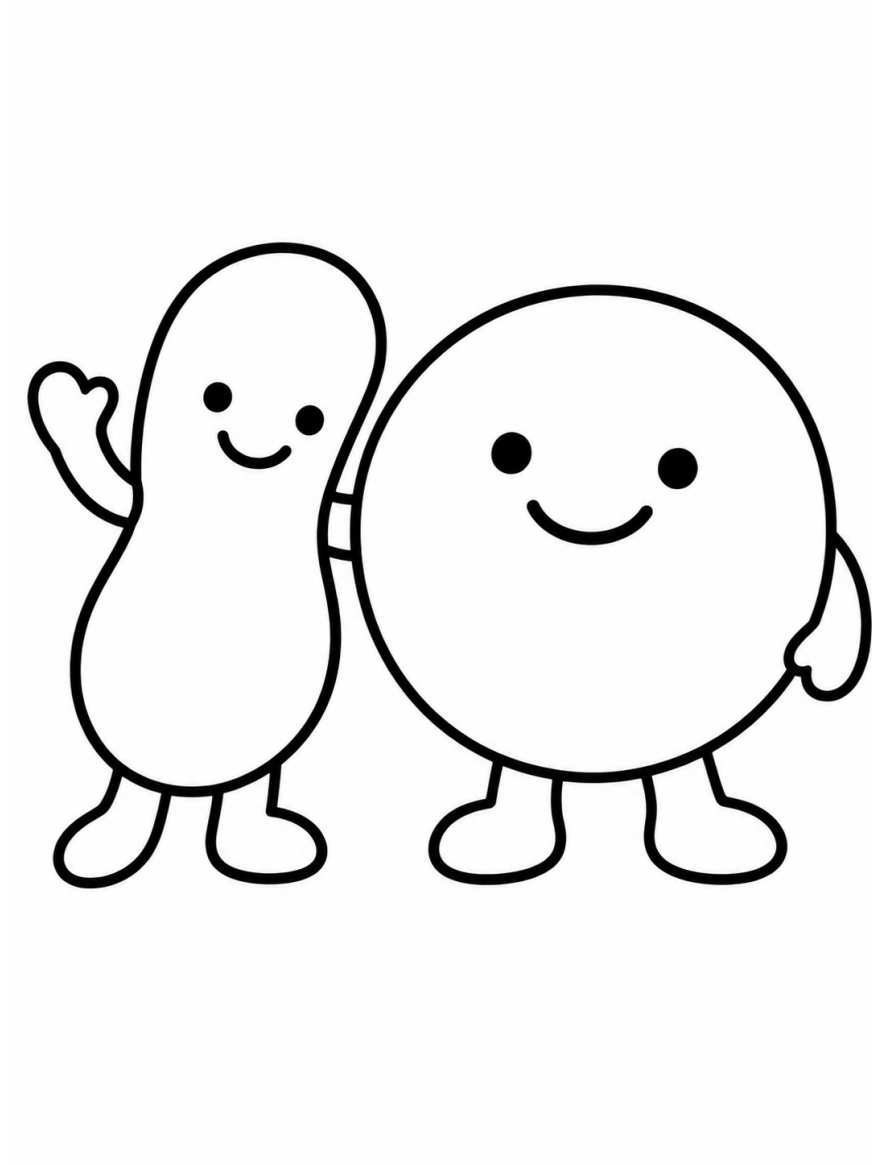


Hello, tiny neighbors!

