Name _____ Date _____

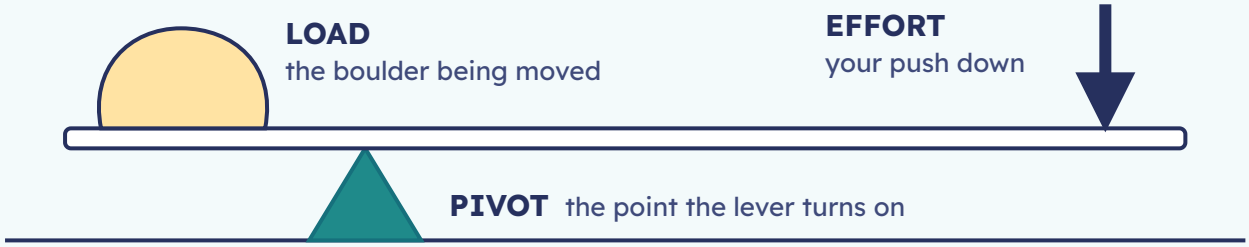
Pivot, load and effort

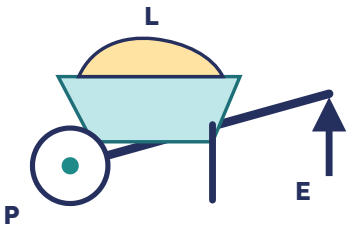
Every lever has three parts. Can you find them?

1 Learn



A **lever** is a bar that turns on a **pivot**. Your push or pull (the **effort**) moves something else (the **load**).





Example: a wheelbarrow

1. **Where does it turn?** On the wheel. The wheel is the **pivot (P)**.
2. **What is being moved?** The soil in the tub. That's the **load (L)**.
3. **Where do I push or pull?** I lift the handles. That's the **effort (E)**. The pivot is at the **end**, not the middle, but it's still a lever!

Flip's tip: ask three questions. **Where does it turn?** (pivot) **What is moved?** (load) **Where do I push or pull?** (effort)

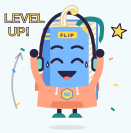
Warm up: draw a line to match each word to what it means.

pivot ●	● the push or pull you give
load ●	● the point a lever turns on
effort ●	● the thing being moved

Grown-ups: read Flip's words together and point to each part of the big picture. Children often swap the pivot and the load: keep coming back to the three questions in Flip's tip.

Name _____ Date _____

2 Try it together a child and a grown-up, about 10 minutes



Lever hunt

You need: a ruler, a round pencil, a small toy, and things to hunt for, such as a clothes peg, a door handle, kitchen tongs, a stapler and a bottle opener.

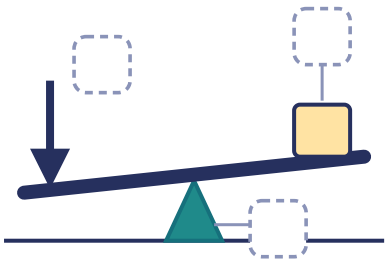
1. Lay the pencil on a table. Rest the ruler across it, and put the toy on one end.
2. Press down on the other end. The toy goes up! Point to the **pivot**, the **load** and the **effort**.
3. Hunt for more levers at home. Work each one gently, then fill in the table (the first row is done for you).

Lever	Pivot: where it turns	Load: what it moves	Effort: where I push
Clothes peg	the spring	the jaws open	the ends I squeeze
Ruler lever			

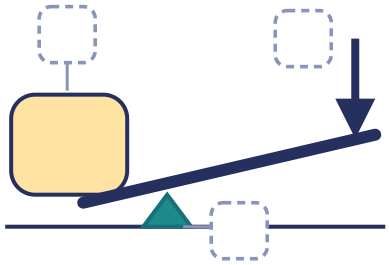
Grown-ups: ask "Is the pivot always in the middle?" A peg and a ruler lever have it in the middle, but tongs and a stapler have it at one end. Use your ruler lever with the pencil moved near one end to show this.

3 Practise

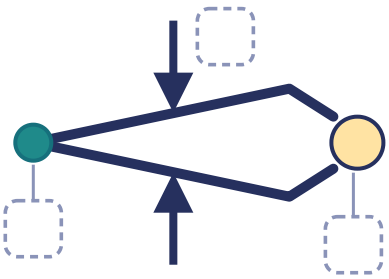
A. Write **P** (pivot), **L** (load) or **E** (effort) in each box.



See-saw



Crowbar



Tongs

Pivot, load and effort

Name _____ Date _____

B. True or false? Tick one box for each.

Sentence	True	False
1. The pivot is the point a lever turns on.		
2. The load is the push or pull that you give.		
3. A lever's pivot is always in the middle.		
4. On a see-saw, the pivot is in the middle.		
5. The effort is the thing the lever moves.		

C. Draw a lever that could lift a heavy box. Label the **pivot**, **load** and **effort**.

D. Mia says, "The load is the place where a lever turns." What would you tell her?

Challenge

Ava says, "A wheelbarrow can't be a lever. Its pivot isn't in the middle like a see-saw's." Is she right? Where is the pivot on a wheelbarrow?

I can... Tick when you can.

- [ ] name the pivot, the load and the effort on a lever
- [ ] find the pivot on a see-saw, a crowbar and a wheelbarrow
- [ ] explain that a pivot doesn't have to be in the middle