

***SCHOOL OF EDUCATION***

**SYLLABUS**

**Course: EDUC 503/603**

**Course Title: Multiple Subject Curriculum and Methods I**

**Term: August 2015**

**Days/Times: Monday & Wednesdays, 5:30-9:30**

**Class Location: Redlands**

**Faculty: Gary Scott, Ed.D.**

**Office: NUH 108**

**Phone:**

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**Office Hours:** **4:30 -5:30 MW**

#### **CATALOG COURSE DESCRIPTION**

Elementary math and science teaching strategies and curriculum. Integrates health, physical education, visual arts, and music. Teaching informed by California K-12 content standards and frameworks, with a focus on assessment and ELD/SDAIE strategies. Experiences with hands-on, computer-based inquiry lesson development. Field experience required.

**CONTEXTUAL COURSE DESCRIPTION**

The primary purpose of this course is to learn about teaching the essential elements of mathematics and science. These include basic calculations, measurement, geometry and data analysis in mathematics, and the properties of natural and man-made objects in science. This course presents these ideas through textbook readings and discussions about learning theory. Emphasis is placed on inquiry based lessons that allow candidates opportunities to deepen their own conceptual understanding and anticipate children's reactions to such activities. In addition, unifying themes such as earth and space science, health, ecology, and the performing arts are incorporated into the mathematics and science curriculum. Candidates will gain initial information on how to relate national and statewide content standards and frameworks to lesson plan design, a variety of assessment strategies, and ELD/SDAIE strategies.

Candidates will explore opportunities and experiences that facilitate continued professional development beyond course work in math, science and the arts as an avenue of life-long learning. The modeling of inquiry teaching and fieldwork experience gives candidates opportunities to observe and experience appropriate ways to facilitate the construction of knowledge in a variety of settings and populations within the context of the state frameworks and standards. This course will emphasize methods and practices designed to make critical academic areas accessible to all students K to 8. Candidates will study lesson plan design, assessment strategies and learning activities for maximizing the engagement of their students.

This course will also acquaint students with the skills necessary in formulating and developing a theoretical framework that guides their teaching and learning of math and science, integrating health and physical education, as well as visual and performing arts. In doing so, students will be expected to understand and synthesize current research. Students will also use action research methodology in solving an educational problem or in answering a research question that pertains to the teaching and learning of mathematics, science, health, physical education, visual and performing arts in K-8. Field experiences will be arranged in accordance with these varying emphases.

**TECHNOLOGY REQUIREMENTS**

Technology tools have been integrated in this course and all other Professional Teacher Preparation courses. **Moodle** is a web-based tool that you can access from any Internet connection with Internet Explorer at any time. The logon is <http://moodle.redlands.edu>. The site will have links to the course syllabus, assignments, resources, and other communication tools. There is no charge for the use of Moodle. **TaskStream** is a web-based lesson, unit, and instructional resource. TaskStream can be purchased on-line at [http://www.TaskStream.com](http://www.taskstream.com/) for an individual full-year subscription. Be sure to indicate you are a student and click on the University of Redlands. The student rate will be charged and you will be connected to our learning community. Other technology tools will be needed such as word-processing, spreadsheet and databases; PowerPoint, FrontPage, Hyperstudio, Blogger, and Inspiration may be required for classes. All software is available in the School of Education for use. Microsoft Office 2000 or later version will be helpful if you have it accessible. Internet access using the Internet Explorer or another appropriate web browser will be required for classes (<http://moodle.redlands.edu>). All courses build on prior coursework and technology skills. Technology skills also should be used as often as is appropriate to enhance learning and teaching competence. When all PTPP coursework is completed successfully, candidates will have met the Level I technology requirements. Additionally, **The Armacost Library** site at <http://www.redlands.edu> /library has links to many other on-line resources under Internet Education Resources.

Candidates will use Moodle tools (email, the discussion board, links, and course materials to download, and the electronic gradebook). They will use TaskStream Lesson Builder, Standards Manager, Rubric Wizard, and email as one of the forms of communication with their professor. They will use Internet searching skills and tools, word processing, spreadsheets and database, Inspiration, and make class presentations with PowerPoint.

