



1720 W. Cameron Avenue, Suite 100, West Covina, CA 91790 · 626-338-5555 · Fax 626-338-5775

# WQA LEGISLATIVE/PUBLIC INFORMATION COMMITTEE AND SPECIAL MEETING OF THE BOARD OF DIRECTORS TO BE HELD ON WEDNESDAY, APRIL 10, 2019 AT 11:00 A.M. AT

1720 W. CAMERON AVE., SUITE 100 IN WEST COVINA, CA

\*The Legislative/Public Information Committee meeting is noticed as a joint committee meeting with the Board of Directors for the purpose of compliance with the Brown Act. Members of the Board that are not assigned to the Legislative/Public Information Committee may attend and participate as members of the Board, whether or not a quorum of the Board is present. In order to preserve the function of the Committee as advisory to the Board, members of the Board who are not assigned to the Legislative/Public Information Committee will not vote on matters before the Committee

# **AGENDA**

Committee Members: Jorge Marquez, Valerie Munoz and Bob Kuhn

Liaison Member: Dan Arrighi

- I. Call to Order
- II. Public Comment
- III. Discussion Regarding Next Advertorial
- IV. Discussion Regarding Agreement with the Eco Voices Institute [enc]
- V. Discussion Regarding San Gabriel Mountains Foothills and Rivers Protection Act (S.3704)
- VI. Legislative Activities/Reports
  - a. State
  - b. Federal
- VII. Executive Director's Report
- VIII. Adjournment



# San Gabriel Basin Water Quality Authority

1720 W. Cameron Avenue, Suite 100, West Covina, CA 91790 • 626-338-5555 • Fax 626-338-5775

## **AGENDA SUBMITTAL**

**To:** WQA Legislative/Public Information Committee

**From:** Kenneth R. Manning, Executive Director

**Date:** April 10, 2019

**Subject:** Proposed Summer Youth Outreach Program

# **Discussion**

Last year the WQA participated in a Summer Youth Outreach Program with EcoVoices to target a segment of the community that we are currently not reaching, the youth of our communities. EcoVoices is a STEM's rich hands-on program that provides young people lessons on the San Gabriel River watershed that includes: groundwater quality, drought preparedness, mitigation measures for the prevention of pollution and restorative biodiversity. It is delivered in a dynamic and theatrical way that helps students remember and retain what they hear. This year the program would be expanding to include at least 15 K-8 schools within the area of the WQA.

Staff would like to consider participating in this program again and the cost to the WQA for the summer program is \$15,000, which is currently available within the WQA budget, and would reach an estimated 1,000 youth within the region.

# Recommendation

Staff recommends the board approve the participation in the Summer Youth Outreach Program and allocate \$15,000 to the project.



Ken Manning, Executive Director San Gabriel Basin Water Quality Authority

03-March-2019

Dear Ken,

Last summer, the San Gabriel Basin Water Quality Authority funded a highly successful series of EcoVoices Expeditions that enabled us to reach hundreds of schoolchildren and family members, primarily in the San Gabriel Valley— and to purchase a 12 foot box van to enhance our capacity.

Our staff at the EcoVoices Institute is continuing to develop a dynamic water quality education component to add to our ever-evolving EcoVoices curriculum, which reaches THOUSANDS of children every year. The purpose of EcoVoices is to create and sustain innovative, effective, and outstanding educational programs for ecological research and stewardship.

Over the past 5 years we have championed the development of science creativity and talent for over 17,000 urban youth from communities where the need is greatest.

Through our exciting theatrical and hands-on field expeditions, we communicate critical understanding of the San Gabriel River watershed: groundwater quality, drought preparedness, mitigation of water pollution, and restorative biodiversity.

# We have a NEW opportunity to extend our reach to THOUSANDS more in the Summer of 2019!

We are requesting that the WQA match last summer's sponsorship of \$15,000. We can leverage that level of support to schedule a robust series of outreach presentations for children attending afterschool programs and to provide EcoVoices Traveling Expeditions through the Parks After Dark programs at sites within the WQA service area. Moreover, we are working successfully with additional water agencies as co-partners to support further expansion of our ongoing EcoVoices programming.

