# MINUTES OF THE SENATE COMMITTEE ON EDUCATION

# Seventy-Seventh Session March 6, 2013

The Senate Committee on Education was called to order by Chair Joyce Woodhouse at 3:33 p.m. on Wednesday, March 6, 2013, in Room 2149 of the Legislative Building, Carson City, Nevada. The meeting was videoconferenced to Room 4412E of the Grant Sawyer State Office Building, 555 East Washington Avenue, Las Vegas, Nevada. <a href="Exhibit A">Exhibit A</a> is the Agenda. <a href="Exhibit B">Exhibit B</a> is the Attendance Roster. All exhibits are available and on file in the Research Library of the Legislative Counsel Bureau.

### **COMMITTEE MEMBERS PRESENT:**

Senator Joyce Woodhouse, Chair Senator Aaron D. Ford, Vice Chair Senator Ruben J. Kihuen Senator Barbara K. Cegavske Senator Donald G. Gustavson

#### **GUEST LEGISLATORS PRESENT:**

Senator Ben Kieckhefer, Senatorial District No. 16

#### **STAFF MEMBERS PRESENT:**

Pepper Sturm, Policy Analyst Diana Jones, Committee Secretary

#### OTHERS PRESENT:

Steve G. George, Chief of Staff, Office of the State Treasurer

Constance J. Brooks, Ph.D., Director, Government Relations, Nevada System of Higher Education

James Richardson, Nevada Faculty Alliance

Rorie Fitzpatrick, Deputy Superintendent for Instructional, Research and Evaluative Services, Department of Education

André DeLeón, Education Programs Professional, K-12 Science and STEM, Assessment, Program Accountability and Curriculum, Department of Education

Mark Newburn, State Board of Education and State Board for Career and Technical Education

Thomas Piechota, Ph.D., P.E., Interim Vice President for Research and Dean of the Graduate Division of Research and Graduate Studies, University of Nevada, Las Vegas

Beth Wells, Executive Director, Nevada STEM Coalition

Kevin Carman Ph.D., Executive Vice President and Provost, University of Nevada, Reno

Mary Pike, Director, K-12 Science, Health, Physical Education, Foreign Language and Driver Education, Curriculum and Professional Development Department, Clark County School District

Kelly Cannon, K-12 Science Coordinator, Washoe County School District Ray Bacon, Nevada Manufacturers Association

#### Chair Woodhouse:

We will begin with Senate Bill (S.B.) 102.

SENATE BILL 102: Revises provisions relating to the Kenny C. Guinn Memorial Millennium Scholarship. (BDR 34-837)

#### Senator Ben Kieckhefer (Senatorial District No. 16):

The mechanism for spending funds from the Kenny C. Guinn Memorial Millennium Scholarship Fund was created during the last Session in Nevada Revised Statute (NRS) 396.940. The Memorial Scholarship provides a yearly award to one Kenny C. Guinn Millennium Scholarship recipient who is focusing on education and plans to teach in Nevada. The purpose of the Memorial Scholarship is to close the gap between the amount students receive from the Millennium Scholarship and the fees they actually pay during their senior year. Scholarships have already been awarded under this program, and students are benefitting from it. This bill would expand the number of scholarships awarded each year from one to two. All funds for this program are donated by the private sector.

We propose that one student from a school in the north and one student from a school in the south receive this scholarship yearly. Schools eligible for participation are listed in section 1, subsection 1, paragraphs (a) and (b) of S.B. 102. These schools currently offer degree programs in education. I have been working with the Nevada System of Higher Education (NSHE) on an amendment to this bill (Exhibit C). We will continue to work together on this

amendment to ensure that additional institutions will not be excluded from participation in the future should they develop a degree program in education. I will bring this amendment back in the future. As it stands, this is not an unfriendly amendment.

### Steve G. George (Chief of Staff, Office of the State Treasurer):

The Memorial Scholarship was first awarded in 2011 to a student from the University of Nevada, Reno (UNR). As of today, there is over \$200,000 in the Memorial Scholarship Fund. This money is kept separate from the Millennium Scholarship Trust fund established in NRS 396.926, and has its own budget account. We are interested in expanding the Memorial Scholarship to provide assistance to students in both sections of the State.

The Office of the State Treasurer works closely with NSHE in awarding this scholarship. We help advertise the scholarship to education program students who are juniors. We participate in reviewing the scholarship applications. Under NRS 396.945 and we ensure the Board of Trustees of the College Savings Plans of Nevada, delegated to choose the winner, receives the applications from the finalists. We announce the scholarship winner the following school year, when the student is a senior.

