1. Welcome
   Michael L. Christensen

2. Local Control Funding Formula (LCFF) Update
   - LCAP
   - Survey
   Gunn Marie Hansen

3. Study Session
   - CTE/STEAM across OUSD
   Kathy Boyd

6. Curriculum & Instruction Share-Out
   - Pacing Guides Survey
     Elsie Simonovski
   - Secondary Math Curriculum Guide(s) Update
     Helen Barney
   - Appendix A Group Discussion
     Cathleen Corella

7. Closing
   Cathleen Corella
2013-2014
LCFF Supplemental Allocation
Board Presentation

Accountability & Special Programs
Educational Services Division
January 23, 2014

LCFF Supplemental Funds

- Step 1: Budget office determined LCFF Supplemental Funds by each school site
- Step 2: Principals obtained input from staff and parents on how to spend the funds
- Step 3: Principals took input from stakeholders on use of funds to School Site Council for additional input and approved proposal

Summary of 2013-14 LCFF Supplemental Funds

- Technology Devices
- Professional Development
- Intensive Interventions
- Instructional Materials
LCFF Progress

<table>
<thead>
<tr>
<th>SCE/CDE</th>
<th>OUSD</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCE meeting to review proposed draft of LCAP template</td>
<td>LCFF information has been shared with teachers, and staff, students and surveys were conducted</td>
</tr>
<tr>
<td>January 15, 2014</td>
<td></td>
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<tr>
<td>OUSD LCFF site developed and online survey stakeholders engagement</td>
<td></td>
</tr>
<tr>
<td>January 31, 2014</td>
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<tr>
<td>OUSD to submit spending regulations</td>
<td></td>
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<tr>
<td>March 21, 2014</td>
<td></td>
</tr>
<tr>
<td>OUSD to use LCFF template for use by OUSD</td>
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</tbody>
</table>

Accountability Plan, LCAP Progress

Next Steps for 2014-15

- Share ongoing stakeholder input
- Develop LCAP
- Obtain Board Approval of the plan and budget by end of this school year
What Is STEM?

The Science, Technology, Engineering & Mathematics fields are collectively considered core technological underpinnings of an advanced society, according to both the National Research Council and the National Science Foundation. The term STEM is commonly used in relation to the nation's economic competitiveness.

"HELP WANTED" in STEM

STEM jobs are growing more rapidly than other fields (2008-2014)

- US STEM +17%
- CA STEM +19%

80% of STEM jobs will be in Computing & Engineering

So at what grade level should we start??

Children in elementary school will change not just jobs, but their entire careers five times over their working years.

- Gartner Group, 1995

- The job you perform today will no longer be done.
- The job you perform tomorrow has not yet been invented.
There aren’t two worlds -- education and work, there is one world -- life.

Willard Wirtz

Reconciling Opposites:
Two Sides of the Same Coin

Knowledge Academics

Liberal Arts/White Collar Jobs

Skill

Career & Technical Education, Arts, Engineering, and Computer Science

Practical

Arts/Blue Collar Jobs

Tell me, and I forget
Show me, and I remember
Let me do, and I understand

—After Confucius, China, 5th century BC
What is new in 21st century education is the mainstreaming of engineering, arts, and computer science processes within the academic context—integration of practical and applied arts.

STEM/STEAM/CTE & ROP/ CAREER PATHWAYS in OUSD

http://www.orangeusd.org/CTE/courses.asp

Chevron at OHS

- The Envision Program (1 year pilot)
- Training teachers and providing materials
- A living lab – putting a solar panel on campus, virtual interface that students can access and collect to analyze data
- Supplying learning kit materials and lesson plans (Energy Conservation, Solar Energy, etc)
15 Career Sectors in CALIFORNIA

- Driving forward so that students have access to all types of electives either at their school or through programs like CAPP (at SCC and SAC)
- Creation of a video to be used for marketing and advertisement when students choose their electives at the secondary level

