

Instructionally Related Activities Report Form

SPONSOR: Steven Norris

PROGRAM/DEPARTMENT: Biology

ACTIVITY TITLE: Visit to Aquarium of the Pacific

DATE (S) OF ACTIVITY: 28 April 2017

Please submit via email to the IRA Coordinator along with any supporting documentation at david.daniels@csuci.edu within 30 days after the activity. Thank you for your commitment to engaging our students!

A. ADDRESS THE FOLLOWING QUESTIONS:

- (1) PROVIDE A DESCRIPTION OF THE ACTIVITY;
- (2) HOW DID THE ACTIVITY RELATE TO A COURSE(S) AND/OR LEARNING OBJECTIVES?
- (3) WHAT DO YOU SEE AS THE STRENGTHS OF THE ACTIVITY?
- (4) WHAT WOULD YOU SAY ARE/WERE THE ACTIVITY'S WEAKNESSES?
- (5) HOW WOULD YOU IMPROVE THIS ACTIVITY FOR NEXT TIME?
- (6) WHAT DID YOU LEARN FROM THE PROCESS?
- (7) WHAT ARE STUDENT RESPONSES TO THE ACTIVITY? ATTACH STUDENT EVALUATIONS OR ASSESSMENTS (IN ACCORDANCE WITH FERPA RESTRICTIONS YOU MUST REMOVE ALL PERSONALLY IDENTIFIABLE STUDENT INFORMATION)
- 8) GIVE A SUMMARY OF EXPENSES FOR THE ACTIVITY.

B. ATTENDEE LIST- SUPPORTING DOCUMENT:

In addition to the report form, *in a separate document*, attach to your email a list of attendees complete with each student major and grade level. This for IRA Committee reference only and will not be published on the IRA website. Include your name and the title of your IRA activity on the document.

C. IMAGES FROM ACTIVITY:

Finally, attach to your email up to 6 images demonstrating student participation (under 2 MB total) with captions/titles. Please attach these photos in .JPEG format directly to email. Thank you!

(1) PROVIDE A DESCRIPTION OF THE ACTIVITY

We took a half-day visit to the Aquarium of the Pacific on Long Beach, admission and transportation provided by IRA funding.

(2) HOW DID THE ACTIVITY RELATE TO A COURSE(S) AND/OR LEARNING OBJECTIVES?

The course is Ichthyology (Biol 450), Biology of Fishes. We don't have many opportunities in lecture or lab to interact with living fishes. This trip allows us that. The students can observe live, breathing fishes. They can observe the workings of a natural history institution.

(3) WHAT DO YOU SEE AS THE STRENGTHS OF THE ACTIVITY?

1. As stated above –we observe and experience fishes as living entities, not descriptions or pictures or dead specimens.
2. The students leave the confines of campus. Off campus interactions with each other and with their instructor are different, often more collegial and informal.

(4) WHAT WOULD YOU SAY ARE/WERE THE ACTIVITY'S WEAKNESSES?

The crowded aquarium means that the class quickly disperses into small groups. As instructor I have rush around trying to keep tabs on them and guide them. The small group interactions are also a strength.

Logistically, it a chore to get to the aquarium and some students can't make the trip. There will always be a certain number of students who won't/can't make a field trip. They don't get the benefit, and finding alternative activities can be difficult and time consuming.

(5) HOW WOULD YOU IMPROVE THIS ACTIVITY FOR NEXT TIME?

Perhaps try to visit on a less busy day. Or arrange set times at which we would re-gather at a specific spot to review what we're doing.

I would like to find a way to 'force' field trip attendance, but that's not something that is in the culture of students here.

(6) WHAT DID YOU LEARN FROM THE PROCESS?

Flexibility is important in a group activity in and 'uncontrolled' venue.

Keep and maintain better and more clearly labeled files and records of the trip.

Remind the bus driver to return to Carmarillo on the PCH, that way we can do a little whale/dolphin watching on the drive.



California State
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**INSTRUCTIONALLY
RELATED
ACTIVITIES**

C H A N N E L
I S L A N D S

DO YOU HAVE STUDENT RESPONSES TO THE ACTIVITY? ATTACH STUDENT EVALUATIONS OR ASSESSMENTS (IN ACCORDANCE WITH FERPA RESTRICTIONS YOU MUST REMOVE ALL PERSONALLY IDENTIFIABLE STUDENT INFORMATION)

I remember gathering these at the time, but presently can't locate them.

(8) GIVE A SUMMARY OF EXPENSES FOR THE ACTIVITY.

Please enter response

**B. ON SEPARATE DOCUMENT, PLEASE ATTACH ATTENDEE LIST
(PERSONALLY IDENTIFIABLE INFO REMOVED)**

I no longer have this information.

**C. PLEASE INCLUDE UP TO 6 IMAGES AS ATTACHMENTS TO YOUR
SUBMISSION**

I didn't take any pictures and can't locate those that students sent me following the trip.

Aquarium of the Pacific

This aquarium displays marine fishes almost exclusively. Most are bony fishes and most of those will be percomorph, if not acanthopterygian fishes. Basically, there is lots of diversity, but mostly within the more derived major groups.

Search for the following creatures as you wander the aquarium (and anything else that interests you).

There are usually displays of jellyfish or comb-jellies. These are not fishes, but do stop and watch them for a few minutes. They are quite mesmerizing.

Watch a shark swim. Notice the asymmetrical heterocercal tail. Notice the large pectoral fins that give it lift as it moves through the water.

Find the shark egg display. Is reproductive strategy r-selected or K-selected?

Find a wrasse (family Labridae). Watch their specialized mode of swimming. They don't create thrust with their tail, but rather with their pectoral fins, so they move without flexing their body.

In the large outdoor shark pool, look at the rays (Chondrichthyes). Many species have enlarged spiracles that they use for breathing, because their mouth is often pressed against the bottom.

What's the most primitive fish you can find?

Can you find an armored fish?

In the coral reef habitats, look for some species that appear (based on their mouth

anatomy) to have rather specialized feeding niches.

If there are tuna or mackerel or jacks (Scombridae or Carangidae), watch them. These are power swimmers. They have highly streamlined bodies, and thrust generated mostly by rapidly flapping the caudal fin (not the entire tail).

See if you can find an ostariophysian fish. This is a huge group, but there may be none on display. Why not?

Find a fish belonging to the Gasterosteiformes.

Find an elopomorph fish.

Can you find a freshwater fish?

If there are sardines (or herring, shad, anchovies) on display stop and watch them. How do they feed?

See if you can find a flounder (halibut, flatfish). Note the highly modified body adapted for bottom living – similar niche to a ray (Chondrichthyes).

Find the tank with simulated waves crashing periodically. Marvel at the fishes that live in this highly challenging habitat with its strong and complex physical forces.