# Constance J. Brooks, Ph.D. (Director, Government Relations, Nevada System of Higher Education):

The NSHE has provided a friendly amendment, <a href="Exhibit C">Exhibit C</a>, but it has not been finalized. We would like more specificity in terms of the institutions that are listed in the bill. We will work on this with Senator Kieckhefer. We are in favor of having students from both the north and south receive scholarships. We want to include language that ensures all of our institutions would be included provided they award a bachelors of education degree. I have provided a data sheet with additional information on the Millennium Scholarship (<a href="Exhibit D">Exhibit D</a>) to the Committee.

### James Richardson (Nevada Faculty Alliance):

The Nevada Faculty Alliance has contributed to the Memorial Scholarship Fund and hopes to see it extended. We support this bill.

## Senator Cegavske:

Would you please explain the amendment in <u>Exhibit C</u> to us? Why do you want to change the language to " ... two recipients from an eligible institution"? Does

this mean there could be two students from UNR instead of one from the north and one from the south? I prefer the bill as written.

#### Senator Kieckhefer:

In their notes on this amendment, NSHE indicates that they do not object to the premise that awards go to one student in each region. I want to ensure this is preserved in statute. This is why the institutions were originally listed in the bill. We agree with the amendment in concept. We should be able to expand the list of eligible institutions should one of them add an education degree program. The amendment does not maintain the north-south split the way we prefer. We will work with NSHE to revise the language. We may keep the list of schools and provide an option for adding institutions if they meet the criteria.

## Senator Cegavske:

I would support that.

#### Chair Woodhouse:

We will have a presentation on science, technology, engineering and math (STEM) programs.

# Rorie Fitzpatrick (Deputy Superintendent for Instructional, Research and Evaluative Services, Department of Education):

I am reading from a written statement I provided to the Committee (<u>Exhibit E</u>). I also want you to know that the rigorous and relevant STEM program applies to students from prekindergarten through Grade 12.

# André DeLeón (Education Programs Professional, K-12 Science and STEM, Assessment, Program Accountability and Curriculum, Department of Education):

I have provided the Committee a copy of my presentation (Exhibit F). The mission statement for STEM in Nevada is given on page 3. We feel it is important to focus on active teaching and learning for both the teacher and the student. Experiences must be relevant so students are educated on the content and develop an understanding of the real-life meaning of STEM. The STEM content areas should be connected to each other and to content areas outside of STEM. Students should understand how STEM relates to literacy, fine arts, physical education and other content areas. Students should achieve at a high level so they are capable in the workforce not only Statewide, but globally. The

stakeholders who helped develop our mission statement and goals are listed on page 5.

We would like to build a guidance document to serve as a "landing place" for those who are beginning to work with STEM programs. This document would provide direction to districts about how to create sustainability in STEM programs. We would like to create a Nevada STEM network to encourage communication and enable us to build on each other's work. Our goal is to increase STEM knowledge, not only for students but also for other stakeholders such as parents and teachers. More goals are listed on page 6.

# Mark Newburn (State Board of Education; State Board for Career and Technical Education):

My entire career has been spent in the STEM industry. Although I am now on the State Board of Education, I will be offering my views as an industry professional. I have provided a copy of my presentation to the Committee (Exhibit G). President Barack Obama, as quoted on page 2, indicated that STEM education is essential to the future of our Nation. The STEM workforce must be expanded, and STEM education must be improved. The importance of STEM in the twenty-first century labor field is shown on page 3. The plan to diversify our Nevada economy into a variety of STEM sectors will depend on our ability to produce skilled STEM workers for these sectors.

The failure point in our current STEM system is discussed on page 4. This appears to occur in middle school, when many students self-select out of STEM fields. This can develop as early as elementary school and may be based on students' perception of math and science. It is not affected by positive student exposure to STEM careers or professionals. A dislike of math or science causes many students to avoid these subjects; they either fail to graduate or graduate with insufficient math and science coursework to enter the STEM programs. If diversifying our economy depends on a strong STEM workforce, then it ultimately rests on our ability to fix this early STEM failure point.

There are pockets of excellence in Nevada. Examples of ways to improve other STEM programs are given on page 5. Students learn by doing—the need to do drives the need to learn. Successful STEM education is hands-on and provides time for students to experiment, ask questions, collaborate and be creative. Project-based learning helps students know why they are learning and how to use what they have learned. Our best STEM schools have close relationships

with industry. Students meet professionals in STEM fields and hear how these fields are used in the real world.

