

Lake Sturgeon Community Science Course Materials

Here is an outline of the student-focused content we shared with you via Google Classroom.

If you plan to deliver to your students via your school's learning management system (e.g. Google Classroom, Canvas, Schoology, etc.), please copy and paste into your LMS.

In the Google Classroom we developed, there are additional teacher resources (identified with a ☐). You do not need to copy these resources into the students' classroom (unless you elect to include supplementary resources!).

- ☐ Video content time estimate: 83 minutes
[LINK TO OPTIONAL ASSESSMENT QUESTIONS](#)
- ☐ Fish identification time estimate: 60 minutes
- ☐ Community science time estimate: 60-90 minutes

PLEASE NOTE: In the Google Classroom we developed, you start at the bottom and make your way up to the top. We flipped the order here. We also numbered the assignments (beginning at #01) to make it easier for copying/pasting.

☐ Welcome ☐

Title	#01 Welcome & Check-In
Description	<p>☐ Welcome to the Lake Sturgeon Community Science Pilot Google Classroom ☐</p> <p>Through this program, students and educators will help researchers better understand biodiversity, predator-prey relationships, and lake sturgeon predators in Michigan's Black River system!</p> <p>Share your school and location to help us develop a map of Lake Sturgeon Community Scientists across the Great Lakes basin!</p> <p>? If you have any questions, please use the comment thread below these instructions as it is likely someone else is wondering the same thing. If you'd prefer to keep your question private, you may use the private comment box on the right side of the screen which will only be viewable by the instructors. ?</p> <p>☐ This assignment should take under 6 minutes.</p>
Link(s)	https://arcg.is/Hvnjz

Lake Sturgeon 101

Title	#02 Introduction to Program
Description	Watch this video to learn about the Lake Sturgeon Community Science Program and how you will help researchers! <input type="checkbox"/> This assignment should take under 5 minutes.
Link(s)	https://www.youtube.com/watch?v=vud1OV03AXA

Title	#03 All About Sturgeon
Description	Learn about Lake Sturgeon - their history, threats, & traits in the Great Lakes region! <input type="checkbox"/> This assignment should take about 9 minutes.
Link(s)	https://www.youtube.com/watch?v=TEi3xUOO0GM

Title	#04 Why do we want to restore sturgeon?
Description	Learn about Lake Sturgeon and why want to restore this threatened MI species! <input type="checkbox"/> This assignment should take under 5 minutes.
Link(s)	https://www.youtube.com/watch?v=DO9-QJ08k8o

Title	OPTIONAL: Take a Virtual Field Trip: Lake Sturgeon at the Toledo Zoo
Description	Learn more about Lake Sturgeon in the virtual field trip of the Toledo Zoo from Great Lakes Now! <input type="checkbox"/> This assignment should take under 5 minutes.
Link(s)	https://www.youtube.com/watch?v=BSWEUqQY0s0

Title	OPTIONAL: The Wisconsin Sturgeon Story
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Description	Learn more about Lake Sturgeon in Wisconsin! <input type="checkbox"/> This assignment should take under 5 minutes.
Link(s)	https://www.youtube.com/watch?v=BSWEUqQY0s0

Great Lakes Literacy 101

Title	#05 Great Lakes Literacy 101
Description	Watch this video to learn more about Great Lakes Literacy. Want to learn more about the Great Lakes Literacy principles? Center for Great Lakes Literacy Website: www.cgl.org Great Lakes Literacy 101 Google Site: https://sites.google.com/msu.edu/2020lakehuronsummerinstitute/great-lakes-literacy-101 <input type="checkbox"/> This assignment should take under 2 minutes.
Link(s)	https://www.youtube.com/watch?v=cAXCVgZgS_U

Title	#06 Biodiversity and Connected Great Lakes Tributaries- Part 1
Description	Learn about biodiversity, connectivity and their importance in the Great Lakes! <input type="checkbox"/> This assignment should take under 14 minutes.
Link(s)	https://www.youtube.com/watch?v=AJDmBUde4_o

Title	#07 Biodiversity and Connected Great Lakes Tributaries- Part 2
Description	Learn about biodiversity, connectivity and their importance in the Great Lakes! <input type="checkbox"/> This assignment should take about 16 minutes.
Link(s)	https://www.youtube.com/watch?v=NHjvFDg8U1o

Predator-Prey Relationships 101

Title	#08 Who Eats Who? Part 1
Description	Learn about the predator-prey relationship and who might be eating Lake Sturgeon different life stages! <input type="checkbox"/> This assignment should take under 16 minutes.
Link(s)	https://www.youtube.com/watch?v=pxuCNhXQd4I

