Project WET Workshop

Teaching From a Watershed Perspective

September 10, 2016

Project WET Water Education for Teachers
CALIFORNIA
Water Education Foundation

10:00 **Registration** *Workshop registration sheets/agendas/name tags/pens/'Sum of the Parts' materials*

10:10 **Welcome - Lodi Watershed Education Program**

10:25 **Ice-breaker Activity: 'Sum of the Parts' (p: 283)** ***Introduction to Stormwater***
'Sum of the Parts' free land plots; directions; marker pens

- Hand-out 'Sum of the Parts' free land plots and directions with Registration
- Participants get to do as they wish with properties.
- Participants bring map and personal object.
- Participants line up facing each other and connect 'streets' to create neighborhood map.
- Introduce self, grade level, looking for.
- Participants pass objects in direction gravity will take water flow down 'neighborhood street'
- Analyze debris that went down storm drains.
- What can be identified as from a specific property? (Point Source Pollutant)
- What cannot (Non-Point Source Pollutant)

11:00 **Project WET Overview**

11:20 **WET Activity Strand:** ***Science in the Schoolyard***

- **The Thunderstorm (p: 209):** ***Sensory Awareness & Precipitation Mapping***
  -> Thunderstorm Kit; Lodi Hypothetical Precipitation maps; CoCoRAHS information; ECE info.
  - Seating arrangement - Move group outside. Give 'rain' cup to central front.
  - Brainstorm weather sensory awareness.
  - Building thunderstorm sensory awareness.
  - RAIN!
  - Mapping rainfall data using isohyetal lines.
  - What changes could have been made to the monitoring network to get better results? How would maps change if more collection points? Have students note home on map of town and measure rainfall after next storm to make a community precipitation map.
  - Who uses this information? Connections to stormwater?

12:00 **Lunch**

12:30 **A Dive into the Project WET Guide!**

1:00 **WET Activity Strand: *Watershed Management***

- **Blue River (p: 135): *Language, Math & Science of Watersheds***
  Blue River kit/USGS annual reports & Hydrographs/Graph/pens/USGS fact sheets
  - Sacramento River maps: mouth/main stem/tributaries/headwaters?
  - Watershed: Area drained by river system to a common outlet – open vs. closed sheds
  - Edges of room/hill = watershed ridges
  - Primary force moving water in watershed? (Gravity)
  - Set-up river system: mouth, headwaters, tributaries, main stem
  - GO!
  - Graph data: Effects of seasonal flow on water quantity/ wildlife
  - Who uses this data? How do gauges work? Extensions!
  - 5th Grade up: Effects of Oroville and Shasta Dams?

- ***'Color Me a Watershed' (p: 239): Land Management & Water Run-off***
  Color Me Kit/ Grade level instructions /USGS reading & questions
  - Land management changes: Sacramento Urbanization graphic
  - Why study maps or overhead photos of an area? What information can they tell us?
  - What information could maps provide to help with environmental issues?
  - Hand-out copies. (Views of a watershed through time/edges of page = watershed)
  - Grade level break-outs. GO!
  - Use in school? Town? Region?
  - Development issues: EEI river cutter activity
  - USGS Fact Sheets

2:15 **Break**

2:30 **WET Activity Strand: *Stormwater & Project-Based Learning Opportunities***

- ***Storm Water (p: 395) Introduction to Best Management Practices***
  Storm Water kit; USGS reading
  - Permeable vs. impermeable?
  - Flood protected community in a pan – Predictions?
  - Directions: Flood simulation #1
  - Go! Measure results.
  - Defining & Learning @ 'Best Management Practices'
  - Directions for implementing
  - Go! Measure results.
  - Applicability to school yards? (Rainy-Day Hike & Color Me)
  - DROPS Grant Overview

- **'Macroinvertebrate Mayhem' (PWET, p: 343)**
  MacroMayhem kit
  - Hand-out cards and macro. ID sheets
  - Role of macroinvertebrates in aquatic ecosystem – Place in food chain
  - Adaptations?
  - Explain game and stressor(s)
  - GO!
  - Results? Use of macros. as indicators - Hand out Indexes

3:30 **Other Opportunities & Evaluations**

4:00 **Workshop Conclusion**