Manta Naturalist Course

Instructional Design Project

Manta Naturalist Designer

Wendy Laros

- Masters candidate
  - Learning Design and Technology
  - University of Hawaii, Manoa
- Jacks' Diving Locker – Kona, Hawaii
  - Director of Education
  - PADI Scuba Instructor
- Manta Pacific Research Foundation
  - Co-founder of the organization
  - Education Committee Chair

Manta Naturalist Instructional Design

What are Manta Rays?

A Question for YOU . . .

Do manta rays have tail stingers like stingrays?

Please answer using the polling feature in Blackboard Collaborate:

a. **YES**

b. **NO**

Answer

NO. Manta rays do NOT have tail stingers like stingrays.

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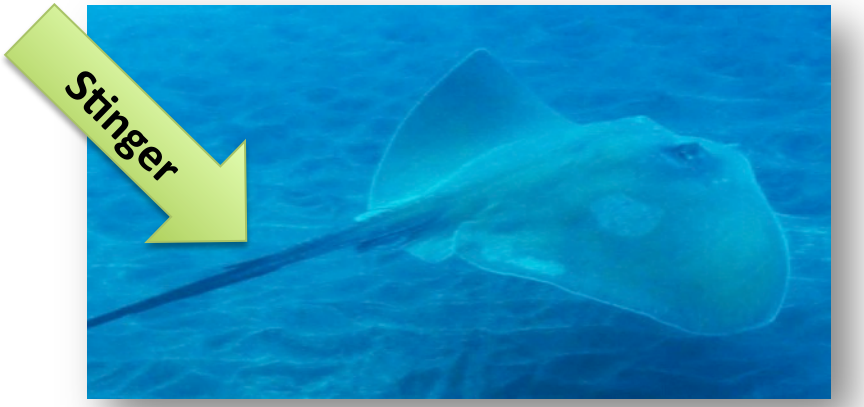
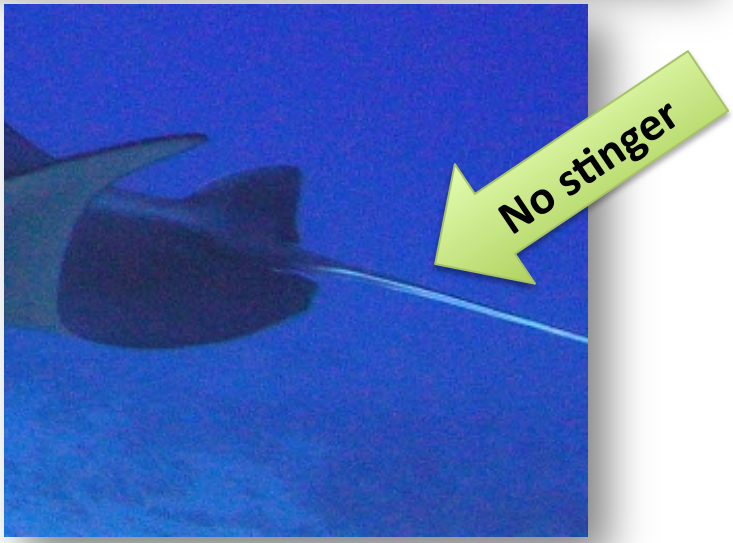
Stingray versus Manta Ray

- For defense, stingrays have a tail stinger or barb.

- Manta rays do **NOT** have tail stingers.

Hawaiian stingray





Manta ray

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Manta tourism generates $140 million worldwide.

The Global Economic Impact of Manta Ray Watching. O'Malley, Lee-Brooks, Mead (2013).

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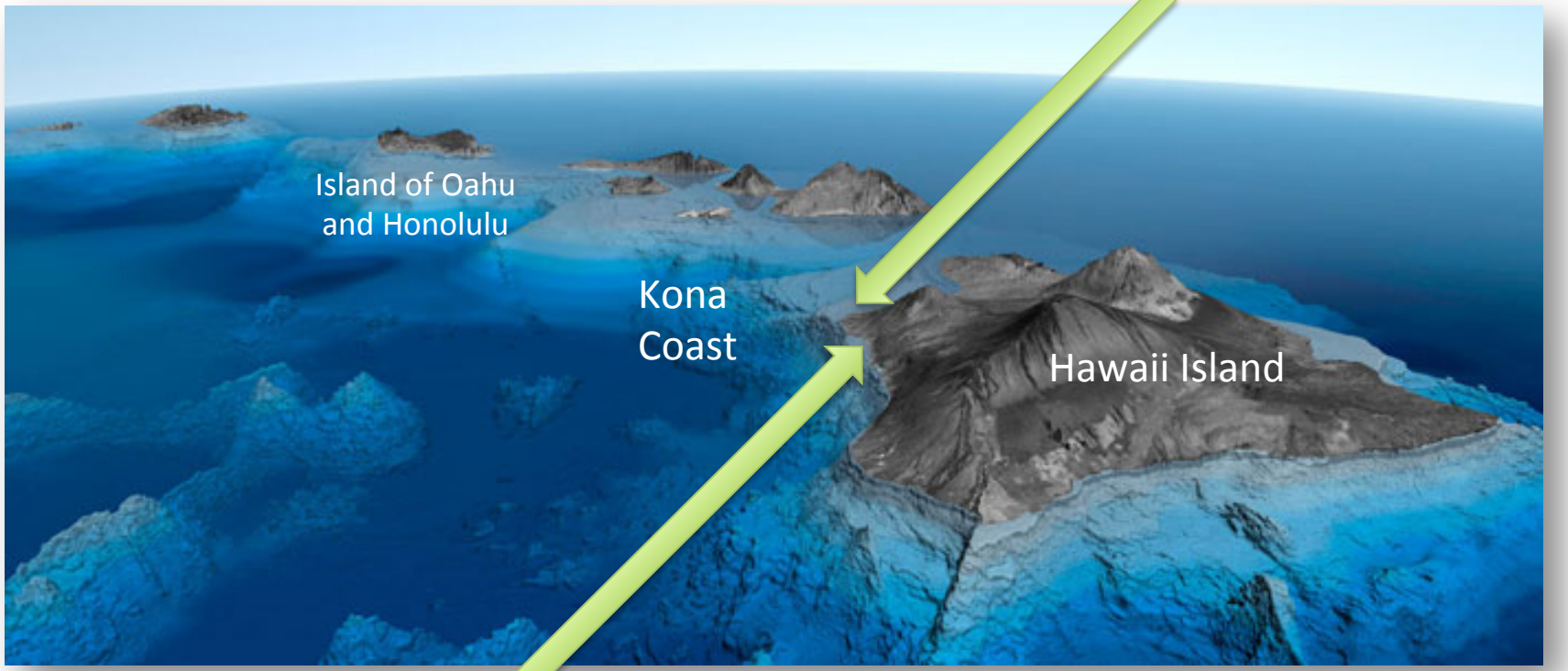
The Kona Coast – Manta Sites

Keahole Point – Makako Bay



Keauhou Bay – Sheraton Kona

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Original Manta Site - Keauhou

