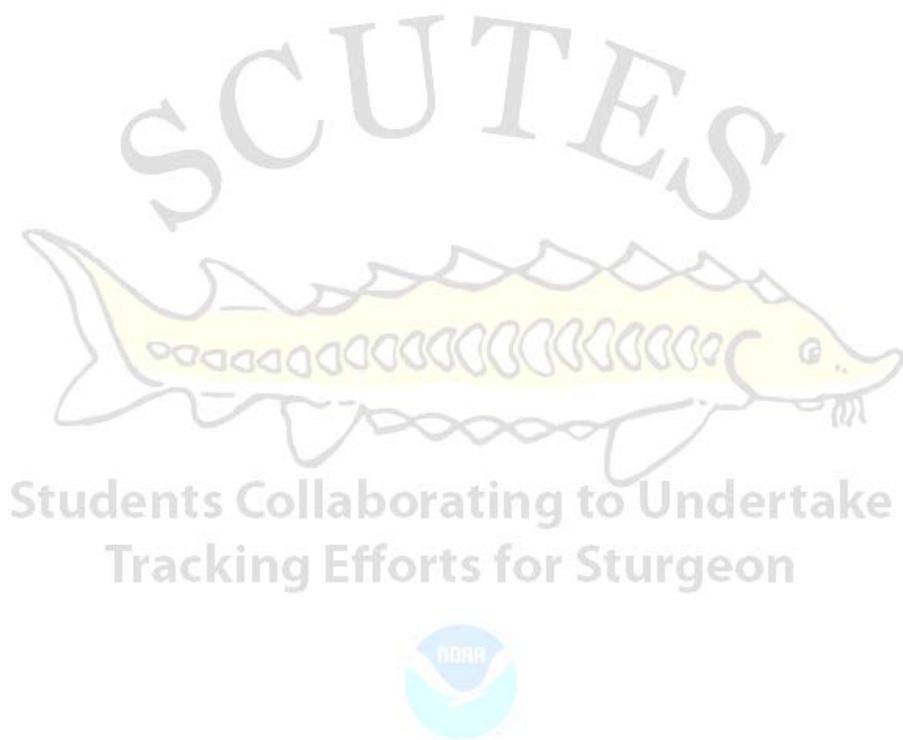


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| Topic/Lesson: | The Children's Story of Sturgeon |
| Subject: | Atlantic and Shortnose Sturgeon Life Cycle |
| Author: | Rob Yeomans |
| Time Duration: | One 90 minute block or two 45 minute classes |
| Overview: | Students will create a children's book about the life cycle of Atlantic or shortnose sturgeon. They will research the life history of the sturgeon and create a children's book, complete with illustrations that will teach to a younger audience. The book will describe the natural life cycle of the sturgeon from fertilized egg to returning adult to spawn. Students will choose one river to use as a natal river. Descriptions of human barriers that prevent present day spawning will be included. |
| Objectives: | <p>Student's will be able to:</p> <ul style="list-style-type: none"> • Explain the natural life cycle of the Atlantic or shortnose sturgeon • Describe human actions that prevent many rivers from being used by spawning sturgeon • Research information on the World Wide Web • Research information from a given article |
| Materials: | <p>Laptops with internet capabilities</p> <p>Art supplies to make children's books:</p> <ul style="list-style-type: none"> • Construction paper • Markers • Stapler, staples • Tape • Glue • Colored pencils <p>Several children's books</p> |
| Procedures: | <p>Near the end of class</p> <p>Ask the students to describe a life cycle for any organism. Write their responses on the board, putting them in order (egg, juvenile, adult). Ask why a life cycle is necessary (organism must develop over time in a suitable habitat). Project the SCUTES website (http://www.greateratlantic.fisheries.noaa.gov/scutes) on the screen and inform the students they are to go this site and, for homework, research the life history of Atlantic and shortnose sturgeon. This includes the</p> |