Students who attend afterschool programs, such as FIRST Robotics, also attend college and enter STEM fields at a very high rate. We need to share the knowledge we have about teaching STEM statewide. Page 6 of <a href="Exhibit G">Exhibit G</a> provides ideas for doing this, including implementation of the Next Generation Science Standards (NGSS). The NGSS are inquiry-based and reinforce the English and mathematics standards found in the Common Core State Standards. Implementing the NGSS will require development of new curricula and assessments and delivery of teacher professional development. Implementation of the NGSS provides an opportunity to add proven elements of STEM education to the Common Core State Standards and to take STEM to Nevada. This will help address the issues on page 7 of <a href="Exhibit G">Exhibit G</a> and will stress the importance of STEM education and its role in helping Nevada both educationally and economically.

#### Senator Ford:

How do we ensure there are enough textbooks in STEM classes for students to take home? In some districts, students have to share books in the classroom and do not have books to take home. I have concerns about having appropriately prepared teachers in all classrooms. We are not adequately funding our classrooms now, especially in science.

### Mr. Newburn:

These programs need to be adequately funded from kindergarten through higher education. The key failure point is in the middle grades. This is where students need to start making decisions about math courses to be at the level required for STEM programs in college. I understand the problem of having substitute teachers teaching these classes. We must address this problem.

#### **Senator Cegavske:**

My understanding is that there is money in a textbook fund that is not being used. I am surprised there are not enough textbooks for all students when this budget is not being spent. I would like to see information about this.

#### Chair Woodhouse:

I will ask staff to retrieve information about textbook funds from past sessions for the Committee. We should also review textbook funding in Clark County

School District (CCSD), Washoe County School District (WCSD) and some of the rural districts. If there is still a need for STEM textbook funding, we will need to bring it up this Session.

### Senator Ford:

In the chemistry class my son attends, there is one set of books for 40 students, and the books cannot be taken home.

# Thomas Piechota, Ph.D., P.E. (Interim Vice President for Research and Dean of the Graduate Division of Research and Graduate Studies, University of Nevada, Las Vegas):

The Committee has received a copy of my presentation (Exhibit H). The University of Nevada, Las Vegas (UNLV) works closely with a variety of agencies in the Las Vegas area to support STEM activities. In conjunction with the Las Vegas Regional Economic Development Council and TIP Strategies, Inc., we are helping to develop the Las Vegas Region Comprehensive Economic Development Strategy.

Two objectives that demonstrate UNLV's focus on STEM are found on page 2 of Exhibit H. The first addresses the need for overall excellence in the educational system. The second identifies the need for UNLV to be viewed as a research university. We are looking to align our mission closely with State and local economic development goals. These objectives use STEM as a major driver to help do this. Pages 3 and 4 show how research and academics at UNLV currently align with some of the important economic sectors in Nevada. The UNLV has opened an Office of Economic Development to support a variety of activities as explained on page 5. In addition to educating students, we encourage them to be entrepreneurs. Our students are thinking about starting businesses, and we are looking at ways we can support them.

We also support the development of intellectual property by our faculty. The genome surgery invented by Drs. Schiller and Strong, described on page 6, may lead to new patents and the startup of a new company by a faculty member. Dr. Robert Schill, Jr. of UNLV's Howard R. Hughes College of Engineering developed the improvised explosive device detector shown on page 7. This led to the development of new patents. This type of research benefits the economy of Nevada.

A STEM summit was recently held at UNLV. Other participants included the College of Southern Nevada and Nevada State College. Participants identified critical issues associated with STEM education. These included recruiting and retention and how to align STEM programs with economic development. We also participated in strategic planning about how to move forward as institutions in STEM-related activities. This allowed us to highlight where we are going as institutions and to take inventory of what we are doing in delivering STEM-related activities.

We are pursuing several STEM initiatives at UNLV, and these are listed on page 9 of <a href="Exhibit H">Exhibit H</a>. These have an impact not only on the university but also on the Nevada workforce. We are building capacity to assist STEM programs by identifying grant writers and student fellows. Initiatives to support educators are shown on page 10. The UNLV College of Education works closely with CCSD to support STEM activities for their students. The UNLV serves students from a variety of minority populations. As seen on page 11, this allows us to qualify for additional STEM grant funding to further educational programs and research. Information about STEM programs at UNLV can be found on the Website listed on page 12.