Keauhou Bay – Sheraton Kona

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Second Manta Site - Keahole

Boats

People and Mantas

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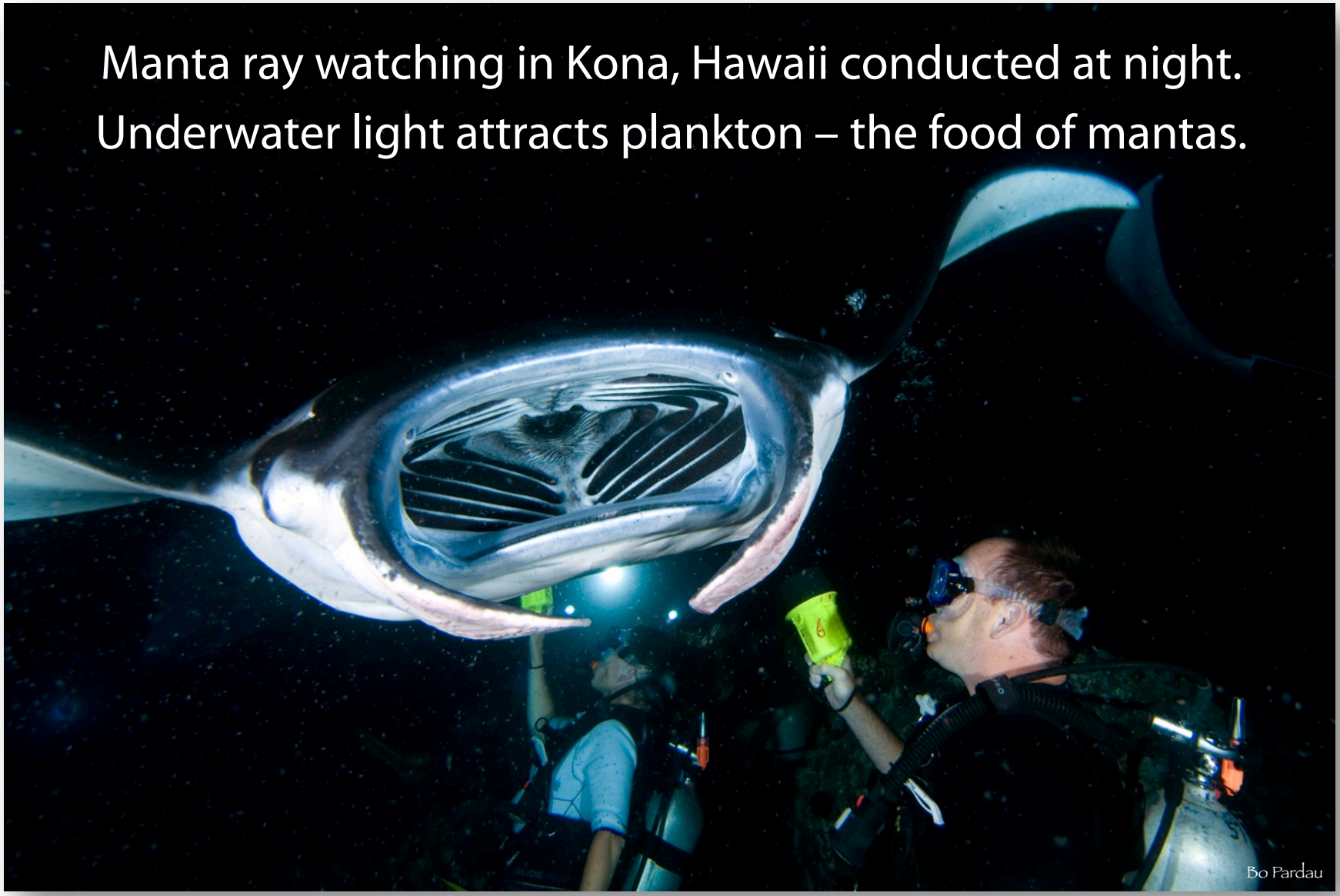
Manta ray watching in Kona, Hawaii conducted at night.
Underwater light attracts plankton – the food of mantas.



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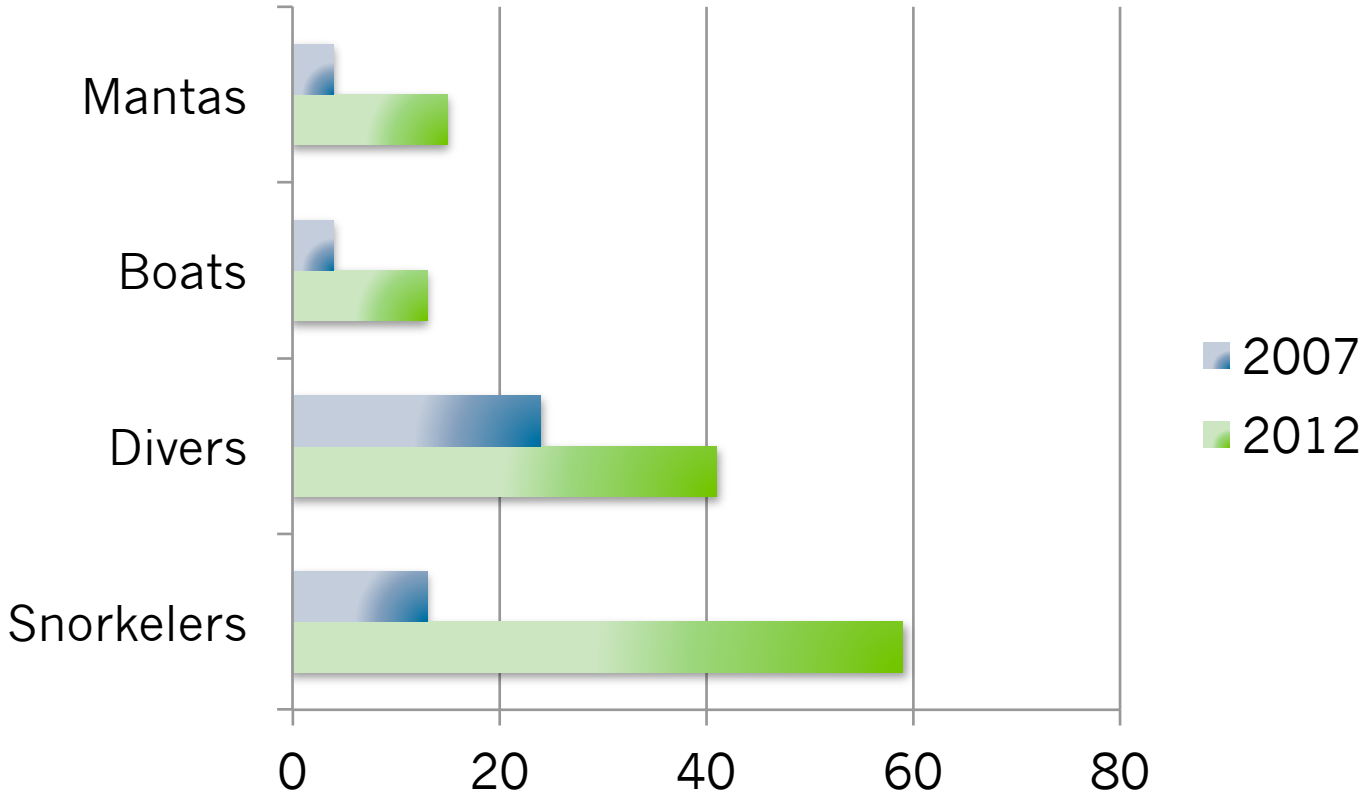
Increases Across the Board



Data based on Manta Pacific Research Foundation Nightly Manta Reports in the summer months June, July, August of 2007 and 2012.

