

# 3rd Grade Armstrong Elementary

## Research Guidebook

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Teacher \_\_\_\_\_ Brown \_\_\_\_\_  
Topic Simple Machines

### The AGOPPE Research Model

#### A- Ask Questions

Be curious!  
Explore your subject.  
Develop good questions.

#### G- Gather Information

Identify keywords.  
Access useful resources.  
Read, watch, listen, take notes, and think.  
Record your source citations.

#### O- Organize Information

Use graphic organizers.  
Summarize your findings.  
Draw conclusions and inferences.

#### P- Prepare

Prepare and produce something to communicate what you've learned.  
Don't forget your Works Cited!

#### P- Present

Show and explain your project to others.

#### E- Evaluate

Reflect!  
Evaluate your final product and the research process.

## A- Ask Questions

1. What is a machine and why do people use them?

2. What are the 6 types of simple machines? Give some examples.

3. How do people use simple machines to help them?

## G- Gather Information

### Citations

"Machine." *World Book Kids*, 2024,  
[www.worldbookonline.com/kids/article](http://www.worldbookonline.com/kids/article)  
Accessed 26 Mar. 2024.

"Simple Machines." *Gale Elementary Online Collection*, Gale, part of Cengage Group, 2020.  
*Gale In Context: Elementary*,  
[link.gale.com/apps/doc](http://link.gale.com/apps/doc) Accessed 30 Apr. 2024.

## G- Gather Information

### Research Notes

**Research Question #1:** What is a machine and why do people use them?

- Machines are objects that make doing jobs easier.
- They can do work that would be impossible without them.

**Research Question #2:** What are the 6 types of simple machines? Give some examples.

The 6 types of simple machines are the lever, the pulley, the wheel and axle, the inclined plane, the screw, and the wedge.

Lever - crowbar, wheelbarrow, seesaw, your arm.

Wheel and axle - (Windlass) that helps to raise a bucket from the well, bicycle, automobiles, wagons.

Pulley - wheel with a rope wound around it, flag pole, elevators

Inclined Plane - a ramp and a playground slide are examples. They help move objects easier.

Wedge - an axe, a chisel, a hatchet, a plow, and a doorstop are examples of wedges.

Screw - is an inclined plane that has been twisted; It has sharp edges that are called threads which allow the screw to twist.

**Research Question #3:** How do people use simple machines to help them?

People use machines to help them move heavy furniture. Other machines help people to move big boxes long distances.

Factories use machines like drills and saws. Businesses use typewriters, computers, and office machines.

People travel on and use airplanes, automobiles, and buses which are machines.

Printing presses were created to print books.

## O- Organize Information