

# POSTER PRESENTATION SCHEDULE

*Only authors are listed for each paper/poster.  
Mentors are shown in the ABSTRACT portion of this program.*

## MORNING POSTER PRESENTATIONS, SESSION 28 MEZZANINE

Posters on display from 8:15-11:30 a.m.  
Presenters must be by posters during judging from 10:00-11:30 a.m.

### WATERS

*(NSF-FUNDED GRANT: WATERSHED ACTIVITIES TO ENHANCE RESEARCH IN SCHOOLS)*

- 1. PATTERN-BASED ENVIRONMENTAL SCIENCE: AN INTERDISCIPLINARY APPROACH TO 8<sup>TH</sup> GRADE SCIENCE WITHIN THE YAKIMA RIVER WATERSHED**  
*Ketsdever, Amanda; Dwight, Kevin*
- 2. ELEMENT CONCENTRATIONS IN DRINKING WATER FROM A.C. DAVIS HIGH SCHOOL, YAKIMA, WA**  
*Orem, Caitlin; Kendrick, Casey*
- 3. HYDROELECTRIC LEARNING: MODELING OF POTENTIAL DAM SITES AT A.C. DAVIS HIGH SCHOOL**  
*Orem, Caitlin*
- 4. COMMUNITY-BASED CONSERVATION AND DEVELOPMENT: A GLIMPSE INTO THE ANNAPURNA CONSERVATION AREA PROJECT, NEPAL**  
*Proszek, Kristina; Wickwire, Eric; Chand, Rachana*
- 5. LOOKING AT THE WATERSHED IN A WHOLE NEW WAY: YAKIMA WATERS IN CLE ELUM/ROSLYN HIGH SCHOOL**  
*Larkins, Clayton; Gazis, Carey; Ryan, Brit; Wickwire, Eric*
- 6. CHEMICAL CHARACTERIZATION OF PRECIPITATION AND SURFACE WATERS FROM THE ANNAPURNA CONSERVATION DISTRICT, NEPAL**  
*Johnson, Jacob; Hodges, Dave; Gazis, Carey*
- 7. USE OF VISIBLE SPECTROSCOPY TO MONITOR THE REMOVAL OF BROMOTHYMOL BLUE FROM WATER USING A POLYELECTROLYTE/SURFACTANT/TIO<sub>2</sub> SYSTEM**  
*Best, Brittany; Tasker, Adam; Hodges, Dave*
- 8. A JOINT PARTNERSHIP: EHS AND CWU WORKING TOGETHER TO INVESTIGATE PHOSPHATE AND SULFATE LEVELS IN THE ELLENSBURG AREA**  
*Best, Brittany; Miller-Rubin, Harper; Hodges, Dave*
- 9. A JOINT PARTNERSHIP: EHS & CWU WORKING TOGETHER TO INVESTIGATE AIR POLLUTION AS A RESULT OF OCCULT DEPOSITION IN THE ELLENSBURG AREA**  
*Best, Brittany; Walker, Alexander; Mancinelli, Frankie; Hodges, Dave*
- 10. A JOINT PARTNERSHIP: EHS & CWU WORKING TOGETHER TO INVESTIGATE NITRATE POLLUTION IN THE ELLENSBURG AREA**  
*Best, Brittany; Thorpe, Haley; McNamee, Sarah; Hodges, Dave*
- 11. YAKIMA WATERS: STUDENTS INVESTIGATING AMPHIBIAN DECLINE**  
*Brady, Susan; Artt, John; Carolan, Lana; Quitadamo, Ian; Johnson, Jim*
- 12. IONS, NITRATES, AND BUGS OH MY!: WATER CHEMISTRY AT WHITE SWAN HIGH SCHOOL**  
*Barreca, April; Rice, Tyler; Irwin, Jason*
- 13. SCIENCE RESEARCH IN THE K-12 CLASSROOM: USING WATERSHED CONCEPTS TO INCREASE SCIENTIFIC LITERACY**  
*Lamperth, Jamie; Hennessey, Kelly; James, Paul*

