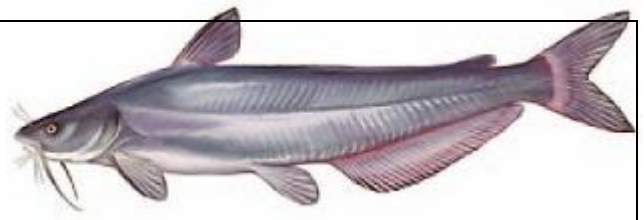




## How Big Will They Get?



**Objectives:** Students will graph the weight and length of state record blue catfish and predict the size of the next state record fish will be caught based on historical data.

### Background:

The blue catfish (*Ictalurus furcatus*) was introduced into Virginia's rivers in the mid 1970's in order to provide additional opportunities for citizens to catch a large fish. The blue catfish is originally native to the Mississippi drainage. The blue catfish were placed in the James River as fingerlings about 2-3 inches in length. This fish is an omnivore and feeds on fish, crayfish, and mollusks. It is also a scavenger, eating dead or dying aquatic and terrestrial animal matter. Like all catfish, the blue catfish is adapted to feed on the dark river bottom, its sense of smell and the very sensitive whiskers help it find food.

Virginia's state record blue cat fish weighed in at exactly 143 pounds and measured 57 inches in length with a girth of 43.5 inches. The huge cat was caught in John H. Kerr Reservoir (Buggs Island Lake) on Saturday, June 18, 2011. This is the largest freshwater fish caught in Virginia waters and is the current **World Record Blue Catfish**.

Historical records for blue catfish indicate that they can grow much larger than the current record but how big no one knows for sure.

Additional information and a description of this species may be found on the Department of Game and Inland Fisheries website; <http://www.dgif.virginia.gov/wildlife/fish/> .

The dates and the weights of each of Virginia's record blue catfish are in **Table 1**.

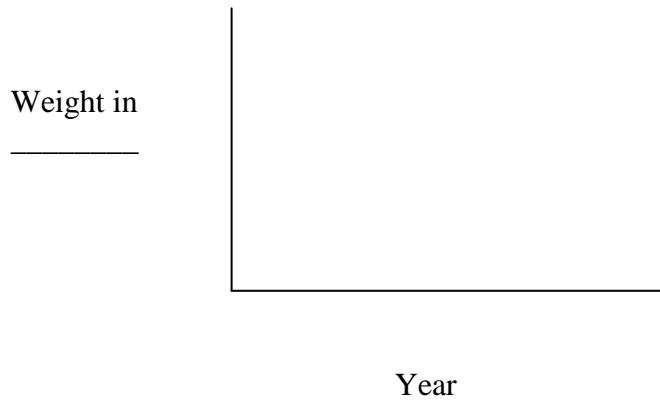
Estimate when Virginia's blue catfish record will reach 160 + pounds. You can convert the pounds to kilograms before graphing. To convert pounds to kilograms multiply the number of pounds by 0.45.

**Table 1:**

Date	Weight (lbs)	Weight (kg)	Length (in)	Body of water
4/5/1986	33.75 lbs		38.0 in.	Rappahannock River
4/5/1986	38.50 lbs		39.0 in.	Rappahannock River
3/13/1987	42.25 lbs		40.0 in.	Rappahannock River
3/28/1989	45.50 lbs		41.0 in.	Rappahannock River
3/17/1990	45.50 lbs		46.0 in.	Rappahannock River
11/21/1991	56.75 lbs		48.0 in.	James River
3/30/1993	57.00 lbs		44.0 in.	Rappahannock River
4/11/1993	57.50 lbs		47.0 in.	Rappahannock River
6/24/1994	66.50 lbs		50.0 in.	Appomattox River
4/11/1999	67.50 lbs		48.25 in.	James River
11/19/1999	71.75 lbs		48.25 in.	James River
4/30/2004	75.25 lbs		51.75 in.	James River
6/29/2004	92.25 lbs		51.75 in.	Buggs Island Lake
6/15/2006	95.68 lbs		54.50 in.	James River
5/20/2009	102.25 lbs		52.75 in.	James River
3/17/2011	109.00 lbs		53.0 in.	Buggs Island Lake
6/18/2011	143.00 lbs		57.0 in.	Buggs Island Lake

