

OUSD  
Climate Change  
Literacy  
Board Presentation

OUSD School Board  
Wed., Dec. 12, 2018

# Objectives

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- Provide background on why the revision for BP 6142.5
- Describe the revision process
- Discuss the vision for implementation

# Goal

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1. Develop action-based projects that integrate science and history to increase environmental and climate change literacy for students in grades K-12.
2. Identify and develop resources and structures to support the implementation of the integrated K-12 projects.

Background



# Timeline

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Jul. 2004 - BP 6142.5 Environmental Education

# 2004 Environmental BP

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*“The Board desires to offer environmental education that fosters attitudes of personal responsibility toward the environment and provides students with the concepts, knowledge and skills needed to contribute meaningfully to decisions involving the environment and its resources. At all grade levels, environmental facts should be taught as they relate to each other, so that students will understand basic ecological principles and appreciate the interrelated nature of living processes, the effect of human activities on ecological relationships, and the interdependence of humanity and nature.”*



# Timeline

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- Jul. 2004 - BP 6142.5 Environmental Education  
2016 - Science & History-Social Science  
Frameworks adopted

# Integration

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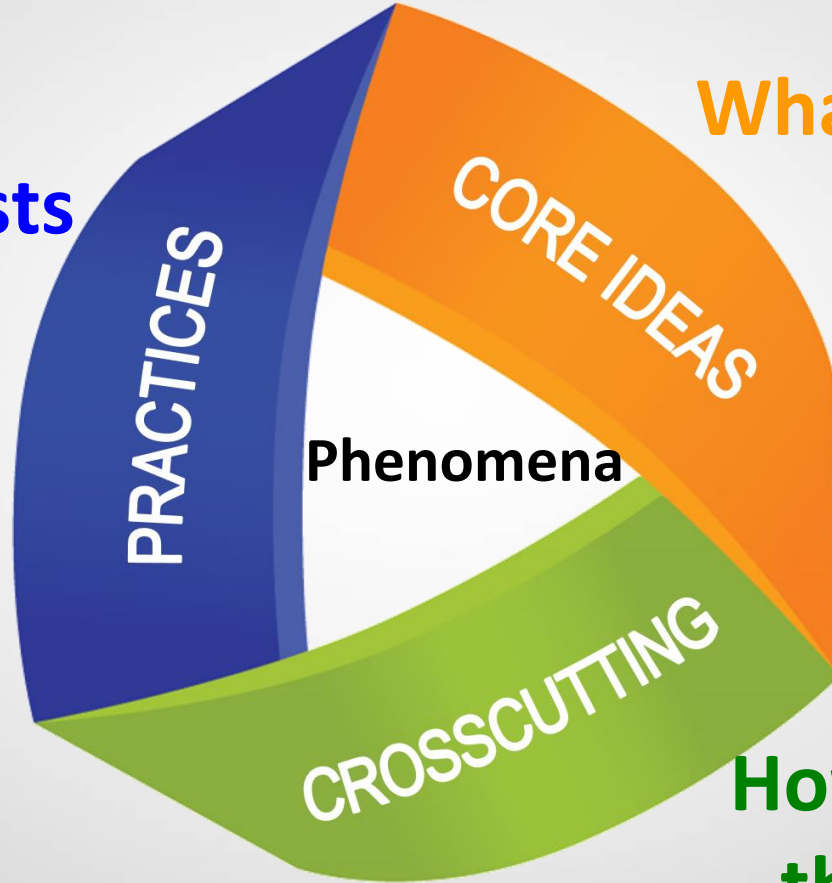
*“In 2016, the Environmental Principles & Concepts (EP&Cs) were integrated into the revised California History-Social Science and the new California Science framework. As a result, subsequent state textbook adoptions will incorporate the EP&Cs.”*

- [California Education & Environmental Initiative](#)