Please sponsor another great summer of EcoVoices!

Your sponsorship ensures that we champion THOUSANDS of well-deserving families and youth!

Dr. Richard Shope, President World Space Foundation

15835 East Main Street, Studio Q

La Puente, CA 91744









## AGREEMENT FOR PROFESSIONAL SERVICES

This Agreement is made and entered into this day of 2019 by and between the San Gabriel Basin Water Quality Authority (WQA) and the EcoVoices Institute, a Project of the Founders of the World Space Foundation (World Space). The purpose of the EcoVoices Institute to create and sustain innovative, effective, and outstanding educational programs for ecological research and stewardship.

SCOPE OF WORK: World Space agrees to perform the professional services and tasks set forth as follows:

- 1. Create, design, and produce, as part of the larger EcoVoices community outreach curriculum, courses, inquiry stations, science journals, mimewrighting scenarios and other associated components on the theme of WATER QUALITY, specifically: GROUNDWATER POLLUTION and GROUNDWATER CLEANUP, with the guidance of WQA expertise.
- 2. Implement the WATER QUALITY curriculum as part of the SUMMER & FALL 2019 community outreach to Los Angeles County Parks, After School Programs, and other K-12 venues including at least 5 Parks, and 5 school districts within the service area of the WQA.
- Implement the WATER QUALITY curriculum as part of the FALL 2019 community outreach to at least 5 K-8 schools within the service area of the WQA.
- 4. Provide photographs and write-ups to enable the WQA to publicize its participation as an EcoVoices partner. Include the WQA logo where appropriate (letterhead, banners, science journals, etc.), to indicate its status as an EcoVoices partner.

COMPENSATION: EcoVoice Institute, a project of World Space, shall perform the Professional Services at a total cost of \$15,000, payable to the "World Space Foundation".

INTELLECTUAL PROPERTY: World Space enthusiastically embraces the task of creating a suite of educational products for EcoVoices that communicate WQA community outreach themes. World Space reserves the intellectual property rights to benefit the authors of those efforts, to be shared as revenueproducing work, on a case by case basis, with its collaborative partners.

GENERAL PROGRAM DEVELOPMENT: This Agreement funds activities carried out in concert with several collaborative entities, including but not limited to: the Los Angeles County Department of Parks & Recreation, the La Puente Valley County Water District, and the San Gabriel Valley Water Company.

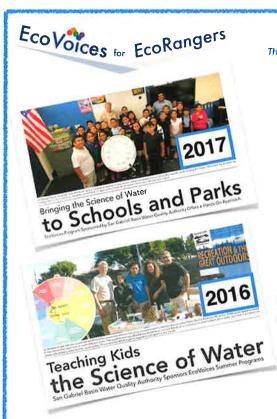
Ken Manning, Executive Director

Richard Shope, President









# DROUGHT OR NOT THE WISDOM of WATER CONSERVATION





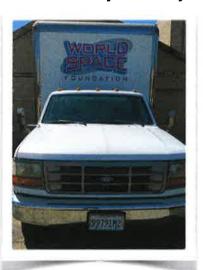


# A LIVELY SHOW

Science perfurned with Theatrical energy

EcoVoices for EcoRangers

World Space Expedition Truck
Acquired Summer 2018 through a grant from the
San Gabriel Basin
Water Quality Authority



our community sponsors

Water Quality Authority

**Since 2016** 



**Since 2017** 



**Since 2017** 

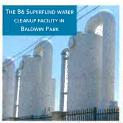




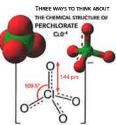
THREE HANDS-ON, MINDS-ON COURSES TO EXPLORE, DISCOVER, UNDERSTAND

EcoVoices: the Wonders of Nature! PRODUCE KNOWLEDGE, CREATE A PROJECT, PERFORM A PLAY

inquiry is the Art of Science







## Chemical Space

Chemistry is the study of the nteraction of atoms and molecules. Chemical space is wherever these interactions happen.

We look at how we keep chemicals where they belong, to PREVENT the problems of pollution that have ¿How do we CONSERVE the GROUNDWATER! ¿How do we measure the WATER we SAVE! ¿How much WATER do we USE! ¿Where do we get our WATER!

