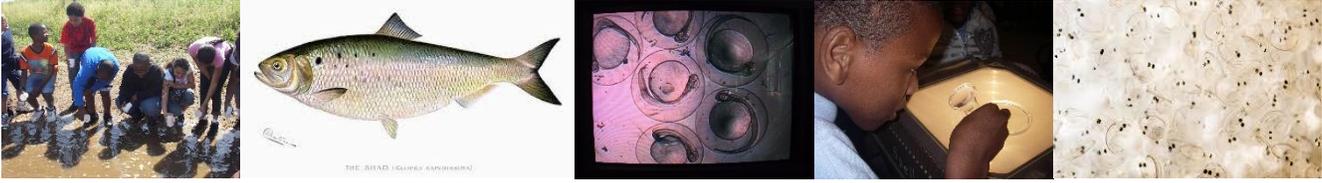


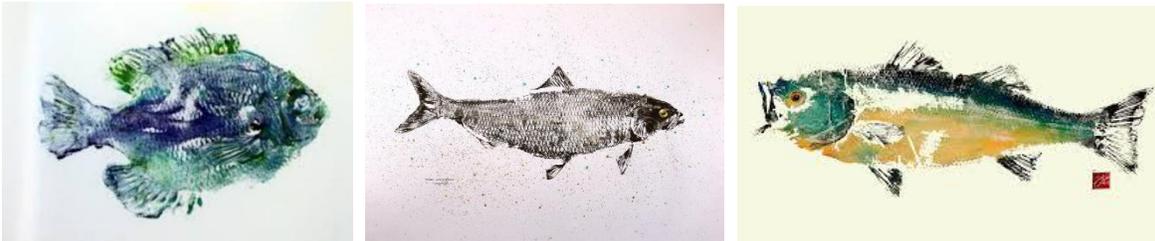
American Shad at Home

American shad-themed activities for students and their caregivers to complete at home.



Early Learners (K-2nd)

1. American shad are a type of fish! But what is a fish, and what things do all fish have in common? Visit [this webpage](#) from National Geographic to learn more about fish and spend time looking closely at the photographs of the different kinds of fish. Make a list of the things that fish have in common. For example, do all fish have fins? Next, make a list of all the things *you* and fish have in common. For example, do fish have eyes? What about bones? You can create your lists by writing words or drawing pictures.
2. Birds like bald eagles and osprey hunt for fish, including American shad! Can you help this eagle find fish by completing [this maze](#)? If you have a printer at home, you can print the maze. If you don't, you can use your finger to trace the route the eagle should take on a computer, tablet, or phone screen.
3. American shad travel long distances throughout their life – from the rivers where they were born, out to the ocean, and back again! Shad may encounter many obstacles on their journey: predators like dolphins and eagles that want to eat them, dams and locks that prevent them from getting where they need to go, rough water and strong currents that make it hard to swim, etc. Create your own [obstacle course](#) at home using materials you already have: sheets, pillows, blankets, blocks, cardboard boxes, etc. As you move through your obstacle course, pretend you are an American shad swimming from one place to another!
4. Explore the traditional Japanese art of [fish printing](#). Although you probably can't create a fish print at home, you CAN create your own fish artwork inspired by other artists who make [fish prints](#) using crayons, markers, pens and pencils, etc. If you have washable paint at home, you can try creating prints of other common household items, like [fruits and veggies](#), [bottles and cans](#), [your own hands](#), blocks, or other items with interesting textures!



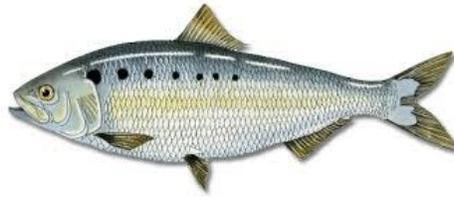
5. American shad travel from the rivers where were born, out to the Atlantic Ocean, and then back to the place where they were born when they are ready to have their own babies; even though they've only lived in that river once! To find their way back, American shad really depend on their sense of smell.

