Creating Real-World Experiences

Organize Student Learning

Engage Students in Learning

Move From Theoretical to Practical Application

Help Students Make Sense of Math

Myth about Misconceptions

Professional Development Offerings

4 strategies to keep them from talking to death
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Organizing Student Learning - the Overview

Today's Preparation Determines Tomorrow’s Achievements
–Bill Hanlon

It’s important to start the school year out right by making sure our students know how to learn effectively and efficiently. The most successful classroom teachers use the beginning of the year to frame expectations for the school year that set the stage for increased student achievement.

As the school year begins, I would suggest that teachers call the parents of their students enrolled in introductory classes, such as algebra and geometry. Teachers can take this opportunity to introduce themselves, tell the parents how delighted they are to have their offspring in their class, explain what they will do in their classes to help their child succeed and discuss student expectations; coming to class on time, paying attention, taking notes, homework, studying, testing and grades, etc. Having a positive first phone call going home in the beginning of the year strongly suggests that if teachers care enough to spend their off time communicating with parents, then they must be caring teachers. It also suggests to students that if you will call home for no apparent reason, then you will definitely call home if there are issues that develop during the school year.

A second suggestion is to always know exactly where you are going before choosing a path. Teachers must teach their assigned curriculum and address student deficiencies using linkage and the Long Term Memory Review (LTMR). For teachers that means before they start their first day of instruction, they should have constructed a specification sheet and practice test identifying what they want their students to know, recognize and be able to do after the unit or chapter is completed and how those specifications will be assessed.

Teachers entered the profession wanting to help students learn, what they say and their body language conveys that message. They are there to help students learn, create interest, enthusiasm and excitement about the subject they are teaching. That begins as the students enter their classroom - every day. Student-teacher relationships are important! The research strongly suggests that students will work for teachers they perceive as caring for no other reason than loyalty. Studies have also suggested that students are much more likely to stay in school if they have a mentor.

Just because someone knows the content does not mean they know how to deliver it in an understandable way. Teachers should set the stage for learning by explaining how the concepts and skills they are teaching are used in daily life or connect them to math they have learned previously. Too often students get hung up in math by not grasping the big picture – what they are doing and why they are doing it.

While using common language is appropriate for introducing a new topic, teachers must remain cognizant that the language of math has to be developed and learned if their students are to be successful. By
developing concepts or linking them to previously learned mathematics or outside experiences, teachers can build on students' past experiences, increase their comfort levels, review and reinforce concepts and skills, compare and contrast, and teach the material in a different context — all of which the research suggests increases student achievement. For example, teachers might connect the division algorithm learned in third and fourth grade to dividing polynomials in first year algebra or synthetic substitution used to solve higher degree equations using the Rational Root Theorem. By connecting the algorithms for adding fractions, decimals and percents, teachers have an opportunity to address deficiencies. Rather than teaching concepts in isolation, students would be better served if they knew the trig identity, \( \cos^2x+\sin^2x = 1 \), equation of a circle, distance formula and Pythagorean Theorem are all the same formula, just written differently, because they are being used in a different context. Additionally, outstanding teachers use simple straight forward examples that clarify the concept or skill they are teaching without bogging the students down with arithmetic. Nothing ruins a good lesson more quickly than a bad example.

While instruction is extremely important, we need to remember that at the end of the year, textbooks are collected. The only thing that students have to refresh their memory in the future is their notebooks. Memory researchers have identified “writing it down” as their most important strategy for recalling information. Teachers who take great care to ensure student notes reflect and support the day's instruction and the notes taken from that instruction. All too often, homework is a page in the book with exercises assigned. The best homework assignments reflect what the teacher values. That is, homework that encourages studying; too many homework assignments don’t.

The next suggestion has to do with homework. Homework should reflect and reinforce the day's instruction and the notes taken from that instruction. All too often, homework is a page in the book with exercises assigned. The best homework assignments reflect what the teacher values. That is, homework that encourages studying; too many homework assignments don’t.

The next suggestion has to do with specific test preparation. With the instruction, notes and homework being aligned to help students be successful on their tests, having a parallel constructed practice test based on the specification sheet created before instruction and discussed earlier will again help focus student learning and increase student achievement. I’d recommend that practice tests be given to the students about halfway through the unit so they can work on it and ask appropriate questions along the way.

And just when you think you are done, here’s another suggestion. Offentimes students will learn concepts and skills in isolation successfully. For instance, in first year algebra, students are typically taught five different methods of factoring. As each method is introduced, the students are typically able to factor those polynomials. Then on the test when all five methods are tested at one time, students get them wrong. Why? What wasn’t taught was how to differentiate between the polynomials and the five factoring methods that look alike for many students — comparing and contrasting — that results in students not maximizing their knowledge because they are not using the correct method for the specific polynomial.

Students of teachers who speak positively about how well they will perform on their test generally perform better than students of teachers that don’t. The best teachers take the time to build confidence so each student is expected to come in and make a grade of A because all the concepts and skills to be tested were based on the instruction, notes, homework, and test preparation (practice test) they have been doing all along. They are ready!

By stressing positive student-teacher relationships with matching body-language, using the CEL and teacher expectancies, and connecting instruction, notes, homework, test preparation and tests, teachers will help students organize their learning, study more effectively and efficiently which, according to the research and experience, will lead to increased student achievement.