- THE WATER CYCLE
- OUR REGIONAL WATERSHED
- LOCAL WATER QUALITY
- MEASURING our WATER LISE
- WATER CONSERVATION

¿LEARN HOW we can REALLY make a DIFFERENCE!

World Space aligns with the Next Generation Science Standards: Understanding the Scientific Enterprise, The Nature of Science

Students APPLY Cross-Cutting Concepts in REAL-WORLD Contexts.



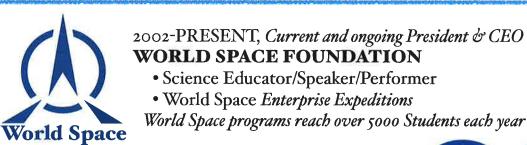
Water quality is a critical issue WORLDWIDE

How do we know how clean the er is that comes out of the tap?

We examine the dynamics of the Superfund Cleanup Technologies that operate 24/7 to provide clean water for residents of the San

A watershed is formed by the interaction of the water cycle and the regional geology. Where does our drinking water

We look at how water flows, how it transports particles, how oundwater becomes our most important water resource.



From 1994-2009, Dr. Shope coordinated science education and public outreach programs for various flight projects at NASA's Jet Propulsion Laboratory (JPL); (Pluto, Mars, Jupiter, Europa, the Sun, the Moon, and more); created science highlights for NASA Headquarters; and served as Principal Investigator for NASA-funded education and public outreach projects.







From 1971-1994, the MIME Wrighting program reached over one mi ion schoolchildren nationa y and throughout Southern California as students and continues to this day as students ACTOUTTHE SCIENCE STORY!



Wright About, Read Aloud, Mime Along



**OUR METHOD:** 

Since 1983, a proven method for active learning, developed by Dr. Shope, performed with theatrical energy for over two million youth!

**FULFILLS Next Generation Science Standards:** 

## **Understanding the Scientific Enterprise**

The Nature of Science The Power of Scientific Inquiry Demystifying the Language & Literature of Science

#### **ECORANGERS:**

- Work with Science Mentors & Inquiry Coaches
- ☑ Read Science Literature
- Go on a Science Expedition
- Apply Scientific Methods
- Wright Science Journals
- (Write, Draw, Discuss, Perform) ✓ Investigate Phenomena
- Gather Data, Interpret Results
- ☑ Communicate Discoveries



# World Space Enterprise Expeditions



Institutes for Scientific, Educational, & Literary Enterprises Wandering Scholar Press • World Space ScienZjournal • EvaluAdded +

#### We Champion Science Creativity & Talent





Transdisciplinary Sciences & Technologies of Space



# **EcoVoices**









The Marvels of Health & Well-Being





Exploring Ice in the Solar System











# EcoResilience Preserve

A World Space for Scientific Inquiry

How to Create & Sustain
An Outdoor Environmental Science
Research & Learning Enterprise

By Richard E. Shope III, Ed.D.

Who We Are:



EcoVoices Institute

A Project of the World Space Foundation Dr. Richard Shope, President



# How to Create and Sustain an

# **EcoResilience Preserve**

As A World Space for Scientific Inquiry

"Doing research is a different activity than learning by course work." — E. David Ford, author of Scientific Method for Ecological Research (2002)

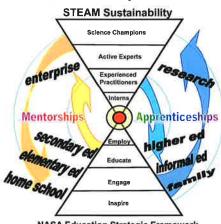
## **EcoVoices for EcoRangers**

The Role of Science in a Participatory Democracy As World Scientists, we inform ourselves & communicate to Decision-Makers As **EcoRangers**, we Participate as Decision-Makers within our own Communities

WATERS: Watershed Awareness Training for Ecological Research & Stewardship Ecological Research Apprenticeships & Mentorships Youth Workforce Development

Science, Technology, Engineering, Arts, Math: SocioEcoSystem view of Entry Opportunities

Science Education is the Engine of Job Creation



# Scientific Inquiry

Keeping a ScienZjournal Developing the Twelve Golden Talents of the Inquiry Wheel