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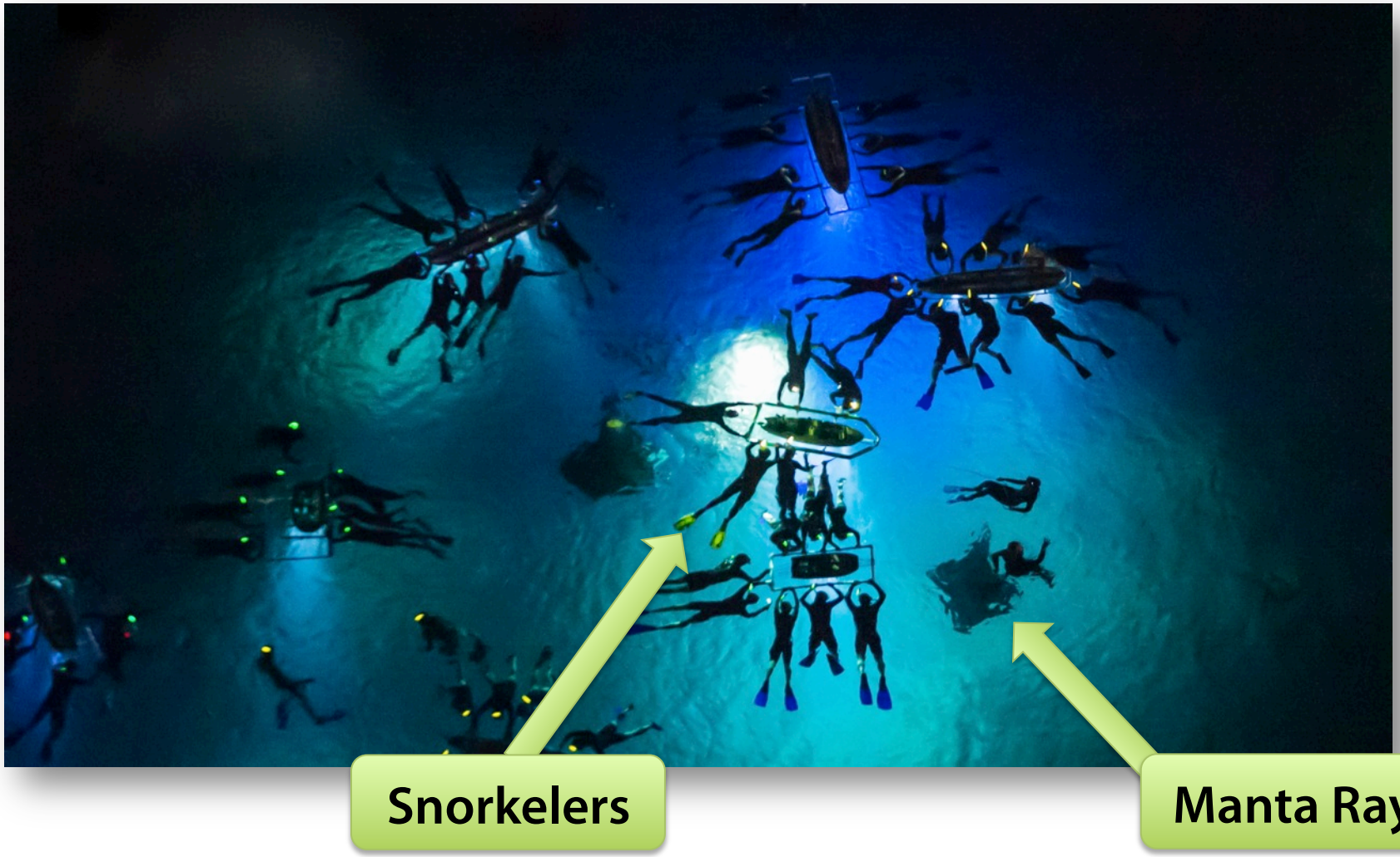
Snorkelers at Manta Site



Manta Naturalist Instructional Design Project

Manta Tour Operator Standards

- Best practices for industry
- Drafted by operators
- Safety of mantas, environment, and people
- Educate those involved

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Manta Tour Operator Standards

- Best practices for industry
- Drafted by operators
- Safety of mantas, environment, and people
- **Educate those involved**

Manta Naturalist Course

for Manta Tour Guides and Operators

Manta Naturalist Course

Partnerships

Hawaii Community College (HCC)

Office of Continuing Education and Training (OCET)

- Course administration
- Learning Management System (Laulima)

State of Hawaii - Workforce Development

- Employer Training Funds (ETF)

Manta Pacific Research Foundation

- Subject Matter Expert (SME)
- Student materials

Jack's Diving Locker

- Planning process
- Venue for face-to-face sessions

Manta Naturalist Course

Target Audience

- 30+ manta tour operators
- 250 guides in the industry
- Ages 18 –65
- Professional development

Manta Naturalist Course

Goals of Course

- Expand the student's knowledge of manta rays.

Manta Naturalist Course

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- Expand the student's knowledge of manta rays.
- Create awareness of manta ray research and conservation.

Manta Naturalist Course

Goals of Course

- Expand the student's knowledge of manta rays.
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- Familiarize students with the Manta Tour Operator Standards.

Manta Naturalist Course

Goals of Course

- Expand the student's knowledge of manta rays.
- Create awareness of manta ray research and conservation.
- Familiarize students with the Manta Tour Operator Standards.
- Prepare and deliver a Manta Naturalist Presentation with accurate manta information to guests on manta tours.

Manta Naturalist Course

Course Overview

- **MODULE ONE: All About Manta Rays**
  - General description and scientific classification
  - Anatomy
  - Life Cycle and Behaviors

Manta Naturalist Course

Course Overview

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- **MODULE TWO: Research and Conservation**
  - Identification, tracking, measurement and more
  - Manta protection in the State of Hawaii
  - Global manta update – trade protection

Manta Naturalist Course

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- **MODULE TWO: Research and Conservation**
  - Identification, tracking, measurement and more
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  - Global manta update – trade protection
- **MODULE THREE: Manta Ray Tourism**
  - Manta tourism locally and globally
  - Manta Tour Operator Standards
  - Manta Naturalist Presentation

Purpose of this Project

The purpose of this instructional design project is to develop and evaluate the first module in a naturalist course for manta tour guides that is offered through the community college in Kona, Hawaii.

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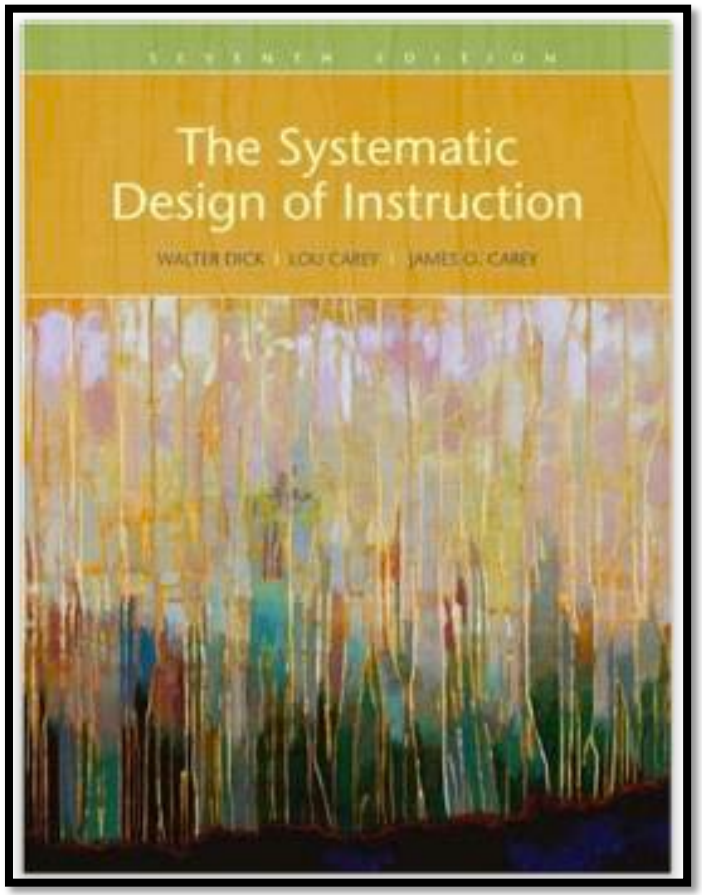
Manta Naturalist Instructional Design Project