## BIOLOGY

**14. ARE BULL TROUT PRESENT IN COWICHE CREEK, WA?: A SPATIAL MODEL PREDICTING SUITABLE HABITAT**

*Lamperth, Jamie*

**15. SEXUAL DIMORPHISM OF RECOMBINATION RATES AS A CONSEQUENCE OF SEXUAL CONFLICT**

*Buxel-Florenzen, Stefanie*

**16. THE EFFECTS OF TEMPERATURE ON METABOLIC RATE, VENOM SYNTHESIS, AND POTENCY IN *PEUCETIA VIRIDANS* (ARANEAE: OXYOPIDAE)**

*Galindo, Joanna; Irwin, Jason; Carnell, Lucinda; Galindo, Gracie*

**17. EVALUATION OF SURVEY AND TRAPPING METHODS FOR AMPHIBIAN SPECIES ALONG THE I-90 CORRIDOR**

*Hill, Brenna; Lester, Michelle; Brady, Susan*

**18. ISOLATION OF PFR-5 AND PFR-6 PROTEINS IN *TRYPANOSOMA CRUZI***

*O'Neill, Susan*

**19. AMPHIBIAN POPULATIONS AND ECOLOGICAL CONNECTIVITY: RESPONSES TO ROADWAYS IN A CASCADES MOUNTAIN CORRIDOR OF WASHINGTON**

*Lester, Michelle; Barreca, April; Brady, Susan; Hill, Brenna*

**20. TIME-DEPENDENT EFFECTS OF CALCINEURIN ON VISUAL SYSTEM DEVELOPMENT**

*Wessel, Erich; Kramer, Joshua*

**21. CHARACTERIZATION OF BACTERIAL VIRUSES FROM SOAP LAKE, WASHINGTON**

*De Rosa, Antonio*

**22. POTENTIAL HUMAN BRAIN RESPONSE TO CRITICAL THINKING STIMULI USING COMMUNITY-BASED INQUIRY**

*Gao, Miao; Greenwald, Ralf; DePaepe, James*

**23. *SER-7*, A SEROTONIN RECEPTOR, IS INVOLVED IN WITHDRAWAL EFFECTS FROM LONG-TERM EXPOSURE TO SEROTONIN IN THE ROUNDWORM, *C. ELEGANS***

*Sudduth, Brandon*

**24. PHARMACOLOGICAL EFFECTS OF CYCLOSPORIN AS A CALCINEURIN INHIBITOR ON CHICK NEURONAL AXON OUTGROWTH**

*Quisenberry, Jennae; Landis, Brandi*

**25. TOXIC EFFECTS OF URBAN PARTICULATE MATTER OF VARIOUS SIZE FRACTIONS ON AN IN VITRO MODEL OF *SACCHAROMYCES CEREVISIAE***

*Nieber, Annika*

**26. CULTIVATION OF BACTERIA FROM THE SOAP LAKE MONIMOLIMNION**

*Inman, Emily*

## CHEMISTRY

### 27. POLYCHROMATIC EMISSION AND LIMITATIONS TO BEER'S LAW

*Christensen, Amanda*

### 28. PREDICTION OF BIOLOGICAL EFFICACY FOR POTENTIAL *PLASMODIUM FALCIPARUM* PLASMEPSIN IV INHIBITORS

*Abdul-Wahid, Badi'*

### 29. PREDICTIVE SOFTWARE AS A RAPID SCREENING TOOL FOR POTENTIAL DRUG CANDIDATES

*Abdul-Wahid, Badi'; Barker, Grant*

### 30. REAL-TIME COMPARISON POLARIMETER FOR DATA ACQUISITION IN DETERMINATION OF 0<sup>TH</sup>, 1<sup>ST</sup>, AND 2<sup>ND</sup> ORDER RATE CONSTANTS

