unique and engaging source that could certainly find uses in a lot of classrooms.

And last but not least, we have hundreds of lessons for the ELA classrooms from grades six through twelve that span a wide range of topics and come from sources that you already know and trust. We have stuff from Teach to the Core, Discovery Education, Excitement, Pea Pods, Engage New York, and Read, Write, Think, and really many many more. I really hope that you all take the time to look through some of the resources that we've provided you here. But remember this is only a small sampling of what Schoolnet has to offer. Thank you very much. And right now I'm going to turn our presentation over to the Science Department with Kerry.

Ms. Christian: Thanks Shannon, this is Kerry Christian. I'm an educational consultant at North Carolina State University, specializing in science curriculum. And I'm going to speak about some of the engaging resources that can be found within Schoolnet for science instruction. So the first set of resources I want to highlight are specifically for elementary science classrooms, and these modules from the Rice University Elementary Model Science Lab offer an integrated approach that helps students make connections across the curriculum. For a variety of activities and experiences accommodating different learning styles, students are given opportunities to build conceptual understanding of common concepts in the areas of earth, life, and physical sciences. Each of these integrated lesson plans is based on the 5-E Instructional Model, and includes vocabulary, reading, hands on, and assessments components.

So we're just going to look at a few of the components today, and this particular module is on rocks, soil, and water. So let's look at the Explore tab first. And under the Explore tab there is a teacher guide and student handouts. And if we click on the student guide, I just want to show you what the student pages look like. And again, they are grade level appropriate. And this is something that can be given to the student to help them, in this particular case it's a very simple soil texture experiment activity that guides them through that on their own. Also, usually there is a student journal section under the explore tab, and again that's just a place where the students can record what they're learning and their thoughts.

The Explain tab offers question prompts that foster discussion and reinforce concepts that are covered by the hands-on activity. So it's just an opportunity for the teacher to delve a little bit deeper into the topic with the students. And if we could go to the Evaluate tab, the Evaluate tab contains multiple forms of assessment for each module. And under the Evaluate tab there are lots of options for assessment and one of the top ones in the concept builder. And this would usually be a culminating product or project that the students work on to cement their understanding about the concepts.

There's usually also a writing prompt and that writing prompt, again just briefly highlights the concept. It gives the student an opportunity to respond to that writing prompt and show their understanding of the concept. Also, there is a rubric associated with that writing prompt so that the teacher can focus in and find the really important parts of that. So those are the modules from Rice University Elementary Model science lab. And again there are a number of them in there for lower and upper level elementary. And they are great to use in the classroom for integrated lessons.

Next I want to look at some lesson plans and activities that employ a hands-on approach to science. Within Schoolnet there are a variety of these inquiry-based experiences that help students develop problem-solving skills that empower them participate in an increasingly scientific and technological world. Research indicates that science students learn science best when they are involved in first hand exploration and investigation of science concepts. Inquiry also fosters that conceptual development and allows students to

apply science content.

So the one I want to look at here is the Dissolving Challenge. And this is from the Inquiry in Action Series from The American Chemical Society. And in this activity students investigate what happens when objects and substances are added to carbonated water. Students are then challenged to make a lemon soda that retains as much carbonation as possible. And so it's a great inquiry based activity. Basic science concepts are elevated because it asks the students to take it to the next level and apply their knowledge to a real world situation. So these are very nicely done, they have lots of parts and pieces to accompany the hands on activity. There is usually some reading, some supplemental reading materials. There are some additional worksheets that the students can work through. So very nice collection from the American Chemical Society that focuses on inquiry based science.

If we go back to the presentation and moving on, as we've already heard with the ELA collections, Schoolnet also houses numerous materials that can be folded into a larger lesson plan or unit and are used to support instruction. So these interactive resources such as multimedia applications, online tutorials, and animations, can help meet the diverse needs of students, especially your visual, auditory and English Language Learners. And I think that science and interactive resources are a great combination, they're a great fit. Because again, even if students can't have the authentic hands on experience, sometimes they can have a simulated hands on experience that really illustrates the concept well.

So the one I want to look at today is the lunar cycle challenge. And this is again a very simple interactive, but very powerful, this comes from AAAs, from their science Netlinks collection. And if we were look for this resource in Schoolnet, we could find it by a standard search for North Carolina Essential Standard .4.E.1.2. That standard simply says, "Explain the monthly changes in the appearance of the moon based on the moon's orbit around the earth." And with this standard the students are expected to understand that the appearance of moon changes in a specific pattern that repeats via a 28-day cycle.

