

2000471

# Jump Up and Cheer!

## Lesson Plan



**Build a cheerleader and explore how cams push objects up and down. Make a Minifigure jump up and down!**

**In this lesson, your students will explore how pushing on an object can change the direction of its motion, and start or stop its movement.**

🕒 30–45 Minutes

📦 Beginner

🎓 Grades 1–2

### Engage (Whole Class, 5 Minutes)

- Have your students look at the picture of the model on their Student Worksheets and predict how the Minifigure will move.
- Ask questions to get them thinking. Here are some suggestions:
  - How do you think the Minifigure will move? (*As the gears turn, the cam (sloped purple brick), moves the Minifigure move up and down.*)
  - What do you think starts and stops this movement?
- Transition your students to the building challenge.

### Explore (Individual Work, 20 Minutes)

- Have your students work independently to build the Cheerleader model by following steps 1 – 12 of the building instructions (found in the box).

### Explain (Whole Class, 10 Minutes)

- Prompt your students to explain how the Minifigure jumps up and down.
- Ask questions like these:
  - What makes the Minifigure jump up and down? (*When the small gear turns, the teeth push the big gear to make it turn. The sloped purple brick, also called a "cam," pushes the Minifigure up and down as the big gear turns.*)
  - Why can't the Minifigure move up and down when the small gear is turned in the other direction? (*The flat side of the sloped brick stops the gear from turning.*)

### Elaborate (Individual Work, 10 Minutes)

- Have your students create drawings, short videos, or audio recordings explaining how the Minifigure is moving.

### Evaluate (Individual Work)

- Ask each student to give an example of a push force that's at work in their model.

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## Student Worksheet

### Build a cheerleader.

- Open the building instructions book



- Explain how your Minifigure moves
- Why does it stop moving when you turn the purple gear the other way?