Written By: Bill Hanlon
RPDP Director
Concept development is one of the Components of an Effective Math Lesson and is a term used often within the education community, but what really does the term mean? More importantly, how does this translate to the elementary classroom in regard to the teaching and learning of mathematics?

Take a few moments to reflect on the meaning of this term, and create a definition of concept development for yourself before reading on....

Webster’s Dictionary provides the following definitions:

**Concept:** something conceived in the mind; a thought or notion.

**Development:** the act, process or result of developing. To develop is to make active or promote the growth of; to create or produce, especially by deliberate effort.

**Disequilibrium...the time when we are most open to learning.**

When we teach for understanding or concept development, it can be helpful to reflect on two states of mind we all experience as learners. Piaget described these as equilibrium and disequilibrium.

**Concept Development is Deliberate**

Based on these definitions, it may be fair to say that planning for concept development requires providing students with the opportunity to deliberately develop mathematical understanding and ideas over time. The National Council of Teachers of Mathematics (NCTM) Principles and Standards for School Mathematics states that conceptual understanding is an important component of proficiency, and that learning with understanding is essential to enable students to solve the new kinds of problems they will inevitably face in the future. The Learning Principle of this document further states that students must learn mathematics with understanding, actively building new knowledge from experience and prior knowledge.

From the classroom perspective, our first job as teachers is to determine what mathematical concepts our children need to know and understand. The Nevada State Standards provide curricular goals for each grade level in addition to presenting an alignment of the mathematical concepts students will be encountering throughout their educational careers. Our work in the elementary grades is to build a strong foundation of these essential understandings so that children are provided the opportunity to make sense of their work in mathematics.

**Disequilibrium...the time when we are most open to learning.**

When we teach for understanding or concept development, it can be helpful to reflect on two states of mind we all experience as learners. Piaget described these as equilibrium and disequilibrium. When learners are in a state of equilibrium, they believe they understand something and are quite comfortable with what they know. At this stage a learner is not actively thinking or trying to figure anything out. However, when something happens that causes them to be surprised or unsure, then the brain begins an active process of trying to make meaning. The brain becomes
actively engaged in a search for understanding. When what we are experiencing contradicts our previous understandings, when we feel unsure, puzzled, surprised, or confused, we are in the state of disequilibrium. This natural state of confusion should not be considered undesirable; rather it is the most opportune time for learning to occur. We seek to return to a state of equilibrium so we are motivated to make sense of what we are experiencing. This opportunity to make connections and see relationship is known as equilibration, the time when we are most open to learning.

**Learning is Making Sense of Confusion**

The way we interact with children during this process of disequilibrium is the key. The process of arriving at equilibration requires ample time with concrete experiences by the learner. The process of equilibration is one in which there is continuous interaction between your mental conceptual understandings and your environment. It is a repeated cycle of going from confusion to new understanding. Confusion is essential to the learning process. Helping children make sense of concepts requires very different kinds of experiences and interactions. We can not force children to understand, but we can get them involved in trying to figure things out by presenting appropriate situations and asking questions. As we watch children work in the classroom and ask questions of them to find out what they understand, we can then use this information to make instructional decisions. We need to engage children in thinking and reasoning in order to develop problem solving skills and see patterns and relationships inherent in mathematics.

Learning mathematics requires children to create and re-create mathematical relationships in their own mind in order to develop conceptual understandings. Therefore, when providing appropriate instruction, teachers need to remember that children need direct and concrete interactions with mathematical ideas. Continuous interaction with thinking, problem solving and concrete experiences is essential for concept development to occur for all learners.

**About Teaching Math** by Marilyn Burns and **Teaching Student Centered Mathematics** by John Van de Walle are two teacher resources that not only provide teaching suggestions for lessons designed to facilitate conceptual development in the classroom but also provide professional development resources and content knowledge for teaching professionals.

Written By: RPDP Math Team
RPDP Teacher Trainers

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**Real-World Experiences...See it. Hear it. Say it. Do it**

Concept development involves teaching the big concepts, linking concepts to previously learned material and/or real-world experiences, and utilizing a variety of techniques allowing students to see it, hear it, say it, and do it.

**Concept Development and Guided Practice in Fluency Instruction**

Concept development and guided practice are both essential elements in the Components of an Effective Lesson. Concept development involves teaching the big concepts, linking concepts to previously learned material and/or real-world experiences, and utilizing a variety of techniques allowing students to see it, hear it, say it, and do it. Guided practice helps students process the information, think, analyze, discuss their solutions and become problem-solvers to enhance conceptual understanding through activities involving inquiry, investigation, and discovery (Components of an Effective Lesson, RPDP).

Concept development occurs primarily through the introduction of the strategy, or concept, by the teacher. The strategy is modeled and involves explanation, clarification, and discussion.

**Authentic Situations Honor the Child and the Task!**

Guided practice consists of gradually giving children more responsibility for using each strategy in a variety of authentic situations. Here children are invited to practice a strategy during whole-class discussions, asked to apply it in collaboration with their peers in pairs and small groups while being supported by honest feedback that honors both the child and the task. (Miller)

**In concept development for fluency instruction:**

- First provide a specific, explicit definition of fluency and model fluent reading for the students.
- Next, read aloud to the students to model fluency and what it sounds like. Some examples of strategies to use during a read-aloud could involve having students listen for fluency, responding to punctuation and text clues, and comparing two books as an example and non-example of fluency.