#### Beth Wells (Executive Director, Nevada STEM Coalition):

The Committee has received a copy of my testimony (Exhibit I) and presentation (Exhibit J). The members of the Nevada STEM Coalition are listed on page 4 of Exhibit J. In 2012, we raised \$100,000 and hosted the first statewide STEM summit. The Colleges of Education at UNR and UNLV have submitted a joint grant to the National Aeronautics and Space Administration for teacher professional development as a result of this collaboration.

I am impressed by the islands of excellence in the State, but there is an abundance of negative press about educators as a group. Teachers need support to scale up STEM programs and market the good job they are doing.

Our definition of STEM teaching and learning focuses on the integration of subject areas and is shown on page 5 of <a href="Exhibit J">Exhibit J</a>. In a science class for example, to encourage greater student engagement, mathematics may be required to complete an assignment, and the teacher might talk about a local manufacturing institute that uses the skills being taught. Students might work on their projects during science, but in order to complete them, math as well as art, reading and research may be required. This integration develops a student's

ability to transfer knowledge to other contexts instead of learning a skill just for a subject-area test. This helps students understand why specific skills are needed. An understanding of science is important for citizens of the future. They must have this knowledge to know what is happening to the planet, to vote appropriately, to take care of their family and to maintain their own health.

Teaching practices required to address the Common Core State Standards are used when teaching STEM and will also be used when addressing the upcoming NGSS. The relationship between STEM activities and these standards is illustrated on page 6 of <a href="Exhibit J">Exhibit J</a>. We are not asking that additional STEM courses be taught; these classes are already being provided. We are asking teachers to change their teaching practices. As teachers develop reading and math curriculum to address the Common Core State Standards, they will be required to incorporate science and vice versa. This will demand State support for the rollout and adoption of the NGSS. Educators will need support in developing new practices through professional development, and resources will need to be allocated.

Nevada and Oklahoma lead the Nation in the proportion of available STEM jobs for workers with some college, including postsecondary vocational certificates and on-the-job training. It is important that we prepare our students to address these areas, which are detailed on page 9 of <a href="Exhibit J">Exhibit J</a>. All seven of the promising industries for Nevada require STEM skills. The need to build high-tech gaming equipment, for example, will require skills in technology.

A graduate with a STEM degree does not always stay in that career; the skills learned earning these degrees are transferable to other careers and are in high demand. Students who participated in hands-on projects scored higher on the National Assessment of Educational Progress than those who did not, supporting the value of project-based instruction. Students who participated in science projects outside of the school day scored higher as well. Additional resources would allow more students the opportunity to participate in these types of programs.

Nevada has many challenges. Some of these are listed on page 14 of Exhibit J. Many students are not receiving science instruction in elementary school. Research indicates that students become interested in reading or math by fourth grade. We cannot wait until middle school or high school to engage these students in STEM. Some elementary teachers are not allowed to teach science

and are told to focus on reading and math for testing purposes. Teachers do not have ways to share current programs with each other, and programs of excellence are not always sustained.

Adequate funding and the timely adoption of the NGSS are important. Additional areas to be addressed are listed on page 16 of <a href="Exhibit J">Exhibit J</a>. Teachers in Nevada are not required to have a degree with a subject area focus necessary to teach middle school science or math. We encourage the State to review the licensure requirements as they relate to STEM. We need to identify exemplary programs for recognition and replication. Teachers need excellent, ongoing professional development and support.

We have three goals for this year and are raising funds to address them. The first goal is to create a centralized Website to allow teachers to gather information and resources. More information about this site is on page 17 of <a href="Exhibit J">Exhibit J</a>. The second goal is to begin a marketing initiative to change our State culture about STEM. The third goal is to identify and disseminate examples of exemplary, research-based STEM programs and practices and begin to develop a plan to recognize excellent programs. This year, we are focusing on developing a statewide STEM network to begin the communication, curriculum alignment and scaling-up of best practices as found on page 19 of <a href="Exhibit J">Exhibit J</a>. I have provided the "Nevada STEM Coalition Report and Strategic Plan 2013" to the Committee (Exhibit K).