Course Framework

- Dick, Carey, & Carey (2009)
- Instructional strategy:
  1) Pre-instructional activities
  2) Content presentation
  3) Learner participation
  4) Assessment
  5) Follow-though activities



Keller's ARCS

- **ATTENTION**
- **RELEVANCY**
- **CONFIDENCE**
- **SATISFACTION**

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ARCS - Gain Attention

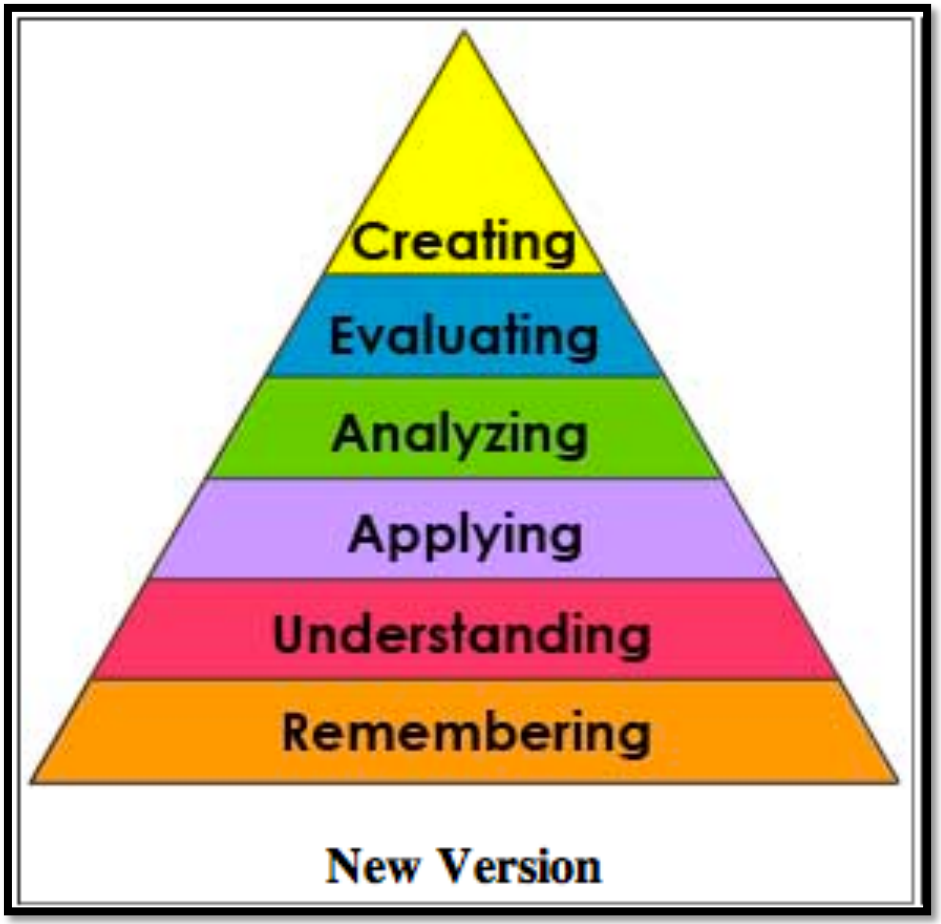
What is your involvement with manta tours?

Describe a special manta moment that you've experienced.

Do you have a favorite manta ray?

Objectives – Bloom's Taxonomy

- **Module One**
- **Remembering**
- **Action Verbs:**
  - Define
  - Describe
  - Identify
  - Name
  - State
  - Recall



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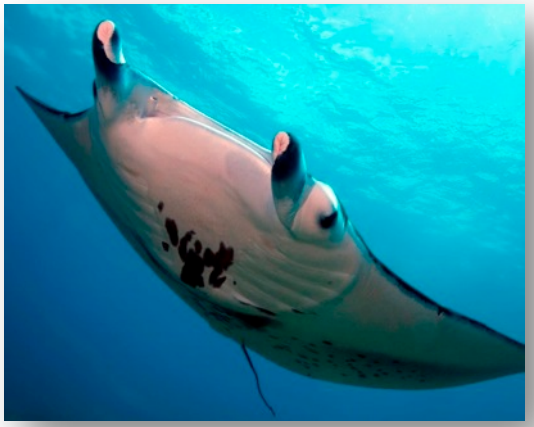
Objectives and Alignment

Objective: Describe the purpose of cephalic fins.

Test Question: What is the purpose of the cephalic fins?

a. To stab at intended prey
b. Funnel food and water into the manta's mouth
c. Courtship display
d. To dig on the ocean floor for food



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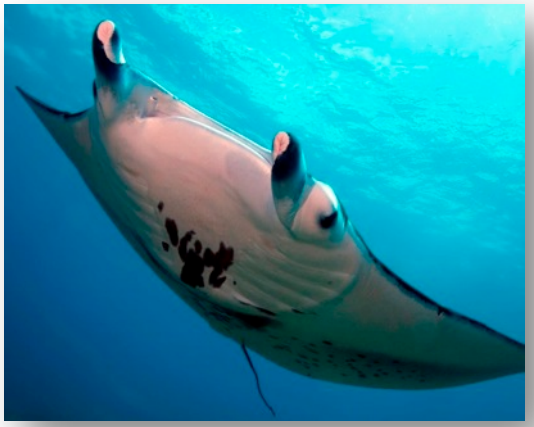

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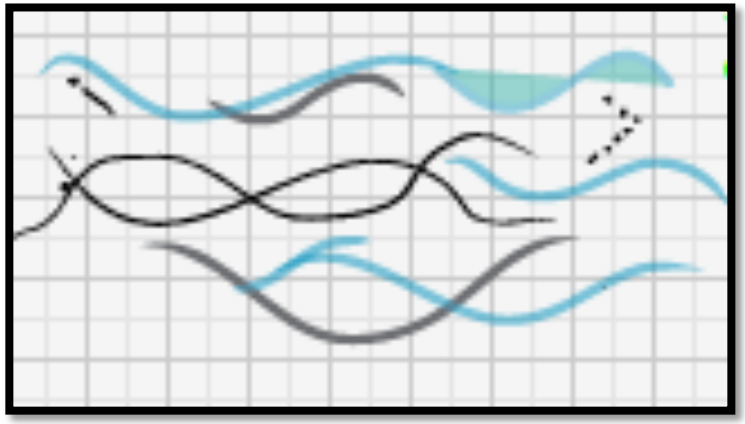
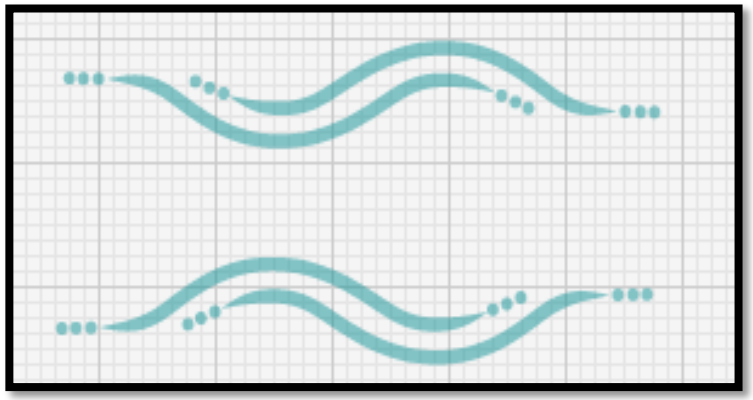
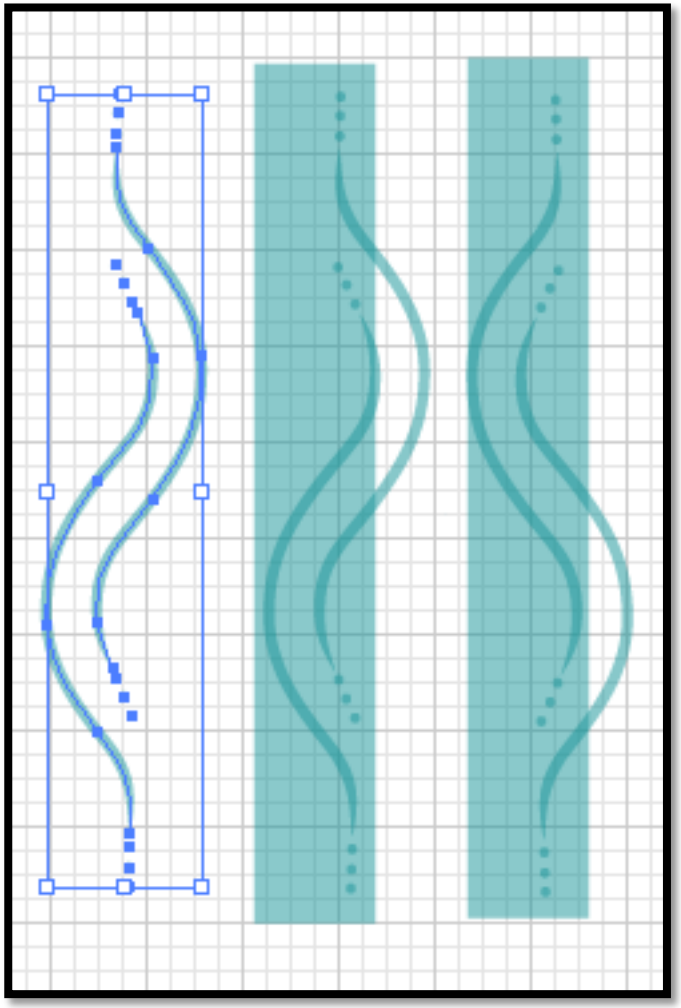
Visual Design – Original Artwork