*Pereze, Edgar*

### 31. IN SITU ATTENUATED TOTAL INTERNAL REFLECTION FOURIER TRANSFORM INFRARED (ATR-FTIR) SPECTROSCOPY COUPLED WITH MULTIVARIATE LEAST SQUARES ANALYSIS FOR THE STUDY OF POLYELECTROLYTE/SURFACTANT SYSTEMS AT THE $\text{TiO}_2$ /WATER INTERFACE

*Hayden, Sarah*

### 32. AN EXPLORATORY STUDY OF THE PROPARGYLATION OF AROMATICS IN IONIC LIQUIDS EMPLOYING YTTERBIUM TRIFLATE AS A CATALYST

*Kellar, Casey; Brown, Kelley; Laali, Kenneth*

### 33. SYNTHESIS OF CYCLIC BORINIC ACIDS AS POTENTIAL NOVEL HIV-1 PROTEASE INHIBITORS

*Nye, Jesse; Chen, Pei-Mien; Nicolaeva, Elizabeth; Clayton, Donald; Heer, Tajinder; Blackmore, Amanda*

## GEOLOGY

### 34. TIMING AND CAUSES OF MULTIPLE CYCLES OF CHANNEL INCISION IN THE LAST 3,000 YEARS ON THE YAKIMA TRAINING CENTER, SOUTH CENTRAL WASHINGTON

*Durkee, Matthew; Ely, Lisa*

### 35. GEOCHEMICAL ANALYSIS OF SURFACE AND GROUNDWATERS AROUND CLE ELUM, WA: IMPLICATIONS FOR THE PROPOSED EXEMPT WELL MORATORIUM

*Hickey, David; Opitz, Ryan*

### 36. CONTROLS ON THE OXYGEN ISOTOPE COMPOSITION OF SOIL CARBON DIOXIDE FLUX TO THE ATMOSPHERE ACROSS A PRECIPITATION GRADIENT IN CENTRAL WASHINGTON

*Larkins, Clayton; Gazis, Carey*

### 37. A STABLE ISOTOPE STUDY OF SOIL WATER BUDGETS ALONG A CLIMATE TRANSECT IN A SNOWMELT-DOMINATED SYSTEM

*Hammond, Travis; Gazis, Carey*

### 38. KINEMATICS AND VORTICITY IN KANGMAR DOME, SOUTHERN TIBET: TESTING PATTERNS OF MID-CRUSTAL DUCTILE DEFORMATION DURING THE HIMALAYAN OROGENY

*Wagner, Tom*

### 39. UTILIZING IN SITU GEOCHEMICAL DATA COUPLED WITH TEXTURAL FEATURES OF PLAGIOCLASE CRYSTALS TO DECIPHER THE GEOMETRY OF THE POSTCALDERA MAGMATIC SYSTEM, CRATER LAKE, OREGON

*Tebbe, Michelle*

### 40. GEODETIC TRANSECT IN CENTRAL NEPAL TO TEST FOR CLIMATE-TECTONIC INTERACTION

*Parker, Emily; Pratt-Sitaula, Beth; Upreti, Bishal Nath; Miner, Andrew; Melbourne, Timothy*

## HEALTH, HUMAN PERFORMANCE, AND NUTRITION

### 41. COMPARISONS OF POST-EXERCISE CHOCOLATE MILK AND A COMMERCIAL RECOVERY BEVERAGE CONSUMPTION BETWEEN ENDURANCE CYCLING WORKOUTS ON RECOVERY AND PERFORMANCE

*Katica, Charlie; Pritchett, Kelly; Pritchett, Robert; Bishop, Philip; Green, Matt; Jager, Johnna*

### 42. FIELD TEST VALIDATION OF THE BORG 15-POINT RPE SCALE FOR TETRAPLEGIC ATHLETES

*Del Pozzi, Andrew; Pritchett, Robert; Katica, Charlie; Crosson, Chad; Pritchett, Kelly; Peters, Jamey*