# **Ecosystem Assessment Survey**

**Biodiversity** Soil Quality Water Quality Water Resources Watershed Dynamics **EcoResilience** 



NASA Education Strategic Framework

{coresearch|coteach

coach science

Transformative Conservation scientific|practice} Native Plants versus Invasive Species Indigenous & Urban Gardening Practices

**Twelve Golden Talents** of the Inquiry Wheel

# **Human Impact**

**Urban Ecology** Life at the Urban Edge **GREENgineering Solutions** 

#### **Outdoor Science Learning**

Applying the  $E\Delta U$  Science Performance Model Creating a Suite of Hands-On Field Collaboratories Tiered {Apprenticeship | Mentorship} Model for Participatory Action Research









# $E\Delta Ucative\ ENTERPRISES$

Explore, \(\Delta\)iscover, Understand...Enterprise!

# WORKING DEFINITION: ENTERPRISE = PROJECT, with a $\Delta$ twist

REAL-WORLD **PROBLEMS** that students genuinely want to solve REAL-WORLD **QUESTIONS** that students genuinely want to answer<sup>1</sup> ...that naturally entail a suite of applied language and inquiry skills, such as: reading, writing, speaking, enacting, calculating, analyzing, synthesizing, designing, investigating, constructing, modeling, conceptualizing, communicating, rehearsing, practicing, performing...

that contributes to REAL-WORLD **CHANGE** ( $\Delta$ )<sup>2</sup>

How to Be & Become a Scientist...

Your Enterprising Thoughts

len-ter-prise also en-ter-prize \ R 'ento(r)prīz, -R -tap-\ n -s [ME, fr. MF entreprise, fr. fem. of entrepris, past part. of entreprendre to undertake, fr. entre- inter- (fr. L inter-) + prendre to take, fr. L prehendere to seize, grasp — more at GET] 1 a: a plan or design for a venture or undertaking (his friends judged his novel ~ to be impractical and urged him to forget it) b: venture, undertaking, project; esp: an undertaking that is difficult, complicated, or has a strong element of risk (indicate the . . important ~s in which he had been engaged, probably battles, expeditions, or treaties of peace —W.A.Mason) (his new ~, a restaurant on Fifth avenue, met with complete failure) (exploring the English character has long been a favorite ~ of literary men —H.S. Commager) (a military ~ of major scope) c: a unit of economic organization or activity (as a factory, a farm, a mine); esp: a business organization: FIRM, COMPANY (an old ~ specializing in scientific textbooks —Current Biog.) (prolen-ter-prise also en-ter-prize \R 'ento(r)priz, -R -top-\n -s mine); esp: a business organization: FIRM, COMPANY (an old ~ specializing in scientific textbooks—Current Biog.) (proposed to encourage the growth of small independent ~s> d: any systematic purposeful activity or type of activity (agriculture is the principal economic ~ among these people) (history, more than any other literary ~, puls the writer in the debt of other people—J.K.Galbraith) (the ... problem of the nature of philosophy and the philosophical ~ itself—J.E.Smith) 2: readiness to attempt or engage in what requires daring or energy: a bold energetic questing spirit: independence of thought: INITIATIVE, ENERGY (the public rarely shows ~ when in search of entertainment—Tyrone Guthrie) (complained of his lack of ~)

2enterprise \"\vb\-ED/-ING/-s vt: to venture upon: UNDERTAKE, LAUNCH (new churches are being enterprised in every area in America—Time) ~ vi, archaic: to undertake an enterprise

en-thuse \5

enthusiasm, thusiastic ( merchandis

express (as he enthused astic : expri to ~ over -L.G.Pine

on-thu-si-a thousiasmos thous inspir more at TI superhumai a state

: TRANSPOR of religious the ~ and excitement zeal or int with ~> (t) or is pursu sailing) (t) PASSION en-thu-si-a astēs, fr. er. self to be in society of spirit-posse ary, extrav or emotion

enterprise less \-lis\ adj: lacking enterprise: UNAMBITIOUS enter-prise r\-zer\\ n - s: one who undertakes an enterprise; specif: ENTREPRENEUR enterprising adj: characterized by a bold daring energetic spirit or by independence or originality of thought: prompt of the state of the state of thought: prompt of the state of the st 2entertain n -s ob en-ter-tain er \le of the most generous and ~ mestcontinuisation - sarchaic: ENT of the most generous and continuisation - sarchaic: ENT of the most generous and continuisation - sarchaic - stokel, -stokel, -s rest of the stories at 1 one the —Taliaferro Boats to the fight fessionally (sent appraise) (specific story to the fight festional story entertaining adj : I ber tai

and instructive verification t-, enthymema + E-ic) en-ter-tain-nus-L.w.combine taining: as