Tool: Adobe Illustrator

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Visual Design – Course Materials

White Space Is Not Your Enemy
Hagen & Golombisky, 2013

Focal point, colors, artwork

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Course Layout - Blended

- **Face-to-Face**
  - 1st class
    - Instructor presentations
  - 2nd class
    - Student presentations
- **Online**
  - Web site
  - Learning Management System

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Manta Naturalist Course

Module One: All About Manta Rays

Lesson 1: General Description & Scientific Classification

Instructor Presentation

Microsoft Power Point

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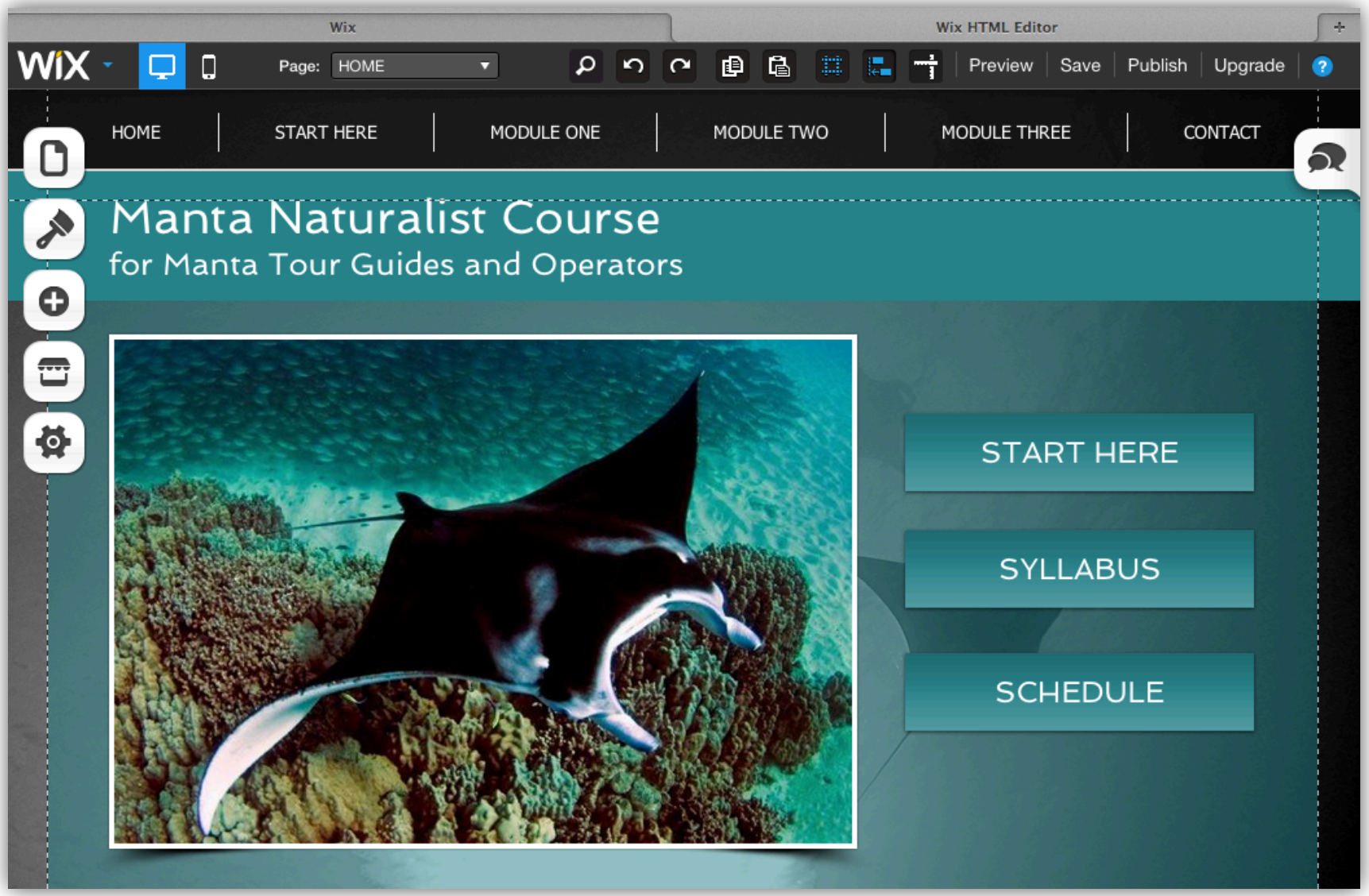