There are many guided reading strategies to increase students’ reading fluency. Echo reading is an example of teacher-supported oral reading.

- Read aloud the text in chunks or phrases, to model appropriate fluency.
- Then, the students echo read the text demonstrating the same fluency that was modeled for them.
- Additional strategies to use as guided reading practice for fluency are partner or paired readings, repeated readings, and reader’s theaters. (Bureau of Education and Research)

Concept development and guided practice are two essential elements of effective classroom instruction. Together they set a foundation for the concept and provide opportunities for practice, ultimately preparing the students to be able to apply the strategy independently and make connections to new concepts.

Written By: Melissa Baumunk
Third Grade Spanish Teacher
Estes McDoniel, An International School

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Regional Professional Development Program
Elementary Literacy

Fall 2008—5
Understanding science concepts begins in infancy, long before children enter school. Very young children are curious and want to find out about the world around them. They wonder about things, inundating the adults in their lives with numerous questions in order to gain the knowledge to make sense of their experiences. They explore their world using their five senses. By exploring their environment and reflecting on those experiences, they begin to actively construct their own knowledge.

Indeed, humans are structured to take in information—to learn—through the use of their senses. People of all ages remember things better when they learn by doing. The more senses that are involved in the new experience, the better we are able to construct our own understandings.

We Learn by Doing
So how can teachers incorporate this information into their classrooms in order to help students develop strong science concepts?

• Provide science opportunities that involve hands-on learning. The more actively involved students are in the process of science, the better able they are to understand new concepts. Research tells us that the following strategies will enable all students to become more scientifically literate:
  • Evoke students’ curiosity by employing inquiry-oriented instruction that provide students with opportunities to ask their own questions and to conduct investigations without having the answers given to them first. By fostering curiosity, motivation to learn is greatly enhanced which leads to better retention of concepts.
  • Plan science lessons based on the ABC method of teaching science: Activity Before Content. When students actually do and experience science, they develop their critical thinking skills as well as discover scientific concepts. Content then makes more sense to them.
  • Connect new learning to what students already know. This allows new information to be processed in a way that makes sense to learners, allowing them to construct their own understandings and to build a consistent picture of the world around them.
  • Encourage oral and written communication. Science is a social activity, and language is the vehicle we use to connect with others. Students need to interact with each other during science lessons just as scientists do. Language is also the way we make sense of our own thinking. The better able we are to explain our thinking, the clearer our concepts become. When planning science lessons, allow opportunities for students to talk in pairs, small groups and large groups. Also, build in time for writing in science notebooks.
  • Allow time during science lessons for reflective thinking. Hands-on activities in and of themselves do not lead to concept development. All learners need time to reflect on the information they have gathered through their senses in order to make connections between oneself, real life and books or other media. Reflection after doing leads to deep understanding.

Written By: Lois Bloom
RPDP Elementary Science
Highlights of CCSD’s New Teacher Induction Program

E ach year hundreds of teachers join the Clark County School District. Each new teacher, even those who have experience in other districts, participates in the Induction Program. The sessions and resources provide a crucial foundation for the first year of teaching in CCSD. The resources, Great Beginnings for Elementary Teachers and Great Beginnings for Secondary Teachers, are useful for ANY teacher in the district. Even veteran teachers will find new and innovative strategies for the classroom. The training sessions provide a review of curriculum documents and instructional methods. Administrators can obtain additional information and the documents from the Teacher Induction and Mentoring Department at 799.1092.

New Teacher Induction Program
The Human Resources Division, Curriculum & Professional Development Division, and the Regional Professional Development Program work closely to provide a variety of activities for all new teachers, elementary, middle level and high school, to assist them in being successful during their first year in the Clark County School District.

Upon Acceptance of an Offer
As soon as an offer is made, the applicant’s name and phone number are given to a volunteer from the business community and to a volunteer teacher. The volunteers call their assigned applicant to answer any questions the applicant may have and to share the advantages of living and working in Clark County. A New Teacher Relocation Guide is sent with each offer. This guide contains information about licensure, housing, the Las Vegas community, and resources to assist with relocation.

New Teacher Welcome Center
Upon arrival to Las Vegas, new teachers are encouraged to visit the New Teacher Welcome Center. The center assists with basic relocation information such as places to live, available roommates, how to register their car, and how to hook up utilities, etc. In addition, there are representatives on hand to answer questions and deal with relocation matters:
- Experienced teachers from the Clark County School District welcome new teachers to the district and answer questions about Las Vegas in general.
- Silver State School Credit Union representatives assist with banking needs.
- The Clark County Education Association is also available.

Get to Know Your Community Day
Teachers new to the district are provided the opportunity to get to know their community by attending Get to Know Your Community Day. This day is filled with many interactive activities. New teachers are first given the opportunity to get to know colleagues who are from their same region of the country. They then have the opportunity to participate in a question-answer session pertinent to their teaching assignment. An information mall provides new teachers with a wealth of information regarding the community and the school district. Door prizes donated by local businesses are given away throughout the day. This is always a very fun-filled day for the new teachers.