ROBOTICS in OUSD

- **High Schools**
  - EMHS
- **Middle Schools**
  - Cerro Villa
  - Yorba
- **Elementary Schools**
  - McPherson Magnet
  - Cambridge
  - Handy
  - Serrano
  - Nohl Canyon
  - Crescent
  - Sycamore
  - West Orange
  - Panorama
  - Anaheim Hills

Energy & Utilities in OUSD

- **High Schools**
  - Orange – Chevron
  - Canyon – Solar Boat
- **Middle Schools**
  - Portola – PEAK
- **Elementary Schools**
  - Cambridge – PEAK
4/6/10 YEAR PLANNING

- In the past presented as a 9th grade activity
- Moving forward....
  - Student planning at the middle school level
  - Student exposure at the elementary school level

OUSD Students and.......

- STEM
- STEAM
- CTE (Career Technical Education)
- ROP (Regional Occupation Program)
- CAREER PATHWAYS
Things are happening

- UCI Energy Invitational - OHS
- oc Maker Challenge - EMHS
- C-STEM - OHS and McPherson
- New Pathways
  - Aviation Science
    - Aviation I (Ground Pilot School) - CHS
  - ICT (Information Communication Technology)
    - CHS/VPHS
    - OHS/EMHS
    - McPherson Magnet
Health Science & Medical Technology

Biomedical Chemists  Biostatisticians  Biotechnology Assistants  Biotechnology Technicians  Geneticians  Biomedical Technicians  Quality Assurance/Control Technicians  Biotechnology Scientists  Translators  Bioinformatics Specialists  Clinical Trials Researchers  Medical Laboratory Aides  Radiology Technologists  Biotechnology Scientists  Radiologists  Medical Laboratory Technicians  Cardiology Technologists  Biotechnology Engineers  Medical Laboratory Assistants  Clinical Medical Technologists  Health Educators  Medical Records Clerks  Health Unit Coordinators  Medical Coders  Telehealth Technicians  Medical Librarians  Medical Record Technicians  Medical/Hospital Receptionists  Health Services Administrators  Morticians  Hospital/Nursing Home Administrators  Medical Transcriptionists  Industrial Hygienists  Health Educators  Central Supply Aides  Environmental Services Assistants  Central Supply Technicians  Pharmacist  Environmental Services Technicians  Materials Management Supervisors  Environmental Health Specialists  Nursing Home Administrators  Physical Therapy Aides  Dental Hygienists  Medical Assistants  Dentists  Exercise Physiologists  Physical Therapists  Physician Assistants  Emergency Medical Technicians  Fitness/Aerobics Instructors  Registered Physical Therapy Aides  Licensed Vocational Nurses/Registered Nurses  Pharmacy Technicians  Certified Nurses Assistants  Respiratory Therapy Aides

Hospitality, Tourism & Recreation

Dietary Aides  Dietary Chefs  Personal Chefs  Food Scientists  Food Product Testers/Tasters  Line Cooks  Dietetic Technicians  Registered Dietitians  Food Product Developers  Sous Chefs  Chefs  Pastry Chefs  Bakers  Caterers  Wait Staff  Food Service Directors  Food Designers  Food Examiners  Recreation Leaders  Event/Wedding Planners  Theme Park Staff  Flight Attendants  Concert Promoters  Travel Company Owner/Managers  Club/Resort/Hotel Managers  Travel Agents  Cruise Ship Staff  Interpreters/Translators  Sports Officials

Information Communication Technologies


Manufacturing & Product Development


Marketing, Sales & Service


Public Service

Child Care  Foster Care  Youth Workers  Social Workers  Educational Counselors  Mental Health Counselors  Marriage and Family Counselors  Psychologists  Psychiatrists  Crisis Intervention  Emergency Services  Disaster Teams  Substance Abuse and Behavioral Disorder Counselors  Judges  Elected Officials  Border Control  ATF / CIA / DEA / FBI Agents  Fish and Game Wardens  Customs Inspectors  Criminologists  Lawyers  Paralegals  Legal Clerks  Court Reporters  Firefighters  Correctional Officers  Fire Inspectors  Paramedics  Lifeguards  Police  Private Investigators