Title	#09 Who Eats Who? Part 2
Description	Learn about the predator-prey relationship and who might be eating Lake Sturgeon different life stages! <input type="checkbox"/> This assignment should take under 10 minutes.
Link(s)	https://www.youtube.com/watch?v=kABY7GCbu00

OPTIONAL: Human Disturbances

Title	Human Disturbances Part 1
Description	Learn how humans have impacted Lake Sturgeon in both the past and present. <input type="checkbox"/> This optional assignment should take under 10 minutes.
Link(s)	https://www.youtube.com/watch?v=rWefZ-Vilzg

Title	Human Disturbances Part 2
Description	Learn how humans have impacted Lake Sturgeon in both the past and present. <input type="checkbox"/> This optional assignment should take about 10 minutes.
Link(s)	https://www.youtube.com/watch?v=A1QJNVFLgbM

Fish ID 101

Title	#10 Learn how to identify fish! <input type="checkbox"/>
Description	<p>Click through this interactive presentation to learn how to identify common fish species of the Upper Black River. Be sure to click ALL the possible "Next Slide" options when learning about the fish species.</p> <p>NOTE: You should have your speakers ON to learn about fish identification from Doug Larson, Research Assistant at Michigan State University's Black River Sturgeon Facility!</p> <p><input type="checkbox"/> This assignment should take between 20-30 minutes.</p>
Link(s)	https://drive.google.com/open?id=13jdtvBomNbonbXbMCHrwNr7SjvGrrRDrdzsuou1eQ_w&authuser=0 (students can view file)

Title	#11 Practice identifying fish! <input type="checkbox"/>
Description	<p>After learning how to ID fish, you will now practice your skills. Watch the videos in the linked FISH ID QUIZ and share what you think the fish species is.</p> <p>NOTE: You are encouraged to use the Fish ID 101 print/download resource in this quiz.</p> <p><input type="checkbox"/> This assignment should take 20-30 minutes.</p>
Link(s)	https://docs.google.com/forms/d/e/1FAIpQLSd6YDROeSTstH5PCLTIISQrJIF0XCGjMwYRzuJYrxNE-NzTeg/viewform?authuser=0
Answer Key	<p>Video 1 Answer: Yellow Perch Video 2 Answer: Northern Pike Video 3 Answer: Largemouth Bass Video 4 Answer: White Sucker Video 5 Answer: Uh, that's not a fish! Video 6 Answer: Silver Redhorse Video 7 Answer: Rock Bass Video 8 Answer: Uh, that's not a fish! Video 9 Answer: Spotted Gar Video 10 Answer: Darter species Video 11 Answer: Smallmouth Bass Video 12 Answer: Lake Sturgeon Video 13 Answer: White Sucker Video 14 Answer: Silver Redhorse Video 15 Answer: Lake Sturgeon</p>

Material Title	Fish ID 101 Presentation Resource ☐
Description	Interactive presentation to learn how to identify common fish species of the Upper Black River... This resource was also shared as an assignment! NOTE: You should have your speakers ON to learn about fish identification from Doug Larson, Research Assistant at Michigan State University's Black River Sturgeon Facility!
Link(s)	https://drive.google.com/open?id=13jdtvBomNbonbXbMCHrwNr7SjvGrrRDrdzsuou1eQ_w&authuser=0

Material Title	Fish ID 101 - Resource for Print/Download
Description	Here is some of the content shared in the Fish ID 101 Presentation Resource ☐, You can print or download this resource. You can also add it as a copy to your Google drive.
Link(s)	https://drive.google.com/open?id=1b3j4ptGLHsWy1vDt_b3v2AHSK441hZOf4UnOpIkUVsk&authuser=0 https://drive.google.com/open?id=1ZiEdmQ0mZCBxuwWmMquvFy05d8bX1loe&authuser=0

Community Science

TEACHER INSTRUCTIONS COPIED FROM GOOGLE CLASSROOM (Student instructions are below)	
Title	Community Science Lesson: Teacher Version
Description	☐ PLEASE READ THESE INSTRUCTIONS FIRST ☐ 1. Review your classroom's assigned videos (http://bit.ly/3awvmbN). Assign the videos to students in your class. You can assign these videos to the students as individuals or in groups. PLEASE NOTE: Your students will need this information in order to complete the Fish ID 101 #11 Practicing Identifying Fish! ☐ If you want more videos, please contact Doug Larson (☐larso147@msu.edu). 2. Visit Sturgeon in the Classroom: MI Resources Community Science Lesson (attached Google Site) to watch the assigned video. Videos are sorted and linked by date in the "Videos" page.