So if we hit "Launch Tool" we actually go into the interactive. We can see that students are presented with a pattern. And in the lunar cycle challenge, they are asked to evaluate the pattern and then simply by drag and drop they are asked to apply the knowledge of the moon's phases to complete the pattern that they see there. So it's a great reinforcement for students to actually focus in on what is happening and how the moon is changing within that cycle. And I think that, both consultants for ELA mentioned this as well, is that a great thing about these interactives is that they offer immediate confirmation and immediate feedback to the student. So they'll get positive reinforcement or they'll be asked to look again. And it's again, that immediate feedback that cues the student in to whether they are fully understanding the concept or not. It's also a great quick and easy way for teachers to assess student understanding as well.

So interactives are great. We don't have time to look at all of these, but very

quickly if we could go on and look at Virtual Labs and Simulations. Which again, these are an extension of interactive resources. While the interactive resources on the previous screen are pretty quick, students can usually complete them within a matter of minutes, some of these Virtual Labs and Simulations offer especially for middle and high school students and science classes, a more in-depth online, virtual experience looking at labs. So virtual experiences are often used in the classroom to supplement instruction especially when manipulative materials are unavailable for student use due to funding or safety concerns.

So if we look at the Virtual Bacterial ID Lab, this is a great example of that very thing. In this lab, which comes from the Howard Hews Medical Institute Bio-Interactive Collection, students identify bacteria based on their DNA sequences, and it includes common lab practices such as PCR amplification and gel-electrophoresis, but they are simulated in a virtual lab environment. This saves time and expense because students can complete these processes virtually in much less time, and they can replicate the experiments multiple times without consumption of expensive materials and equipment. And if any of you have taught a high school biology course or an AP biology course or even a biotechnology course, you know that the equipment for those types of labs can be very costly and the consumables can be very costly and especially if you have several classes of students that are trying to replicate the experiment. And in this case they get the same type of experience with these materials, but in a virtual environment. So again, it can be replicated as many times as they want and you can run a gel-electrophoresis, a gel for electrophoresis in seconds in a virtual lab.

I also want to look at one of the other virtual experiences that we have in the presentation, and that's the Wave Generator. And the Wave Generator, this particular app comes from PhET, which is the Physics Education Technology Collection. That's a database of interactive simulations sponsored by the university of Colorado at Boulder. And if you have never used the PhET simulations in class, I would highly encourage you to do so. They are very wonderful and again, students are given very practical virtual experiences with materials that are again, they may not have access to. And they can manipulate variables and run the application in it, lots of different ways to show a lot of different concepts and application of those concepts. These PhET simulations are easy for students to access and they are very effective in developing conceptual understanding. So we have quite a few of the PhET simulations and or lesson plans associated with those also in the Schoolnet collection.

And the last thing that I want to talk about today is STEM resources. We also are growing a collection of STEM instructional materials within Schoolnet and these STEM instructional materials will align to math and or science standards in the K-12 grade span. And all of the STEM lessons and units center around the engineering design process. And those types of activities will engage students through project-based learning. Students are presented with a problem. They are given an opportunity to develop idea, possibly build

models, test their ideas and models, reexamine their data, perhaps go back to the drawing board and start over, and through a recursive process they go through that engineering design process until they reach a solution or until their solution takes them to another question. So the engineering design process is very strong in helping them develop critical thinking skills and problem solving skills, and giving them again a platform to show their understanding in science, math, and using technology skills.

So if we look at Egg Bungee Jump, this one is a very quick simple activity from PBS, Zoom Into Engineering. And this has been aligned to grade three and five, physical science standards, dealing with force and motion. And in this simple activity students are challenged to design a bungee jump so that the egg stops within two inches of the floor, when dropped from five feet. So, very specific constraints that they're given, and then they're given the freedom to be creative in designing what that particular bungee jump contraption is going to look like, how it's going to work, and whether or not it's going to be successful.

Also, I want to look very quickly at the NASSA lesson, Designing Aircraft in Five Easy Steps, it's a challenge. And in this particular lesson students build and design paper aircraft based on actual NASSA experimental aircraft. And they will conduct and test models that they have created based on those designs. And gather data and gauge effectiveness of those designs throughout the lesson. So again, very inquiry based problem-solving challenge that again builds their critical thinking skills.