Web site builder – Wix

www.mantanaturalist.com

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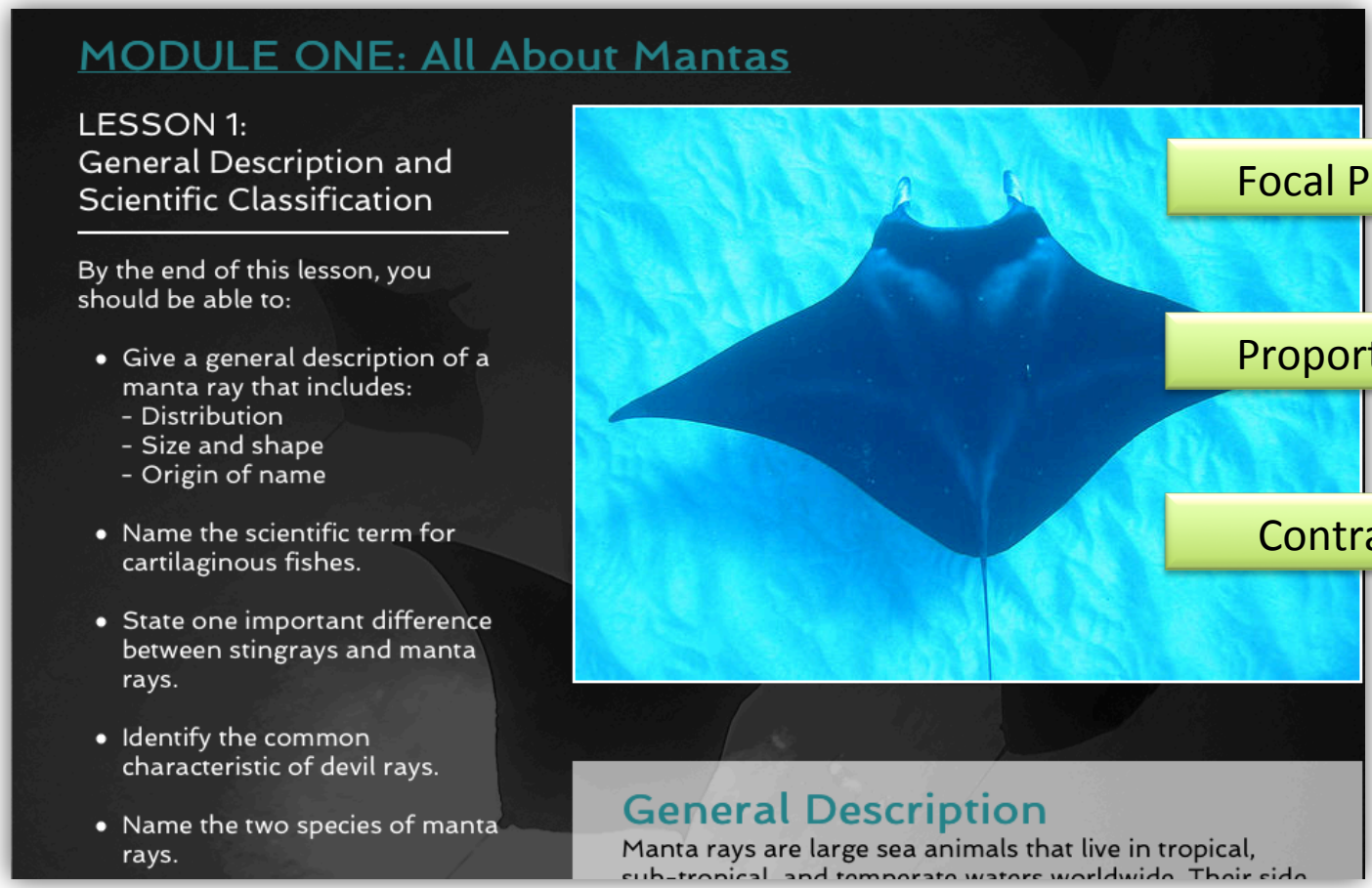
Visual Design Elements with Web Site



[_____][_____]