New Teacher Curriculum Orientation
Teachers who are new to the Clark County School District attend a one-day orientation prior to the beginning of the school year. This orientation is designed to acquaint teachers with resources, services, curriculum, and information pertinent to having a successful first year of teaching. At orientation, new teachers are provided a copy of Great Beginnings for Elementary Teachers or Great Beginnings for Secondary Teachers. The content delivered at orientation focuses on planning for the first day and the first week of school and the following CCSD Professional Domains:
- Domain #1: Planning and Preparation
- Domain #2: Assessment of Student Achiev.
- Domain #3: Learning Environment
- Domain #4: Instruction
- Domain #5: Professional Responsibilities

In addition, Dr. Harry Wong, author of The First Days of School, provides a half-day seminar for new teachers. Dr. Wong is a nationally recognized motivational consultant. His book is an excellent resource for new teachers, both elementary and secondary.

Academy Training Opportunities
New teachers are also provided opportunities throughout the school year to attend follow-up training sessions. The content for both elementary and secondary new teacher sessions is based on the CCSD Performance Domains.

The training for teachers new to the teaching profession is delivered by the New Teacher Training Cadre, under the direction of Project Facilitators from the Human Resources Division. The Cadre consists of experienced CCSD teachers who have demonstrated expertise in their curriculum area, excellent classroom management skills, thorough instructional planning and organizational ability, and knowledge of effective instructional strategies leading to student academic achievement.

Additional Assistance
In addition to on-going training, assistance is provided to new teachers, upon request, at their school site. Project Facilitators from the Human Resources Division are available to provide focused assistance in the classroom of new teachers. This assistance may include demonstration lessons, classroom management techniques, effective teaching strategies, etc. The assistance is geared toward the individual needs of the teacher.

New Teacher Socials
New teachers are afforded the opportunity to relax and unwind with other new teachers and veteran teachers after school hours at organized socials. Local hotels and restaurants provide new teachers free or discounted rates on food and musical entertainment.

Additional Resources
The CCSD InterAct system provides for continuous communication with the new teachers. Teaching tips are posted weekly as well as postings of upcoming training opportunities.

A monthly newsletter is provided to each new teacher in CCSD. This newsletter contains pertinent monthly information for the new teachers. Articles written by veteran teachers are shared in these newsletters, as well as current research on best instructional practices.

Mentoring
Each elementary, middle level and high school has an identified, on-site Facilitator of Mentoring. This experienced teacher assists new teachers in becoming acclimated to their school. The Mentor Facilitator, along with additional mentors at the school, provides ongoing support to all new teachers throughout the school year. Mentor Facilitators are provided the opportunity to attend on-going training sessions regarding various aspects of mentoring.

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Updated 04/16/87
Student ideas about science can be like files found on an old computer’s hard drive: outdated and fragmented. When our students enter our science classrooms, they already have well-formed theories about how the natural world operates. These theories form through their own observations, media messages, and previous science instruction. Unfortunately, student’s preconceived theories are probably not consistent with those held by scientists. We commonly call these “incorrect” ideas misconceptions, naïve theories, or alternative conceptions. Whatever the name, misconceptions serve as strong barriers to student understanding of science.

Misconceptions are Persistent

Best education practice tells us to determine our student’s prior knowledge at the beginning of a unit. Whether a teacher uses a pretest, think-pair-share, KWL, or some other instructional strategy, the idea is to gauge student understanding about a particular topic and reveal any misconceptions. Science teachers and educational researchers have become fairly adept at identifying misconceptions, with textbook and Internet sites providing extensive listings of naïve theories. One such site is SNRPDP’s own Targeted Interventions for Proficiency in Science or TIPS, found by clicking the green Science TIPS tab at www.rpdp.net.

While teachers have many resources and strategies for identifying misconceptions, promoting strong conceptual change toward scientific understanding is less well understood. The tendency is for teachers to employ what I call the “smart bomb strategy,” where we actively “seek and destroy” misconceptions by telling students that they are plain wrong. A less draconian measure, but still a common strategy, is to introduce discrepant events via demonstrations. One classic example is demonstrating to students that (in the absence of air resistance) objects fall at the same rate, regardless of their size and mass. When introducing acceleration due to gravity, I would have my high school physics students predict what would happen if I dropped a marshmallow and brick from the top of a stairwell. Despite having physical science as 8th graders, almost all of my students would predict that the brick would reach the ground floor before the marshmallow did. Much to their surprise, the brick and marshmallow would reach the ground floor at the same instant. These students almost certainly experienced a similar demonstration, with perhaps a laboratory activity to reinforce the concept, in their 8th grade class. How then, could the students still hold the misconception that more massive objects fall at a greater rate than less massive ones?

Why “Seek and Destroy” Doesn’t Work

Recent research in conceptual change sheds some light on this disturbing issue. Chinn and Brewer (1993) discussed what happens when students are provided scientific evidence that disagrees with their naïve theories. In other words, these researchers asked how students respond when scientific data they have collected through observation and/or experimentation does not agree with their naïve theories. According to Chinn and Brewer, there are seven outcomes when a student experiences “anomalous data.” These outcomes are shown in the following table, with a typical student response.