- Read and listen to "[My Five Senses](#)", by author Alikei, to begin learning about your own senses.
- Explore your own home using your five senses. Complete a [five senses scavenger hunt](#), paying particular attention to your sense of smell. Are there things in your home that have a strong sense of smell? If so, what are they?

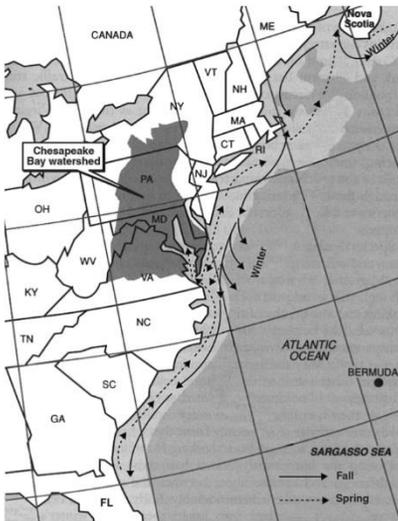
Upper Elementary (3rd – 5th)

1. Watch the movie "[Shad Run](#)", directed by Ben Dorger and Becky Harlan, to learn more about the American shad in the Anacostia and Potomac Rivers. The movie teaches us more about how the American shad population has changed over time, and the ways in which scientists and students have worked together to restore American shad. What have students done to help?

2. Biologists (scientists who study animals and plants) often work with artists to create drawings and paintings to help them better understand what they are exploring. Check out [this drawing](#) of a fish that has all of the body parts labeled. Then, do a Google search for images of American shad. Using crayons, markers, pens, pencils, or whatever you have at home, create your own drawing of an American shad - remember to label the parts! If you have a printer at home, you can also print out [this image](#) of an American shad, label it, and color it in.



3. American shad travel long distances throughout their life - from the rivers where they are born, out to the ocean, and back again when they are ready to have babies of their own. Sometimes they encounter obstacles on the journey.



- Watch [this video](#) from the U.S. Fish and Wildlife Service and explore [this webpage](#) from the World Wildlife Fund that explain some of the challenges that migratory fish face. Write down two challenges *and* two solutions.
- Watch [this video](#) of shad as they make their way through a fish "ladder" – one of the solutions people have created to help migratory fish - on their return journey.
- Create your own obstacle course at home using materials you already have: sheets, blankets, pillows, blocks, boxes, bins, etc. and be sure to include a lot of obstacles! Pretend you are an American shad traveling from the Atlantic Ocean back to the Anacostia River. Try changing or altering some of your obstacles – how does this impact how quickly you can make it through your obstacle course?

4. In [this presentation](#), check out the graph on page 15 that tells us how many American shad were caught each year in the Potomac River between 1878 and 2002. How many shad were caught in 1878? In 1928? In 1972? Now that you've learned more about American shad, why do you think that there were less shad caught in 1972 than in 1878? Write two sentences explaining why. Next, check out the graph on page 45 that shows how many American shad were found in the Potomac River every two years between 1959 and 2015. How many shad were found in 1995? In 2015? Write two sentences explaining why the population of American shad has begun to increase again!

5. In the movie "[Shad Run](#)", the funny and entertaining song "I'm a Fish" by Joe McCauley and the Sturgeon Generals plays through the credits. Have a listen (fast-forward to minute 23:33) and then [write your own song](#) about shad!

- Start by choosing a theme (ex. American shad)
- Choose a melody you already know (ex. Twinkle, Twinkle, Little Star)
- Brainstorm words that relate to your theme (ex. fish, swim, journey, plankton, etc.)
- Use these words to create the chorus (part of the song that repeats) and the verses. Decide if you want parts of your song to rhyme (they don't have to).