# Next Generation Science Standards

What scientists  
do



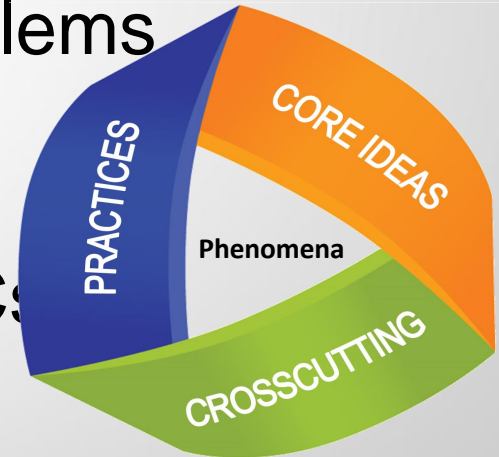
What scientists  
know

How scientists  
think & link

# NGSS Promotes

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- Coherent K-12 progression
- Phenomenon based instruction
- Inquiry in solving real-world problems
- Engineering connections
- Connection to CCSSs and EPCs





# Timeline

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- Jul. 2004 - BP 6142.5 Environmental Education
- 2016 - Science & History-Social Science Frameworks adopted
- Jan. 2018 - Community advocacy
- Apr. 2018 - O Tech students presented to the board
- Jun. 2018 - Climate Policy Resolution
- Aug. 2018- Climate Change Literacy Working Group

Process

# Climate Change Literacy Working Group

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## Task:

*Update the existing Board Policy 6142.5, Environmental Education, to reflect the Next Generation Science Standards and develop an accompanying Administration Regulation.*

# Climate Change Literacy Working Group

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- Herberta Zulueta - *Secondary Science Coordinator*
- Janan Apaydin - *Retired OUSD Elementary Teacher, OEA Environmental Justice Caucus member*
- Sarah Pipping - *K-12 Project Director for NGSS Early Implementer Initiative, OEA Environmental Justice Caucus member*
- Nancy Deming - *Sustainability Manager from Custodial and Nutrition Services, OEA Environmental Justice Caucus member*

# Climate Change Literacy Working Group

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- A group of volunteers that convened monthly
- Looked at current adopted curriculum and standards
- Engaged with the following groups:
  - *OEA Environmental Justice Caucus*
  - *Stop Waste*
  - *OUSD History Department*
  - *Living Schoolyards*
  - *Sierra Club*
  - *OUSD Buildings and Grounds*

# Board Policy

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## *Highlights:*

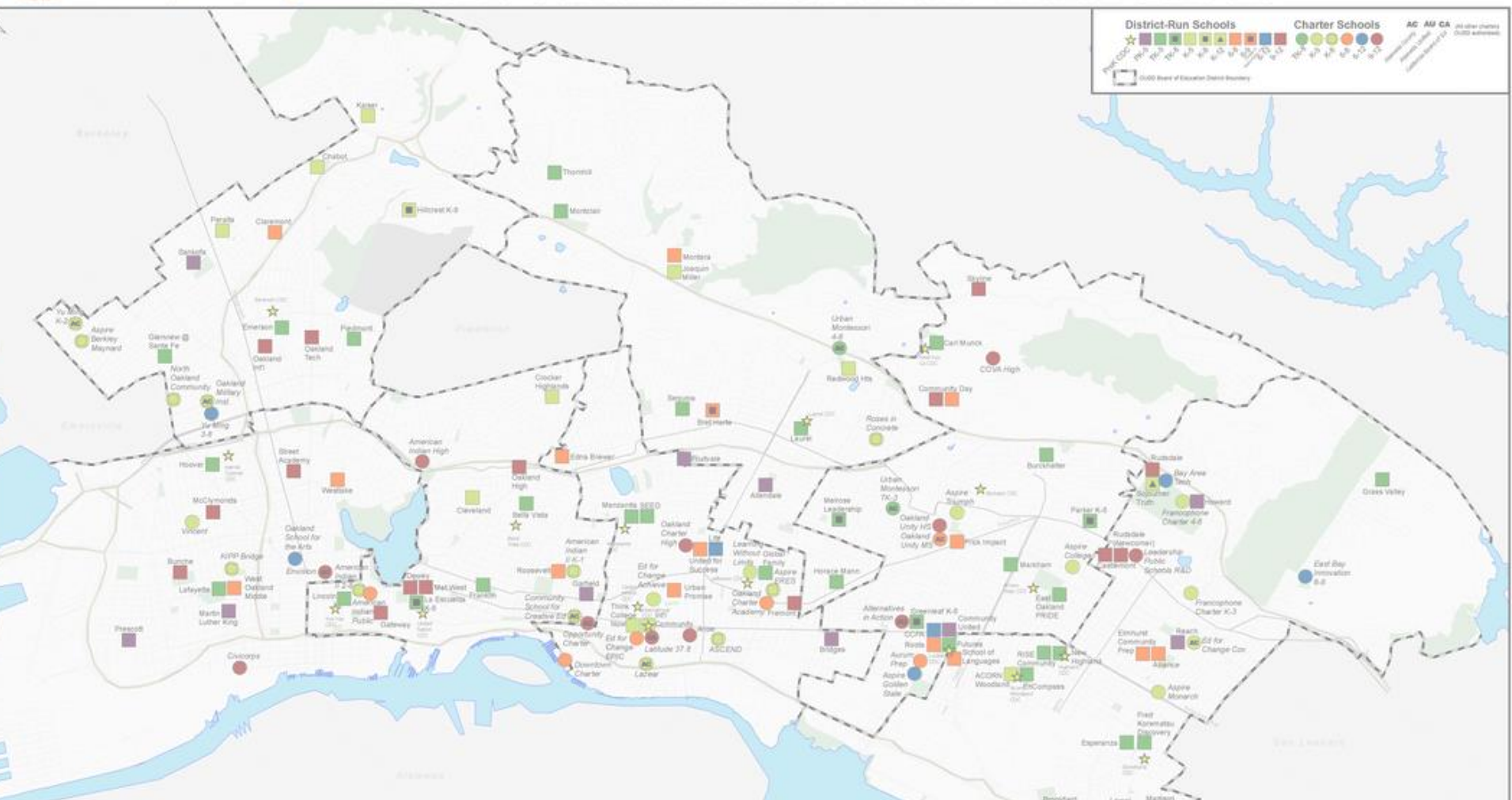
- Providing equitable access to standards-based instruction
- Building conditions for student and adult learning
- Collective efforts from around the district & community
- The relevancy