<table>
<thead>
<tr>
<th>Student Response</th>
<th>What a Student Might Say or Thinks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Ignore and discard the anomalous data with no explanation</td>
<td>I do not understand, and I do not care about science.</td>
</tr>
<tr>
<td>2. Reject and discard data with explanation</td>
<td>These data are false because the teacher is tricking us. We made a mistake in our data collection.</td>
</tr>
<tr>
<td>3. Exclude and place the data outside of their existing naïve theory</td>
<td>This experiment works this way in the science laboratory, but not this way in the real world.</td>
</tr>
<tr>
<td>4. Hold in abeyance (dormancy) and deal with the data later</td>
<td>Relativity does not make sense and scientists will eventually figure out how we can travel faster</td>
</tr>
<tr>
<td>5. Reinterpret by incorporating data into their existing naïve theory</td>
<td>This experiment obviously shows that biological evolution applies to bacteria, but not to humans.</td>
</tr>
<tr>
<td>6. Make a superficial change to their existing conception</td>
<td>The observations show that the Earth is round, so it must be that we live on a round and flat disc,</td>
</tr>
<tr>
<td>7. Theory change by making a strong restructuring so that their conception is</td>
<td>because the Earth around me still appears to be flat.</td>
</tr>
<tr>
<td>consistent with scientific understanding</td>
<td>These data clearly show that heat transfer is related to random particle motions and not the flow</td>
</tr>
<tr>
<td></td>
<td>of some kind of “fluid” between objects.</td>
</tr>
</tbody>
</table>

Table 1. Possible student responses when confronted with scientific data that does not correspond to their naïve theories, from Chinn and Brewer (1993).
As science teachers, we want to transform student misconceptions into current scientific understanding (number 7 in Table 1), but all too often, our students respond in one of the six other ways. Misconceptions remain because of the myriad of ways that students respond to our instruction.

**Promoting Strong Conceptual Change through Talk and Argumentation**

With this daunting challenge, how can teachers facilitate deep understanding of science? One promising instruction strategy is the use of “Talk and Argumentation” in our classrooms. Using effective talk and argumentation strategies makes student thinking “visible” to teachers and allows students to actively engage in reflecting on their thinking about and understanding of science. But to be effective, students need to be trained in the modes of argumentation used by the scientific community.

**Argumentation is Not Shouting**

Argumentation does not mean that students engage in a shouting match commonly seen on the cable news networks. Rather, argumentation provides a structure for communicating what the data are revealing and what the data mean. Training students on proper argumentation techniques takes some precious time, especially at the beginning of the school year. But by relying on the “Success on Success” model and taking time in the fall to develop sound scientific argumentation skills, large dividends of increased student achievement can be achieved at year’s end. Not only will students become efficient in communicating scientific data and results, they will engage actively in using anomalous data to break down their naïve theories and comprehend current scientific understandings.

**Scientific Argumentation Resources**

NSTA members freely download an article about incorporating scientific argumentation in their classrooms. Log on as a member at [www.nsta.org](http://www.nsta.org), to the “NSTA Science Store,” and search for the article titled “Incorporating Scientific Argumentation into Inquiry-Based Activities with Online Personally Seeded Discussions” by Victor Sampson and Douglas Clark. The article may be purchased for just $1 at the store for those of you who are not NSTA members.

A large amount of excellent and useful guides are also available by doing a Google™ search using the words “scientific argumentation.”

Most importantly, we need to have our science students reflect on what they are thinking and why. This not only will promote strong conceptual change, but enable them to understand how scientists investigate and understand the universe in which we live.

**Reference**


By: Doug Lombardi
RPDP Science Trainer
**Concept Development**

Most critical in designing our lessons are laying the foundations through Objectives for Concept Development and Practice. What is Concept Development? “Concept Development” is the stage of the lesson where the “big idea” is presented. This is the lesson “input”. Often, in its original state, the concept is in an abstract form which requires the teacher to construct the concept in a more concrete way; something tangible for the students to manipulate. Concept Development is the “theory” we present to our students. Students are able to discover the essence of the concept, create, reassemble, interpret, translate, reframe, devise or build from the construct we, as teachers, present. The teaching of concepts/theory can be broken down into three parts: Analytical Ability, Creative Capacity, and Practical Purpose.

- **Analytical Ability:** Students are able to look at the concept presented and analyze it, judge it, compare it, and criticize it.
- **Creative Capacity:** Students are able to manipulate the concept in a creative way through discovery, invention, and transformation.
- **Practical Purpose:** Students are able to apply and use the concept in real situations.

Educators should utilize a variety of instructional strategies in developing the concepts being taught. Students need to be able to visualize the concept, hear the concept, verbally express the concept, and put the concept into action. “Why” we teach the concept is just as important as teaching the concept. We need to practice what we teach. **Think how great our model would be if we were able to manifest personally the learning outcomes we are looking for in our students.** Students need to understand the real world application of the learning that takes place in classrooms. Not only do we need to present those applications, but we also need to be those applications. In the words of Immanuel Kant, “Experience without theory is blind, but theory without experience is mere intellectual play.” Learning is more than theory or concepts; it is the application of those concepts.