### 43. PHYSIOLOGICAL COMPARISON OF MALE AND FEMALE COLLEGIATE RUNNERS

*Green, Amber; Perkins, Ryan; Brown, Justin; D'Acquisto, Leo*

### 44. SCHOOLS MEETING SMI BREAKFAST CALORIE STANDARDS TEND TO BE LARGER AND HAVE LOWER COMMUNITY POVERTY RATES THAN SCHOOLS THAT DO NOT MEET CALORIE STANDARDS

*Tibay, Joseph; Oakley, Charlotte; Elkins, Ann; Aragon, Maria*

### 45. NUTRIENT INTAKE COMPARISON OF MALE AND FEMALE COMPETITIVE COLLEGE CROSS COUNTRY RUNNERS SHOWS HIGHER NUTRIENT DENSITY OF VITAMIN B2 AND VITAMIN E IN FEMALE RUNNERS

*Aragon, Maria; Rust, Bret*

### 46. AÇAÍ PUREE PERFORMANCE AS A FAT REPLACER IN FUDGE BROWNIES

*Sconce, Michael; Rust, Bret; Walton, Michelle*

## INFORMATION TECHNOLOGY AND ADMINISTRATIVE MANAGEMENT

### 47. REDESIGNING A UNIVERSITY DEPARTMENT'S WEB SITE: MEETING THE NEED FOR A VIABLE, MAINTAINABLE, AND USER-FRIENDLY WEB SITE

*Zones, Austin; Seelye, Logan*

### 48. CROSS-CULTURAL COMPARISON OF ATTITUDES, PERCEPTIONS, BELIEFS, AND TENDENCIES OF CENTRAL WASHINGTON UNIVERSITY AND PUKYONG NATIONAL UNIVERSITY STUDENTS ON RECYCLING

*Lemus-Luna, Hernan; Rios, Brenda; Park, Hee Jung*

## PHYSICS

### 49. OPERATING CHARACTERISTICS AND RESEARCH APPLICATIONS OF THE CARBON DIOXIDE LASER

*Leiseth, Jeff*

### 50. A SPECTROSCOPIC STUDY OF THE ND RADICAL BY FAR-INFRARED LASER MAGNETIC RESONANCE

*Groves, Jen*

### 51. USING THE FORCE CONCEPT INVENTORY TO IMPROVE STUDENT UNDERSTANDING OF FRICTIONAL FORCES

*Sizemore, William*

## SAFETY AND HEALTH MANAGEMENT

### 52. SLIPS AND FALLS

*Nichols, Sean*

## THEATRE ARTS

### 53. END GAME AND TEMPEST COSTUME DESIGNS

*Bakeman, Mary*

# POSTER PRESENTATION SCHEDULE

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## AFTERNOON POSTER PRESENTATIONS, SESSION 29 MEZZANINE

Posters on display from 1:15-4:30 p.m.  
Presenters must be by posters during judging from 3:00-4:30 p.m.

### ANTHROPOLOGY

1. **AGE AND POTENTIAL SOCIAL PARTNERS IN TIBETAN MACAQUES (*MACACA THIBETANA*)**  
*Sheeran, Lori; Matheson, Megan; Li, Jinhua; Wagner, R. Steven*
2. **GENDER, POWER, AND CULTURE: LEARNING FROM TLINGIT WOMEN'S ROLES TO MOVE BEYOND EUROAMERICAN ASSUMPTIONS**  
*Fredericks, Rose*
3. **FROM THE PAST INTO THE FUTURE: FLATHEAD AND PEND D'OREILLE CULTURAL MAINTENANCE AND ADAPTATION**  
*Judy, Krystal; Smith, Talitha*
4. **VOCABULARY USE OF FOUR CROSS-FOSTERED SIGNING CHIMPANZEES**  
*O'Rahilly, Kathleen; Leake, Madeleine; Potosky, Robin; Wallin, Jason; Jensvold, Mary Lee; Fouts, Deborah; Fouts, Roger*
5. **BONE GREASE RENDERING AND FRESHNESS OF BONE**  
*Vickers, Sara; Barrett, Carrie*
6. **BREAKAGE PATTERNS AND USE-WEAR FROM THE SANDERS SITE 45-KT-315**  
*Hocking, Sara*
7. **FAUNAL ANALYSIS OF SANDERS SITE, 45-KT-315**  
*Dice, Laura; Nauer, Christian; Black, Jill*
8. **ANALYSIS OF THE FRESHWATER MUSSEL (*MARGARITIFERA FALCATA*) FROM 45-KT-315, KITTITAS COUNTY, WA**  
*VanTine, Launi*