**COURSE OBJECTIVES**

**TPE** Teacher Performance Expectations, State of California

**Candidates will demonstrate their understanding of:**

1. Students will review and become familiar with the California Curriculum Standards and Frameworks for Mathematics, Science, Visual and Performing Arts Literacy and Health Literacy**. [TPE 1, 4, 6]**

2. Students will effectively develop lesson plan models for a balanced math and science program addressing computation, conceptual understanding and problem solving with grade appropriate components in life science, physical science and earth science which specifically address State Standards**.[TPE 1, 4, 6, 9]**

3. Students will formulate lesson plans that effectively integrate physical education, health, and the visual and performing arts. **[TPE 1, 4, 6, 9]**

4. Students will design strategies for making content accessible to special needs populations. **[TPE 1, 4, 5, 6, 9]**

6. Students will implement ELD/SDAIE strategies that make math and science content accessible to second language learners. **[TPE 1, 4, 5, 6, 7, 9]**

7. Students will investigate a variety of assessment strategies. **[TPE 1, 3, 6]**

8. Students will explore a range of relevant, standards-based technology resources for use in instruction. **[TPE 1, 4, 5, 6, 9]**

9. Students will apply a range of reading and writing strategies and integrate them with math, science, health, physical education, and arts curricula. **[TPE 1, 4, 6, 9]**

10. Students will learn to employ cooperative learning strategies. **[TPE 1, 2, 3, 5, 6]**

11. Students will access technology for resources and prepare lessons and units using TaskStream, Moodle, Inspiration, PowerPoint, etc. **[TPE 1, 4, 5, 6, 9]**

12. Students will interpret, critique, and analyze quantitative and qualitative research in mathematics, science, and the other integrated content areas including issues of gender, diversity, and students with special needs. **[TPE 1, 4, 6, 9]**

13. Students will develop and articulate a theoretical framework for teaching and learning of elementary subjects: math, science, health, physical education, and visual and performing arts**.[TPE 1, 4, 6, 9]**

14. Students will develop and implement a plan of action research.

**READINGS**

**Required**

1. Cox-Petersen, A, Melber, T.M, Patchen, T (2012). *Teaching science to culturally and linguistically diverse elementary students*. Pearson. Boston, MA.
2. Van de Walle, John, A. (2016). Elementary and middle school mathematics: teaching developmentally. 9h ed. Pearson, MA. (ISBN-978-0-13-376893-0).
3. A subscription to TaskStream is required in order to complete the Teaching Performance Assessment.

**Other Resources (Available On-Line)**

1. Engineering Programs for elementary teachers
	1. Project Lead the Way - <http://www.pltw.org/>
	2. Engineering is Elementary - <http://www.eie.org/>
2. Molecular workbench

<http://mw.concord.org/modeler/>

1. **Create your own interactive mathematics and science lessons**

Each [Yenka product](http://www.yenka.com/en/Products/) is based around a powerful modelling engine. This lets you use and edit the [rich, interactive content from our extensive online database](http://www.yenka.com/content/set.action?c=itemType&v=MODEL) - or even create your own lessons from scratch with just a few clicks.

1. Scratch

With Scratch, you can program your own interactive stories, games, and animations — and share your creations with others in the online community. Scratch helps young people learn to think creatively, reason systematically, and work collaboratively — essential skills for life in the 21st century. Scratch is a project of the Lifelong Kindergarten Group at the MIT Media Lab. It is provided free of charge. http://scratch.mit.edu/

1. Pangrazi, R. P. and Beighle, A. (2013). Dynamic Physical Education for Elementary School Children with Curriculum Guide: Lesson Plans for Implementation. Pearson, Upper Saddle River: NJ.
2. Foster, G.W. (1999). Elementary mathematics and science methods: Inquiry teaching and learning. Wadsworth Publishing. Belmont, CA.
3. The Arts in the Elementary Classroom: A Visual and Performing Arts Content and Delivery Guide [www.ccsesaarts.org/CCSESA\_FILES//ElementaryToolkit.pdf](http://www.ccsesaarts.org/CCSESA_FILES/ElementaryToolkit.pdf)
4. California Department of Education Curriculum Frameworks and Standards for Mathematics, and Science. Available for viewing or download at <http://www.cde.ca.gov/ci/cr/cf/index.asp>
5. Essential Elements of Effective Science Instruction for English Learners Second Edition (PDF) Available for viewing and download at <http://csmp.ucop.edu/downloads/csp/essential_elements_2.pdf>
6. Access the frameworks for health, physical education, and visual and performing arts on the California Department of Education Website.
7. Using Multiple Intelligences to Differentiate in the Elementary Classroom: [www.edzone.net/~mwestern/mi04.pdf](http://www.edzone.net/~mwestern/mi04.pdf)

**Assignments:**

**1. [TPE 1, 6]**

**Science content lessons and presentations for K-3 and 4-8 using learning cycle formatted lesson plans(20 Points)**

One presentation will be for K-3 and the other for 4-8. Each presentation will be done in small groups. Both lessons will be turned in at the end of class. Each lesson will use the learning cycle format found on Moodle.