**How do we present and develop concepts?**

- **What skill/concept is to be taught?**
  - Why is this skill/concept important?
  - How is it used in the real world?
- **What are the instructional objectives?**
- **What strategies and activities will be utilized in the instruction?**
  - Scaffolding
  - Conspicuous Strategies
  - Examples
  - Models
  - Checking for Understanding
  - Re-Teaching Activities
  - Extension Activities
- **What supports need to be in place for successful learning?**
• What presentation style(s) will be used?
  Direct teaching
  Lecture
  Cooperative Learning
  Panel of Experts / Guest Speaker
  Media Presentation
  Role Playing
  Small and Large Group Discussions
  Brainstorming
  Case Studies

• What tasks will engage students in the learning?
• How and when will feedback be given?
• What accommodations need to be made so all students can apply the concept successfully?

**Guided Practice**

According to Virginia Woolf, “Thought and theory must precede all salutary action; yet action is nobler in itself than either thought or theory.” So what our students do with what we have “taught” them is more important than the concepts themselves. How we move our students from Concept Development to practical application is by means of Guided Practice. What is Guided Practice? “Guided Practice” is the segment in lesson planning where students are able to grasp, in a concrete way, the concepts being presented in the lesson. Guided Practice is not handing out a worksheet, a set of problems, or questions to be completed during class. Guided Practice should be centered on activities that hold each student accountable for demonstrating an understanding of the concept presented. Teachers should be able to visually assess the level of student mastery and need for remediation during this stage of the lesson. According to the Components of an Effective Lesson, “Guided Practice offers students time to think and reflect upon the learning, to discuss solutions and become problem solvers instead of watching the teacher do all of the work.” Guided Practice is deliberate in that it offers students a “safety net” of support while allowing the freedom to work with the new concepts without the fear of failure.

Why Guided Practice? Providing instructional feedback is critical in the learning process. Guided Practice is the hand-off between Concept Development and Independent Practice. During this phase the teacher becomes the “coach”, the “ball” of learning has been handed-off to the “players”, students, and the real game begins. In the real world, we do not learn in isolation, so why should our students? Guided Practice is where our students take the concepts we have taught, and apply those concepts to their lives. Real learning is to be used. Give the students the ball and let them run with it.

**Ways to “Guide Practice”:**

• Question the Concepts
• Give Partial Answers / Hints
• Move from Simple to Complex Problems
• Use Visual Prompts
• Discovery Activities
• Experimentation
• Think Pair Share

Putting theory into practice is what education is all about. Samuel Smiles said, “Practical wisdom is only to be learned in the school of experience. Precepts and instruction are useful so far as they go, but, without the discipline of real life, they, products of instruction, remain of the nature of theory only.”

Written By: Karyn Steffensen
RPDP Teacher Trainer

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**Secondary Literacy**

**news TALK!**

**Exchanging Flip-Flops for Tool Belts**

Welcome Back! As we are still thinking about the beach, summer and our flip-flops, we need to begin to plan our professional development goals for 08-09 school year. Professional Development is productive, valuable and more importantly, after an educator attends a workshop, they usually gain a feeling of empowerment in their classroom. RPDP Secondary Literacy uses research-based strategies and powerful achievement tools to assist in getting your school year off without a hitch. We welcome the opportunity to bring our “tool belt” to your site.

We will continue to offer university credit courses through UNLV. All classes offered are for graduate credit and can be taken by all teachers (grades K-12, all content areas, with a focus on grades 4-12). To register for classes, go to www.RPDP.net and click on the UNLV link for course offerings. The cost is $75 per credit and you must register with UNLV. Our classes are the perfect forum to share insight and educational experiences with other CCSD teachers.

RPDP is a professional resource that plays a significant role in supporting teacher learning and will in turn have a tremendous impact on student achievement.

Feel free to contact Saralyn Lasley, Amy Raymer or Rosanne Richards at 799-3835 for any literacy assistance.
Engaging Today’s Student

“Engage Maverick! Engage!”

As seen in the 1980’s movie Top Gun, Tom Cruise’s character, Maverick, finds it difficult to engage in battle after the death of his co-pilot. He loses the connection with his mission and reverts his attention back to a tug of war with his grief. Even the “best of the best” sometime have difficulty with engagement. Therefore, is it so unbelievable that in a world that moves and changes as quickly as ours, that students have difficulty with engagement and connection? Our students often come to school with backpacks of conflict and responsibilities outside our control. How then do we turn their attention away from their baggage and back to their mission?

(Structure + Safety) x Novelty = Thriving Students

Educators need to give students a structure for learning and a safe environment in which to thrive. Keeping this in mind, and adding the element of novelty, teachers are succeeding in engaging students with technology.

Building Bridges

In the Clark County School District, administrators and teachers are turning to interactive white boards like SMART Boards and Promethean Boards to bring life to concepts which are thought of as too abstract and meaningless. This connection to real-life situations provides a feeling of safety for students. When students link concepts to their background knowledge, they bridge the concrete with the abstract more easily. The use of technology, guided by a thoughtful teacher and encased in the Components of an Effective Lesson, gives educators a new way to meet our challenge.

