Air on the Move

Model tiny particles to explain what air does.

P.3.5.2 "Develop and use models to communicate the concept that matter is made of particles too small to be seen that move freely around in space (e.g., inflation and shape of a balloon, wind blowing leaves, or dust suspended in the air)."

NAME _____ DATE _____

1 READ AND MARK

Read it twice

YOUR JOB Underline two changes you can see and circle two phrases that tell what tiny air particles do. Use your marks to help you make a model of air.

Maya's Balloon Model

1. At the school fair, Maya blows air into a balloon. It grows round and pushes against her hands. When she lets some air out, it shrinks. Air is matter even though Maya cannot see it. Air is made of tiny particles too small to see. The particles have space between them and move around inside the balloon.

2. Maya wants to show what is happening, so she plans a model. She will draw a big circle for the balloon and small dots for air particles. Short arrows beside the dots will show that the particles move in many directions. She will leave spaces between the dots. When more air enters, more particles move around inside and push on the balloon, stretching it.

3. Maya opens the balloon and points its neck toward a few paper scraps. As air rushes out, the scraps slide across the table. The moving air particles push the scraps, even though no one can see the particles. Maya could draw dots and arrows outside the balloon to show the air moving toward the scraps. The balloon gets smaller because some air has left it.

2 ANSWER WITH EVIDENCE

Use the passage

1. In Maya's model, what do the dots and arrows stand for?

2. Why does Maya leave spaces between the dots in her model?

3. How could Maya change her model to show the balloon after more air enters? Explain what happens to its shape.

4. How could Maya use dots and arrows to show why the paper scraps slide?

3 YOUR TURN

Your own words

A breeze through an open window lifts the edge of a curtain. Draw the window and curtain, then use dots and arrows to model the air between them. Label the dots and arrows, and write one sentence explaining why the curtain lifts.

ANSWER KEY

Air on the Move

GRADE 3 · P.3.5.2

PART 1 · READ AND MARK

Underline two changes you can see and circle two phrases that tell what tiny air particles do. Use your marks to help you make a model of air. Accept any marking that follows this job and points at the right text.

PART 2 · ANSWERS

#	QUESTION	ANSWER
1	In Maya's model, what do the dots and arrows stand for?	**The dots stand for air particles. The arrows show that the particles move.**
2	Why does Maya leave spaces between the dots in her model?	**Air particles have space between them and move around.**
3	How could Maya change her model to show the balloon after more air enters? Explain what happens to its shape.	**She could draw more dots inside a larger balloon. More air particles move around and push on the balloon, stretching it.**
4	How could Maya use dots and arrows to show why the paper scraps slide?	**She could draw dots outside the balloon with arrows pointing toward the scraps. The moving air particles push the scraps.**

PART 3 · YOUR TURN (SAMPLE ANSWER)

Drawing: An open window beside a curtain with one edge lifted; spaced dots between the window and curtain, with arrows pointing toward the curtain. Labels: dots, air particles; arrows, particle movement. Sentence: Moving air particles push the curtain, lifting its edge.

Accept models with spaced dots for unseen air particles and arrows that show movement toward the curtain. The sentence should connect moving air to the curtain lifting.