<sup>&</sup>lt;sup>1</sup> Shope <sup>III</sup>, R. (1997). Class Notes. Adapted from Krashen, Stephen D. (1992) Fundamentals of Language Education. Torrance CA: Laredo Publishing Co.

<sup>&</sup>lt;sup>2</sup> "Δ" is the Greek letter DELTA, which is used by scientists as a symbol to signify "change."

<sup>3&</sup>quot;Enterprise." Webster's 3rd New International Dictionary (unabridged). Chicago: G. & C. Merriam Co., 1976.

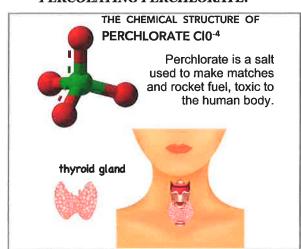






## SINGLE PASS ION EXCHANGER

# QUESTIONS, THOUGHTS, & DISCOVERIES ABOUT PERCOLATING PERCHLORATE!



#### **PHENOMENON**

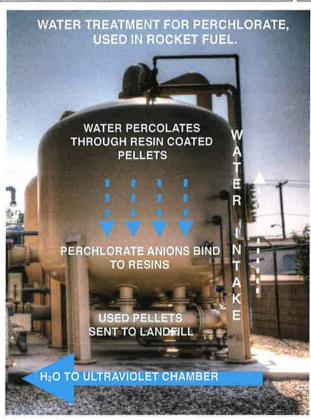
"ANION" means that the molecule is negatively charged; therefore a positively charged molecule will have the effect of attracting and binding the ANION. How can we apply this knowledge?

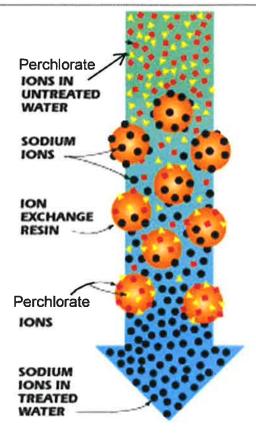
## **HISTORY**

In 1997, perchlorate, was found in the La Puente Valley wellfield that made the water unhealthy for drinking. The source of contamination was traced to aerospace companies that had stored rocket fuel improperly. Cleanup technologies were pioneered and placed into operation for the first time, in 2000. Since then, the single pass ion exchanger has been operating 24/7.

## **GUIDING QUESTION**

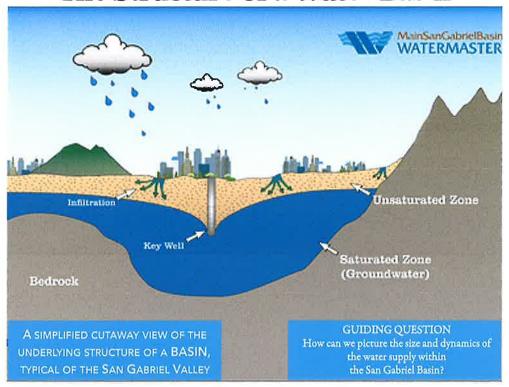
How can we remove perchlorate once it has contaminated the water supply?





THE PUENTE VALLEY OPERATING UNIT WATER CLEANUP FACILITY IN BALDWIN PARK SINGLE PASS ION EXCHANGER THAT PERCOLATES THE PERCHLORATE.

# The Structure of a Water Basin



#### PHENOMENON

The San Gabriel Valley forms a basin, like a deep bowl between the San Gabriel Mountain range and the uplifted hills that formed on either side of the Whittier Narrows.

