

U. S. COAST GUARD AUXILIARY

THE Education Connection

TECHNIQUES FOR BETTER BOATING EDUCATION

Education Department ▪ March 2010 ▪ Carl Gross, DVC-EP, Editor
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FROM THE DIR-E Anne R. Lockwood

Paddlers – we need to reach them and teach them. Kayakers and canoeists do not think they are boaters, but we know better.

The fastest growing water sport in North America resides in the kayak and canoe arena. Annual sales now top 300,000 kayaks and canoes thus adding to the 2008 estimate that there are 2.1 million paddle craft enthusiasts.

An increase in paddle sport participants is correlated with the increase in accidents but even more alarming - the increase in fatalities. Our responsibility as educators now focuses on reaching that paddle craft audience with a safety course designed to prevent accidents before they happen.

Paddlesports America is now approved as the official course for the U. S. Coast Guard Auxiliary. This four - hour seminar course, designed and produced by Boat Ed, provides outstanding safety information just for canoeists and kayakers.

The course comes with a five chapter student manual, 30 item test, answer sheet, answer template, certificate of completion, and Instructor notes. PowerPoint presentations to accompany the course will be posted to the E-Library Resource Center for download.

The student manual has awesome color graphics, and the content design is very similar to the layout of *About Boating Safely*. One user-friendly feature in the content is that if a paddler's term is used in the text, it is in bold type with the definition provided in a sidebar on that same page. This eliminates having to search through a glossary to find the definition.

The student manual also provides Chapter Review Exercises for each chapter. Similarly, the PowerPoint presentations for each chapter provide the same resource review material.

The Instructor Guide provides recommended teaching techniques and indicates appropriate teaching times for each chapter. Extensive chapter lesson plans are provided adding objectives and suggested props for each chapter.

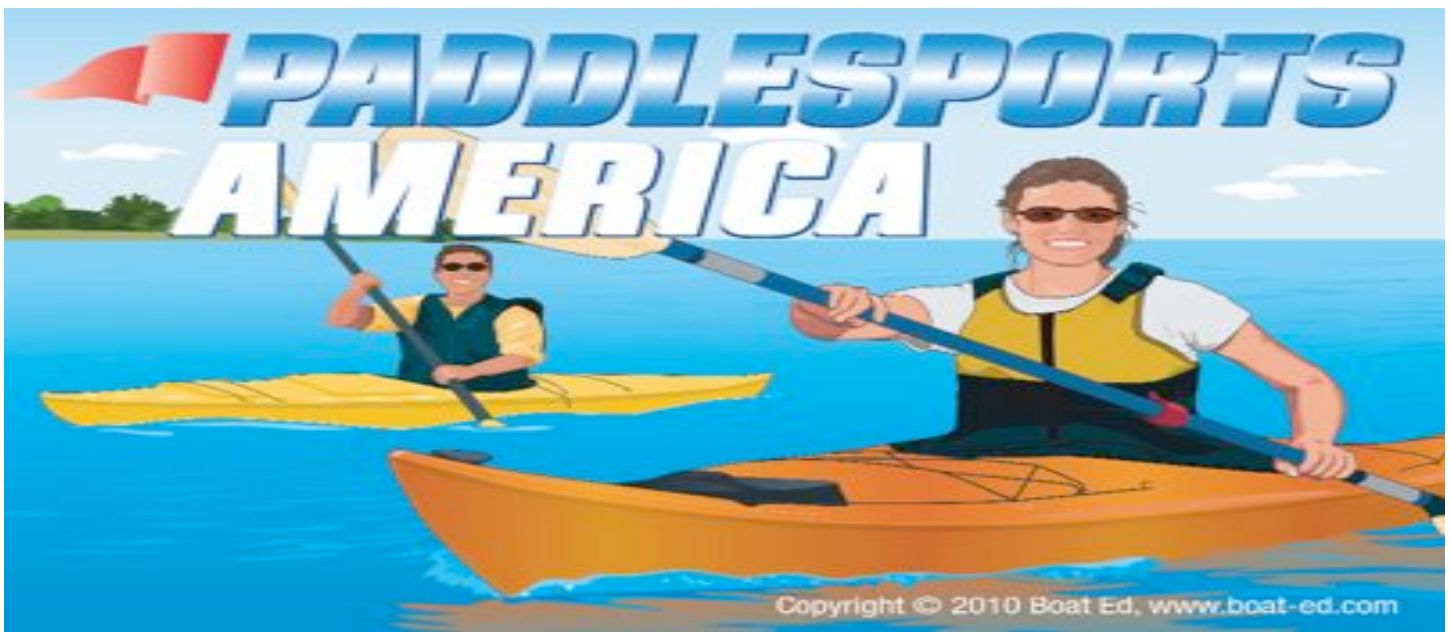
Flexibility is built into the course. Instructors can add region-specific equipment information. Kayaks in Alaska differ greatly from in those used in the Gulf Coast or lake areas, so equipment information can be updated.