	<p>3. A data sheet which your students can use is attached as an assignment, where it will automatically make a copy. After you've entered data from your video, please ask your students to share the sheet with you ("Share" -> <enter your teachers email> -> click "Done").</p> <p>You can also access in the "Data Sheet" page of the attached website. BEFORE YOU ENTER DATA, please make a copy (file -> Make a copy).</p> <p>4. Submit your data to MSU Research Staff. The data can be submitted by selecting the "Turn In Data" link in the website linked below. In the redirected google sheet, find your date. On your date tab, find the time of your video (ex: Midnight to 1:00 A.M.). Here, copy the data from your datasheet into the file. The file autosaves. Notice that your data will automatically populate into the graphs. Please be careful to make sure you are only entering data in your time slot. Please note that teachers should keep the datasheet (from Step 3) students submitted as a backup to protect data integrity!</p> <p>5. Detailed instructions for viewing the videos are included as, along with a brief background of this project (Lake Sturgeon Community Science Video Viewing Instructions).</p> <p>On behalf of the Michigan State University Black River Sturgeon Facility research staff, we would like to thank you for contributing to our Community Science Program!</p> <p><input type="checkbox"/> This assignment should take 60-90 minutes.</p>
Link(s)	<p>Lake Sturgeon Community Science Video Viewing Instructions: https://drive.google.com/open?id=1xG_ivYvgwFcDjZXRTcwSGfDNnyIEQwXWS4FnBv5TyUs&authuser=0 Citizen Science Data Backup: https://drive.google.com/open?id=1Zwvcf8hlE2M_1IpQ8DPcjk6CuLUdgMA-JO6MBIUEYoI&authuser=0 Sturgeon in the Classroom: MI Resources Community Science Lesson (CLICK TO ACCESS THE VIDEO ASSIGNMENTS): https://sites.google.com/msu.edu/sturgeoncommunityscience/home/community-science-lesson Teacher Video Assignments: http://bit.ly/3awvmbN</p>

Title	#12 Community Science Lesson: Student Version
Description	<input type="checkbox"/> PLEASE READ THESE INSTRUCTIONS FIRST <input type="checkbox"/>

	<p>1. Visit Sturgeon in the Classroom: MI Resources Community Science Lesson (attached Google Site) to watch your assigned video. Videos are sorted and linked by date in the "Videos" page.</p> <p>2. A data sheet which you can use is attached as an assignment, where it will automatically make a copy. After you've entered data from your video, please share the sheet with your teacher ("Share" -> <enter your teachers email> -> click "Done").</p> <p>You can also access in the "Data Sheet" page of the attached website. BEFORE YOU ENTER DATA, please make a copy (file -> Make a copy).</p> <p>3. Submit your data to MSU Research Staff. The data can be submitted by selecting the "Turn In Data" link in the website linked below. In the redirected google sheet, find your date. On your date tab, find the time of your video (ex: Midnight to 1:00 A.M.). Here, copy the data from your datasheet into the file. The file autosaves. Notice that your data will automatically populate into the graphs. Please be careful to make sure you are only entering data in your time slot. Please note that your teacher will keep the datasheet you submitted as a backup to protect data integrity!</p> <p>4. Detailed instructions for viewing the videos are included as, along with a brief background of this project (Lake Sturgeon Community Science Video Viewing Instructions).</p> <p>On behalf of the Michigan State University Black River Sturgeon Facility research staff, we would like to thank you for contributing to our Community Science Program!</p> <p><input type="checkbox"/> This assignment should take 60-90 minutes.</p>
Link(s)	<p>Lake Sturgeon Community Science Video Viewing Instructions: https://drive.google.com/open?id=1xG_ivYvgwFcDjZXRTcwSGfDNnyIEQwXWS4FnBv5TyUs&authuser=0</p> <p>Citizen Science Data Backup: https://drive.google.com/open?id=1Zwvcf8hlE2M_1IpQ8DPcjk6CuLUdgMA-JO6MBIUEYoI&authuser=0</p> <p>Sturgeon in the Classroom: MI Resources Community Science Lesson: https://sites.google.com/msu.edu/sturgeoncommunityscience/home/community-science-lesson</p>

Wrap-Up

Title	Student Evaluation
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Description	Please complete this evaluation AFTER you have completed all activities related to the Lake Sturgeon Community Science Program.
Link(s)	http://bit.ly/3qTzwRZ

TEACHER INSTRUCTIONS COPIED FROM GOOGLE CLASSROOM

TEACHER INSTRUCTIONS COPIED FROM GOOGLE CLASSROOM	
Title	Lake Sturgeon Community Science - Educator Evaluation
Description	Please complete this evaluation AFTER you have completed all activities related to the community science program with your students.
Link(s)	https://docs.google.com/forms/d/e/1FAIpQLSevUBlCOUBnHYrEl6i0igXzrA1ArFN-EP-UvdeyqV42vukHy0A/viewform