Implementation



# 2018-19 Oakland District-Run and Charter Schools



Resources &  
Training

2018-19	2019-20	2020-21	2021-22	2022-23
<ul style="list-style-type: none"> <li>- Board approve policy</li> <li>- Seek funding</li> <li>- Establish Community Partnerships</li> <li>- Create K-5 Core Curriculum Environmental Educations Connections</li> <li>- Determines Field Experiences</li> </ul>	<ul style="list-style-type: none"> <li>- Expand Membership of Working Group: Coordinator and Stipended positions</li> <li>- Pilot Field Experience</li> <li>- K-5 Environmental Education Professional Learning Communities</li> <li>- Summer Institute</li> </ul>	<p style="text-align: center;"><b>Elementary School Implementation</b></p> <ul style="list-style-type: none"> <li>- Teacher Field Trip Trainings</li> <li>- 3rd Grade Environmental Education Field Experience</li> <li>- 6-8 Environmental Education Professional Learning Communities</li> <li>- Summer Institute</li> </ul>	<p style="text-align: center;"><b>Middle School Implementation</b></p> <ul style="list-style-type: none"> <li>- Teacher Field Trip Trainings</li> <li>- 6th Grade Environmental Education Field Experience</li> <li>- 9-12 Environmental Education Professional Learning Communities</li> <li>- Summer Institute</li> </ul>	<p style="text-align: center;"><b>High School Implementation</b></p> <ul style="list-style-type: none"> <li>- Teacher Field Trip Trainings</li> <li>- 9th Grade Environmental Education Field Experience</li> <li>- Summer Institute</li> </ul>

# Core Curriculum

Red = Lack of Standards-aligned Curriculum

Yellow = Need to revisit due to implementation challenges

Green = Standards-aligned Curriculum

Grade	Math	Science	Language Arts	Social Studies
9-12	List of textbooks for sites to select from (pre-date Common Core and Next Generation Science Standards)			
6-8	Open Up Resource 18-19	CPO Science	Expeditionary Learning (EL Education)	Pearson History 18-19
TK-5	Math Expressions OUSD Core Curriculum Guide	Next Gen FOSS 18-19	Units of Study Words Their Way SIPPS Adelante/Advanced 18-19 for DL	Harcourt Reflections & Big Books

