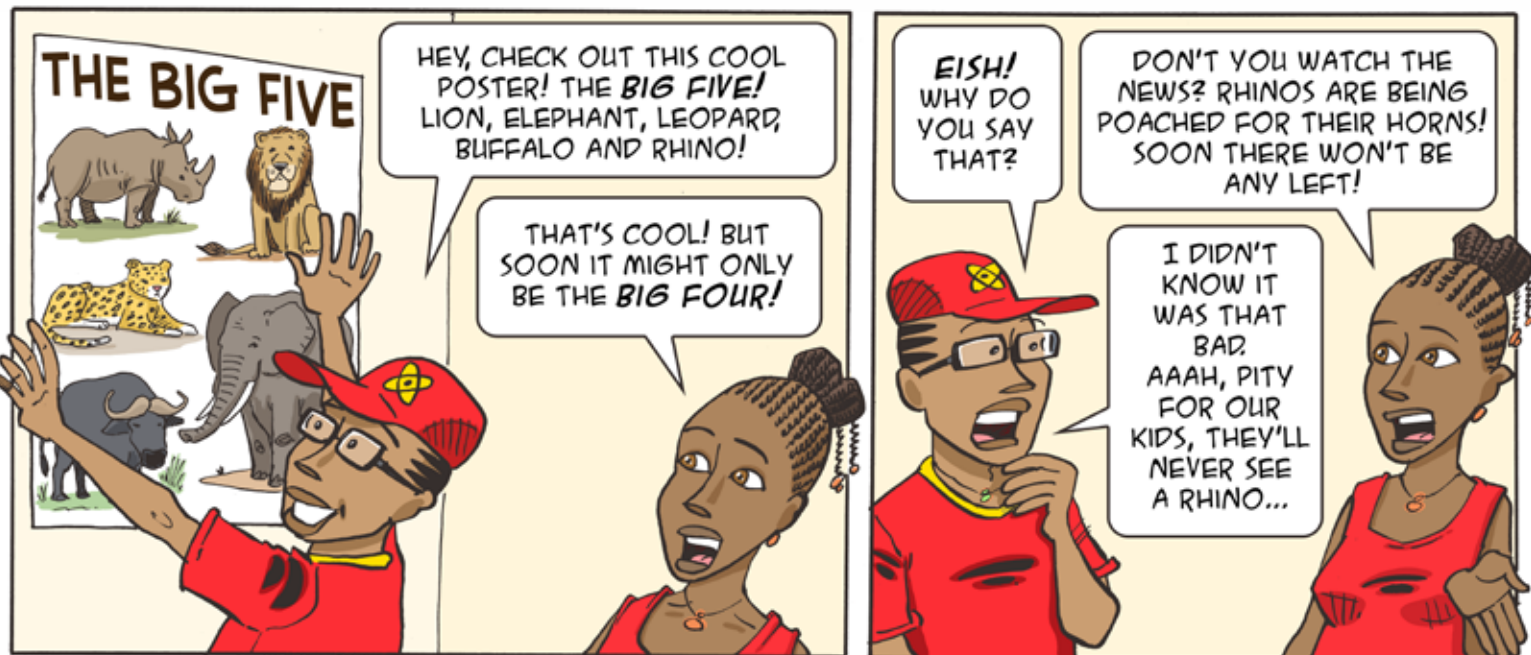




SAVE THE RHINO!



THE BIG FIVE

HEY, CHECK OUT THIS COOL POSTER! THE **BIG FIVE!** LION, ELEPHANT, LEOPARD, BUFFALO AND RHINO!

THAT'S COOL! BUT SOON IT MIGHT ONLY BE THE **BIG FOUR!**

EISH! WHY DO YOU SAY THAT?

DON'T YOU WATCH THE NEWS? RHINOS ARE BEING POACHED FOR THEIR HORNS! SOON THERE WON'T BE ANY LEFT!

I DIDN'T KNOW IT WAS THAT BAD. AAAH, PITY FOR OUR KIDS, THEY'LL NEVER SEE A RHINO...

RHINOS IN DANGER

THE **RHINOCEROS** (OR RHINO, FOR SHORT), IS ONE OF AFRICA'S LARGE MAMMALS. ONE RHINO CAN WEIGH UP TO 3000 KG! RHINOS ARE ONE OF THE "**BIG 5**" THAT TOURISTS COME TO SEE ON SAFARIS.

THERE ARE TWO SPECIES OF RHINO IN SOUTH AFRICA, THE WHITE RHINO AND THE BLACK RHINO.



UNFORTUNATELY, RHINOS ARE IN DANGER OF BECOMING **EXTINCT**. IN OTHER WORDS, THEY MIGHT DIE OUT COMPLETELY.

THIS TABLE SHOWS THE NUMBER OF RHINOS THAT HAVE BEEN KILLED BY POACHERS EACH YEAR.