Presenters should do the following:

1. For the K-3 lesson only, respond to each prompt in the far right column (the column is titled “Prompts”) of the template.
2. Give an overview of the science concepts and list the Next Generation Science Content Standard(s).
3. Identify and describe adaptations of that differentiate (see chapters 2 and 5 of Cox-Peterson) the concepts for English Language Learners and students with special needs.
4. Provide a handout that includes a written description of items a, b.
5. Presenters should provide manipulatives, realia, worksheets, etc., for the participants.
6. Submit a hard copy of the learning cycle formatted lesson after the presentation.

**[Choose dates to present]**

**2. [TPE 1, 4, 7]**

**Math content lessons and presentations for K-3 and 4-8 using learning cycle formatted lesson plans (20 Points)**

One presentation will be specific for K-3 and the other for 4-8. Each presentation will be done in small groups. Each lesson will use the learning cycle format found on Moodle and be turned in (hardcopy) at the end of class. Each lesson should include one task, game, or activities from one of the Van de Walle chapters or something similar found on the internet (including website resources listed at the end of each Van de Walle chapter). Presenters should do the following:

1. Give an overview of the math concepts and list the Common Core Content and Practice Standards;
2. Use Appendix A of Van de Walle, Standards for Mathematical Practice found in the *Common Core State standards* (p 491), to analyze the games/activities chosen and determine the extent to which the games/activities address each of the eight Mathematical Practice Standards.
3. Identify and describe adaptations of the games/activities that differentiate (see pages 65-67 of Van de Walle) the concepts for English Language Learners and students with special needs.
4. Provide a handout that includes a written description of items a, b, and c.
5. Presenters should provide manipulatives, realia, worksheets, etc., for the participants to use during the presentation.

 **[Choose dates to present]**

**3.** **Signature Assignment [TPE 1, 2, 3, 4, 5, 8, 9, 10]**

**Integrated thematic unit.** **(35 Points)**

1. Units should include a minimum of three (3) lessons. One of the lessons should integrate Language Arts. Another of the three lessons should show *clear* integration of any of the following: math/science; math/health; math/visual arts; visual arts/performance arts; health/PE; science/PE, etc.
2. Lesson plans should use the learning cycle (on Moodle) format.
3. Individual lessons and integrated lessons should specifically address:
4. California Content Standards for health, physical education, and visual and performance arts at the targeted grade level. (<http://www.cde.ca.gov/be/st/ss/index.asp>).
5. Common Core standards for language arts (including reading, writing, speaking, and listening) and mathematics. Next Generation Science Standards for science.
6. Effective strategies and adaptations for meeting the needs of special populations (Special Education), English Language Learners (ELLs), and gifted and talented students (GATE).
7. At least one of your lessons should incorporate a Scratch element (you will email the instructor a link to your Scratch piece. With Scratch, you can program your own interactive stories, games, and animations — and share your creations with others in the online community. Scratch helps young people learn to think creatively, reason systematically, and work collaboratively — essential skills for life in the 21st century. Scratch is a project of the Lifelong Kindergarten Group at the MIT Media Lab. It is provided free of charge. <http://scratch.mit.edu/>.
8. At least one of your lessons should include spatial reasoning.
9. Appropriate assessment strategies using TaskStream Rubrics.
10. Appropriate graphic organizers.

d.    Units will incorporate literacy (reading, writing, speaking and listening) with special attention to one or more examples of children’s literature integral to the unit theme.

e.      All lesson plans, worksheets, background information, references, Web sites, etc., should be included in the final unit plan.

f. PowerPoint presentation of unit.