Transportation

<table>
<thead>
<tr>
<th>Date/Time Frame</th>
<th>Primary Standards</th>
<th>Unit</th>
<th>Resources</th>
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<tbody>
<tr>
<td>2007/2008</td>
<td>Holt</td>
<td>6th Grade Math Curriculum Map</td>
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<td>2007/2008</td>
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<td>Date/Timeframe</td>
<td>Unit</td>
<td>Primary Standards</td>
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<tr>
<td>28 days</td>
<td>3. Ratios and Proportions</td>
<td>RP 1 Ratio language</td>
<td>5-1, 5-2</td>
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<td>Nov 3 – Dec 19</td>
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<td>RP 2 Unit Rate</td>
<td>5-2 Problem Solving</td>
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<td>RP 3b Unit Rate Problems</td>
<td>4-9, 5-5</td>
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<td></td>
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<td>3c Percent of quantity</td>
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<td>3d Convert measurement units</td>
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<td>6-4, 6-5 Activity page 297</td>
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<td>27 days</td>
<td>4. Negative Numbers and Four Quadrant Graphing</td>
<td>NS 5 Integers</td>
<td>2-1 Problem Solving 2-1</td>
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<td></td>
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<td>NS 6b Ordered Pairs</td>
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<td>NS 6c Coordinate Plane</td>
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<td>NS 7 a-d Inequality statements</td>
<td>1-7, 1-11 Problem Solving</td>
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<td>Order for rational # Absolute Value</td>
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<td>Comparisons of Absolute Value</td>
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<td>NS 8 Solve problems by graphing</td>
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<td>G 3 Draw polygons on coordinate plane</td>
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<td>EE 5 Solving an equation as a process of answering a question</td>
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<td>EE 8 Inequalities</td>
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<td>Date/Timeframe</td>
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<td>Primary Standards</td>
<td>Resource</td>
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<tr>
<td>Feb 23 - 25 days</td>
<td>5 Expressions and Equations</td>
<td>EE 3.8</td>
<td>Holt</td>
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<td>Mar 27</td>
<td>6 Expressions and Equations</td>
<td>EE 2.4, b, c</td>
<td>Resource of 1-7, 1-11</td>
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<td>Making Equivalent Expressions</td>
<td>EE 4</td>
<td>Resource of 1-7, 1-11</td>
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<td>Solving Equations and Problems</td>
<td>EE 6</td>
<td>Resource of 1-7, 1-11</td>
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<td>Using Math Terms in Expressions</td>
<td>EE 7</td>
<td>Resource of 1-7, 1-11</td>
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<td>Combining like Terms</td>
<td>EE 6</td>
<td>Resource of 1-7, 1-11</td>
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<tr>
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<td>Identity Equivalent</td>
<td>EE 4</td>
<td>Resource of 1-7, 1-11</td>
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<td>Evaluating Expressions</td>
<td>EE 2-7, 2-8</td>
<td>Resource of 1-7, 1-11</td>
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<td>2-7.7-12 Concepts about Properties</td>
<td>EE 3</td>
<td>Resource of 1-7, 1-11</td>
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<td>Distributive, NS 4, GCF, LCM</td>
<td>EE 3</td>
<td>Resource of 1-7, 1-11</td>
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<td>Problem 6EE Use Variables in</td>
<td>EE 6</td>
<td>Resource of 1-7, 1-11</td>
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<tr>
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<td>Two Variable Equations Writing and Solving</td>
<td>EE 7</td>
<td>Resource of 1-7, 1-11</td>
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<td>Two Variable Solving Problems</td>
<td>EE 6</td>
<td>Resource of 1-7, 1-11</td>
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<td>EE 9</td>
<td>Resource of 1-7, 1-11</td>
<td>References of 1-7, 2-7, 2-8</td>
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</table>
## 6th Grade Math Curriculum Map