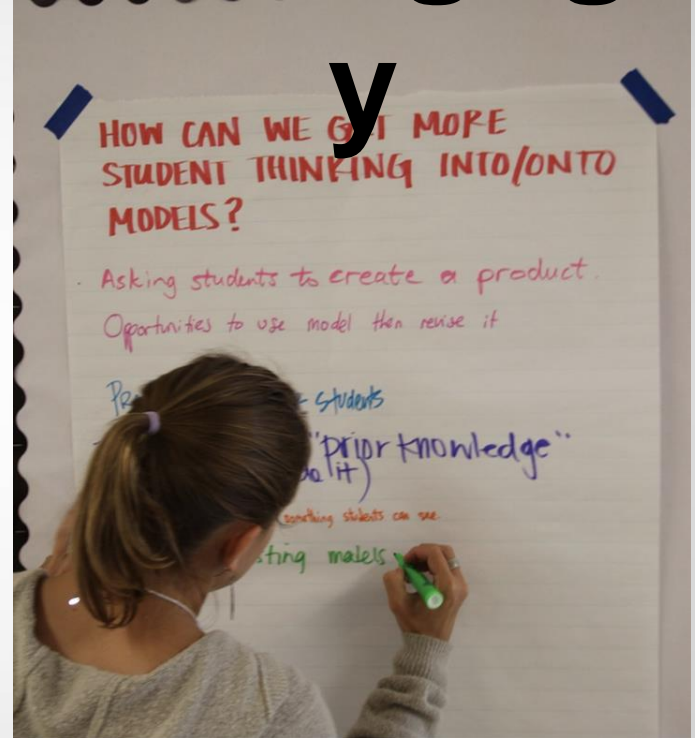
2018-19	2019-20	2020-21	2021-22	2022-23
<ul style="list-style-type: none"> <li>- Board approve policy</li> <li>- Seek funding</li> <li>- Establish Community Partnerships</li> <li>- Create K-5 Core Curriculum Environmental Educations Connections</li> <li>- Determines Field Experiences</li> </ul>	<ul style="list-style-type: none"> <li>- Expand Membership of Working Group: Coordinator and Stipended positions</li> <li>- Pilot Field Experience</li> <li>- K-5 Environmental Education Professional Learning Communities</li> <li>- Summer Institute</li> </ul>	<p style="text-align: center;"><b>Elementary School Implementation</b></p> <ul style="list-style-type: none"> <li>- Teacher Field Trip Trainings</li> <li>- 3rd Grade Environmental Education Field Experience</li> <li>- 6-8 Environmental Education Professional Learning Communities</li> <li>- Summer Institute</li> </ul>	<p style="text-align: center;"><b>Middle School Implementation</b></p> <ul style="list-style-type: none"> <li>- Teacher Field Trip Trainings</li> <li>- 6th Grade Environmental Education Field Experience</li> <li>- 9-12 Environmental Education Professional Learning Communities</li> <li>- Summer Institute</li> </ul>	<p style="text-align: center;"><b>High School Implementation</b></p> <ul style="list-style-type: none"> <li>- Teacher Field Trip Trainings</li> <li>- 9th Grade Environmental Education Field Experience</li> <li>- Summer Institute</li> </ul>