Middle and High School (6th – 12th)

1. Watch the movie [“Shad Run”](#), directed by Ben Dorger and Becky Harlan, to learn more about the American shad population in the Anacostia and Potomac Rivers, how it has changed over time, and the ways in which scientists and students have worked together to restore American shad.

- “Shad Run” was selected for inclusion in the [Chesapeake Film Festival](#). Using materials you have at home (paper, cardboard, markers, crayons, MS Paint, etc.) design a movie poster for “Shad Run” that advertises the movie and encourages people to come see it at the festival!

2. After watching “Shad Run”, explore [this presentation](#) prepared by Jim Cummins (the biologist featured in “Shad Run” who was instrumental in helping to restore American shad to the Potomac and Anacostia Rivers). There is A LOT of information in this presentation, so please focus on the data that has been shared in the graphs on page 15 and page 47. Consider how the American shad population has changed over time.

- At what point in time did the shad population begin to decline?
- At what point in time did the American shad population begin to grow again?
- How many American shad were counted in 2015? How does that number compare to the numbers of shad caught in 1878?

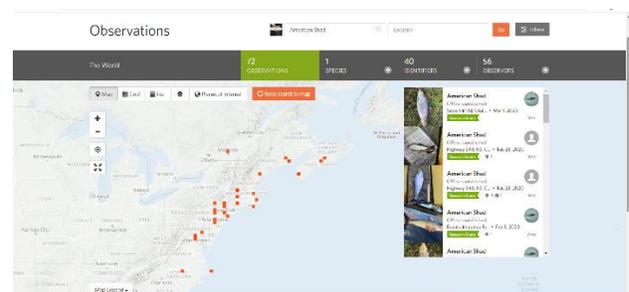
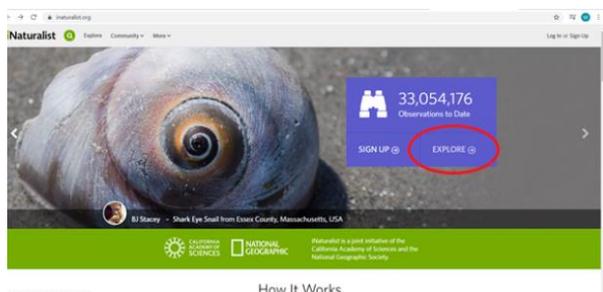
3. Visit a few of the following webpages to learn more about how the population of American shad has changed over time. After reading, summarize what you have learned about the challenges that American shad face and some of the great things being done to increase the population of American shad, as well as why this work matters.

- [This article](#) from the Chesapeake Bay Program discusses why shad have been important throughout history.
- [This article](#) from the Bay Journal discusses some of the challenges that American shad continue to face.
- [This article](#) from Atlas Obscura provides more details about the history of American shad in the United States.

4. American shad are members of the herring family, which includes other types of anadromous fish like alewife, hickory shad, blueback herring, etc. These fish can be found up and down the East Coast of North America. The alewife and blueback herring in the Mystic River in Connecticut have faced many of the same challenges as the American shad in the Potomac and Anacostia Rivers.

- Visit [this webpage](#) to learn more about the efforts along the Mystic River to increase the populations of river herring and explore the data to better understand how the population of river herring has changed over time.
- Scientists are counting river herring on the Mystic River to determine how their populations are changing, and individuals are invited to help with this effort! Visit [this webpage](#) to help count the number of fish that swim by in 10-60 second videos and submit your data to be a part of this cool project!

5. Visit [this webpage](#) from the MD-DNR and read the portion of the page on spawning. Next, visit [iNaturalist.org](#). Click on “Explore.” Type “American shad” into the search feature. Check out the map and notice the dates and locations of the observations. Using the information you gained visiting the MD-DNR webpage, explain why individuals in Georgia observe shad in February but individuals in Maine don’t observe shad until mid-June.



LEARN MORE about the Anacostia Watershed Society’s environmental education programs by visiting:
<https://www.anacostiaws.org/what-we-do/education.html>