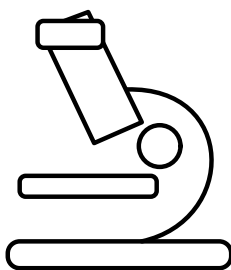
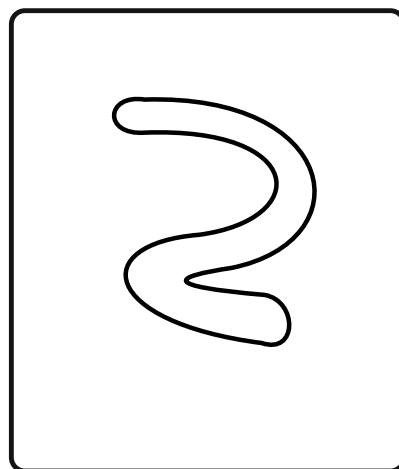
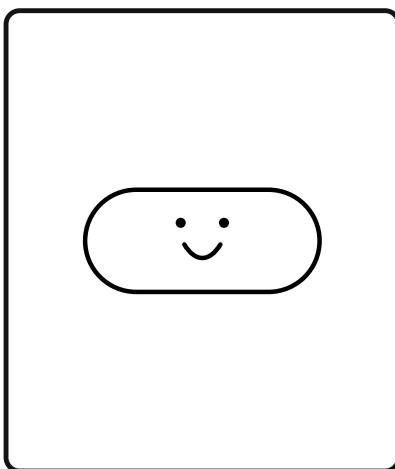
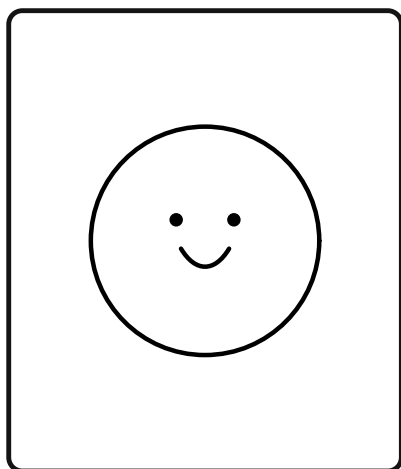
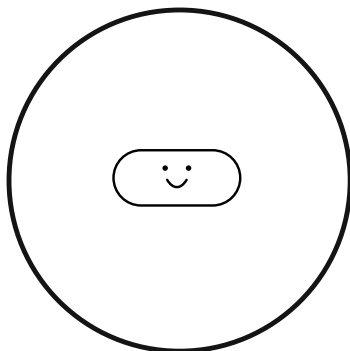
Color the pretend neighbors. Point to the round one.



For grown-ups: microbes are usually too small to see unaided. These enlarged, smiling characters are imaginary models, not a way to identify a real microbe.

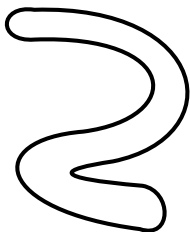
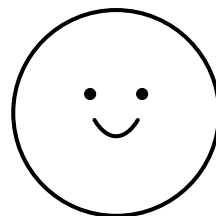
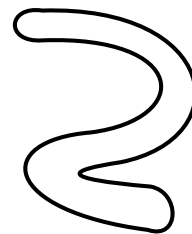
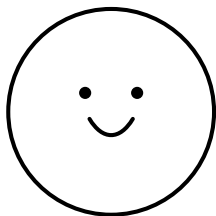
A closer look

Point to the big picture that matches the little picture.



Shape homes

Draw a line from each tiny-life picture to the same shape.