In both of these STEM lessons that we highlighted today, students are looking at force of motion concepts and they're using math skills such as measurement to solve a problem. But within this collection we've tried to do a very good job of providing a variety of concepts and topics. I think force of motion, just because of the engineering component tends to be a go-to. But we've really found some innovative resources that delve into other areas that are great STEM projects. So hopefully you'll find some resources within the collection that you can use in your classroom.

So thank you. Hopefully you'll check out the science and STEM lessons and find something useful. Have a great day. I'm now going to turn it over to Chuck Henesy, who's going to talk about Social Studies resources.

Mr. Henesy: Hello this is Chuck Henesy. Just before we get started with Social Studies, I know a lot of y'all have been asking some very good questions in the comment section. We do intend to have some time to address some of your questions and comments at the end of the presentation. So I know we have a couple of people reading them and responding back to you. Please understand we are very very happy to get those questions. Length wise, at the end of this presentation, if you as a teacher know some areas of need, please don't hesitate to contact any of us and let us know so that we have some idea of areas where to search, because that makes it a lot easier for us to find content, and more importantly to find useful content for people out in the field.

Another time, my name is Chuck Henesy and I am primarily a social studies consultant. And I want to talk about a couple things here today with the social studies content in Schoolnet. One of the great things that Schoolnet has is it has some very strong regional resources for the North Carolina area. And of course we know that with fourth and eighth grade, North Carolina in fourth, fifth, and eighth grade, North Carolina History is a very strong focus in the curriculum of North Carolina, and Schoolnet has some wonderful resources, which directly address that. I know the year I taught eighth grade it was always so hard to find good high quality resources.

This one here is from the National Parks Service. It deals with Little Kittery Life Saving Station. And again, it's not the biggest history in the world, but part of what we talk about of course is cultural history, and we also talk about social history, and this certainly does that. As you can see here, it has a lot of wonderful things. It has a lot of primary sources and things that we'd want to integrate within our classroom. We have maps. We have readings, visual evidence. You combine that with some of the primary source decoders that Shannon talked about earlier, and you have a wonderful opportunity to work on multiple types of literacy in the Classroom, of course, which is part of what we do in social studies.

Although, of course, some of these activities where you simply put it all together and you combine everything together, it allows students to simulate or to think about different ideas and to write about different things connected with these items. And even right here, you can see that can be done with some real world applications, a modern day application of the concepts we were talking about. And of course the social studies people out there know the question always is, why does it matter? You also notice here we have Learn NC, we have a lot of Learn NC things here. We've made sure again they are aligned to the standards, and that's the big thing. These things are already aligned. So, there are very strong regional resources here for all grade levels.

Also talking about global resources, Schoolnet has a lot of items which connect students to an ever changing global society. Of course as teacher, one of the ways we are assessed now is how well we bring in global issues into the classroom. And so we've been looking for things for Schoolnet, we've tried very hard to find items that have that global connection to help you fulfill that part of your evaluation.

And here we have items that cover all three different levels of school, whether you are talking about high school, which would be New York Times Learning Network items, which are wonderful. They take New York Times articles and they connect them to things. This interactive here about the collapse of the Incas and the Mayas, or this elementary school activity here from the National Geographic, which deals with community migration, which can be used for upper elementary, or even possibly lower middle school. And again, we're talking about activities here that have been vetted.

This one here, you talk about how communities develop, what kinds of community... migration both outside of the country from one country to the

next, and also inside the nation or inside a community. Why do people move? This is probably something students haven't thought a whole lot about, with all likelihood. And you know, again, we have students interviewing people, this interactive, bringing these concepts in social studies to life, making them applicable, making the five themes applicable and real to our students and not just some esoteric concept that they hear in the classroom.

We also try to pull from some of the great collections of resources. These are lesson plans and resources from trusted collections. Shannon has talked about this. Kenya has talked about this. Kerry talked about this. I'm going to mention it. We make sure to hit upon these great sources of information, whether they are things we all know about or some that we might not all know about. If you're not familiar with Global Studies, you might not be familiar with the Asian Society. The Asian Society has done great work in bringing global ed education and global ed items to people from across the world.

We have an item here on eminent domain from the Feral Reserve. High school teachers here again, especially if you're teaching Government, AP Government, or even any of the US Histories, this is something you could use very easily and again, tie in with the other things. America on the Move here has items. This is from the Smithsonian, one of their activities. And here we are with item PDFs that give all sorts of different things for all sorts of different grade levels. Again, we have maps, contextual image information, images with analysis questions, higher-level primary source documents, if you're dealing with higher-level students. If you're dealing with lower-level students, questions about their neighborhood, okay, how do they apply?