Paddlesports America will be available with an on-line order cost of \$77.75 to Flotillas per case to serve 10 students. The product number is 1PA- 10150. The suggested Auxiliary retail price to students is a minimum of \$15 per student.

Paddlesports America was piloted in January in two Districts. The first was in 11SR. Victoria Jacobs, DSO-PE was the contact lead for this pilot with Bob Simons and Dianna Jones as instructors with the supporting aide of Anne Cioffi. This team provided outstanding insight into better perfecting the course materials.

The second pilot was in 5NR with DCOS Harold Robinson as the lead. Instructors were Jack Morrison and Norman and Aleda Fehr. Their responses and guidance provided the positive aspects of the course and evaluated what they felt would be improvements to the support materials. The E- Department sends a BZ to both pilot groups. They helped make this course dream a reality.

Through education we save lives. Help save even more lives by reaching out to this vast new audience by teaching the dynamic Auxiliary approved *Paddlesports America* course.



DIFFERENTIATED INSTRUCTION

M.D. Zeig, SO-SR

As instructors, we are all motivated to ensure that all our students are successful, whether we are teaching a course to the public or training our own members. Think about that teacher from school who *made* learning happen. This teacher used a strategy that is called **differentiation**. In order for us to be the best teachers to the public or best trainers for our own members, we as Auxiliary instructors need to learn about differentiation as well.

Differentiation is a strategy the good instructors do without realizing it – it ensures that each student is challenged by a *variety* of instructional strategies suited to his/her achievement and ability levels, learning styles, and interests. Think about it – are the good instructors, you know the ones, who read straight from the PowerPoint presentation and make harsh condemnations about breaking the Nav rules, or are they the one who will sit patiently with you and *help* you learn how to tie a bowline? These instructors simply meet a student at the *student's* need and help him learn. Most instructors will find this concept challenging, but with just a little bit of preparation, differentiation is easy and very rewarding.

Some key hints to help any instructor differentiate:

Provide multiple activities within each unit

Say “NO” to just lecture – try question-and-answer strategies, scavenger hunts and other activities *in addition* to limited time lecturing.

Allow students to choose

If they hint that they prefer activities from the *Waypoints*, use those throughout the course, or if they like to take notes, have lots of paper ready for them to use. This is also a good way to pique students’ interest about other courses the Auxiliary offers.

Permit students to opt out of material

Why should they have to learn it if they already know it? A brief review may be sufficient.

Structure the class activities

Any activity you add should require high levels of critical thinking but permit a range of responses.

Have high expectations for all students

Without expecting the impossible – provide instruction aimed at a high level of understanding.

Implement flexible grouping strategies

that cluster students by achievement in a particular subject area, interest, learning style, personal choice, and ability. This also facilitates class discussion.

Create learning centers

with activities geared to different learning styles, levels of thinking, levels of interest, and levels of achievement.

Provide students with opportunities to explore topics

in which they have strong interest and find personal meaning.

For more information, try these websites:

<http://www.caroltomlinson.com>

<http://www.gpschools.org/ci/diff/diffhome.htm>

OUR FIRST ABS CLASS IS A GREAT SUCCESS!