# Kevin Carman, Ph.D. (Executive Vice President and Provost, University of Nevada, Reno):

The Committee has received a copy of my testimony (Exhibit L). We actively collaborate with our local partners in education including Truckee Meadows Community College (TMCC) and WCSD. In 2012, the UNR College of Engineering faculty offered a summer program and worked in local classrooms with students. Graduate engineering students taught in kindergarten through Grade 12 (K-12) classrooms to encourage an interest in potential engineering careers. Faculty from the UNR College of Science provided materials for teaching earth sciences to K-12 teachers and classes. We participated in the Math, Engineering and Science Achievement program (MESA) which provides STEM services to underrepresented minorities. The Nevada Science Olympiad was cohosted by MESA and the other organizations listed on page 3.

The Raggio Research Center for STEM Education at UNR has a goal of attracting STEM grants and related activities to our area. We work closely with local school districts to ensure students are accurately placed in math classes so they do not struggle when they get to college. Page 4 of <a href="Exhibit L">Exhibit L</a> provides additional information on our collaborations with WCSD. Enrollment in STEM programs has continued to grow over the last 5 years. Degrees granted and the total number of students in STEM programs have also increased, as shown on pages 5 and 6. Our undergraduates are involved in research at a 35 percent increase over the last 5 years. Funding for STEM programs increased over the last 4 years, but it is beginning to decline due to a decrease in grants, as shown on page 7.

It is important to remember the humanities, business and social sciences when discussing higher education. Our STEM students must have diverse educational backgrounds, strong communication and business skills, and a sense of the arts and humanities. Our students must be well-rounded.

#### Dr. Brooks:

The community colleges work in partnership with NSHE to support STEM. I have provided the Committee with a statement from TMCC (<u>Exhibit M</u>) about STEM education at their site.

# Mary Pike (Director, K-12 Science, Health, Physical Education, Foreign Language and Driver Education, Curriculum and Professional Development Department, Clark County School District):

I have furnished a copy of my presentation (<u>Exhibit N</u>) to the Committee. In the CCSD, we have a diverse student population. Identifying successful STEM schools and programs is a challenge for our district because of its diversity. It is important that STEM curricula be well-defined. It must include an articulated K-12 sequence of learning progressions.

All schools are different, and each needs to identify a STEM model that will serve the needs of its student population. The recommendations on page 6 can help focus schools that want to implement a quality STEM program. Learning progressions for STEM must be implemented at every grade level K-12. Quality professional development must occur for administrators as well as teachers because many administrators do not have a STEM background.

The Committee has received a document, "Clark County School District STEM Schools and Programs" (Exhibit O) that provides information about CCSD

elementary schools, middle schools, high schools and career and technical academies that have a STEM focus. These schools share several common features. They have a rigorous curriculum, they have high expectations for their students, they have excellent teachers with strong content knowledge and they have dedicated administrators.

The CCSD recently received a \$2.9 million "Investing in Innovation" grant from the U.S. Department of Education, one of only 20 allocated in the Nation. This grant will provide high school and middle school students with access to rigorous, project-based curriculum in STEM. It will include extracurricular activities such as summer camps, internships, job-shadowing, STEM clubs and weekly meetings with STEM professionals. Teachers will receive extensive professional development.

Other STEM activities in CCSD are listed beginning on page 9 of Exhibit O. These activities require collaboration between schools and CCSD departments and divisions to make STEM schools successful. We work with English language learners and special education programs because STEM funding is for all students. We collaborate with our Grants Development and Administration Department to receive funding. Additional areas of collaboration are listed on page 9 of Exhibit N.

The Committee has a copy of "Transitioning to the Next Generation of Science Education" (Exhibit P). This document discusses the framework for science education that will be used to plan future science instruction. Three areas of focus are identified: science and engineering practices, disciplinary core ideas and crosscutting concepts. Each of these areas is explained in greater detail on page P2. The CCSD has a cadre of 40 K-12 teachers who have participated in professional development using this framework. They will serve as our teacher leaders as we develop capacity, and they will provide professional development on this framework to their peers.

The relationship between the NGSS and STEM education is apparent. Both reflect real-word interconnections, build coherently across K-12, provide a deeper understanding and application of content, and integrate STEM with language arts. They provide a basis for rigorous science instruction for every student at every school. They develop twenty-first century skills and prepare students for the workplace, ensuring they are globally competitive. The NGSS are for all students—no child is left out. They equip students for a society that

demands a high level of literacy in science, mathematics and technology. The CCSD is advocating for the adoption of the NGSS when they are released. These standards will assist in providing a rigorous STEM education for all students in Nevada.

