05 · Teacher and parent guide

Extra material, not a book page

Part A is for the teacher. Part B is the take-home note for parents and carers.

Part A · For the teacher

This week in one line: the first engineering week. Children push, pull and roll, then **plan, build and test** a bridge or ramp for Ayo's toy car, and try again when it falls.

Get ready (20 minutes before class)

- **Safe materials:** big blocks and boxes only, all bigger than a toilet-roll opening. Pre-cut any card yourself. Check every toy car's wheels are fixed.
- Lay a blue paper river for each group. Set up 2 ramps of different heights (a plank on 1 block and on 2 blocks).
- Tie a **short** string to a box for pulling. Print the build card and plan cards (Printables PDF).
- Read the lesson spec the evening before and lay out the cards.

Key words and hand signs

Word	Say it like this	Hand sign
build	"Make something."	Fists stacking
bridge	"A way over the river."	Arms make an arch
ramp	"A slope."	Slanted arm
strong	"It does not fall."	Show muscles
test	"Try it to see if it works."	Thumb up/down wiggle
push / pull / roll	"Move away / move towards / turn over and over."	Palms forward / pull rope / roll hands

> **RhinoBot tip**
> When a build falls, celebrate it: "Great test! Now we know what to change." Ask one question: "What can we make bigger, wider or lower?" This is the same as fixing a program.

Checking learning

Watch, don't test. Tick each child who builds and tests a bridge or ramp and uses push, pull or roll (Review sheet 06). Photo each build. Each child who does it gets a **Step Star sticker**.

Part B · Take-home note for parents and carers

This week your child was an engineer! We built bridges and ramps for a toy car, tested them, and tried again when they fell.

Try this at home (5 minutes)

1. Make a ramp with a book or a tray. Roll a ball or a plastic bottle down. Try a higher ramp: does it go further?
2. Build a bridge with boxes and a book for a toy car. Test it!
3. Talk about push and pull: pushing a door, pulling a drawer.

Words to use together

bridge · ramp · tower · strong · test · push · pull · roll

Play together

Scan the QR code in the book, or visit: https://rhinoxscientifica.com/q/n1-t3-w5
There you will find the printable cards and the build card (optional; screen time is never needed).