# Cadre



What to teach

# Pedagog




How to teach

## Environmental and Climate Change Literacy Project Outcomes

Year	Program Area	Outcomes	Funding
2018-19	<b>District Coordination</b> <i>Environmental Education Coordinator</i> <i>Environmental Education Working Group</i> <i>Core Curriculum Environmental Education Connections</i>	<ul style="list-style-type: none"> <li>- Approve new School Board Environmental Education Policy</li> <li>- Seek Grant Funding</li> <li>- Establish Community Partnerships</li> <li>- Create K-5 Science Core Curriculum Environmental Educations Connections</li> <li>- Determines Field Experiences (Grades 3, 6, and 9) with teacher input</li> </ul>	<b>\$0</b>
	<b>Teacher Professional Learning</b> <i>Summer Institute</i> <i>Grade Level Professional Learning Communities</i> <i>Teacher Field Trips</i>	n/a	
2019-20	<b>District Coordination</b> <i>Environmental Education Coordinator</i> <i>Environmental Education Working Group</i> <i>Core Curriculum Environmental Education Connections</i>	<ul style="list-style-type: none"> <li>- Expand Membership of EE Working Group</li> <li>- Pilot Field Experience Packages (Grades 3, 6, and 9)</li> <li>- Estbalish Environmentalists in the Classroom Program (EICP)</li> </ul>	<b>\$ 190,250.00</b>
	<b>Teacher Professional Learning</b> <i>Summer Institute</i> <i>Grade Level Professional Learning Communities</i> <i>Teacher Field Trips</i>	<ul style="list-style-type: none"> <li>- K-5 Environmental Education Professional Learning Communities</li> <li>- K-12 Teacher Field Trips (2 Saturdays - Spring &amp; Fall)</li> </ul>	
2020-21	<b>District Coordination</b> <i>Environmental Education Coordinator</i> <i>Environmental Education Working Group</i> <i>Core Curriculum Environmental Education Connections</i>	<ul style="list-style-type: none"> <li>- Evaluate Environmental Education Implementation Effectiveness</li> <li>- Support Environmental Educatin Field Experiences</li> <li>- Pilot Environmentalists in the Classroom Program (EICP)</li> <li>- Plan and Facilitator Saturday Teacher Field Trips</li> </ul>	<b>\$ 429,750.00</b>
	<b>Teacher Professional Learning</b> <i>Summer Institute</i> <i>Grade Level Professional Learning Communities</i> <i>Teacher Field Trips</i>	<ul style="list-style-type: none"> <li>- K-5 Environmental Education Summer Institute</li> <li>- 6-8 Environmental Education Professional Learning Communities</li> <li>- K-12 Teacher Field Trips (2 Saturdays - Spring &amp; Fall)</li> </ul>	
2021-22	<b>District Coordination</b> <i>Environmental Education Coordinator</i> <i>Environmental Education Working Group</i> <i>Core Curriculum Environmental Education Connections</i>	<ul style="list-style-type: none"> <li>- 3rd Grade Environmental Education Field Experience</li> <li>- 6th Grade Environmental Education Field Experience</li> <li>- 9th Grade Environmental Education Field Experience</li> <li>- K-5 Field Trip Grants</li> </ul>	<b>\$ 472,350.00</b>
	<b>Student Career Technical Education (Field Experiences &amp; Guest Speakers)</b>	<ul style="list-style-type: none"> <li>- 3rd Grade Environmental Education Field Experience</li> <li>- 6th Grade Environmental Education Field Experience</li> <li>- 9th Grade Environmental Education Field Experience</li> <li>- K-8 Field Trip Grants</li> <li>- Environmentalists in the Classroom Program (EICP)</li> </ul>	
2022-23	<b>District Coordination</b> <i>Environmental Education Coordinator</i> <i>Environmental Education Working Group</i> <i>Core Curriculum Environmental Education Connections</i>	<ul style="list-style-type: none"> <li>- Evaluate Environmental Education Implementation Effectiveness</li> <li>- Support Environmental Educatin Field Experiences</li> <li>- CoordinateEnvironmentalists in the Classroom Program (EICP)</li> <li>- Plan and Facilitator Saturday Teacher Field Trips</li> </ul>	<b>\$ 464,150.00</b>
	<b>Teacher Professional Learning</b> <i>Summer Institute</i> <i>Grade Level Professional Learning Communities</i> <i>Teacher Field Trips</i>	<ul style="list-style-type: none"> <li>- 9-12 Environmental Education Summer Institute</li> <li>- K-12 Teacher Field Trips (2 Saturdays - Spring &amp; Fall)</li> </ul>	
	<b>District Coordination</b> <i>Environmental Education Coordinator</i> <i>Environmental Education Working Group</i> <i>Core Curriculum Environmental Education Connections</i>	<ul style="list-style-type: none"> <li>- 3rd Grade Environmental Education Field Experience</li> <li>- 6th Grade Environmental Education Field Experience</li> <li>- 9th Grade Environmental Education Field Experience</li> <li>- K-12 Field Trip Grants</li> <li>- Environmentalists in the Classroom Program (EICP)</li> </ul>	
	<b>Student Career Technical Education (Field Experiences &amp; Guest Speakers)</b>	<ul style="list-style-type: none"> <li>- 3rd Grade Environmental Education Field Experience</li> <li>- 6th Grade Environmental Education Field Experience</li> <li>- 9th Grade Environmental Education Field Experience</li> <li>- K-12 Field Trip Grants</li> <li>- Environmentalists in the Classroom Program (EICP)</li> </ul>	




