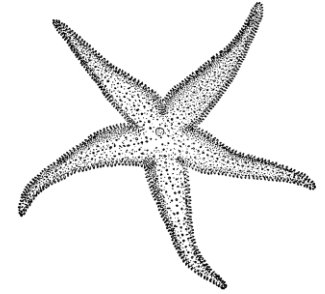




Dissection 101: Sea Star (starfish)

Lesson Plan: Sea Star Dissection

Background: The sea star (commonly called a starfish) is an excellent specimen to use to represent a unique group of marine animals called echinoderms. The sea star has a circular (radial) body plan in which there is a central disk (circular body region) with elements (arms, normally 5) that radiate from the central region.



To make the dissection experience for your students more relevant and to reduce the number of specimens used we have developed a collection of teacher resources for you. A teacher video (background information), interactive PowerPoint with student cut videos, a student checklist and an interactive quiz with answer key are provided below.

Materials:

NOTE: The PowerPoint files are very large – PLEASE select “Save” which will reduce download time. Then, wait for the “Click” sign in lower right corner to advance through the slides.

- The sea star dissection PowerPoint ([Regular](#) or [Show](#))
- Sea star PowerPoint quiz ([Regular](#) or [Show](#)) (Handout: [Teacher/Student](#))
- Preservative MSDS for reference
- Eyewash station available
- Shower available
- The following are for each student, pair or group.
 - Dissection tray and pointer
 - Dissection scissors/ scalpel
 - Eye protection
 - Protective clothing (apron, lab-coat)
 - Gloves (latex free)
 - Sea star identification [checklist](#) for students (One for use in lab, extra copy for reference)
 - Sea star
 - Example biological suppliers
 - WARDS (<http://wardsci.com>)
 - Carolina (<http://www.carolina.com>)

Advance through the PowerPoint slides slowly for the PowerPoint presentations to work properly. (Please wait for the “Click”)

Safety Considerations

- Age appropriate activity for the children in your care
- Material Safety Data Sheet (MSDS) available for accident reference
- Poison control number/phone readily available
- Latex free gloves, eye protection and apron/lab coat
- Eyewash station, shower and sink
- Sharp instruments (cut away from self and others)
- Sharps and specimen(s) disposal
- Encourage students to report all accidents
- Basic science laboratory rules (strictly enforced)

Dissection 101:

The Sea Star

(continue – page 2)

Procedure:

1. The teacher should view the accompanying dissection video(s) (two formats below). (The video is not designed to be viewed by the students; it is designed for the teacher to review the dissection. The students may view the video if appropriate/necessary. Student video clips are in PowerPoint.)
 - ❖ YouTube Videos (Does not work in Firefox):
 - Sea Star Dissection: [Part I – Exterior/Orientation](#)
 - Sea Star Dissection: [Part II – Dissection](#)
 - ❖ Window Media Video:
 - [Entire Video](#)
2. Gather the materials listed above.
 - ❖ Include the interactive PowerPoint ([Regular](#) or [Show](#)) presentation for the laboratory projector/screen.
3. Review safety concerns/rules with students.
4. Lead the dissection by advancing through the PowerPoint presentation; the students should identify the parts shown.
5. The students should check off the sea star parts on the student [checklist](#) once they are identified. An extra, clean copy should be given to the students for review.
6. Clean the facility/materials and dispose of specimens properly.
7. Quiz the students during the next class period.
 - ❖ Save the sea stars and pin the actual parts. (or)
 - ❖ Sea star quiz PowerPoint ([Regular](#) or [Show](#)) (Handout: [Teacher/Student](#))

Reasons to Use the Dissection Video and Accompanying PowerPoint Presentation

- Reduce the number of specimens used by a class
- Increase the quality of the dissection for the students
- Review opportunity, increasing the learning experience for the students
- Student unable to dissect due to pregnancy or hypersensitivity to the preservatives
- Student chooses not to dissect due to ethical/moral reasons

As an educator you are responsible for the implementation of the dissection activity described in the video and PowerPoint. You must have safety procedures and rules established for your classroom and make sure all of the students follow the rules to ensure a safe environment. South Dakota Public Broadcasting and Dakota State University cannot in any way be responsible or liable for any injury as a result of performing the described dissection. Complete the dissection if you feel it is appropriate and safe for your individual class.
Have fun and stay safe!



Are you looking for more science resources?
Visit Old School Demonstrations at
<http://www.sdpb.org/scienceiq> ([Click](#))