Using Technology

Using the interactive white board in the Introduction, teachers have the option to include interactive exercises with manipulatives. One activity may include rolling a pair of dice several times, asking students to write down their outcomes, and determining the probability of an outcome. Rolling the dice can be done with just a touch of the finger to the board. They can use spiral instruction by using digital flip boxes for Jeopardy style questions. Columns named for state standards can be displayed digitally, and students can be asked to create assessment style questions from standards. Teachers can even produce streaming video segments from KLX /Vegas PBS that are related to the concept to develop interest. Correlating these activities to the process and content standards for Nevada can create a concrete foundation for rich, engaging lessons.

During the concept development phase of the lesson, teachers use technology to guide students through an inquiry or investigation of the concepts using various methods. Many successful teachers include the use of graphic organizers. Interactive white board galleries, digital libraries and software programs; such as Inspiration, contain resources and are easily accessible by teachers. Note taking formats such as Cornell Notes can be imported into a blank page on the screen and students can interact with the information using text, pictures, shapes, and drawings. Teachers can support the learning of algorithms by connecting these rules and formulas to real world situations through interaction with internet resources. For example, a lesson created by a teacher from the Eldorado Preparatory Academy connects learning about proportionality of triangles, with finding the height...
of the Leaning Tower of Pisa. A picture of the monument was imported from a media folder. Students then were asked to use gallery tools to measure the tower and determine the length of the missing side, which was its height. Students searched the internet to locate cross-curricular mathematical and historical information.

**Linking to the Future**

Concluding the lesson and linking it to future learning is an important section of the Components of an Effective Lesson. In this final phase, teachers review information with students and create a path for it to be used in future sessions. The use of technology supports formative assessment and rubrics. These can be used to encourage students to set goals and think about their learning. Interactive white boards are used in conjunction with electronic voting systems that collect data and immediately display it in graphed formats on the screen for teachers and students to analyze, thereby expanding instruction.

While engaging the “Mavericks” of our time is a difficult challenge, it is possible to direct them toward their mission engaging their minds using carefully crafted instruction and technology in a safe environment.

Written by Johnna Early  
RPDP Teacher Trainer
Meetings, Meetings, **Meetings!**

Staff meetings are essential for decision making and discussion of critical information. To be effective, meetings must be necessary and substantive. Mark Twain once said, “It is a terrible death to be talked to death.” Administrators should take his advice as the beginning of school staff meetings begin in earnest.

**Trading Cards**
1. Staff writes down an assigned number (consecutive based on number of participants) on a card or pre-made number cards are distributed.
2. Staff stands.
3. Leader starts upbeat music.
4. Staff walks around the room trading their cards.
5. Leader stops the music; staff stops and listens.
6. Leader gives two clues: size of group and who is in the group
   a. Examples –
      - groups of 4; even numbers
      - groups of 7; odd numbers
      - groups of two; odd numbers
      - groups of 3 with consecutive numbers
      - groups of 6 with consecutive numbers
7. Leader gives discussion topic
   a. Examples -
      - How can we ensure all our students are learning?
      - How should the master schedule be configured to maximize learning for all students?
8. Participants interact.
9. Leader assembles the groups for discussion and action.

**Circle the Sage**
1. Leader identifies the “Sages” (participants who know the content that will be discussed).
2. The Sages spread out across the room.
3. The Other staff divides into groups and each group encircles a Sage.
4. Each Sage teaches the topic to the group, imparts important information, or teaches a concept, etc.
5. Staff returns to original meeting arrangement and reports.

**Placemat Conservations**
1. Leader creates groups and assigns tables.
2. At each table there are paper placemats and markers.
3. Leader assigns a task.
4. Tasks examples -
   - Ideas for improving student-teacher relationships
   - How to implement the Backward Assessment Model
   - Themes for writing across the curriculum
   - Identifying the Components of an Effective Lesson
5. Each person writes his comments on the placemats.
6. Leader collects the placemats and redistributes them for discussion.
7. Placemats are posted around the room.

**Paraphrase Passport**
Paraphrase Passport helps people with active listening because it slows conversation down in order to truly understand the ideas of one another.

The passport is created by stating one’s own ideas is correctly restating the ideas of the person who shared his or her ideas with you.
1. Divide the group into groups of two: count off or divide by male/female.
2. Leader states the topic. Topics should focus on critical issues surrounding the school and the students.
3. Each person reports to the whole group on partner’s ideas.

Written By: Pam Hicks
RPDP Administrative Trainer

References:
In this issue of Shop TALK, RPDP would like to recognize the following individuals for their outstanding work in education.

Teacher Highlight
Cindy Kern

Cindy Kern has lived in Southern Nevada since 1979. She was raised in Henderson attending Fay Galloway ES, Burkholder JH, and Basice HS. Cindy graduated from UNLV in 1997 with a Bachelor of Science in Secondary Education and a minor in Biological Sciences. In 2007 she also earned her Master’s degree in Science Education and she began her pursuit of a Ph.D. this past summer. She has spent her career of eleven years at Green Valley High School teaching Earth Science, Principle of Science, Biology, and Marine Science. She loves teaching and also enjoys participating in professional development training with CPDD and RPDP.

“Teaching is creating situations in which students can escape only by thinking.”

“Only when the answer becomes more important than the question does the solution finally emerge.”