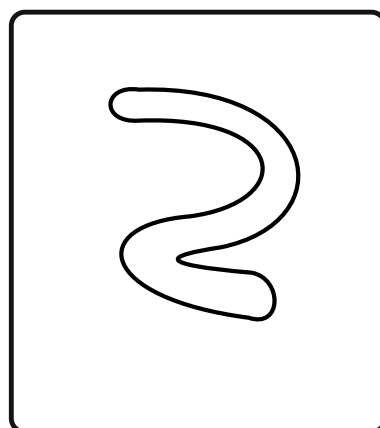
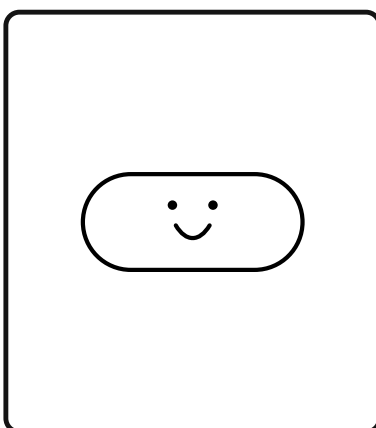
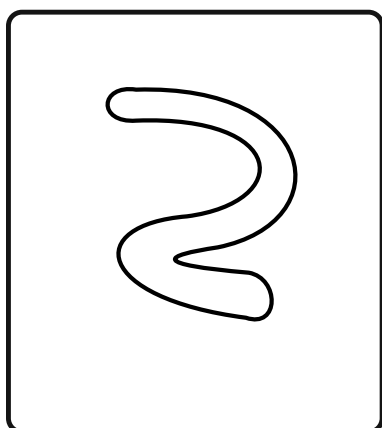
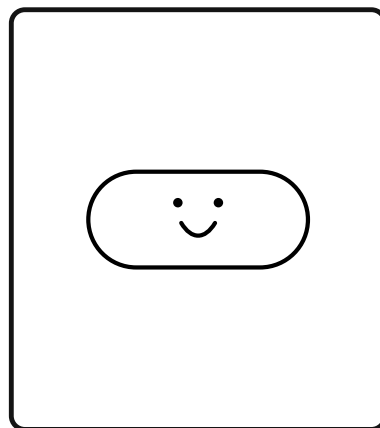
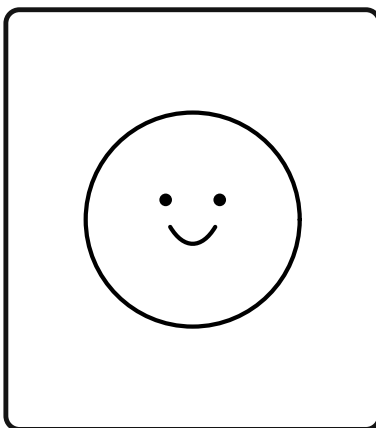
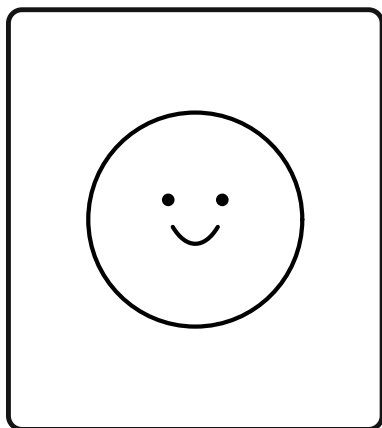
Tap and count

Tap each little picture. Match its group to a dot group.



