

PRE-FLIGHT ANSWERS FOR KITE FLYING

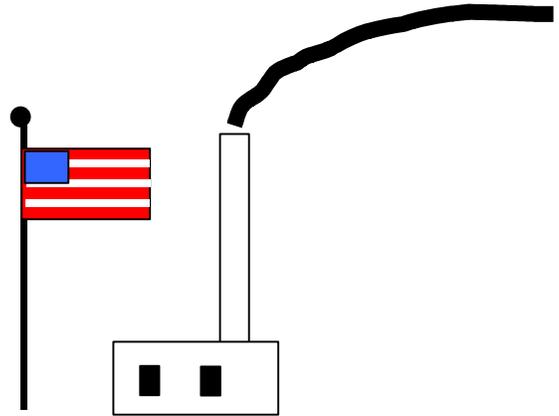
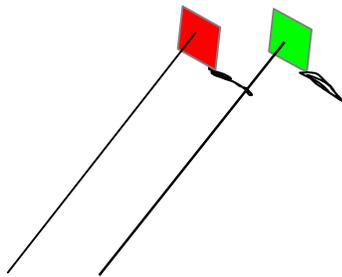
GRADES K-3

1. THE WIND
2. ROPES ARE TOO HEAVY
3. BLUE - IT IS THE SAME AS THE SKY

GRADES 4-6

1. YES - YOU WOULD HAVE TO RUN
2. YOU WOULD HAVE TO MAKE THE KITE VERY LARGE
3. YOU COULD COMPARE TO BUILDINGS - EACH FLOOR IS 10 FEET OR YOU COULD COMPARE THE HEIGHT OF THE KITE TO THE HEIGHT OF SOMEONE STANDING UNDERNEATH IT.

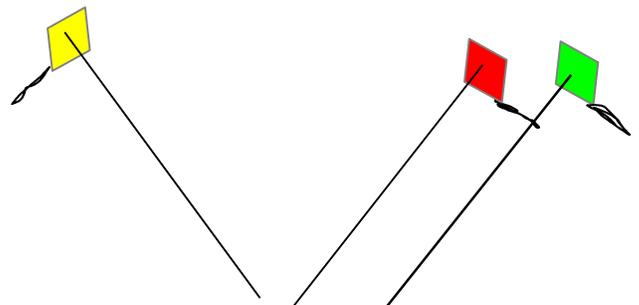
4.



GRADES 7-9

1. YOU WOULD HAVE TO MAKE THE METAL VERY THIN AND MAKE THE KITE VERY LARGE
2. YOU COULD DO THINGS LIKE LIFT CAMERAS TO TAKE PICTURES, MEASURE THE HEIGHT OF A BUILDING, MEASURE THE DISTANCE TO AN OBJECT, MEASURE THE STRENGTH OF THE WIND, FIND THE TEMPERATURE AT HIGHER ALTITUDES, ...

3. ALL KITES FLY WITH THE WIND. A KITE CANNOT FLY INTO THE WIND.



4. EVEN THOUGH THERE ISN'T ENOUGH WIND AT THE SURFACE TO LAUNCH A KITE (SO YOU MUST RUN), THERE MAY BE WIND BLOWING HIGHER UP TO KEEP THE KITE UP WITHOUT RUNNING.

GRADES 10-12

1. PROBABLY NOT. THE LIFTING FORCE GENERATED BY THE KITE MUST BE ENOUGH TO HOLD UP BOTH THE KITE ITSELF AS WELL AS THE STRING THAT IS ATTACHED TO IT. THE MORE STRING YOU LET OUT, THE MORE FORCE THAT IS NEEDED. EVENTUALLY THE WEIGHT OF THE STRING BECOMES TOO GREAT AND THE KITE WON'T FLY.
2. BUILDINGS CAUSE AIR TO SWIRL AND BECOME TURBULENT CAUSING UNEVEN FORCES ON THE KITE.
3. USE TANGENT FUNCTION. $\tan 35^\circ = \text{OPPOSITE (HEIGHT)}/\text{ADJACENT (110 FEET)} = .700$

THEREFORE, HEIGHT = $110 \times .700 = 77$ FEET

