



## 1 • MATCH EACH THING TO ITS HOME IN THE SKY

The air ocean has layers. Draw a line from each picture's little circle to the circle of the layer where it belongs. The dots inside each layer show how much air is there.

**SPACE**  
 no air at all — the black sky begins

**THERMOSPHERE**  
 almost no air left up here

**MESOSPHERE**  
 shooting stars burn up here

**STRATOSPHERE**  
 calm, clear, and very quiet

**TROPOSPHERE**  
 where we live — all the weather is here. Lightly color this layer.

jet plane

shooting star

bird

space station

cloud

weather balloon



**Gravity** holds the whole ocean of air down onto the Earth — air has weight, so gravity can hold it. That is why it doesn't float away into space.



A guess is never wrong — it's a prediction, and predictions get tested. Circle one picture *before* each experiment.

### 1 • DRY PAPER UNDER WATER



A dry paper ball is wedged inside the glass. The glass goes upside-down, **all the way under the water**. What happens to the paper?



soaked through



stays dry



glass fills right up

draw what really happened

### 2 • THE BALLOON BALANCE



Two empty balloons hang level. We fill **ONE** with air and hang it back. What does the balance do? *After: how many paper clips to make it level again?*



full side sinks down



stays level



full side floats up

draw what really happened

### 3 • THE CANDLE AND THE CUP



A candle burns in a dish of water. We lower a glass right over it, rim under the water. What happens?



flame keeps burning



flame out, water climbs in



the cup pops off

draw what really happened

### 4 • THE CAN CRUSH



The can is hot and full of steam. We flip it upside-down into icy water. Nobody touches it. What happens?



nothing happens



crushed flat — from every side



pops open bigger

draw what really happened

Think like a scientist: for each experiment, tell someone **WHO** did the pushing. Hint: it is always the same invisible somebody.