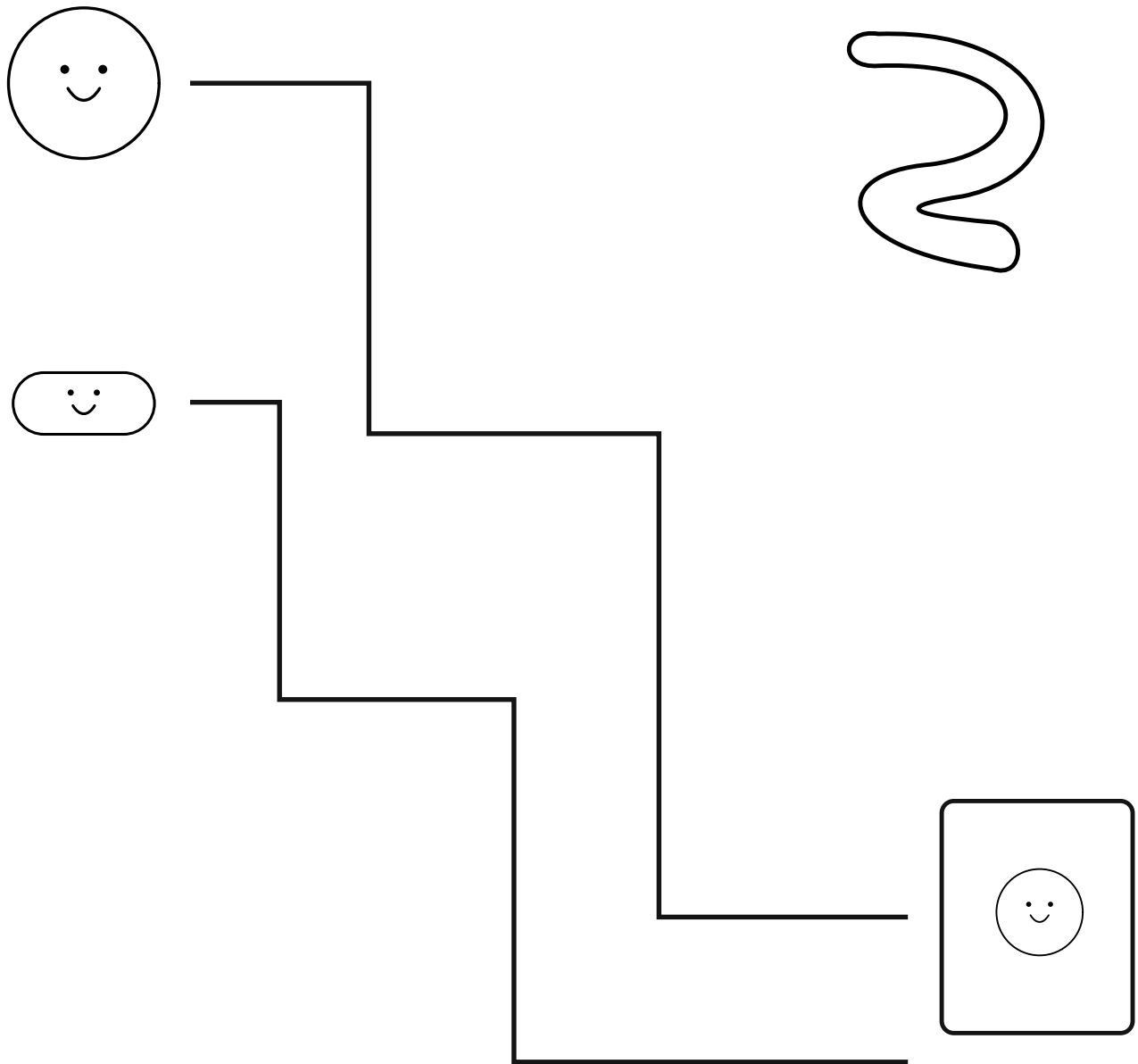
Find the twins

Circle the two pictures that look the same in each row.