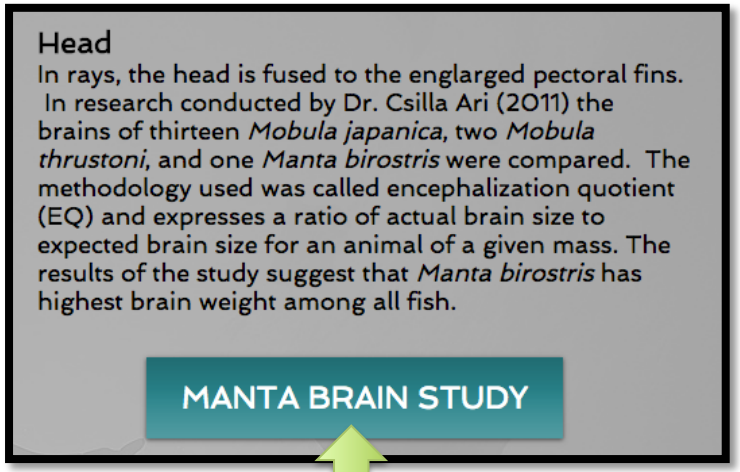
One-third

Two-thirds

www.mantanaturalist.com

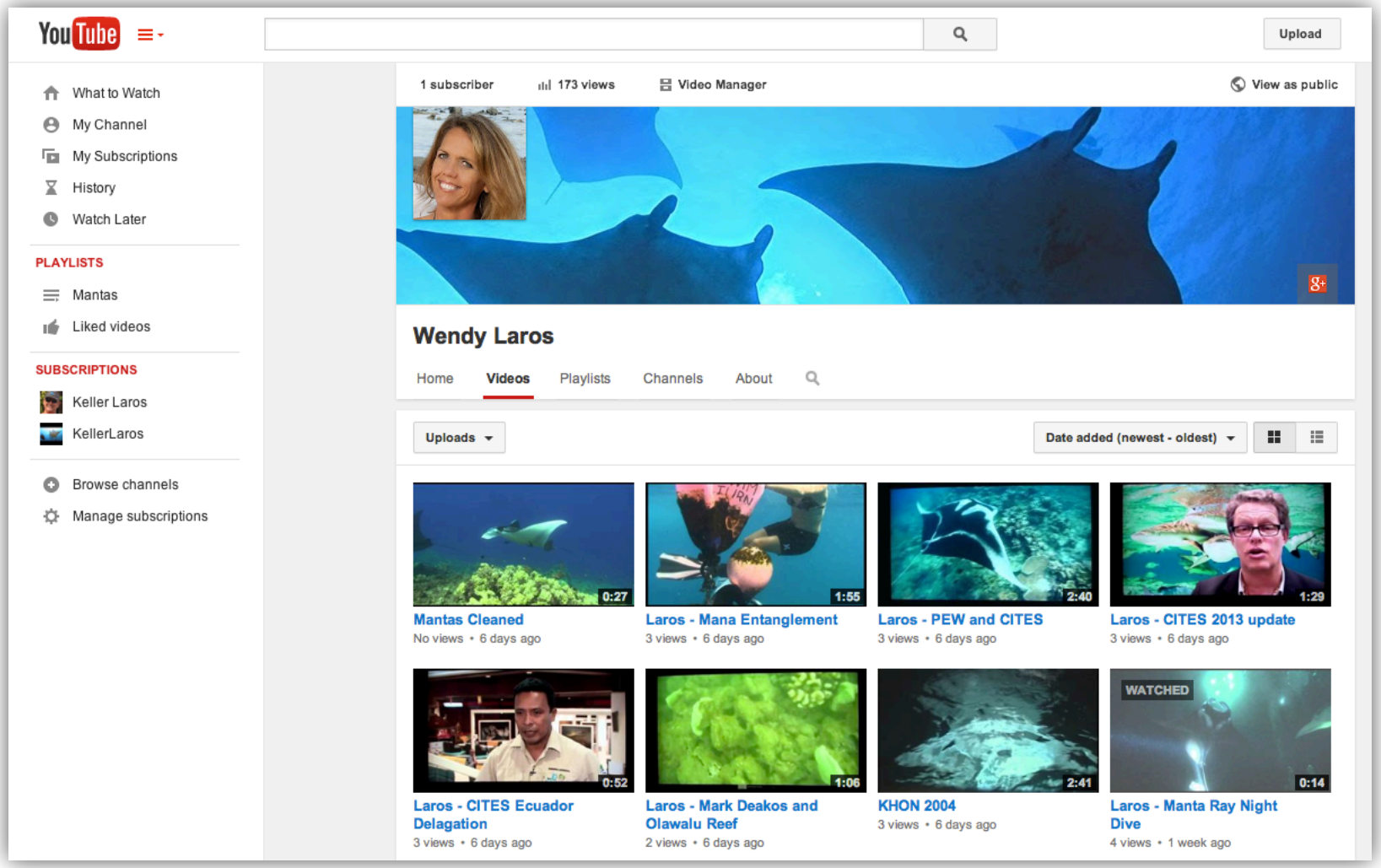
Web Site – Links to Resources

www.mantanaturalist.com



Link to the Brain Study by Dr. Csilla Ari

www.mantapacific.org



Media Library - YouTube

www.youtube.com

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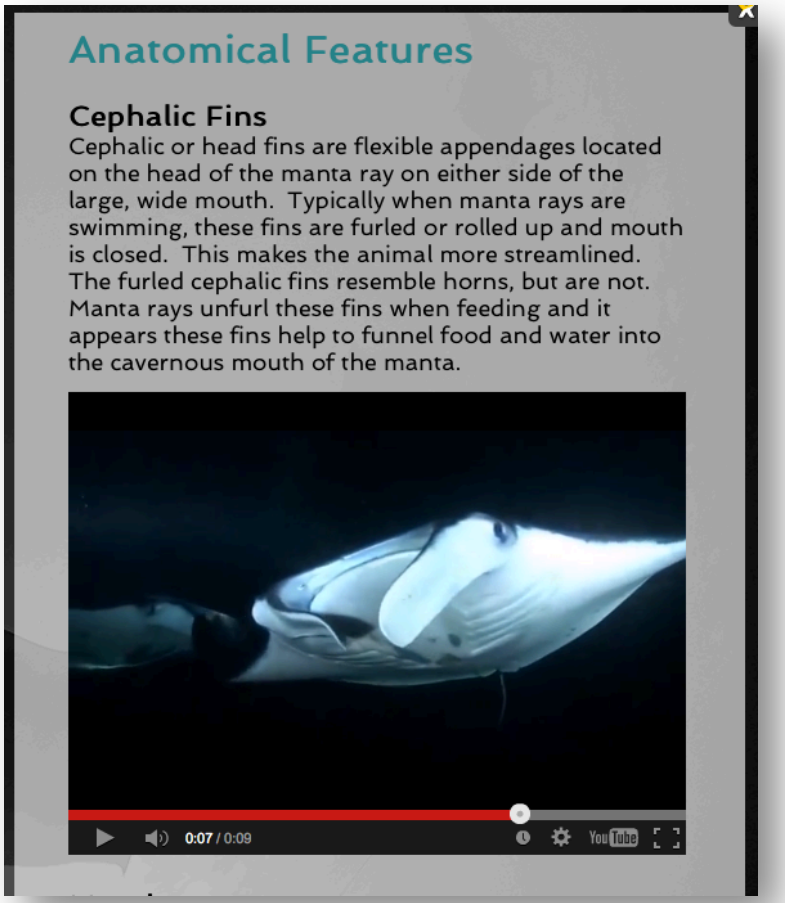
Online Tools – YouTube Videos

- 20 videos on web site
- Original videos
- Laros Productions



www.mantanaturalist.com

Learning Management System – Laulima

https://laulima.hawaii.edu/portal

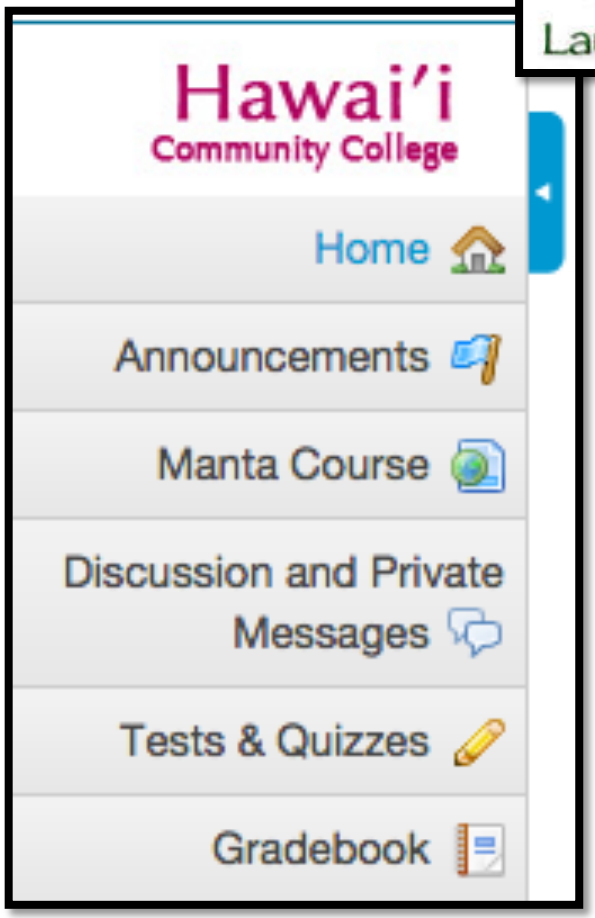
Directions →

Embedded web site →

Activity →

Assessments →

Grades →



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Course Implementation

- 8 Students
- 5 different companies represented
- All came together as planned

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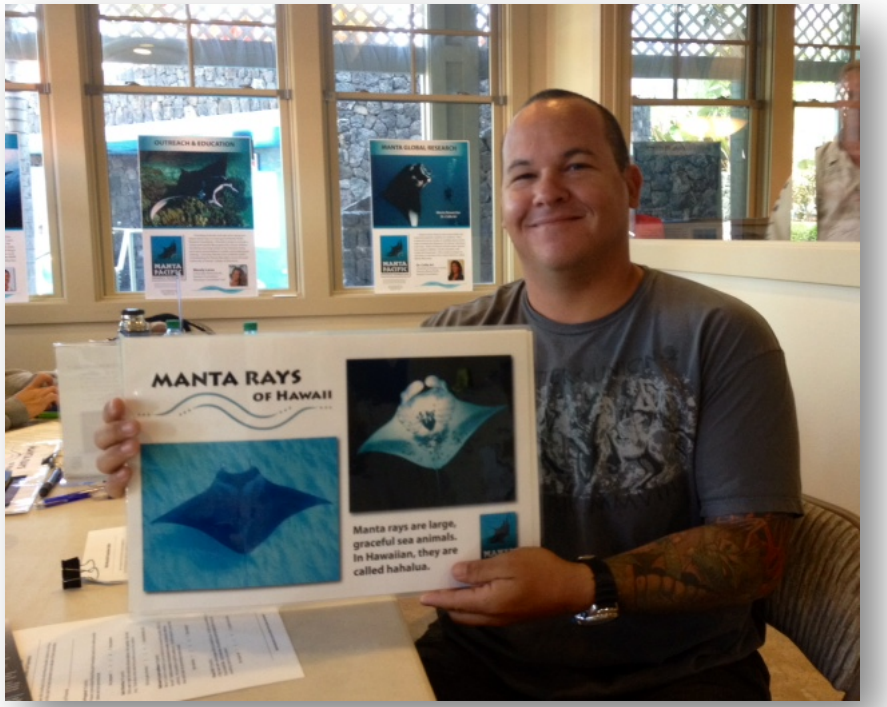
Follow Through Activity – Job Aid

Terminal Objective for Course:

Prepare and deliver a Manta Naturalist Presentation with **accurate manta information** presented to guests on manta tours.

