



Right Whale Population, Trends and Current Status Activity

Purpose: Right whales are on the brink of extinction. Students will walk away with an understanding that right whales are critically endangered and that if nothing is done, we will lose this species within their lifetime.

Preparation: Each right whale, on the next pages, should be cut out, printed and laminated if you want. You can either cut them in rectangles or cut out the animal itself. It's for 30 people.

Directions:

Begin with the PowerPoint available soon at www.yearoftherightwhale.org. This explains a little of what we know about right whales.

Hand out the right whales to each student.

1. Tell them that the population of right whales is currently about 410 so each one of them represents 14 right whales left in the N. Atlantic. We are going to explore the demographics first.
 - a. Everyone with a blue dot, go to my left—everyone else to the right (make sure they are all still in front of you—just off to the side). Ok, this is roughly how the population is split male/female. Is this good for the population? Yes, it's important to have even numbers of males and females.
 - b. Everyone with a pink dot, stay where you are, and the rest come back to my left. This is the number of breeding females—whales able to have a calf. Is this good? No, there are less and less breeding females. Why? Some aren't sexually mature, but what else???? Too old? Haven't had calves in a while. Where does this number come from?
 - c. Ok, now, everyone with a GREEN band around your tail, come to the left. You have all been entangled in fishing gear at some point in your life. 85% of the population has entanglement scars. Some have been entangled up to 6 times. Recently 6 whales died and there were 21 previous entanglements between them. Good, bad??? Horrifying?
 - d. Finally, everyone with an orange boat, come to my left. Imagine all of you have died. The ones with boats represent the number of whales killed by shipstrikes between 1970 and 2007. 35%. At that point, a speed limit was put into effect along the Eastern seaboard when right whales are present. This has drastically reduced the number of shipstrikes. At this point, only 1 right whale calf has died from a shipstrike in the past 10 years (that we know of) in the US.
 - e. Staying in the same place. Imagine again, that all of you have died. The ones here (with the boats) are the only whales that we find. We estimate that we only see

about 1/3 of the deaths any given year. If we don't see a dead animal, we have no way of determining its cause of death.

2. Current trends in the population. We are looking at what has happened in the past 3 years. Now, you each represent a single whale. We started 2017 with a population estimate of 450 whales.
 - a. Births over the past 3 years
 - i. Red smiley face: come over here. 5 calves in 2017
 - ii. Green smiley face: come over here—no calves in 2018
 - iii. Good news: Pink Smiley faces—7 calves in 2019
 - b. Known deaths over the past 3 years.
 - i. Those with a red X, come to the right side of the room. You all died in 2017. (remember that we only see 1/3 of the deaths also, so this is just what we know of.) Good or bad for the population? Obviously bad because a population of 450 losing 17 a year won't take long to go extinct.
 1. Have 7 of the kids in the 17 step forward. You all were necropsied, which means that an autopsy was done to figure out why you died. 4 of you were hit by a boat, 2 were entangled in fishing gear, and the last, we don't know, It couldn't be determined. What do you think would have happened after the Canadian government found out these results??? See what the kids come up with. (You might want to pause for a little discussion here about what happened. Speed limit, fishing gear regulations. Etc)
 - ii. 2018 was a little better. If you have a green X, come to the right. You were the only whales that we know of that died in 2018. Much better. No deaths in Canada this year. Population estimate at the end of the year was 411.
 - iii. Pink X join your friends over here. 8 whales have been found in 2019 so far. 3 necropsied were hit by boats. Necropsy on Sunday for one animal.
 - c. SUMMARY: 12 births, and 28 known deaths
 - d. We have to act now.
3. What is happening?
 - a. What is killing the right whales? Have a little discussion about this. Shipstrikes and entanglements. Published in the journal *Diseases of Aquatic Organisms*, the paper reports on the causes of 70 North Atlantic right whale deaths over a 16-year time period (2003-2018). Of the 43 cases in which a cause of death was definitively determined, 90% died from trauma resulting from entanglement in line and vessel collisions.
 - b. Last thing. If you have an aqua band on your tail, come to the right. You all represent individual whales who were last seen entangled. That means that you might or might not be alive. We either haven't seen you free of gear, or your body was never recovered if you died. (Maybe read a little about some of the whales—they are in the powerpoint.)
4. Together we are going to create a solution to help save right whales!