Again, resources that you can use right away... As you see here again, some of the other resources that we mentioned, Learn NC, the New York Times, many many more.

And again, as others have talked about and I'm going to mention here, the interactives, the interactive lessons that make content relevant, that make it engaging, that make it real. One of my favorites here is the National Budget Simulation. This is a simulation that has been around for a very long time. The latest update was the 2006 budget. I remember when this was done with a 1998 budget. But here, the students have their goal to balance the United States Budget, and so they have to make spending decisions. And I always hear the most interesting discussions amongst my students. Listening to a pair of 14-year-olds argue about whether or not we should cut Social Security or not in order to balance the budget. And at the end, you find out what your budget is. And then, you know, at that point you ask the students, well what do you have to do to cut the deficit in this case by, you know, about 303 billion dollars. Did you spend as much money in these areas as possible? And just again, it makes these things real. It makes the discussion real.

We also have interactives in terms of roll playing activities. For the elementary school teacher here, there is an excellent one teaching about the Lion States Government with Larry the Lion on the loose. In this case students get to roll play themselves as government leaders. They try to track

down a lion. So I can only imagine they would have all sorts of interesting discussions within your classroom.

And lastly, multiple people have talked about again the primary sources. They talked about the National Archives, Harper's Weekly, others, great primary sources. As social studies teachers we know we need to be integrating our classroom, both with reading and in other areas. In our work will we want to be increasing them in all levels of students. So, what are we waiting for? We hope you get a change to log in and check out what Schoolnet has for you. Here in the website for Home Base. As you'll want to keep up with what's going on with Home Base, there is a sign up for the Home base bi-weekly newsletter. We will email out a version of this PowerPoint to everyone who is currently online right now, so don't worry if you can't write down all the address right away.

Ms. Hickman: All of the hyperlinks work when we send you the PowerPoint, so you'll have access to all of the resources that we've showed you today. But please look at Schoonet because we do have many many more. It's just a small sample of the resources we have available for you.

Mr. Henesy: Exactly. So what we'll do now, we're running just a little bit over and we apologize for that and we're going to... Give us a chance to look at some of the questions that are coming in and see if we can have an opportunity to address them. So see if you could give us just one moment please. Thank you.

Dr. Weldon: Okay, thank you for your time and attention during this webinar. As it was mentioned the PowerPoint will be shared with you after the webinar in case you want to share it with others. We hope that you find this information very helpful. Some of the questions that have come in really revolve around rolls and permissions within Schoolnet. So let me make just one statement about that. Teachers should have access to all of these resources, all of these materials that we've been talking about and all of the content areas today. So be sure that you contact your Home Base coordinator or your contact person to be sure that you have the right roll, which is a Teacher roll, to have access to all of these resources.

Some of you questioned the items, passages and rubrics. Now that's a part of Schoolnet, but that is the assessment admin section of the classrooms module, not the instructional materials section. So be sure that when we hover over that blue banner that's called Classrooms, that you move to the right and see Instructional Materials. That's where you'll find the lesson plans, the unit plans, etc, and can search not only by key word or subject, but you can also do a standards search. So those of you who are teaching based on standards, and that's all of us, you can type in a standard and receive all the materials that are aligned to the standard that you are teaching.

So that's the real beauty of Schoolnet. All that we shared with you today can be found in Schoolnet. These are the materials found in the state bank, so if you look at the lower left hand corner and filter on state, those are the

materials that you've been talking about today in ELA, science, social studies, and STEM.

Mr. Henesy: We would like to remind you that we will be doing another presentation on different resources in Schoolnet on March 25th. That will cover world languages, math, ESL, and the various arts programs. So we encourage you to let your colleagues know about this and to encourage them to come and tune in and to register for that webinar. We look forward to being able to present information on this. And again, if you have questions about these, please don't hesitate to contact any of us here. We would love to be in contact with you and to have a dialogue about these items. So we're going to take a couple more minutes here to see if any more questions have come in. So if you'll just hold on for just one moment. Thank you for hanging around for just a little bit extra. All right, well thank you very much for attending today's webinar. We really appreciate your time and interest in Schoolnet and we look forward to talking you so more later on. Have a wonderful afternoon and take care.