Teacher Highlight
Hoai-My Winder

This is Hoai-My’s fourth year teaching full time in CCSD after being a substitute teacher for 15 years. Currently, she is teaching Physical Education (PE). She has coached the Boys’ Basketball Team and the Cross Country Team. Hoai-My loves to incorporate technology into her PE curriculum. Using resources such as my.ccsd.net, she keeps her students and parents informed through the internet. She makes movies and slideshows of her students which become teaching tools for new students when they learn a new physical skill. Her students use various websites to journal their physical activities and dietary choices so they can lead healthier lives.

Congratulations to Hoai-My Winder for successfully integrating technology into her Physical Education curriculum.

Teacher Highlight
Cherie Malay

Cherie Malay is a product of the Clark County School District and wanted to teach from the time she was in second grade at Rose Warren Elementary School. During her thirteen years of teaching, she has taught kindergarten, 1st, 2nd and 5th grades. She has been teaching at Mabel Hoggard Elementary School throughout most of her career and feels very lucky to be in a school where she gets to spend extra time and effort on science. Next year she is looping to second grade with most of her class and is looking forward to continuing the incorporation of science notebooks with the second grade curriculum. To help her school enhance their use of science notebooks during the past school year, she led a study group on the book Science Notebooks by Lori Fulton and Brian Campbell. She has also worked part time for RPDP teaching an Introduction to FOSS class for first grade teachers.

Teacher Highlight
Shelly Marshall

RPDP Secondary Literacy would like to recognize Shelly Marshall. Shelly is a dynamic English Language Arts teacher and a devoted leader in education. Shelly comes to CCSD with a wealth of knowledge in special education, counseling and an old-fashioned love of teaching. Shelly taught science and English at Mojave High School and is now touching the hearts and lives of many adolescent students at Escobedo Middle School. Ms. Marshall enjoys family, Scrabble and working with young adults.

Ms. Marshall has taken many RPDP courses to further her professional development as an instructor and as a mentor. Shelly is the teacher that we all wish worked next door to us. She has worked with incarcerated youth at Spring Mountain Youth Camp and has taught English at the Southern Nevada Women’s Correctional Center. Ms. Marshall has also worked as a literacy tutor for adults that need that little extra push. Shelly is helpful, knowledgeable and always willing to go the extra mile. Her teaching philosophy is simple as she teaches English to all who walk in her door. Shelly states, “Students are the reason I teach and I am here because of them.”

We are honored to have educators like Shelly in our district. Thanks, Shelly for all your efforts!

Teacher Highlight
Melissa Baumunk

Meet Melissa Baumunk, a third grade reading and Spanish as a second language teacher at Estes McDaniel, An International School.

Melissa has been teaching in Clark County since 1999, coming from Southern California, where she received a B.S. degree in International Business and Spanish from the University of La Verne. Once a teacher in the district, Melissa earned a M. Ed. in Instruction and Curricular Studies at UNLV. She is also bilingual and TESL endorsed.

An outstanding teacher, Melissa has been appointed as a member of the New Teacher Training Cadre for the 2008-2009 school year.

Administrative Highlight
Paula Naegle

Paula Naegle has been in the Clark County School District for 19 years, and this school year is the beginning of her third year as principal of Del Webb Middle School. She was Nevada Teacher of the Year in 1996 and was selected as Prinicipal of the Year for the Southeast Region in 2007. This Southeast Region award is particularly memorable for Ms. Naegle because she was nominated by her teachers for this prestigious award.

Ms. Naegle has been involved in CCSD’s New Teacher Induction Program because she believes in order to hire and retain quality teachers, programs must be available to support and nurture young professionals. Her personal beliefs guide her in the continuous effort to provide each new teacher with the tools to be successful. Last year Mrs. Naegle hired 19 teachers for her building; nine were rookies. She utilized the New Teacher Induction Program as a foundation for practices and resources.

The Induction Program offers several venues for getting to know the Las Vegas community; however, some teachers revert to a common denominator: mom. Ms. Naegle relates the story of a young teacher candidate with impeccable credentials who asked her mother to meet the principals with whom she had interviewed. The teacher selected Del Webb MS (and Ms. Naegle) and has been an exemplary addition to the school and students.

Congratulations to Paula Naegle for the dedication to her teachers who create the ultimate learning environment for students at Del Webb MS.

Administrative Highlight
Cardon Allred

Ms. Allred has been in the CCSD for 30 years. She was principal at Eileen Brookman ES before accepting her most recent assignment, Principal on Special Assignment in the Leadership Development Department. Over the years this administrator has hired many new CCSD teachers and has taken a personal interest in ensuring these professionals get the necessary foundations to be successful.

The New Teacher Induction Program has played a vital role in helping new teachers, and this is the reason Ms. Allred has been involved in the program for many years. She believes initial and substantive training helps hire and retain quality teachers, and continuous support must come from the district and the schools. These are the reasons professional development and mentoring have been standards for teachers under her tutelage.

New administrators need the same guidance and support as new teachers. Administrators require support not only in the arenas of accountability and achievement but also in the arenas of climate and culture. In her position in the Leadership Development department, she plans to expand trainings to hire, support, and retain qualified administrators.

Ms. Allred is to be congratulated for her continued efforts to support teachers and administrators.
Regional Professional Development Program

Professional Development Offerings

Visit www.rpdp.net and learn more about registering for RPDP's professional development offerings and additional programs supported by the respective teams at RPDP including: workshops, institutes, and Advanced Studies Programs (ASP)

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