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| | <p>various life stages, morphology, habitat, environmental factors and human intervention. Before leaving for the day, show the students how to navigate to the files and pictures for this lesson on the website.</p> <p>Next Day</p> <p>Check the students' notes and pictures. Discuss with the class the general stages of Atlantic sturgeon development that they found.</p> <ul style="list-style-type: none"> • Egg • Yolk sac larvae • Larvae • Juvenile • Mature adult <p>Tell the class they are to now construct a children's book that illustrates and describes the life history of an Atlantic or shortnose sturgeon from egg to mature adult. The book they make should have:</p> <ul style="list-style-type: none"> • A friendly, hand drawn main character • Large style, neat font • Color, organization and creativity • Language for a younger audience • Sturgeon's five stages each having: <ul style="list-style-type: none"> ○ Habitat ○ Environmental factors ○ Hand drawing ○ Diet ○ Behavior ○ Human hazards <p>Students have the rest of this class period to formulate a rough idea of how they want to construct their book. They may get ideas from some of the sample children's books that are at the front table. They may use the internet for further research but should use this time to construct their book. If they do not finish, they may take some paper supplies home and finish it for homework. Or, the teacher may use one more class period for construction time if necessary.</p> |
| <p>Conclusion:</p> | <p>At the start of class</p> <p>Check to see that everyone has made a book. Ask the class if anyone would like to show off their books. Discussion should focus on the:</p> <ul style="list-style-type: none"> • Complex lifecycle of Atlantic or shortnose sturgeon • Human hazards (teacher should note to the class that many rivers are not suited anymore for sturgeon reproduction) • What the class liked about this project • What challenges the students faced with this project <p>Collect the books for grading.</p> |

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| Massachusetts Frameworks: | 6.3 Use a food web to identify and distinguish producers, consumers, and decomposers, and explain the transfer of energy through trophic levels. Describe how relationships among organisms (predation, parasitism, competition, commensalism, mutualism) add to the complexity of biological communities. |
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| CATEGORY | 4 | 3 | 2 | 1 |
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| Characters | The main character is named and clearly described in text as well as pictures. Most readers could describe the character accurately. | The main character is named and described. Most readers would have some idea of what the character looked like. | The main character is named. The reader knows very little about the character. | It is hard to tell who the main character is. |
| Organization | The story is very well organized. One idea or scene follows another in a logical sequence with clear transitions. | The story is pretty well organized. One idea or scene may seem out of place. Clear transitions are used. | The story is a little hard to follow. The transitions are sometimes not clear. | Ideas and scenes seem to be randomly arranged. |
| Focus on Assigned Topic | The entire story is related to the assigned topic and allows the reader to understand much more about the topic. | Most of the story is related to the assigned topic. The story wanders off at one point, but the reader can still learn something about the topic. | Some of the story is related to the assigned topic, but a reader does not learn much about the topic. | No attempt has been made to relate the story to the assigned topic. |
| Requirements | All of the written requirements (writing for audience, 5 stages of life cycle, illustrations, large font, etc.) were met. | Almost all (about 90%) the written requirements were met. | Most (about 75%) of the written requirements were met, but several were not. | Many requirements were not met. |
| Illustrations | Original illustrations are detailed, attractive, creative, and relate to the text on the page. | Original illustrations are somewhat detailed, attractive, and relate to the text on the page. | Original illustrations relate to the text on the page. | Illustrations are not present OR they are not original. |
| Accuracy of Facts | All facts presented in the story are accurate. | Almost all facts presented in the story are accurate. | Most facts presented in the story are accurate (at least 70%). | There are several factual errors in the story. |
| Creativity | The story contains many creative details and/or descriptions that contribute to the reader's enjoyment. The author has really used his/her imagination. | The story contains a few creative details and/or descriptions that contribute to the reader's enjoyment. The author has used his/her imagination. | The story contains a few creative details and/or descriptions, but they distract from the story. The author has tried to use his/her imagination. | There is little evidence of creativity in the story. The author does not seem to have used much imagination. |