Over time, the rivers and tributaries in the area deposited rocks, boulders, gravel, sand, and other sediments-and the WATER SUPPLY for residents, industry, and agriculture.

# Ecosystem Survey ScienZjournal

Qualia: Qualitative Data Quantica: Quantitative Data









#### Phenomenon

When we step up to a faucet, we expect the water to flow IMMEDIATELY. Just think about how many places in the community where water has to be, READY TO FLOW! A water agency has to make sure the water is flowing through all the pipes, with the right pressure, clean and ready to use.

Managing the flow of water requires measuring volumes of water, on a large scale for the overall supply, and at the end-user scale to be able fairly distribute the costs of water use within the community. At the large scale, we speak in terms of ACRE FEET, and at the end-user scale, UNITS.

# **Guiding Questions**

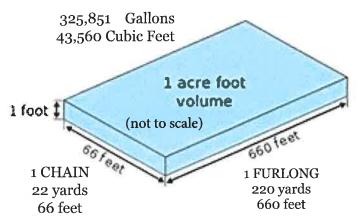
Where is the water meter where you live?

How many UNITS of water have been measured according to your water bill?

Where does water come in and go out where you live?

What are the relationships among different categories of water use: Household, Agricultural, Commercial, Industrial?

ACRE FOOT (of water): the amount of water needed to cover an acre, one foot deep in water.



An Acre is a unit of measure from medieval times: the area you can plough in a day's work!

UNIT (of water): 748 gallons of water, the number of gallons in 100 cubic feet 1 cubic foot of water= 7.48 gallons



How many UNITS are in one ACRE FOOT?

QUESTIONS, THOUGHTS, & DISCOVERIES ABOUT THE MEASUREMENT OF WATER

D	ate:		

This World Space ScienZjournal belongs to:	Date:



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How to CONSERVE WATER at HOME & in the COMMUNITY

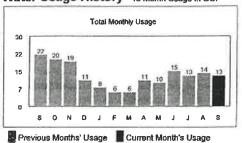
# How to Read a Water Bill

Current Reading Based on Actual

Meter	Meter Read Dates		Number	Meter Reading		Usage	Meter
Size	From	То	Of Days	From	То	CCF	Number
5/8"	08/15/2017	09/14/2017	31	1074	1087	13	72669159