**Environmental and Climate Change Literacy Project Budget**

Year 1: 2019 - 2020		Year 2: 2020-21		Year 3: 2021-22		Year 4: 2022-23	
Cost		Cost		Cost		Cost	
<b>Summer Institute</b>		<b>Summer Institute - Focus K-5</b>		<b>Summer Institute - Focus 6-8</b>		<b>Summer Institute - Focus 9-12</b>	
n/a		Teacher Pay - \$800/teacher x 90 teachers	\$ 72,000.00	Teacher Pay - \$800/teacher x 120 teachers	\$ 96,000.00	Teacher Pay - \$800/teacher x 120 teachers	\$ 96,000.00
		Cadre Presenter Stipend - \$1,000/Presenter x 12 Presenters	\$ 12,000.00	Cadre Presenter Stipend - \$1,000/Presenter x 18 Presenters	\$ 18,000.00	Cadre Presenter Stipend - \$1,000/Presenter x 12 Presenters	\$ 12,000.00
		Curriculum and Pedagogy Presenters - \$600/Presenter x 12 Presenters	\$ 7,200.00	Curriculum and Pedagogy Presenters - \$600/Presenter x 6 Presenters	\$ 3,600.00	Curriculum and Pedagogy Presenters - \$600/Presenter x 12 Presenters	\$ 7,200.00
		Institute Costs (food, rental, materials)	\$ 20,000.00	Institute Costs (food, rental, materials)	\$ 30,000.00	Institute Costs (food, rental, materials)	\$ 30,000.00
<b>District Coordination - Environmental Education Working Group</b>		<b>District Coordination - Environmental Education Working Group</b>		<b>District Coordination - Environmental Education Working Group</b>		<b>District Coordination - Environmental Education Working Group</b>	
Environmental Education Coordinator Salary	\$ 120,000.00	Environmental Education Coordinator Salary	\$ 120,000.00	Environmental Education Coordinator Salary	\$ 120,000.00	Environmental Education Coordinator Salary	\$ 120,000.00
History Coordinator 1/2 Salary	\$ 45,000.00	History Coordinator 1/2 Salary	\$ 45,000.00	History Coordinator 1/2 Salary	\$ 45,000.00	History Coordinator 1/2 Salary	\$ 45,000.00
<b>EE Working Group Sessions</b>		<b>EE Working Group Sessions</b>		<b>EE Working Group Sessions</b>		<b>EE Working Group Sessions</b>	
Teacher Pay - \$500/teacher - 2 hours x 10 sessions x 4 teachers	\$ 2,000.00	Teacher Pay - \$500/teacher - 2 hours x 10 sessions x 4 teachers	\$ 2,000.00	Teacher Pay - \$500/teacher - 2 hours x 10 sessions x 4 teachers	\$ 2,000.00	Teacher Pay - \$500/teacher - 2 hours x 10 sessions x 4 teachers	\$ 2,000.00
Materials (Office Supplies, EE Resources, etc.)	\$ 1,000.00	Materials (Office Supplies, EE Resources, etc.)	\$ 1,000.00	Materials (Office Supplies, EE Resources, etc.)	\$ 1,000.00	Materials (Office Supplies, EE Resources, etc.)	\$ 1,000.00
Food - \$7/person x 12 members x 10 sessions *rounded up	\$ 900.00	Food - \$7/person x 12 members x 10 sessions *rounded up	\$ 900.00	Food - \$7/person x 12 members x 10 sessions *rounded up	\$ 900.00	Food - \$7/person x 12 members x 10 sessions *rounded up	\$ 900.00
<b>Testing Out Potential Field Experiences</b>		<b>Testing Out Potential Field Experiences</b>		<b>Testing Out Potential Field Experiences</b>		<b>Testing Out Potential Field Experiences</b>	
<b>Elementary EE Field Experience</b>		<b>Elementary EE Field Experience</b>		<b>Elementary EE Field Experience</b>		<b>Elementary EE Field Experience</b>	
Busing - \$800	\$ 800.00	Busing - \$800	\$ 800.00	Busing - \$800	\$ 800.00	Busing - \$800	\$ 800.00
