

# Curious Kids!

citylibraries



## Down Up, Down Up - Challenge Sheet

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### The Challenge for all Curious Kids

- Let's be engineers today. An engineer designs, invents, makes and builds structures and machines like roads, computers, your house, bridges, cars, toys.
- Let's be curious about designing and constructing ramps that make balls go different speeds.

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### What do we need?

- Recycled boxes, tubes, rolls, cardboard
- Painter's tape or masking tape
- Balls – different sizes (not small), cars, other odd-shaped toys to send down the ramp
- Lego Duplo
- Stopwatch, timer, or we can count

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### Explore & Create

- Ramp design building: What you would like to build – high, low, wide, narrow?
- Ramp building: Use cardboard and painter's tape to secure the ramp onto the wall, chair, or tables. What items can be used to go down the ramp?
- Ramp racing: See how fast, slow balls, cars, & other things go down the ramp.
- Change the angle of the ramp. Does this change the speed of the balls?

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### Question to Ask & Words to Use

- How high / low? Could it go faster/slower? What have you discovered?
- Why did you...? How did you do that? Can you change it? What will happen if?
- High, low, slow, fast, tall, short, steep, gentle, engineer, imagine, design, try

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### Show & Share

- Play with a friend.
- Show a friend what you can do with the ramp to make a ball go fast.
- Race down the ramp.