**Due: Session 10**

**4. Signature Assignment [TPE 2, 3, 10, 11] (60 Points)**

 **Individual Project: *Observe teachers and students and practice teach*** in elementary classrooms.

1. Make arrangements for your observations with a school administrator and classroom teachers early!
2. The cooperating teacher signature template with signatures is due on **the last class session.**
3. For this assignment, candidates will make **SIX** one-hour observations in a classroom setting related to the subject area they would like to teach in. Evidence of each observation will be documented by submitting a **TYPEWRITTEN** 3-2-1 form. Each 3-2-1 observation form should include a description of how the teacher mediated at least three different cognitive functions and how the teacher applied Mediated Learning Experience Universal Criteria and any situational parameters. Each observation will be worth **TEN** points.
	1. Observation 1: Gather information on the curriculum being taught to the whole class including as many details as you can on content, strategies, procedures, assessments, and general demographics on the class as a whole. Describe examples of Mediated Learning Experience criteria and development of at least three cognitive functions. If you cannot identify examples, then there were many missed opportunities to do so by the instructor and you are to describe these missed opportunities. Observation 1 is due on session 3.
	2. Observation 2: Part 1 - Use the Reformed Teacher Observation Protocol to assess the extent to which inquiry is used as an instructional strategy. Part 2 – Describe examples of Mediated Learning Experience criteria and development of at least three cognitive functions (different from the previous observation). If you cannot identify examples, then there were many missed opportunities to do so by the instructor and you are to describe these missed opportunities. Observation 2 is due on session 4.
	3. Observation 3: Gather information on one focus student who is an ELL. Review the template for TPA 2 and gather details specific to each area of inquiry, i.e., family history, areas of interest, health, test scores, and so forth. Describe examples of Mediated Learning Experience criteria and development of at least three cognitive functions (different from the previous observation). If you cannot identify examples, then there were many missed opportunities to do so by the instructor and you are to describe these missed opportunities. Observation 3 is due on session 5.
	4. Observation 4: Gather information on one focus student -a student with special needs. Review the template for TPA 2 and gather details specific to each area of inquiry, i.e., family history, areas of interest, health, test scores, and so forth. Your student does not have to have an IEP. She or he may have a difficult time speaking in class or contributing during group work and is someone who needs some special attention when planning instruction. Describe examples of Mediated Learning Experience criteria and development of at least three cognitive functions (different from the previous observation). If you cannot identify examples, then there were many missed opportunities to do so by the instructor and you are to describe these missed opportunities. Observation 4 is due on session 7.
	5. Observation 5: Part 1 - Use the Reformed Teacher Observation Protocol to assess the extent to which inquiry is used as an instructional strategy. Part 2 – Describe examples of Mediated Learning Experience criteria and development of at least three cognitive functions (different from the previous observation). If you cannot identify examples, then there were many missed opportunities to do so by the instructor and you are to describe these missed opportunities. Observation 5 is due on session 9.
	6. Observation 6: Describe examples of Mediated Learning Experience criteria and development at least three cognitive functions (different from the previous observation). If you cannot identify examples, then there were many missed opportunities to do so by the instructor and you are to describe these missed opportunities. Observation 6 is due on session 10.

**5. Signature Assignment [TPE 4, 6, 7, 8]**

**Team Project:** ***Develop Learning Centers* (40 Points)**

1. Your centers will focus on ascience, technology, engineering, or math (STEM focus) theme. Your team should create/modify a Scratch program that depicts the essence of your learning center.
2. The center should include activities that provide opportunities for students to practice spatial, science, and math skills and include all necessary materials. Projects should be interactive and integrate any of the following elementary school subjects: Health, Physical Education, and the Visual and Performance Arts.
3. Projects should address the needs of special populations and ELLs.
4. Class time will be used for planning and construction of projects. Outside/recycled materials will be required.
5. ~~Each group should provide copies of a handout for other class members that include the following information:~~
* ~~a brief description of the project, including materials required; a brief discussion of appropriateness for students with special needs and appropriateness for English language learners; a brief summary of how the project supports practice spatial thinking, understanding of the Next Generation Science Standards, Common Core Math Content and Practice Standards.~~

**[due last class session]**

**6. Assessment of Mathematical Content Knowledge for Teaching (MKT) (10 points)**

The MKT will be used in the following ways:

* as open-ended prompts which allow for the exploration of teachers’ reasoning about mathematics and student thinking;
* self reflection of the kinds of mathematics teachers must know to teach elementary mathematics.
* The MKT should be completed before the 1st class session.
* Submit a single spaced two page summary of your growth in mathematical knowledge on the last class session.
1. **Homework, attendance, and participation (45 points, 15 chapters x 3 pts/chapter)**
* Homework – before each class session students will select one task/activity/game from the assigned Van de Walle chapter(s) for that session. Half of your selections should be focused on K-3 and the other half for 4-8. This means you may have to modify the task/activity/game for the grade span. The selection criteria should include the extent to which the task/activity/game will broaden your repertoire of tasks/activities/games that will develop and enhance student understanding. Broadening the repertoire means there is a degree of novelty in the task/activity/game. In other words, your choice should be new to you in some way.
	+ Write-up for the task/activity/game. One page double-spaced page due at the end of each class session.
		- Describe how the task/activity/game addresses the four categories of your MKT using the first person in your description:
			* MY knowledge of mathematics that most educated people acquire (“common content knowledge”);
			* MY knowledge of mathematics that is unique to, and essential for, teaching mathematics (“specialized content knowledge”);
			* MY knowledge that combines knowledge of content with knowledge of common student errors and misconceptions; and,
			* MY knowledge that combines knowledge of mathematical content with knowledge of general teaching strategies.
		- Describe how the task/game/activity addresses at least two of The Standards for Mathematical Practice found in the Common Core State Standards (pp 491-2 in Van de Walle).
* Each class session will include small group discussions (4-5 students per group) of the assigned Van de Walle chapters. During these small group discussions each student will present and lead the discussion based on the selected task/activity/game.
1. **Professional Engagement (20 points) During Class -** For sessions 1-9 each candidate will view an assigned website and respond to prompts/tasks embedded in the web pages or provided by the instructor.
2. **Class participation** is a critical component and requirement in all courses, and students are expected to attend all class sessions. We realize that emergencies can arise and students need to make important and difficult choices. Students are always responsible for informing the instructor of an absence and making up all required class assignments and activities in a manner approved by the instructor. *Any student who misses more than two consecutive class meetings without notifying their instructor may be administratively dropped from the course.*

**PROGRAM/COURSE POLICY: PROFESSIONAL RESPONSIBILITIES**

Creating an inclusive learning community involves a social contract to which everyone agrees so as to maximize the learning of others and self. Certain behaviors hinder this pursuit. The following is the social contract that will be upheld by both students and teacher in class. Should the contract be violated, regardless of how well one is doing academically, the individual will be asked to leave the class. This consequence is based in ethics: teaching cannot be separated from who one is as a person. He or she will need to meet with the Chair, Preliminary Teacher Credential Program.

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| **Professional Ethical Responsibilities for Remaining in Class** |
| **Demonstrated** |  **Violated** |
| Being inclusive. Listening fully and attentively to all speakers or presentations. Being fully attentive to all. Such listening reflects intellectual empathy, humility, and perseverance. Maintaining eye contact, listening for understanding, and keeping the focus on the speaker addressing the group. | Being exclusive. Having side-bars, making comments not addressed to the group, passing notes or participating in any other form of verbal or written communication, doing any outside work (e.g. grading papers / responding to emails) rather than consistently being an attentive member of the learning community. |
| Writing or developing as writers demonstrating mastery in constructing original knowledge. Acknowledging the role of research in one’s teaching and learning. | Using the work of others and presenting it as if you did the work. Plagiarism is such a serious issue that should this occur, you risk being dropped from the program. |
| Acting with integrity regarding technological tools. Notifying the professor if an emergency arises where you need the cell phone turned on during class. | Engaging in text messaging, surfing the Internet, keeping cell phones in the silent or vibrate mode and stepping outside of class for the purpose of using technology.  |
| Monitoring one’s participation in course so that everyone is able to participate.Initiating meetings with the instructor if one is shy or reluctant to speak within a whole class setting so as to share one’s thinking with the professor. | Dominating class discussions or never contributing or speaking up in class.  |
| Choosing a proactive attitude to further the overall accomplishment of the course objectives collegially (i.e. using intentionality to create a positive and productive reality). Meeting with the instructor to ensure a relevant and excellent course is created. | Choosing an attitude of being bored or failing to create relevance. This results in creating a course that is less than excellent for self, others, and the instructor. |
| Challenging one’s own egocentric, sociocentric, and ethnocentric assumptions so that one is an advocate for all students. | Perpetuating racism, sexism, heterosexism, classism, ableism, sizeism, ageism, and using religion to promote intolerance. |
| Meeting with the teacher to discuss ways to better meet one’s needs (including requests to discuss the possibility of alternative assignments).  | Failing to meet with the instructor to share how the course can become an excellence learning opportunity and choosing to complain to class members. |
| Contacting the instructor if a situation prevents being in class. | Missing class and/or leaving early without talking with the instructor. |