Terry Aldridge, FSO-PA

Our Flotilla (44) just held its first “About Boating Safely” class of the year. With all of our hard work we were able to sign up thirteen students. We did this by posting flyers at local marinas, marine dealers, a local university, and many other places. Also, we were interviewed on a local radio station, and had press releases posted in local newspapers. However, our best form of advertising has been Craig’s List. Craig’s List is a free web-based classified advertising medium. Out of the thirteen students that attended our class, at least nine saw our ad on Craig’s List. Craig’s List has many different headings or sections where you can place an ad. Instead of placing the ad under the heading of Schools or Instruction, I place the ad under the heading of Boats for Sale. I figured this way more boaters were likely to see the ad.

We will have a boating safety class every month until November 2010. We’re doing this to take advantage of the new boating rule that recently went into effect in Florida. That rule/law states that “anyone born on or after January 1, 1988 and is going to operate a boat with an engine of 10 horsepower or more, must pass a state-certified boating safety course”.

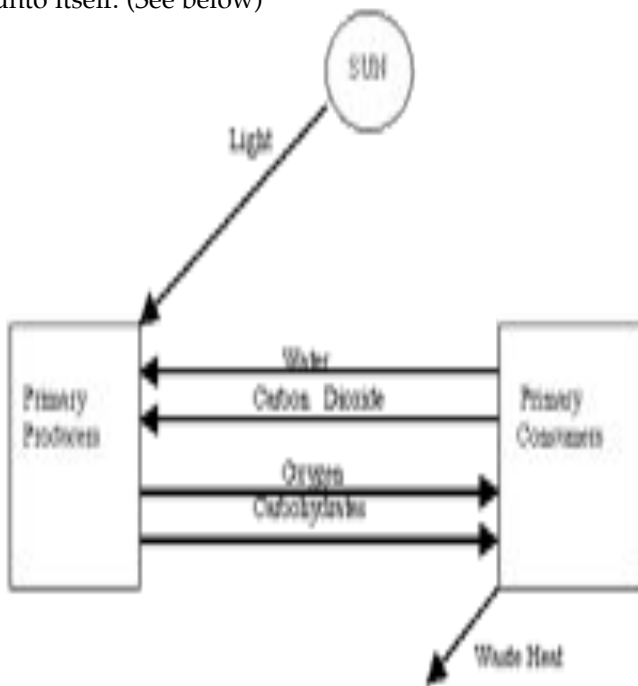


THE LEARNING CORNER

PLANKTON

Hank Foglino, DVC-BL

We travel across the surface of the various water bodies in our vessels, moving across the world of plankton. Plankton, from the Greek “roaming”, is not a species but rather a life style and is comprised of mainly those organism who lack the ability to propel themselves against the current and just drift to wherever the currents take them. Included are primary producers such as microscopic and larger plants, eggs that have been laid previously and are waiting to hatch, and the primary consumers, including microscopic grazers - young that have hatched but still have not developed to the point when they can move about on their own. It is in fact a self sufficient community unto itself. (See below)



What a great design. The sun provides energy from light, the primary producers use this energy for photosynthesis producing oxygen and carbohydrates (food), which is used by the primary consumers who give off carbon dioxide and water which are used by the primary producers during the process of photosynthesis. Actually, this is what's going on throughout the world, and it's this process that makes life possible on earth. Could it all have started in a primordial ocean? Perhaps a prototype? However it came about, it's a wonderful design.

The primary producers are the plants in the ocean. They are extremely self sufficient, not requiring any root systems as do their terrestrial cousins, and do not have to expend any great amounts of energy growing to reach for the sun's rays. The microscope species, in the plankton far outnumber the larger “seaweeds”. Their productivity is 98% as compared to 2% for the “sea weeds”. They are at

the bottom of the feeding pyramid (Ref: Fishing/Over fishing Jan 2005)