\*CCF (100 Cubic Feet) = 748 Gallons of Water

# Water Usage History - 13 Month Usage in CCF\*



Message Center

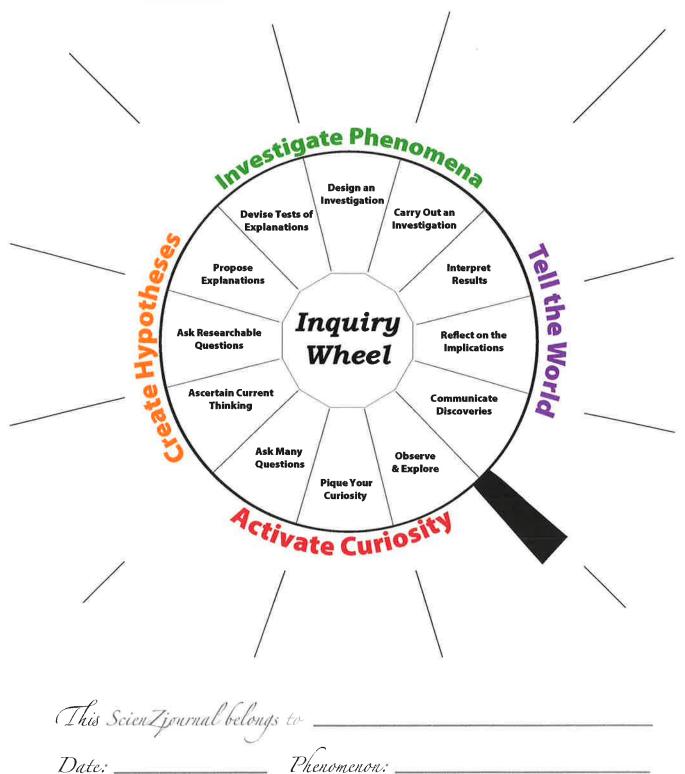
# Account Summary

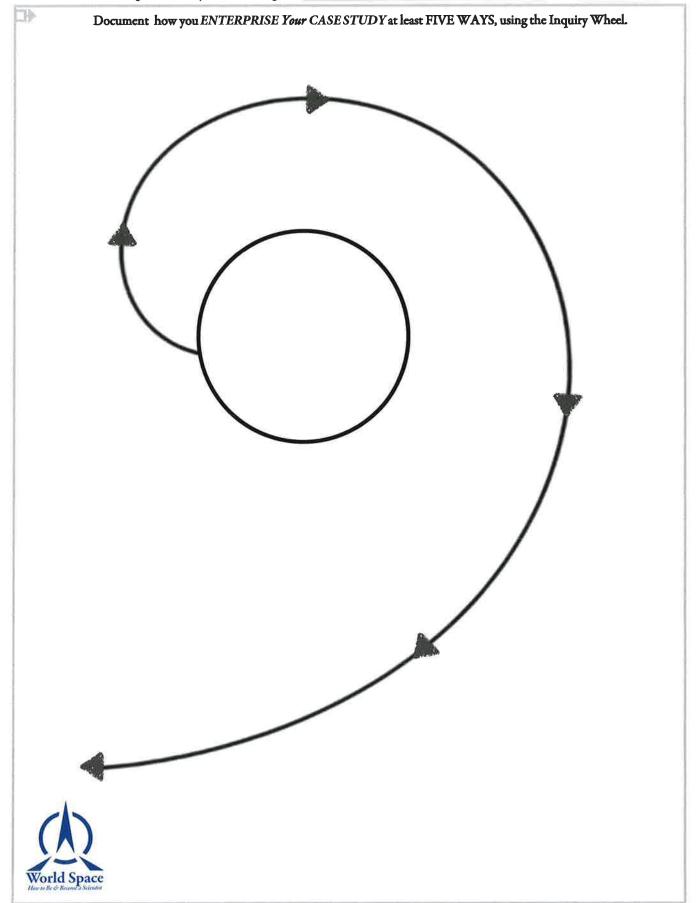
Previous Balance	\$61.38	
Payment Received	\$0.00	
Payment Received 09/06/2017 -	-\$61_38	
<b>Balance Before Current Charge</b>	\$0.00	
Service Charge	\$13.11	
Water Charge		\$34.50
	13 @ 2.6540 = 34.50	
Public Purpose Program	13 × 0.0400	\$0.52
CPUC Surcharge	48.13 x 1.44%	\$0.69
Whittier Tax	47.61 x 5.00%	\$2.38
Local Government Fee	47.61 x 12%	\$5.71
Total Current Charges Past Du	\$56.91	
Total Balance Including Cu	\$56.91	





# The Golden Talents of Scientific Inquiry





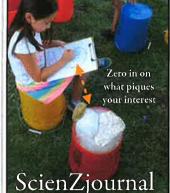
# EcoVoices for EcoRangers

# **Ecosystem Survey**



# **Observation Protocols**





## SCIENTIFIC INQUIRY

Qualia: Qualitative Data

Quantica: Quantitative Data

WHEN IN DROUGHT,



**OUTDOOR SCIENCE LEARNING** 

To study the importance of water in the

# **KEY CONCEPTS:**

Watershed

Ecosystem

Water Cycle

Water Quality

Conservation

Water Use Efficiency

Ecosystem Services

Microclimate

WATER!!!

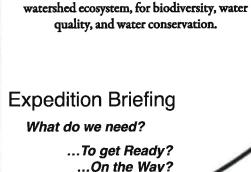
FOLLOW THE WATER....

EcoVoices!

Calling all EcoRangers!

# **LEARN & PRACTICE:**

- 1) HOW to BE & BECOME a WORLD SCIENTIST
- 2) HOW to go on an SCIENCE EXPEDITION
- 3) HOW to SURVEY & MAP a MICROECOSYSTEM
- 4) HOW to Keep a ScienZjournal
- 5) HOW to be an Enterprising EcoRanger!!



...Once we're there?



# **GUIDELINES for SCIENCE MENTORS & INQUIRY COACHES**