- **Manta Naturalist Flip Chart**
- **Job Aid for Manta Tours**
- **Information from Module One**



Manta Tour Guide – Kona, Hawaii

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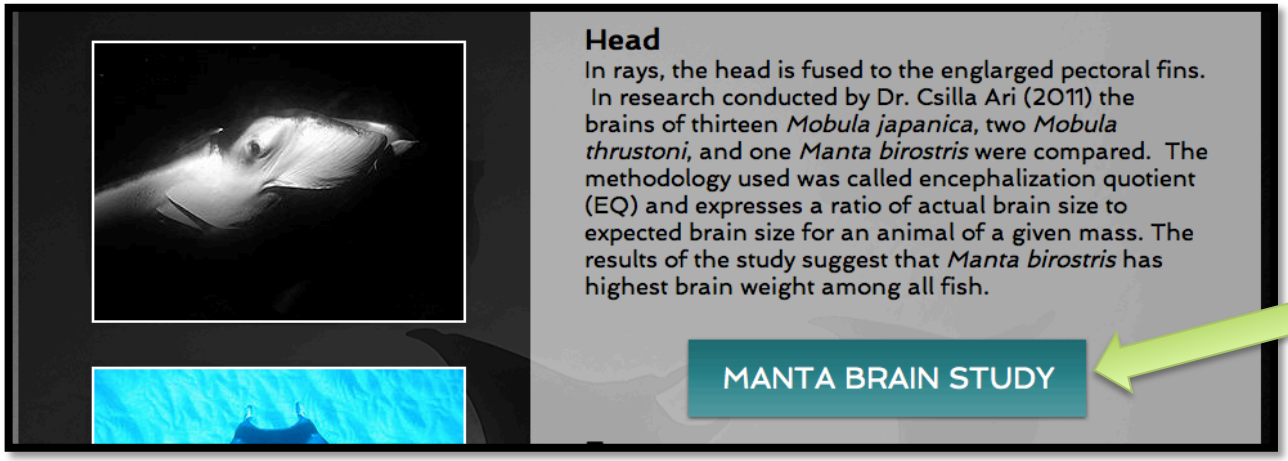
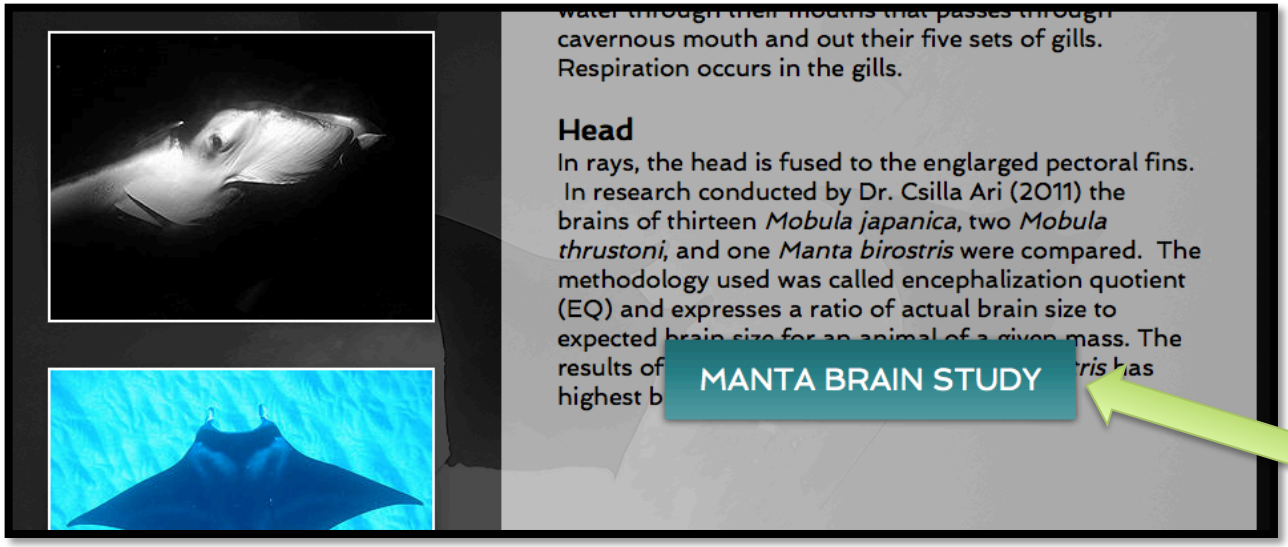
Lessons learned – Browser Differences



Safari
Chrome

Works



Firefox

Doesn't work

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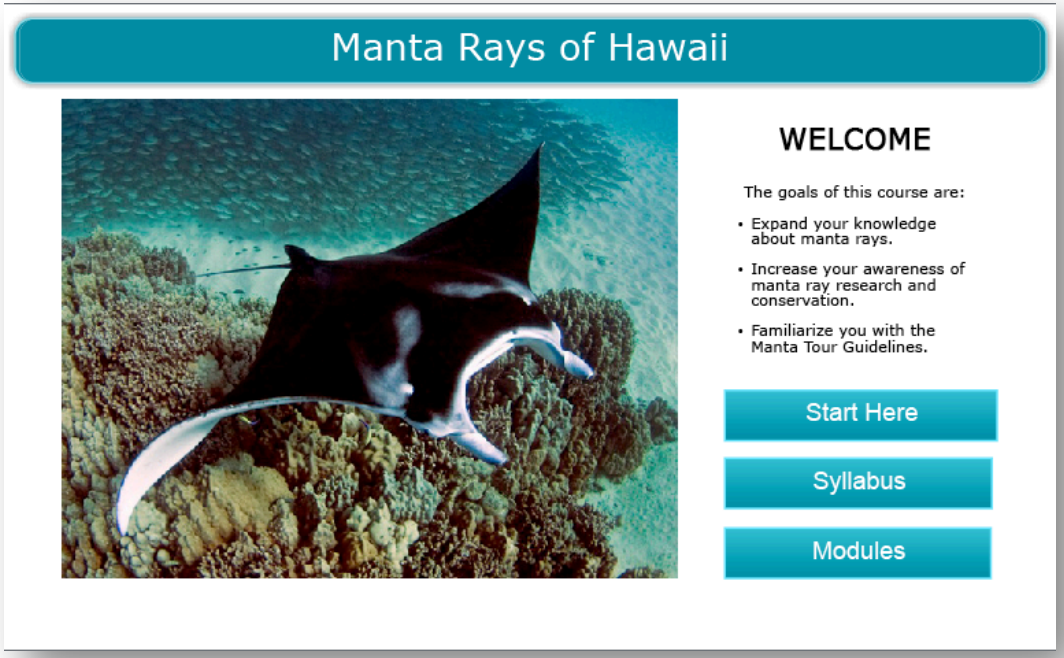
Lessons learned - Distractions

Adobe Captivate



Benefits

- One site for course, not two
- Use with future courses that are offered through our private company – not UH

Problems

- Steep learning curve
- Building hundreds of new pages
- Not as appealing visually
- No links to resources

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Future of Manta Naturalist Course

State of Hawaii

House Resolution 129 (2014)

"Urging the Department of Land and Natural Resources to adopt rules to manage manta ray sites."

http://www.capitol.hawaii.gov/session2014/bills/HR129_HD1_.htm

- Currently working with the State's Rule writer.
- Manta Naturalist Course or some version of it, may be used in future training.

Future of Manta Naturalist Course

Workforce Development in Kona, Hawaii

- **Marine Tourism Industry**
  - Naturalist Courses
  - Safety Training
  - Leadership Training
- **Partnerships**
  - Private Industry – Jack's Diving Locker
  - Non-profit organization – Manta Pacific
  - New Community College – HCC Palamanui / OCET
  - State of Hawaii – Workforce Development Funds
  - State of Hawaii – Manta Site Management

Manta Naturalist Instructional Design Project

What's Next

Manta Naturalist Instructional Design Project

Mahalo

Thank You to the following:

- TCC and all those people who made this conference possible
- Learning Design and Technology Department, UH Manoa
  - Dr. Menchaca, Dr. Ho, Dr. Fulford
  - Cohort and Critical Friends
- OCET– Hawaii Community College
- Manta Pacific Research Foundation
- Manta photographer – Bo Pardau
- Jack's Diving Locker

Special Thanks to my Family!

Laros Family – Kona, Hawaii

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