You may hear a lot about the dangers of diminishing rain forests, but if we lose the phytoplankton, we're gone too. The size of these plants that make up the floating forest range from nano which have to be collected by centrifuging a water sample, to micro, which can be collected in nets having openings of 0.05mm (1/500”) to macro (sea weeds). There are even ultra sizes that cannot even be collected by centrifuge. There are eight major types of phytoplankton, but I'll just discuss a few of them. The most prominent and most productive are the diatoms which have the most productive rates of conversion to oxygen and carbohydrates. Their shells are made up of silica and are abundant in colder waters. The dinoflagellates have flagella, whip like appendages that they can use to orient themselves for maximum light exposure. When conditions are optimum, some species may bloom and reproduce to a point where there are not enough nutrients and will die off resulting in harm to the environment. As an example, the brown tide, caused by a phytoplankton bloom, reported in eastern Long Island is suspected of having a key role in the demise of the scallop population. You may have heard of a red tide. This is caused by a dinoflagellate bloom where there are so many organisms that the waters turn red and become toxic. A bloom and resulting red tide happened once in New England waters. The “red” swath was about 30 miles wide in places and was drifting south. The organisms comprised of these blooms may be harmful when ingested by humans, for example, eating raw shellfish. Dinoflagellates also cause bioluminescence, the “lighting up” of the waters when stirred up. Anyone out at night, especially during the summer months, have probably observed this phenomenon.

Also in the plankton are the grazers, or primary consumers. Their mass is about 10% of that of the phytoplankton and rely on the phytoplankton for food and oxygen. The greatest number by far are the copepods, looking somewhat like miniature lobsters. There are also the globigerina and foraminifera, which have calcareous and silicate shells respectively. Ocean bottoms containing more than 30% biogenous material are called oozes and are named after the species with the greatest number of remains. So if you study ocean bottoms the terms globigerina or radiolarian (a type of foraminifera) are not new to you. I remember when I was working for Grumman and we were writing the proposal for the Viking S3 aircraft. We simulated a convoy sailing from England to the US and evaluated some of the anti-submarine tactics and state of the art technology that would be involved with the Viking's operation. It was my task to come up with the environmental parameters including sonar transmission. I was young, enthusiastic, and in graduate school learning marine biology at the time, so I came up with “the bottom is comprised radiolarian ooze which is a species of the

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genus protozoa, order foraminiferem" (or something like that). A very short time after the draft was submitted, an old graduate of the Casey Jones Aeronautical College (remember? I think it was at LaGuardia Airport) came running out of his office demanding to know who the wise guy was. We settled for "medium silt". The siliceous and calcareous shells of the globigerina and foraminifera, respectively, fall to the bottom when the animal dies. Since shell growth and absorption rates are a function of ambient temperature and the chemistry of the surrounding water, they are indicators of past weather patterns.

The secondary consumers include krill, thumb size shrimp-like crustaceans. Great amounts of these animals occur at the poles during the onset of sunlight. Interestingly enough the largest known mammal, the blue whale, and a marine fish, the whale shark, do not wear themselves out chasing down and attacking large prey but rather consume zooplankton, which are mostly composed of krill, in large quantities. The krill have fed on the microscopic primary consumers so the larger species are more efficient in quantity and nutrients harvested. One of the questions raised by scientists is what the effect on the

environment will be if we continue killing whales. They consume so much krill that without their intervention we may wind up with oceans filled with krill. What will this mean to the other species. What we do to the bottom of the feeding triangle will eventually have an effect on top consumers, which includes us.

An interesting discovery years ago when we started to experiment with undersea acoustic detection techniques was the discovery of something called the Deep Scattering Layer. The sonar was able to detect the plankton at the upper surface. At night it was comprised of one horizon mass beneath the ocean surface. However during the day, the mass separated into two layers, one remaining at the top and one going deeper in the water column to return to the surface at nightfall. This was a puzzle for a time but eventually it was determined that small fish living in the plankton would go to the darker depth in all probability to escape detection by predators and come to the surface to feed during the daylight hours.

So when cruising, remember, you are not alone. You are surrounded by living organisms.

NEWSLETTER DISTRIBUTION

- Electronic copies to National Board, VCOs and DSOs-PE
- DSO-PE to SO-PE and FSO-PE
- FSO-PE to FC and Flotilla Instructors
- All membership via Education Department web page:
www.cgauxed.org/