



### ACTIVITY DESCRIPTION: [Suggested for Knd - 5th graders]

Track how light and shadows change over time and observe the pattern that they follow. You will use sunlight or a flashlight to create shadows of a 'building', trace them and see how the shadows change!

### STEPS:

1.) Lay a piece of paper on a flat surface near a brightly lit window **OR** use a flashlight to create a shadow that will fall on the paper.

2.) Find an object that will stand up on its own, like a cylinder or a rectangular prism. For example:

- a water bottle
- a small box
- a tupperware container

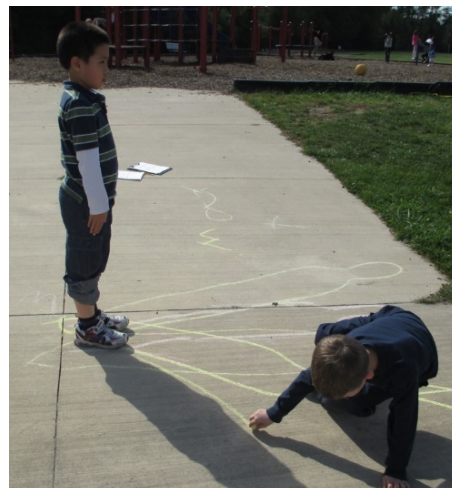
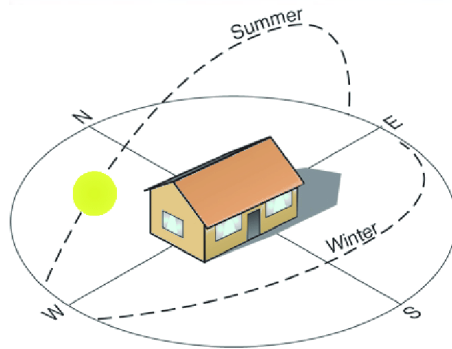
3.) Place the object on the side of the paper, and trace the around the base of the object so you have a reference in case it moves.

4.) Trace the shadows on the paper at regular time intervals (every hour, half hour, or whatever time frame you want) while always keeping the object in the same spot.

### OR

If using a flashlight, move it from one side of the object to the other in intervals to simulate different times of the day.

5.) Remove the object from the paper and see how the shadow changes over time. Decorate your pattern any way you like!



### MATERIAL LIST

- PAPER
- MARKERS OR CRAYONS
- A HOUSEHOLD OBJECT
- LIGHT SOURCE [SUNLIGHT OR FLASHLIGHT]
- (OPTIONAL) CHALK

### KEYWORDS

**CYLINDER** - AN OBJECT WITH A CURVED SIDE AND TWO FLAT CIRCLES ON THE ENDS

**RECTANGULAR PRISM** - A SOLID (3-DIMENSIONAL) OBJECT WHICH HAS SIX FACES THAT ARE ALL RECTANGLES

### KEEP GOING!

- FOR AN INTERESTING CHALLENGE, USE A MORE COMPLEX OBJECT, LIKE AN ACTION FIGURE, STUFFED ANIMAL, OR LEGO CREATION!
- TAKE THE ACTIVITY OUTSIDE USING CHALK: TRACE AN OBJECT OR A PERSON EVERY HOUR OVER THE COURSE OF THE DAY AND SEE HOW THE SHADOWS MOVE! REMEMBER TO PLACE THE OBJECT BACK IN THE SAME SPOT BEFORE YOU TRACE IT.