Round friend, winding path

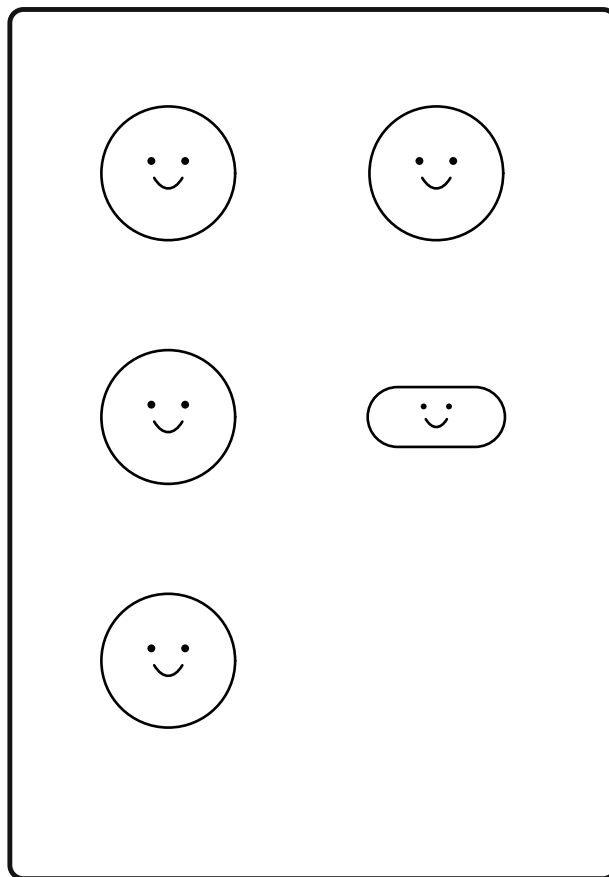
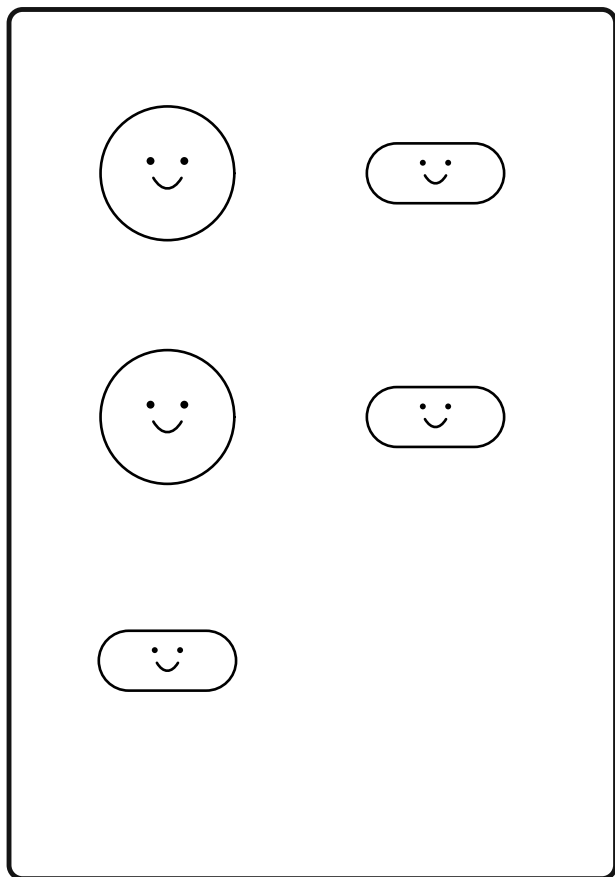
Start at the round friend. Trace its wide path to a window.



Trace slowly with a finger first. This is an imaginary picture path, not a claim about how microbes move.

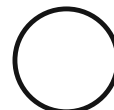
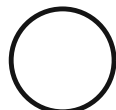
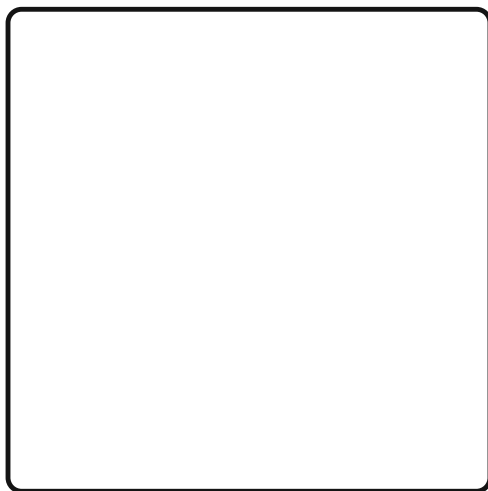
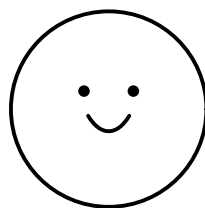
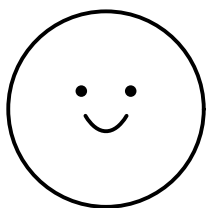
Looking windows

Point to the window with more round pictures. Tap to check.