**GRADUATE GRADING SYSTEM/SCALE** (See University Catalog)

4.0 – 3.7 **A Outstanding**

The student displayed exceptional grasp of the material, frequently with evidence of intellectual insight and original thought. Above and beyond expectations.

3.3 - 3.0 **B Excellent**

Work demonstrated a thorough grasp of the material with occasional errors and omissions. Assignments were thoroughly and completely done, with careful attention to detail and clarity and with evidence of intellectual insight.

2.7 - 2.3 **B/C Acceptable**

or 2.0 The quality of work was acceptable, meeting minimal course standards but was not exceptional. Performance on examinations and other assignments was satisfactory and demonstrated that the student was keeping up with the material and attending to detail.

1.7 and **D Poor**

Below Graduate students will not receive credit for a course awarded a grade of 1.7 or below.

**Total Points Available:**

|  |  |  |  |
| --- | --- | --- | --- |
| Letter grade | % | Letter grade | % |
| A = 4.0 | 95 | C = 2.7 | 75 |
| A- = 3.7 | 90 | C- = 2.3 | 70 |
| B = 3.3 | 85 | D = 1.7 | 65 |
| B- = 3.0 | 80 |  |  |

**ACADEMIC HONESTY**

Academic honesty stands at the center of intellectual pursuits in the academic community. Faculty and student scholarship in all forms, individual and collaborative, expresses our understanding and esteem for intellectual honesty. Nurturing and sustaining a climate of honesty are the responsibilities of every member of the community. The academic policy statement includes standards of academic honesty, obligations and responsibilities of the members of the academic community for cultivating a climate of academic honesty, violations of academic honesty, and procedures for addressing academic dishonesty. See the university catalog for full text of the academic honesty policy.

**LATE WORK POLICY**: There is reduction of one point per day for each late assignment unless the student has contacted the instructor and received permission to turn in the assignment late.