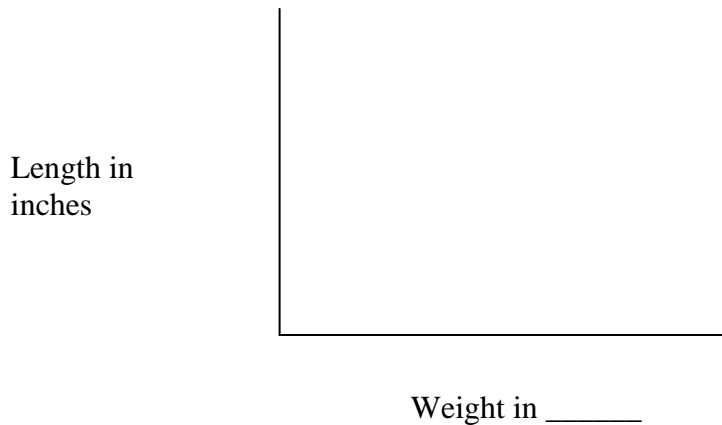
**Graphing:**

1. Graph the year and weight of each blue catfish below.



When and where would you go fishing if you wanted to catch the next state record or the next world record blue catfish?

2. Graph the weight and length of each record fish.

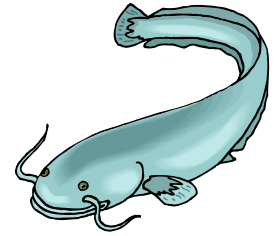


Is there a relationship between the weight of the fish and its length?

If you know the length can you estimate the weight of the fish?

**Additional blue catfish graphing activity:**

If you catch a blue catfish over 30 pounds and 38 inches long you may request a citation or certificate from the Virginia Department of Game and Inland Fisheries. A random sample of the 659 citation size Blue catfish caught in the James River during 2006 can be found in **Table 2**. Most of the fish were released back into the river to be caught again, a few were kept to be eaten or mounted by the fisherman.



Based on this sample; what time of year are most of the citation size fish caught?

Is there a relationship between the weight of the fish and its length?

**Table 2: Sample 2006 James River Blue Catfish Citations**

Catch Date	Weight	Length
2/8/2006	30.00	38.75
3/1/2006	30.00	39.75
4/10/2006	30.00	28.75
1/31/2006	31.00	38.75
7/29/2006	31.00	41.75
2/19/2006	31.50	39.75
11/24/2006	32.00	39.75
1/24/2006	33.00	38.75
7/22/2006	33.00	37.75
4/10/2006	34.00	41.75
9/7/2006	35.00	38.75
10/21/2006	35.00	41.50
4/8/2006	35.50	39.50
6/11/2006	36.00	43.75
4/8/2006	37.00	39.25
8/5/2006	37.00	40.50
6/4/2006	37.50	39.75
4/6/2006	38.00	40.50
10/8/2006	38.63	42.25
3/4/2006	39.00	43.75
3/11/2006	40.00	43.75
12/17/2006	40.00	45.50
4/8/2006	41.00	44.75
1/1/2006	42.00	42.75
1/15/2006	42.00	44.75
11/17/2006	43.00	44.75
12/17/2006	44.00	45.75
12/5/2006	45.00	51.75

Catch Date	Weight	Length
4/18/2006	46.00	46.25
11/22/2006	47.00	41.75
11/24/2006	48.00	44.75
11/20/2006	49.00	44.50
8/11/2006	50.00	48.75
3/11/2006	51.00	43.75
11/24/2006	52.00	45.75
4/9/2006	53.00	42.75
1/30/2006	54.00	43.50
4/9/2006	55.00	45.75
4/3/2006	57.00	45.75
5/1/2006	57.00	48.75
10/20/2006	60.00	48.75
7/20/2006	61.13	48.50
2/24/2006	63.00	49.75
4/27/2006	68.38	50.75
2/2/2006	69.00	50.75
1/4/2006	70.00	50.75
4/7/2006	70.00	50.50
7/15/2006	72.00	50.75
12/3/2006	72.00	50.75
12/20/2006	72.25	52.75
7/20/2006	73.00	52.75
8/21/2006	74.00	64.75
8/20/2006	77.00	64.75
3/18/2006	78.00	64.75
10/28/2006	85.44	54.50
8/1/2006	86.00	50.75
7/15/2006	95.69	54.50

Similar citation and record data can be found for other Virginia fish species at <http://www.dgif.virginia.gov/fishing/trophy/>