YEAR	NUMBER OF RHINOS POACHED
2007	13
2008	83
2009	122
2010	333
2011	448
2012	668
2013	1004
2014	1215

Department of Environmental Affairs: Rhino Poaching Statistics



ACTIVITY: BUILD A MODEL GRAPH



WHAT YOU WILL NEED:

- 1 NINE SHEETS OF A4 PAPER



- 2 SCISSORS



- 3 PRESTIK



- 4 CARDBOARD BOXES TO CUT INTO SQUARES



(INSTEAD OF CARDBOARD SQUARES YOU CAN USE BRICKS, BLOCKS OR SMALL BOXES TO BUILD YOUR GRAPH)

- 1 CUT 50 CARDBOARD SQUARES FROM THE BOXES. EACH SQUARE SHOULD BE 15cm X 15cm.



- 2 WRITE 2007 ON ONE SHEET OF PAPER, 2008 ON THE NEXT, AND SO ON UNTIL 2015. PLACE THE SHEETS ALONG THE BOTTOM OF THE WALL.

- 3 ABOVE EACH SHEET OF PAPER STICK CARDBOARD SQUARES TO REPRESENT THE NUMBER OF RHINOS KILLED IN THAT YEAR. USE ONE SQUARE TO REPRESENT 100 RHINOS.

- 4 FOR NUMBERS LESS THAN 100, CUT A CARDBOARD STRIP FROM A FULL SQUARE.



- 8 STICK CARDBOARD SQUARES UP TO SHOW YOUR PREDICTION.



- 7 WHAT TREND DO YOU NOTICE?

DISCUSS: IF THIS TREND CONTINUES, HOW MANY RHINOS DO YOU ESTIMATE WILL BE KILLED IN 2015?

- 6 WRITE THE NUMBER OF RHINOS KILLED ON THE TOP PIECE OF CARDBOARD IN EACH COLUMN.



- 5 DO THIS FOR EACH YEAR, UNTIL YOU HAVE BUILT YOUR MODEL GRAPH UP TO 2014.

USING MATHS FOR CONSERVATION

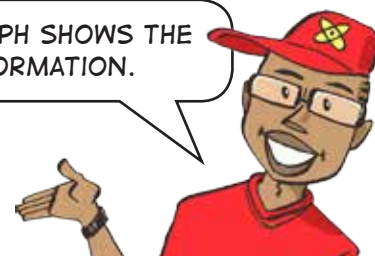
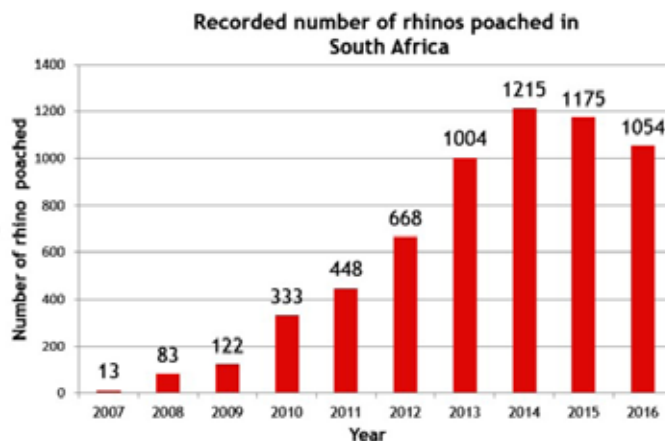
WHEN YOU EXTEND YOUR GRAPH BY GUESSING, WE CALL THIS **EXTRAPOLATION**. THIS IS NOT JUST A WILD GUESS - IT IS USING THE TRENDS IN THE GRAPH TO GIVE AN "INTELLIGENT" ESTIMATE.

YOUR GRAPH WAS BASED ON THE OFFICIAL FIGURES FOR THE YEARS 2007 TO 2014. SINCE THEN THE STATISTICS HAVE BEEN UPDATED, SO WE KNOW HOW MANY RHINOS WERE POACHED IN SA IN 2015 AND 2016:

2015: 1175

2016: 1054

THIS BAR GRAPH SHOWS THE UPDATED INFORMATION.



HOW DOES IT COMPARE WITH YOUR EARLIER ESTIMATE? WERE YOU SURPRISED?

WHAT POSSIBLE REASONS CAN YOU THINK OF TO EXPLAIN THE REDUCTION OF POACHING NUMBERS IN SA?

WHITE RHINOS INCREASE **BIODIVERSITY** BY SELECTING ONLY CERTAIN KINDS OF PLANTS - GRASSES. THIS GIVES SPACE FOR MANY OTHER KINDS OF PLANTS TO GROW. WHEN THERE ARE MORE KINDS OF PLANTS, THIS ALSO PROVIDES FOOD FOR MORE KINDS OF ANIMALS THAT DEPEND ON THOSE PLANTS. THE RESULT IS MORE BIODIVERSITY. SO, IF RHINOS BECOME EXTINCT IT MAY LEAD TO THE LOSS OF OTHER SPECIES AS WELL.