**EDUC 503 Planning** **Schedule**

NOTE: This schedule is subject to change

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| --- | --- |
| **Session 1** | **Session 2** |
| 30m Community Building – 3 truths & a lie; Business card polyhedral.60m Introductions and Course Orientation – Project Based Learning (PBL); www.edutopia.org/‎ and bie.org/. View these websites and write a brief description of the value of PBL for elementary students.PBL creativity and innovation rubrics; rubric for rubric creationBusiness card polyhedraIntroduction to cognitive functions via polyhedra and cognitivefun.net (spatial working memory updating, Corsi block task, and reverse Corsi block task ) websiteSign up for math, science, learning center dates60m Engineering design challenge Wind Racer PBL**Homework:** Acquire 15 sheets of card stock in at least three different colors for session 3.Read Ch. 1: Cox-Petersen, Melber, & PatchenRead Van de Walle Chapters 20 Geometric ThinkingExit slip- PBL description and PBL evaluation using rurbrics - *Launching the Project* **Define the Creative Challenge** | 30m Debrief in small groups Ch. 1: Cox-Petersen, Melber, & Patchen and Van de Walle chapters 20. 120m Engineering design challenge Wind Racer PBL Identify the Next Generation Science Standards, Common Core Mathematics and Language Arts standards embedded in the Wind Racer PBL. Minds-Eye - part 1 of your team’s learning center. From your pre-invention collection Each member will construct two inventions from trash/recycled materials.Minds-Eye part 2. In teams choose a theme from the Toys from Trash (http://arvindguptatoys.com/) and decide on the materials you will need to construct a theme-based learning center. Each team member should create two toys that are central to the team’s theme. The actual construction of the theme-based learning center will be done during class starting session 7.30m Mediated Learning Experience-based observations**Homework:**Acquire 15 sheets of card stock in at least three different colors for session 3.Read Ch. 2: Cox-Petersen, Melber, & PatchenRead Van de Walle Ch 8 and 9. Exit slip –PBL standards and evaluation using rurbrics - *Developing and Revising Ideas and Products* **Generate and Select Ideas****Assignments due tonight:** Van de Walle tasks chapter 20 |
| **Session 3** | **Session 4** |
| 30m Debrief Ch. 2: Cox-Petersen, Melber, & Patchen and Van de Walle Ch 8 and 9. 30m: analyzing student thinking video (Embodied cognition – gestures).120m - Engineering design challenge PBL – pop up books. <http://www.citytechnology.org/>. Your pop-up should be related to your theme-based Trash from Toys learning center.**Homework:**Read Ch. 3: Cox-Petersen, Melber, & PatchenRead Van de Walle chapters 10 and 11. Exit slip –PBL evaluation using rurbrics - *Launching the Project* **Define the Creative Challenge****Assignments due tonight;** Van de Walle tasks ch 8,9Classroom observation 1. | 30m Debrief Ch. 3: Cox-Petersen, Melber, & Patchen and Van de Walle chapters 10, 11. 120m - Engineering design challenge PBL – pop up books. http://www.citytechnology.org/**Homework:** Read Ch. 4: Cox-Petersen, Melber, & PatchenRead Van de Walle chapters 12, 13. Exit slip –PBL evaluation using rurbrics - *Developing and Revising Ideas and Products* **Generate and Select Ideas****Assignments due tonight:** Van de Walle tasks chapters 10, 11Classroom observation 2. |
| **Session 5**  | **Session 6** |
| 30m Debrief Ch. 4: Cox-Petersen, Melber, & Patchen and Van de Walle 12, 13. 120m - Engineering design challenge PBL – mechanimations. <http://www.citytechnology.org/>. Your mechanimation should be related to your theme-based Trash from Toys learning center.**Homework:** Read Ch. 5: Cox-Petersen, Melber, & PatchenRead Van de Walle chapter 15. Exit slip –PBL evaluation using rurbrics - *Launching the Project* **Define the Creative Challenge****Assignments due tonight:** Van de Walle tasks chapters 12, 13.Classroom observation 3. | 30m Debrief Ch. 5: Cox-Petersen, Melber, & Patchen and Van de Walle chapter 15. 120m - Engineering design challenge PBL – mechanimations. http://www.citytechnology.org/**Homework**: In teams of 2-3 choose a theme from the Toys from Trash (http://arvindguptatoys.com/) and decide on the materials you will need to construct a theme-based learning center. Each team member should create two toys that are central to the team’s theme. The actual construction of the theme-based learning center will be done during class starting session 7.Read Ch. 6: Cox-Petersen, Melber, & Patchen Read Van de Walle chapters 16 and 17. Exit slip –PBL evaluation using rurbrics - *Developing and Revising Ideas and Products* **Generate and Select Ideas** **Assignments due tonight:** Van de Walle task chapter 15 |
| **Session 7** | **Session 8** |
| 30m Debrief Ch. 6 : Cox-Petersen, Melber, & Patchen and Van de Walle chapters 16, 17.120m – Spatial thinking PBL – visuospatial working memory. Start Toys from Trash learning centers.**Homework:**Read Ch. 7: Cox-Petersen, Melber, & Patchen Read Van de Walle chapter 14. Exit slip – describe the ways in which visuospatial working memory builds mathematics and reading comprehension skills. **Assignments due tonight:** Van de Walle task chapter 16, 17.Classroom observation 4. | 30m Debrief Ch. 7: Cox-Petersen, Melber, & Patchen and Van de Walle Ch 14.120m – Toys from Trash**Homework:**Read Van de Walle chapters 21, 22. Exit slip –PBL evaluation using rurbrics - *Launching the Project* **Define the Creative Challenge** **Assignments due tonight:** Van de Walle task chapter 14 |
| **Session 9**  | **Session 10** |
| 30m Debrief Van de Walle Ch 21,22.120m – Toys from Trash**Homework:**Exit slip –PBL evaluation using rurbrics - *Developing and Revising Ideas and Products* **Generate and Select Ideas****Assignments due tonight:** Van de Walle task chapters 21, 22.Classroom observation 5. | **Assignments due tonight:**Unit plans and presentationsClassroom observation 6.MKT summary |