

STEM: Catching a Leprechaun

Leprechauns are smart and very tricky, too. Do you want to catch one? If so, you will need to make a very special trap—one that has a simple machine or two as part of the construction. You will also have to think of something to get the leprechaun's attention. What would make him come out of hiding?

Here is a list of the 6 simple machines. Some examples have been provided for each simple machine, but there are many more ways to use them.

pulley—a flag pole, a crane, a wishing well, a tow truck, a reel on a fishing pole, or window blinds

lever—a see-saw or a balance scale

wedge—a door stop, an ax, or a zipper→ think of the tab you pull and how it “wedges” between the “teeth” of the zipper

screw—a drill, a screw, a corkscrew, or something that screws together like a jar and lid

inclined plane—a ramp, a staircase, a ladder, or a slide

wheel and axle—a bike or a skateboard, a door knob you turn, a water wheel, a wheelbarrow

Start planning! Do you want to draw your idea first or gather interesting materials and then think of ways to use them?

Leprechaun Facts

- Leprechauns are only about 4" tall.
- They are known for being mischievous and playing tricks.
- They wear little suits, usually green, and hats of different kinds.
- Many have beards that can be red or brown, like their hair.
- They collect gold coins and hide them.
- They seem to like to polish their gold when there is a rainbow in the sky.
- They make shoes for themselves and for fairies.
- Sometimes, if you listen closely, you can hear them tapping while they work!
- If you catch a leprechaun, he will try to trick you to get away.
- If caught, a leprechaun must share his gold with you.



STEM Assignment: Build a Leprechaun Trap. Name: _____

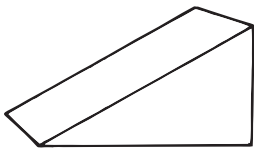
Make a trap to catch a tricky leprechaun and capture his gold.

1. Use recycled materials for your construction.
2. Incorporate one or more of the six simple machines shown below.
3. Decorate your trap to grab the attention of a tricky leprechaun and capture his gold!

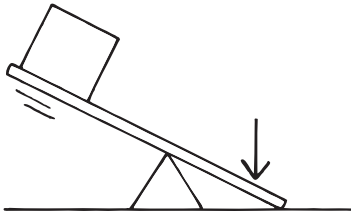


Science

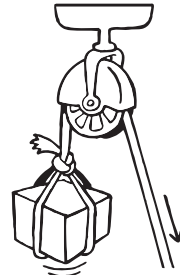
Put a check mark next to the simple machine(s) you used.



Inclined Plane



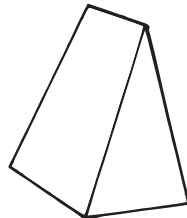
Lever



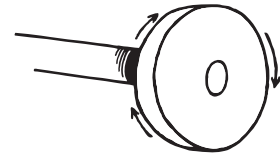
Pulley



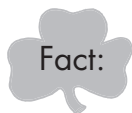
Screw



Wedge



Wheel and Axle

 **Fact:** These simple machines are the building blocks of all other machines.

Technology

1. Make a movie or take pictures (or draw one) to show how the trap works.
2. What tools did you use to build your trap?

3. What research did you do?

STEM Assignment: Leprechaun Trap *(cont.)*

Engineering

1. What steps did you use to build your leprechaun trap? List them below.

2. Describe how your trap works.

3. Did you run into any problems building your trap? Yes No

If yes, how did you solve them?

Math

1. What are the measurements of your trap?

How wide is it? _____

How tall is it? _____

How heavy is it? _____

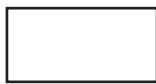
2. Circle the shapes you used to make your trap.



circle



square



rectangle



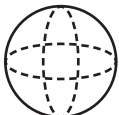
oval



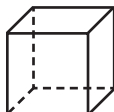
triangle



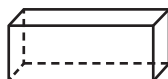
trapezoid



sphere



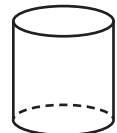
cube



rectangular prism



cone



cylinder