### EDUCATION

9. **ADDRESSING STUDENT PRECONCEPTIONS THROUGH FORMATIVE ASSESSMENT**  
*Remington, Tera; Weller, Katie; Johnson, Diana*
10. **THE CWU PREPARATORY STRING PROGRAM**  
*Smith, Bret*

## **CHIMPANZEE AND HUMAN COMMUNICATION INSTITUTE**

### **11. THE ACQUISITION OF NEW SIGNS IN ADULT CROSS-FOSTERED CHIMPANZEES**

*Metzler, Deborah; Jensvold, Mary Lee; Fouts, Roger; Fouts, Deborah*

## **FAMILY AND CONSUMER SCIENCES**

### **12. IDENTITY STYLE, ATTITUDES ABOUT SEX, AND RELATIONSHIP STATUS AS PREDICTORS OF ADOLESCENT RISKY SEXUAL BEHAVIOR**

*Paulk, Amber; Zayac, Ryan*

### **13. DUAL CREDIT COURSE FACILITATES EDUCATION PARTNERSHIPS**

*Bowers, Jan*

## **FINANCE**

### **14. EFFICIENCY ANALYSIS OF PUBLIC EDUCATION IN WASHINGTON STATE**

*Johnson, Krista*

## **FOREIGN LANGUAGES**

### **15. "ENGLISH" IN JAPAN: THE USE AND MISUSE OF ENGLISH IN JAPANESE MEDIA**

*Kjeldgaard, Marie*

### **16. HIS 'N' HER LOVE STORIES: THE EFFECTS OF GENDER ON THE RETELLING OF COURTSHIP STORIES**

*McGraw, Kelly*

## **GEOGRAPHY**

### **17. ARROYOS IN CENTRAL WASHINGTON**

*Joslin, Michael*

### **18. WEATHER IN EVERYDAY LIFE**

*Kosters, Kolten*

### **19. STEREOPHOTOGRAPHY: A VIRTUAL 3D METHOD FOR RECORDING ARCHAEOLOGICAL SITES**

*Schroeder, William*

### **20. ARCHAEOLOGICAL SITE MONITORING IN HELL'S CANYON, ID, MARCH 2009**

*Shea, Holly; Fredrickson, Carl; Oosahwee-Voss, Eric*

### **21. CULTURAL RESOURCE SURVEY, HIGH BAR, HELL'S CANYON, ID**

*Stanley, Stacy; Volkenand, Todd; Nauer, Christian*

### **22. LANDFORM MORPHOGENESIS: HIGH BAR, HELL'S CANYON, ID**

*Brown, Genevieve; Frank, Harold; Volkenand, Todd; Nauer, Christian*

### **23. 2009 HELL'S CANYON RESEARCH OVERVIEW**

*Shapley, Helen*

## **MATHEMATICS**

### **24. A STUDY OF HIGH RISK BEHAVIORS RELATED TO GENERAL AND MENTAL HEALTH**

*Conaway, Linda; Harris, Heather*

### **25. CHANGES IN THE HEIGHT AND WEIGHT OF PROFESSIONAL ATHLETES OVER THE DECADES**

*Gilbertsen, Kim; Te Velde, Laken*

## **POLITICAL SCIENCE**

### **26. LATINO POLITICAL PARTICIPATION AND REPRESENTATION IN THE STATE OF WASHINGTON**

*Wilson, Jana; Alvarado, Pamela*

### **27. IMPORTANT ELEMENTS OF WESTERN DEMOCRATIC GOVERNMENTAL SYSTEMS**

*Hamblet, Michael; Dorn, Brandy*

