

# CephSchool: a Pedagogic Portal for Teaching Biological Principles with Cephalopod Molluscs

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CephBase is an online, user-friendly database directed towards the scientific community in order to disseminate information about cephalopods (a class of mollusks including octopus, cuttlefish, and nautilus). Although, our initial audience was scientists, we found that the majority of our users were students, educators, and the general public [1].

CephSchool is based on CephBase and will take the information present in CephBase's digital libraries and redirect it towards students and teachers. CephSchool will modernize the way students learn about basic biological processes by giving them a dynamic web page that will be updated as new information is made available. Textbooks are often dated. CephSchool will present very current data[1].

CephSchool will be organized into eight arms (OCTOPUS!) and which will contain information about cephalopods, discussion topics, teacher support, and student assessment techniques. These eight sections will provide an accurate and inquiry base learning environment for students to learn basic biological concepts using cephalopods as the subject organism [2]. The information present in CephSchool will be supplemented with images, video and current scientific data.

**Online Tour:** This will give students a glimpse into the National Resource Center for Cephalopods (NRCC), a working cephalopod lab which "cultures and rears cephalopods for scientific uses as well as public aquaria" [2].

**Cephalopod Behavior and Evolution:** Cephalopods' ability to dynamically change shape and color has been a main driving force in their evolution [3]. In this section those color changing abilities will be explained and

explored and the students will be faced with the open ended question: "Do squid have a language?"

**Teacher's Corner:** This is a password protected portion of CephSchool intended to familiarize the teachers with CephSchool. We will provide potential PowerPoint presentations, test questions, and portfolios. It will also give the teachers a chance to give feedback on CephSchool, and an e-mail focus group to communicate with other teachers utilizing CephSchool.

**Online Dissection Guide:** This component of CephSchool will provide dissection guides for all four groups of cephalopods available at the NRCC. The dissection guides will contain still images as well as video. Still image and video will enrich this section.

**Predators and prey:** This section of CephSchool will incorporate the ecology of cephalopods and the role they play in marine environments. Basic ecological concepts will be discussed through this section.

**Use of Cephalopods:** This section will help students understand the high importance of cephalopod research in the biomedical world due to the large amount of research done on their physiology, reproduction, and genetics just to mention a few.

**Students' corner:** This section will pose potential project topics and will display select completed projects. It will also include "just for fun" test questions, and a list of free online scientific tools will be accessible.

**!Links!:** This component will include a list of cephalopod, marine biology, and science links for the students to use.

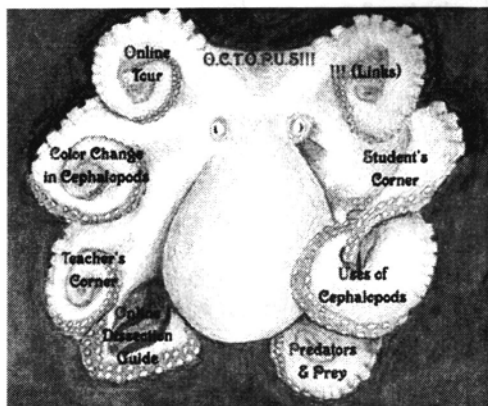


Figure 1: CephSchool index page.