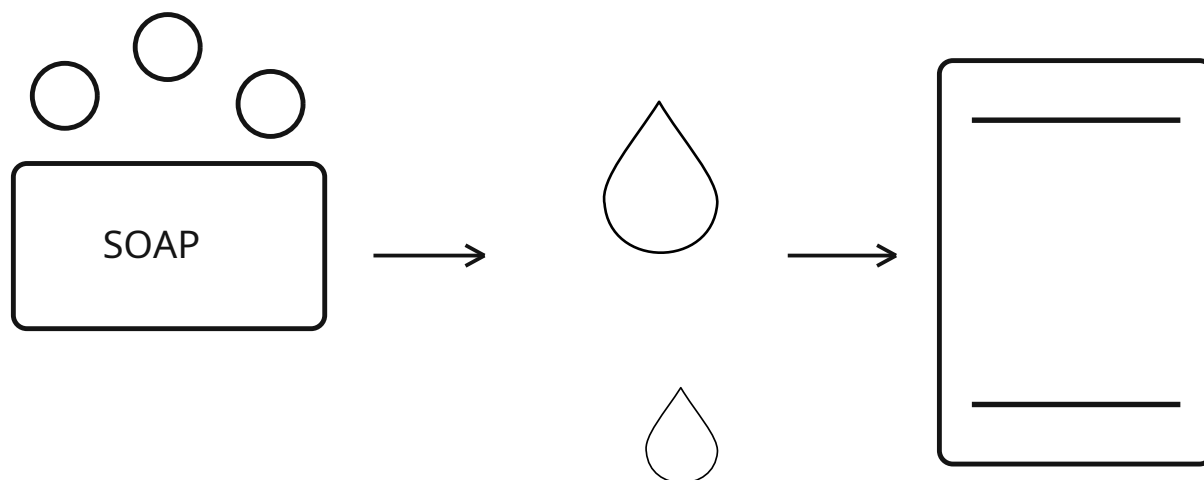
Round, long, round, long

Say the pattern. Draw the next picture inside the empty frame.



Soap, rinse, dry

Point to what comes first. Then trace the handwashing story.



Pretend to wash, rinse, and dry your hands.

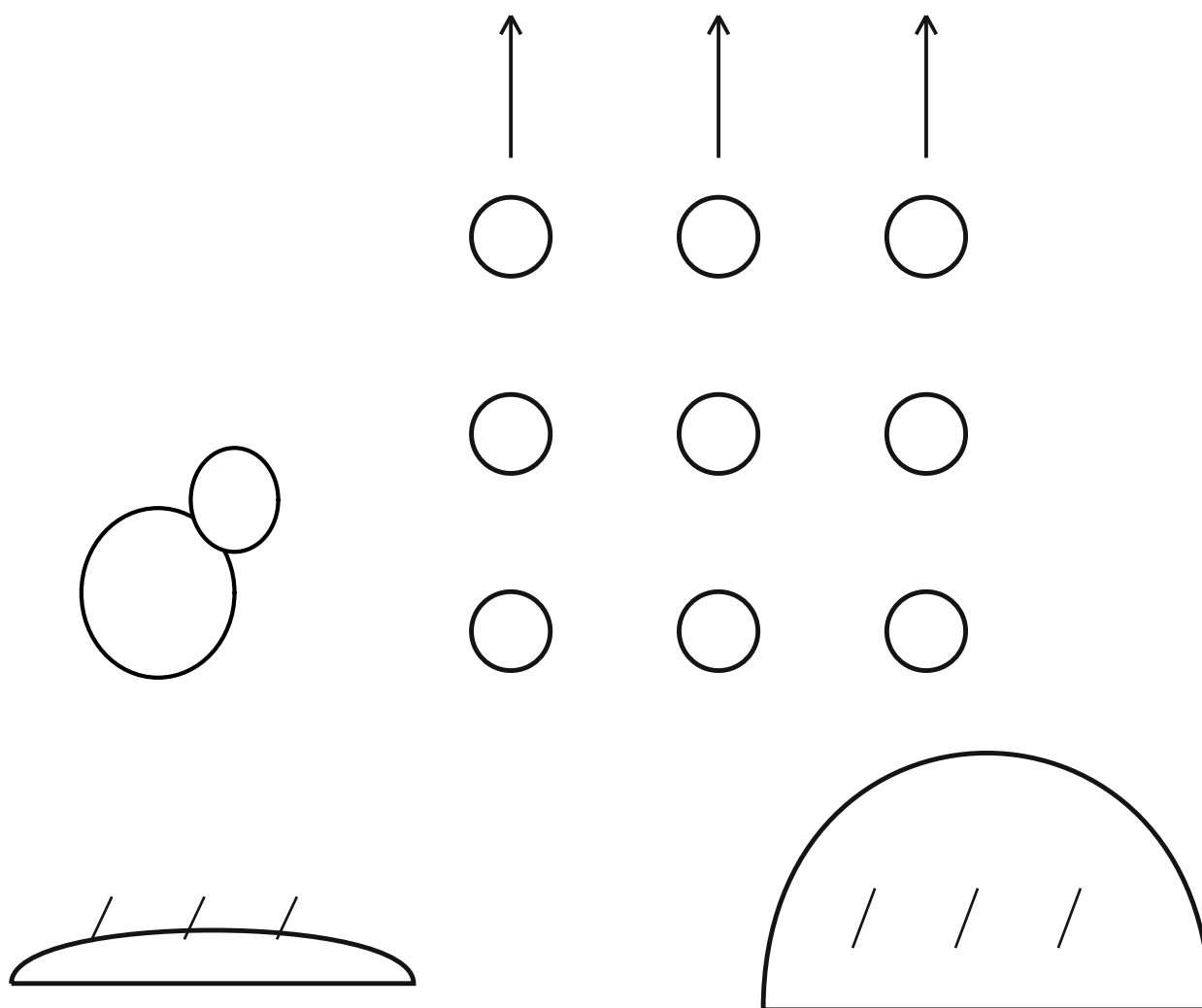
Draw your hands here.

