

# GEARS! GEARS! GEARS!

## OBJECTIVES

- Experiment with ratios •Use trial and error techniques•Observe reactions •Use language for prediction\*•Use descriptive and factual words for observations† •Make informed hypotheses– use experience, knowledge and research results\*•Learn from non-ideal results\*

\*Indicates STEM and/or Common Core objectives

## GRADES

K-3

## ESTIMATED TIME

Flexible—adapt to your needs

## MATERIALS NEEDED

- [Gears! Gears! Gears! Set](#)



## SETTING THE STAGE

- Demonstrate how to attach gears.

## PROCEDURE

Let students experiment with the gears and use trial and error to make things spin.

Walk around the classroom as students assemble gears and encourage them to build various structures. Ask questions as you see fit.

- Build a tower for gears
- Build the tallest tower you can
- Build the longest gear line you can

## FOLLOW UP

- Do gears spin faster or slower by themselves? With other gears?
- When you have a long line of gears and slowly spin a gear on one end, does the gear on the other end start spinning right away?
- How can you make the base and tower gears spin at the same time?
- Do gears that are next to each other spin in the same direction?