Sub Pay - \$150/sub x 4 teachers	\$ 600.00	Sub Pay - \$150/sub x 4 teachers	\$ 600.00	Sub Pay - \$150/sub x 4 teachers	\$ 600.00	Sub Pay - \$150/sub x 4 teachers	\$ 600.00
Food - \$7/person x 12 members *rounded up	\$ 100.00	Food - \$7/person x 12 members *rounded up	\$ 100.00	Food - \$7/person x 12 members *rounded up	\$ 100.00	Food - \$7/person x 12 members *rounded up	\$ 100.00
<b>Middle School EE Field Experience</b>		<b>Middle School EE Field Experience</b>		<b>Middle School EE Field Experience</b>		<b>Middle School EE Field Experience</b>	
Busing - \$800	\$ 800.00	Busing - \$800	\$ 800.00	Busing - \$800	\$ 800.00	Busing - \$800	\$ 800.00
Sub Pay - \$150/sub x 4 teachers	\$ 600.00	Sub Pay - \$150/sub x 4 teachers	\$ 600.00	Sub Pay - \$150/sub x 4 teachers	\$ 600.00	Sub Pay - \$150/sub x 4 teachers	\$ 600.00
Food - \$7/person x 12 members *rounded up	\$ 100.00	Food - \$7/person x 12 members *rounded up	\$ 100.00	Food - \$7/person x 12 members *rounded up	\$ 100.00	Food - \$7/person x 12 members *rounded up	\$ 100.00
<b>High School EE Field Experience</b>		<b>High School EE Field Experience</b>		<b>High School EE Field Experience</b>		<b>High School EE Field Experience</b>	
Busing - \$800	\$ 800.00	Busing - \$800	\$ 800.00	Busing - \$800	\$ 800.00	Busing - \$800	\$ 800.00
Sub Pay - \$150/sub x 4 teachers	\$ 600.00	Sub Pay - \$150/sub x 4 teachers	\$ 600.00	Sub Pay - \$150/sub x 4 teachers	\$ 600.00	Sub Pay - \$150/sub x 4 teachers	\$ 600.00
Food - \$7/person x 12 members *rounded up	\$ 100.00	Food - \$7/person x 12 members *rounded up	\$ 100.00	Food - \$7/person x 12 members *rounded up	\$ 100.00	Food - \$7/person x 12 members *rounded up	\$ 100.00
<b>Teacher Professional Learning</b>		<b>Teacher Professional Learning</b>		<b>Teacher Professional Learning</b>		<b>Teacher Professional Learning</b>	
<b>Professional Learning Communities - Focus K-5</b>		<b>Professional Learning Communities - Focus 6-8</b>		<b>Professional Learning Communities - Focus 9-12</b>		<b>Professional Learning Communities</b>	
Grade K EE PLC - \$500/teacher (2 hours x 10 sessions x 3 teachers)	\$ 1,500.00	Grade 6 Science EE PLC - \$500/teacher (2 hours x 10 sessions x 3 teachers)	\$ 1,500.00	Grade 9 Biology EE PLC - \$500/teacher (2 hours x 10 sessions x 3 teachers)	\$ 1,500.00	n/a	
Grade K EE Pilot Materials - \$200/teacher x 3 teachers	\$ 600.00	Grade 6 Science EE Pilot Materials - \$200/teacher x 3 teachers	\$ 600.00	Grade 9 Biology EE Pilot Materials - \$200/teacher x 3 teachers	\$ 600.00		
Grade 1 EE PLC - \$500/teacher (2 hours x 10 sessions x 3 teachers)	\$ 1,500.00	Grade 7 Science EE PLC - \$500/teacher (2 hours x 10 sessions x 3 teachers)	\$ 1,500.00	Grade 10 Chemistry EE PLC - \$500/teacher (2 hours x 10 sessions x 3 teachers)	\$ 1,500.00		
Grade 1 EE Pilot Materials - \$200/teacher x 3 teachers	\$ 600.00	Grade 7 Science EE Pilot Materials - \$200/teacher x 3 teachers	\$ 600.00	Grade 10 Chemistry EE Pilot Materials - \$200/teacher x 3 teachers	\$ 600.00		