SAVING OUR NATURAL HERITAGE

FROM YOUR MODEL GRAPH YOU CAN SEE THAT MORE RHINOS ARE BEING POACHED EVERY YEAR. IF POACHING CONTINUES TO INCREASE, RHINOS WILL SOON BECOME EXTINCT. THIS IS ONE WAY THAT MATHS CAN BE USED TO HELP CONSERVATION EFFORTS.

100 YEARS AGO, BECAUSE OF HUNTING, THERE WERE VERY FEW WHITE RHINO LEFT. CONSERVATION EFFORTS HAVE RESCUED THEM, AND TODAY THERE ARE OVER 20 000.

BUT THERE IS A NEW THREAT - A MULTI-BILLION DOLLAR WORLDWIDE TRADE IN ILLEGAL WILDLIFE PRODUCTS. MANY PEOPLE IN THE EAST BELIEVE THAT RHINO HORNS HAVE HEALING PROPERTIES. RUMOURS ON THE INTERNET CLAIM THAT RHINO HORN CAN CURE CANCER. RHINOS ARE AGAIN UNDER SERIOUS THREAT OF EXTINCTION.

CONSERVATIONISTS ARE USING MANY METHODS TO TRY TO SAVE ENDANGERED SPECIES LIKE THE RHINO. FOR EXAMPLE:

- MICROCHIPS ARE HIDDEN IN RHINO HORNS SO THAT SCIENTISTS CAN TRACK THE RHINOS.
- HELICOPTERS AND PLANES ARE USED TO FOLLOW RHINOS AND TRACK POACHERS.



A ranger drilling into the horn of a sedated rhino to insert a microchip

Photo: Endangered Wildlife Trust

PUZZLE YOUR MIND!!!

FIND THE LISTED WORDS IN THE PUZZLE BLOCK, AND DRAW A RING AROUND EACH WORD. THE WORDS RUN IN ALL DIRECTIONS, SO LOOK CAREFULLY!

CONSERVATION
EXTINCTION
HERITAGE
HORN
MAMMAL
MICROCHIP
NATURAL
POACHING
PRESERVE

PROTECTION
RHINOCEROS
SAVE



H	M	H	H	N	M	C	G	L	O	A	T
O	A	W	A	R	E	N	E	S	S	N	R
E	M	N	E	O	I	L	C	O	O	O	A
C	M	E	R	H	A	A	R	I	R	I	M
I	A	N	C	R	I	E	T	P	E	T	I
L	L	A	U	M	C	C	H	S	C	C	C
O	O	T	W	O	N	A	E	X	I	E	R
P	A	H	N	I	N	G	R	I	H	T	O
N	O	I	T	A	V	R	E	S	N	O	C
T	H	X	G	P	I	R	H	O	R	R	H
R	E	E	G	A	T	I	R	E	H	P	I
I	S	A	V	E	V	R	E	S	E	R	P

Knowledge is NCAH!



RHINOS AND BIODIVERSITY

IN AN ECOSYSTEM AN **APEX SPECIES** ("TOP" SPECIES) IS ONE THAT IS NOT EATEN BY OTHER ANIMALS. AN APEX SPECIES IS USUALLY LIMITED BY ITS FOOD SUPPLY. FOR EXAMPLE, THE NUMBER OF LIONS THAT CAN SURVIVE IN AN AREA DEPENDS ON HOW MANY PREY SPECIES (E.G. IMPALA) THEY CAN HUNT. THE LIONS CONTROL THE BALANCE OF MANY OTHER SPECIES.

RHINOS ARE AN APEX SPECIES BECAUSE THEY ARE TOO BIG TO BE HUNTED BY BIG PREDATORS. WHITE RHINOS ARE **GRAZERS** - THEY EAT GRASS. THE NUMBER OF WHITE RHINOS IS CONTROLLED BY THEIR FOOD SUPPLY, I.E. HOW MUCH GRASS IS AVAILABLE.



Photo: Endangered Wildlife Trust

DO RHINOS NEED HORNS?



DE-HORNING RHINO IS ONE METHOD BEING USED TO DISCOURAGE POACHERS FROM KILLING RHINO. TALK ABOUT THIS STRATEGY. DO YOU THINK IT WILL WORK? HOW DO YOU FEEL ABOUT IT?

Photo: Kelvin Trautman, Wildlands Conservation Trust

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WE WANT YOUR FEEDBACK!

SEND US A PICTURE OF THE GRAPH YOU BUILT, AND THE MEMBERS OF YOUR CLUB WHO BUILT IT.



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