## Kelly Cannon (K-12 Science Coordinator, Washoe County School District):

In the last 3 years, math scores have risen at all of the STEM schools in the WCSD. Our high school and middle school teachers say students are now better; they know how to apply STEM learning. The WCSD is excited about the NGSS because of its alignment to the Common Core State Standards in English language arts and math. Science is not taught consistently in elementary school. The NGSS will provide a vehicle for this instruction to occur in WCSD.

### Ray Bacon (Nevada Manufacturers Association):

In the future, jobs in technology, manufacturing and engineering will require a better understanding of science than they do today. The number of manufacturing jobs will not grow significantly, but the jobs will become more technical.

There is a skills gap in Nevada that impacts employment. For many years, we have imported people from other states who have a lower level of skills. This gap cannot be fixed overnight, but it can be addressed immediately. We have excellent career and technical education (CTE) schools in Nevada. These schools have graduation rates above 95 percent, and their rate of sending students to college or postsecondary education is over 85 percent.

Modern jobs are requiring new and greater use of technology. Jobs that did not previously require technology now do. Machinists are still required, but the skill set they need is different; they now must have an understanding of computers. The Nevada Manufacturers Association (NMA) is collaborating with TMCC on a food manufacturing program that combines TMCC's culinary arts program with NMA's manufacturing program. We have offered tours of manufacturing plants to CTE teachers to help them better understand industry needs and how they can address them in their classrooms.

Data about employment needs in manufacturing fields are incomplete and need to be more accurately gathered by our institutions of higher learning. The communication between employers and the community colleges is good, but we

need to improve the links between employers and our universities. The skills gap is in workers, not at the management or engineering level.

## Senator Cegavske:

How many manufacturing jobs have we lost in the last 5 years?

#### Mr. Bacon:

Manufacturing losses are at 24 percent and are second to those in the construction industry. That equals about 10,000 jobs, most of them are people who made materials used in the building industry. The job description showing the biggest drop was "concrete truck drivers." There still exists a skills gap; employers are going outside the State to find workers. The NMA recently worked with the Nevada Department of Employment, Training and Rehabilitation to implement a Right Skills Now machinist training program. We have a program in welding operating at Western Nevada College. Programs like these encourage companies to look at our State when deciding where to operate. We are beginning to close the skills gap.

## Pepper Sturm (Policy Analyst):

The Committee has received <u>S.B. 58</u> and the proposed amendment (<u>Exhibit Q</u>) to revert to the original language in section 2, subsection 1.

**SENATE BILL 58**: Revises provisions relating to distance education. (BDR 34-396)

### Senator Cegavske:

I would like to thank CCSD for working with me to understand this bill. I support the amendment.

#### **Chair Woodhouse:**

The presentations made it clear to me that, due to the amount of support students receive in these programs, they will not fall through the cracks. This bill gives rural students the opportunity to take courses they might not be able to take otherwise due to small enrollment at their sites.

DATE:\_\_\_\_\_

SENATOR CEGAVSKE MOVED TO AMEND AND DO PASS AS AMENDED S.B. 58. SENATOR KIHUEN SECONDED THE MOTION. THE MOTION CARRIED UNANIMOUSLY. \* \* \* \* \* **Chair Woodhouse:** Since there is no further business, the meeting is adjourned at 5:21. RESPECTFULLY SUBMITTED: Diana Jones, Committee Secretary APPROVED BY: Senator Joyce Woodhouse, Chair

<u>EXHIBITS</u>				
Bill	Exhibit		Witness / Agency	Description
	Α	1		Agenda
	В	3		Attendance Roster
S.B. 102	С	1	Constance Brooks	NSHE Proposed Amendment
S.B. 102	D	2	Constance Brooks	Governor Guinn Millennium Scholarship Data Sheet
	Е	1	Rorie Fitzpatrick	Written Testimony
	F	6	André DeLeón	NDE STEM Overview
	G	8	Mark Newburn	Nevada State Board of Education STEM Education
	Н	12	Thomas Piechota	STEM at UNLV
	ı	3	Beth Wells	Written Testimony
	J	21	Beth Wells	Nevada STEM Coalition Slide Presentation
	K	35	Beth Wells	Nevada STEM Coalition Report and Strategic Plan 2013
	L	7	Kevin Carman	UNR STEM Initiatives
	М	1	Constance Brooks	STEM Education at TMCC
	N	14	Mary Pike	CCSD STEM Education Initiatives
	0	12	Mary Pike	CCSD STEM Schools and Programs
	Р	2	Mary Pike	Newsletter NGSS
S.B. 58	Q	2	Pepper Sturm	Work Session Document