## **PSYCHOLOGY**

### **28. THE RESEARCH EXPERIENCE: REQUIREMENTS AND OPPORTUNITIES IN UNDERGRADUATE PSYCHOLOGY CURRICULUMS**

*Haghighi, Meisam; Biddle, Ryan; Gabriel, Kara*

### **29. IMPACT OF THE ALCOHOLWISE PROGRAM ON DRINKING IN RESIDENCE HALLS**

*Biddle, Ryan; Gabriel, Kara*

### **30. SOCIAL STRUCTURE IN THREE CAPTIVE CHIMPANZEES**

*Leeds, C. Austin; McCarthy, Maureen; Bismanovsky, Daniella; Denton, Tanya; Jensvold, Mary Lee; Fouts, Deborah*

### **31. THE EFFECTS OF TIME DELAY EXERCISE ON STRESS LEVELS FOLLOWING A STRESSFUL EVENT**

*Washington, Anthony*

### **32. THE CHANGING ROLE OF PSYCHOLOGICAL ACCREDITATION**

*Brammer, Robert; West, Rondale*

### **33. A CULTURAL AUDIT AT CENTRAL WASHINGTON UNIVERSITY**

*Cole, Melissa; Sleigh-Layman, Staci*

## RESOURCE MANAGEMENT

**34. UNDERSTANDING CHANGING LAND USE ON IRRIGATED ACREAGE IN THE KITTITAS VALLEY OF CENTRAL WASHINGTON STATE**

*Hackett, Jennifer*

**35. SOIL CRUST LICHEN HUNTING AND IDENTIFICATION ON THE WILD HORSE WIND FARM AND WHISKEY DICK WILDLIFE AREA OF KITTITAS COUNTY, WASHINGTON**

*Jensen, Dawn-Marie*

**36. LANDSCAPE APPROACH IN CULTURAL RESOURCE MANAGEMENT: GEOMORPHIC CONTEXT OF ARTIFACT DISTRIBUTION IN THE LOWER WHYCHUS CREEK WATERSHED CROOKED RIVER NATIONAL GRASSLAND JEFFERSON COUNTY OREGON**

*Volkenand, Todd*

**37. ENVIRONMENTAL CONTROLS OF INVASIVE AQUATIC WEEDS IN WASHINGTON STATE LAKES**

*Gray, Jeff; Gabriel, Anthony*

**38. SHORELINE INVENTORY PROCESS FOR PARK PLANNING AT DECEPTION PASS STATE PARK, WASHINGTON**

*Merrill, Adam; O'Brien, Meghan; Gabriel, Anthony*

**39. THE ARCHAEOLOGY OF THE DAVIS LAKE AREA, DESCHUTES AND KLAMATH COUNTIES, OREGON**

*Nauer, Christian*

**40. A WATER MANAGEMENT PLAN FOR BIRIM VALLEY, GHANA: INCORPORATING TRADITIONAL ECOLOGICAL KNOWLEDGE (TEK)**

*Adjepong, Godfried*

## SOCIOLOGY

**41. THE SOCIALIZATION OF GUILT ANALYSIS**

*Gomez, Cornelio*

## FASHION DESIGN EXHIBITION

**42. FASHION LINE CALLED MENAGE, BY DAVID MICHAEL**

*Reimer, David*

**43. FLAUTESE**

*Hammer, Emily*

**44. ELEGANCE TO ITS LIMIT**

*Martini, Jenni*

**45. SPRING FEVER**

*Birklid, Samantha*

**46. STRYCHNINE & KEROSENE LIPS**

*Redmann, Loui*

**47. KJ DESIGNS**

*Andersen, Kristen*

**48. DOWN TOWN CHIC**

*Trosper, Ashley*

**49. PANTONE PANDEMONIUM**

*Triber, Melissa*