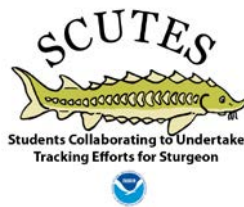


Topic/Lesson:	Sturgeon / Striped Bass Life Cycle
Subject:	Sturgeon and striped bass reproduction
Author:	Rob Yeomans
Time Duration:	One 90 minute block or two 45 minute periods
Overview:	Class will discuss the decline of the Atlantic sturgeon population over time. Discussion should steer students towards ways in which the species could recover. Class should then watch the movie, “Striper! Restoring Coastal Striped bass,” and take notes on the restoration of the striper. Students will then use lap tops to research the reproductive life cycle of both the striper and Atlantic sturgeon so that they may understand the difficulties of raising sturgeon.
Objectives:	<p>Students will be able to:</p> <ul style="list-style-type: none"> • Compare the decline of striped bass to that of Atlantic sturgeon. • Discuss ways people have aided in the recovery of the striped bass. • Explain the life cycle of the striped bass. • Explain the life cycle of the Atlantic sturgeon. • Determine why the restoration of sturgeon will take much longer than the striped bass.
Materials:	<ul style="list-style-type: none"> • “Striper! Restoring Coastal Striped Bass.” Movie can be ordered at: National Conservation Training Center Media Library 698 Conservation Way Shepherdstown, WV 25443-9713 Phone: 304-874-7576 • Laptop computers with internet connection
Procedures:	<p>Last 10 minutes of class</p> <p>Tell the students they will be divided into two groups. One group will research the population and economic importance of the striped bass, while the other group researches the population and economic importance of the Atlantic sturgeon.</p> <p>Day of activity</p> <p>On the board, create a two column table, one for each fish. Teacher should prompt the students to list their findings from homework. When finished,</p>

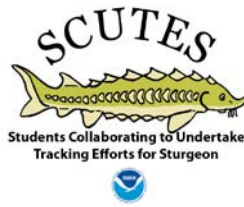
	<p>teacher should stress the fact that the population of striped bass has rebounded, due largely to human interactions.</p> <p>Show the movie, “Striper! Restoring Coastal Striped Bass” and explain to the class they are to take notes on 1.) bass life cycle and 2.) human actions to aid in the population’s recovery</p> <p>When movie has finished, discuss what a life cycle is. Pass out the spawning comparisons worksheet. Students are to use the lap tops to research the life cycle of both striped bass and Atlantic sturgeon, writing their information into the worksheet. If they do not finish during class, they are to finish for homework.</p>
<p>Conclusion:</p>	<p>At the beginning of next class</p> <p>Check and go over the spawning comparisons worksheet. Have the students create a list on the board of actions people took to repopulate the striped bass (from their notes last class). Ask the class if these methods used to repopulate the striped bass will work for Atlantic sturgeon. Steer the discussion towards their reasoning and what will have to be done in order for the Atlantic sturgeon population to rebound.</p>





Spawning Comparisons of Striped Bass to Atlantic Sturgeon

	Striped Bass <i>Morone saxatilis</i>	Atlantic sturgeon <i>Acipenser oxyrinchus</i>
Habitat for spawning		
Number of eggs produced by one female		
Egg habitat		
Time taken for eggs to hatch		
Habitat for Larvae		
Time taken for development of fry		
Fry Habitat		
Time to reach sexual maturity		
Number of times fish will spawn over 10 years, once reaching sexual maturity		



Spawning Comparisons of Striped Bass to Atlantic Sturgeon: Teacher Answer Key

Note: Answers may vary depending on the website that is used.

	Striped Bass <i>Morone saxatilis</i>	Atlantic sturgeon <i>Acipenser oxyrinchus</i>
Habitat for spawning	<i>Near the surface in turbid, shallow, freshwater</i>	<i>On gravel bottom, in deep freshwater</i>
Number of eggs produced by one female	<i>850,000 – 4.2 million</i>	<i>400,000 - 8 million</i>
Egg habitat	<i>Drift in currents</i>	<i>Stick to bottom, hard substrate (gravel)</i>
Time taken for eggs to hatch	<i>1.5 – 3 days</i>	<i>3 - 6 days</i>
Habitat for Larvae	<i>Downstream, deeper depths in the water column</i>	<i>Downstream, gravel bottom</i>
Time taken for development of fry	<i>4 – 5 days</i>	<i>8 - 12 days</i>
Fry Habitat	<i>Further downstream, water column</i>	<i>Further downstream, rocks, aquatic plants</i>
Time to reach sexual maturity	<i>Males: 2 – 4 years, Females: 4 – 8 years</i>	<i>Males: 12 – 14 years, Females: 18 – 19 years</i>
Number of times fish will spawn over 10 years, once reaching sexual maturity	<i>10</i>	<i>Males: 10, Females: 5</i>