Grade 2 EE PLC - \$500/teacher (2 hours x 10 sessions x 3 teachers)	\$ 1,500.00	Grade 8 Science EE PLC - \$500/teacher (2 hours x 10 sessions x 3 teachers)	\$ 1,500.00	Grade 11 Physics EE PLC - \$500/teacher (2 hours x 10 sessions x 3 teachers)	\$ 1,500.00		
Grade 2 EE Pilot Materials - \$200/teacher x 3 teachers	\$ 600.00	Grade 8 Science EE Pilot Materials - \$200/teacher x 3 teachers	\$ 600.00	Grade 11 Physics EE Pilot Materials - \$200/teacher x 3 teachers	\$ 600.00		
Grade 3 EE PLC - \$500/teacher (2 hours x 10 sessions x 3 teachers)	\$ 1,500.00	Grade 6 History EE PLC - \$500/teacher (2 hours x 10 sessions x 3 teachers)	\$ 1,500.00	Grade 9 History EE PLC - \$500/teacher (2 hours x 10 sessions x 3 teachers)	\$ 1,500.00		
Grade 3 EE Pilot Materials - \$200/teacher x 3 teachers	\$ 600.00	Grade 6 History EE Pilot Materials - \$200/teacher x 3 teachers	\$ 600.00	Grade 9 History EE Pilot Materials - \$200/teacher x 3 teachers	\$ 600.00		
Grade 4 EE PLC - \$500/teacher (2 hours x 10 sessions x 3 teachers)	\$ 1,500.00	Grade 7 History EE PLC - \$500/teacher (2 hours x 10 sessions x 3 teachers)	\$ 1,500.00	Grade 10 History EE PLC - \$500/teacher (2 hours x 10 sessions x 3 teachers)	\$ 1,500.00		
Grade 4 EE Pilot Materials - \$200/teacher x 3 teachers	\$ 600.00	Grade 7 History EE Pilot Materials - \$200/teacher x 3 teachers	\$ 600.00	Grade 10 History EE Pilot Materials - \$200/teacher x 3 teachers	\$ 600.00		
Grade 5 EE PLC - \$500/teacher (2 hours x 10 sessions x 3 teachers)	\$ 1,500.00	Grade 8 History EE PLC - \$500/teacher (2 hours x 10 sessions x 3 teachers)	\$ 1,500.00	Grade 11 History EE PLC - \$500/teacher (2 hours x 10 sessions x 3 teachers)	\$ 1,500.00		
Grade 5 EE Pilot Materials - \$200/teacher x 3 teachers	\$ 600.00	Grade 8 History EE Pilot Materials - \$200/teacher x 3 teachers	\$ 600.00	Grade 11 History EE Pilot Materials - \$200/teacher x 3 teachers	\$ 600.00		
				Grade 12 Senior Capstone EE PLC - \$500/teacher (2 hours x 10 sessions x 6 teachers)	\$ 3,000.00		
				Grade 12 Senior Capstone EE Pilot Materials - \$200/teacher x 6 teachers	\$ 1,200.00		
<b>K-12 Teacher Field Trips</b>		<b>K-12 Teacher Field Trips</b>		<b>K-12 Teacher Field Trips</b>		<b>K-12 Teacher Field Trips</b>	
Teacher Pay \$100 Stipend/teacher x 30 teachers	\$ 3,000.00	Teacher Pay \$100 Stipend/teacher x 30 teachers	\$ 3,000.00	Teacher Pay \$100 Stipend/teacher x 30 teachers	\$ 3,000.00	Teacher Pay \$100 Stipend/teacher x 30 teachers	\$ 3,000.00
Materials \$500/day x 2 days	\$ 1,000.00	Materials \$500/day x 2 days	\$ 1,000.00	Materials \$500/day x 2 days	\$ 1,000.00	Materials \$500/day x 2 days	\$ 1,000.00
Food \$7/person x 35 people (teachers & presenters)	\$ 250.00	Food \$7/person x 35 people (teachers & presenters)	\$ 250.00	Food \$7/person x 35 people (teachers & presenters)	\$ 250.00	Food \$7/person x 35 people (teachers & presenters)	\$ 250.00
<b>Student Career Technical Education (Field Experiences &amp; Guest Speakers)</b>		<b>Student Career Technical Education (Field Experiences &amp; Guest Speakers)</b>		<b>Student Career Technical Education (Field Experiences &amp; Guest Speakers)</b>		<b>Student Career Technical Education (Field Experiences &amp; Guest Speakers)</b>	

Thank  
You!

# Questions & Answers