<table>
<thead>
<tr>
<th>Date/Timeframe</th>
<th>Unit</th>
<th>Primary Standards</th>
<th>Holt Reference</th>
<th>Resources</th>
</tr>
</thead>
</table>
Secondary Schools Common Core Math Teams

Teams consist of math teachers from the secondary schools

Objectives:

- Align the Common Core Standards to the existing math textbooks.
- Determine what standards are not covered in the textbook.
- Identify what sections of the book that should not be taught.
- Research the internet for resources to fill the holes.
- Determine that the Common Core Math Practices are evident in the lessons.

Significant issues:

- Existing textbooks that cover the standards are procedural, lacking many of the common core math practices.
- 8th grade math’s Common Core Standards can not be found primarily in one textbook.
  - Approximately 40% in the 7th grade book
  - Approximately 30% in the Algebra book
  - Approximately 30% in neither book
- Holes are being filled with lessons found on the internet.

Status of the Math Teams

<table>
<thead>
<tr>
<th></th>
<th>Initial team review of the existing Textbook</th>
<th>Creation of a Curriculum Map First Draft</th>
<th>Follow up Work</th>
<th>Final Draft of a Curriculum Map</th>
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</thead>
<tbody>
<tr>
<td>Middle School 6th Grade</td>
<td>X</td>
<td>X</td>
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<tr>
<td>7th Grade</td>
<td>X</td>
<td>1/28</td>
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<tr>
<td>7th Grade Accelerated</td>
<td>X</td>
<td>1/28</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8th Grade</td>
<td>X</td>
<td></td>
<td></td>
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<tr>
<td>8th Grade Algebra</td>
<td></td>
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</tr>
<tr>
<td>HS Algebra</td>
<td>X</td>
<td></td>
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<tr>
<td>Geometry</td>
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</tbody>
</table>
Course Sequences for Higher Mathematics: No Acceleration

Grade 6 → Grade 7 → Grade 8 → Algebra I/Math I → Geometry/Math II → Algebra II/Math III → Precalculus
Possible Course Progressions from the Standards Document

<table>
<thead>
<tr>
<th>Discipline</th>
<th>Grade Seven</th>
<th>Grade Eight</th>
<th>Grade Nine</th>
<th>Grade Ten</th>
<th>Grade Eleven</th>
<th>Grade Twelve</th>
</tr>
</thead>
<tbody>
<tr>
<td>Algebra / Mathematics I</td>
<td></td>
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<tr>
<td>Geometry / Mathematics II</td>
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<tr>
<td>Algebra I / Mathematics II</td>
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<tr>
<td>Advanced Placement</td>
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<td>Probability and Statistics</td>
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<tr>
<td>Calculus</td>
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</tbody>
</table>
Course Sequences for Higher Mathematics: Middle School Acceleration

Acceleration Decision Point
Course Sequences for Higher Mathematics: Doubling Up

Doubling up in High School

- Grade 6
- Grade 7
- Grade 8
- Algebra I
- Algebra II
- Precalculus
- Calculus

Acceleration Decision Point

Accelerated Integrated Pathway

- Grade 6
- Grade 7
- Grade 8
- Mathematics I and part of Mathematics II
- Part of Mathematics II and Mathematics III
- Precalculus
- Calculus
Course Sequences for Higher Mathematics: Enhanced & Summer Bridge

Enhanced Pathway

Grade 6 ➔ Grade 7 ➔ Grade 8 ➔ Enhanced Algebra I / Mathematics I ➔ Enhanced Geometry / Mathematics II ➔ Enhanced Algebra II / Mathematics III ➔ Calculus

Acceleration Decision Point

Summer Bridge Pathway

Grade 6 ➔ Grade 7 ➔ Grade 8 ➔ Algebra I / Mathematics I ➔ Geometry / Mathematics II ➔ Algebra II / Pre-Calc Mathematics III or Summer Bridge ➔ Calculus