Use this as a picture story. For real handwashing, a grown-up can guide soap, running water, and a clean towel. Do not collect or grow microbes.

Bubbles help bread rise

Trace the bubbles upward. Circle the bigger, risen dough.

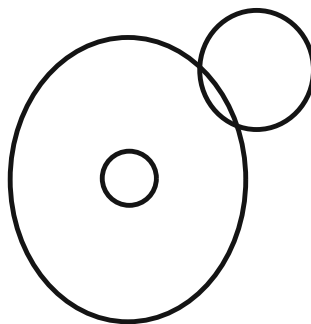
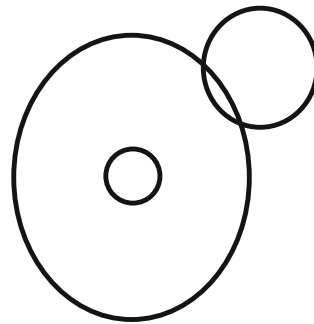
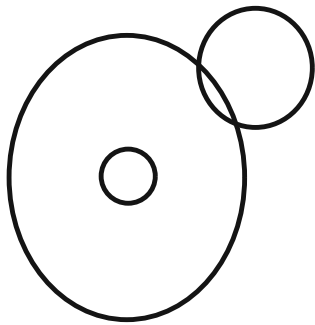
Some yeast makes gas bubbles in dough.



An enlarged picture story, not an experiment. Baker's yeast can release carbon dioxide gas; bubbles help dough expand. Microbes are not all the same.

A little yeast bud

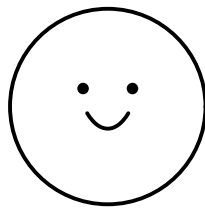
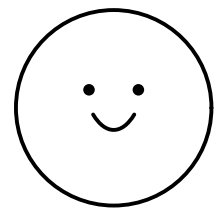
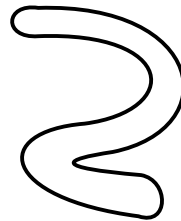
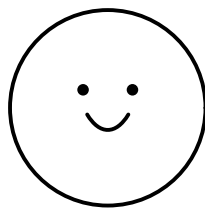
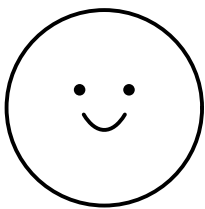
Circle the small new cell next to each bigger cell.



Some yeast makes a new cell by budding. These simple outlines show a big parent cell and a small bud; they are not photographs or a clock.

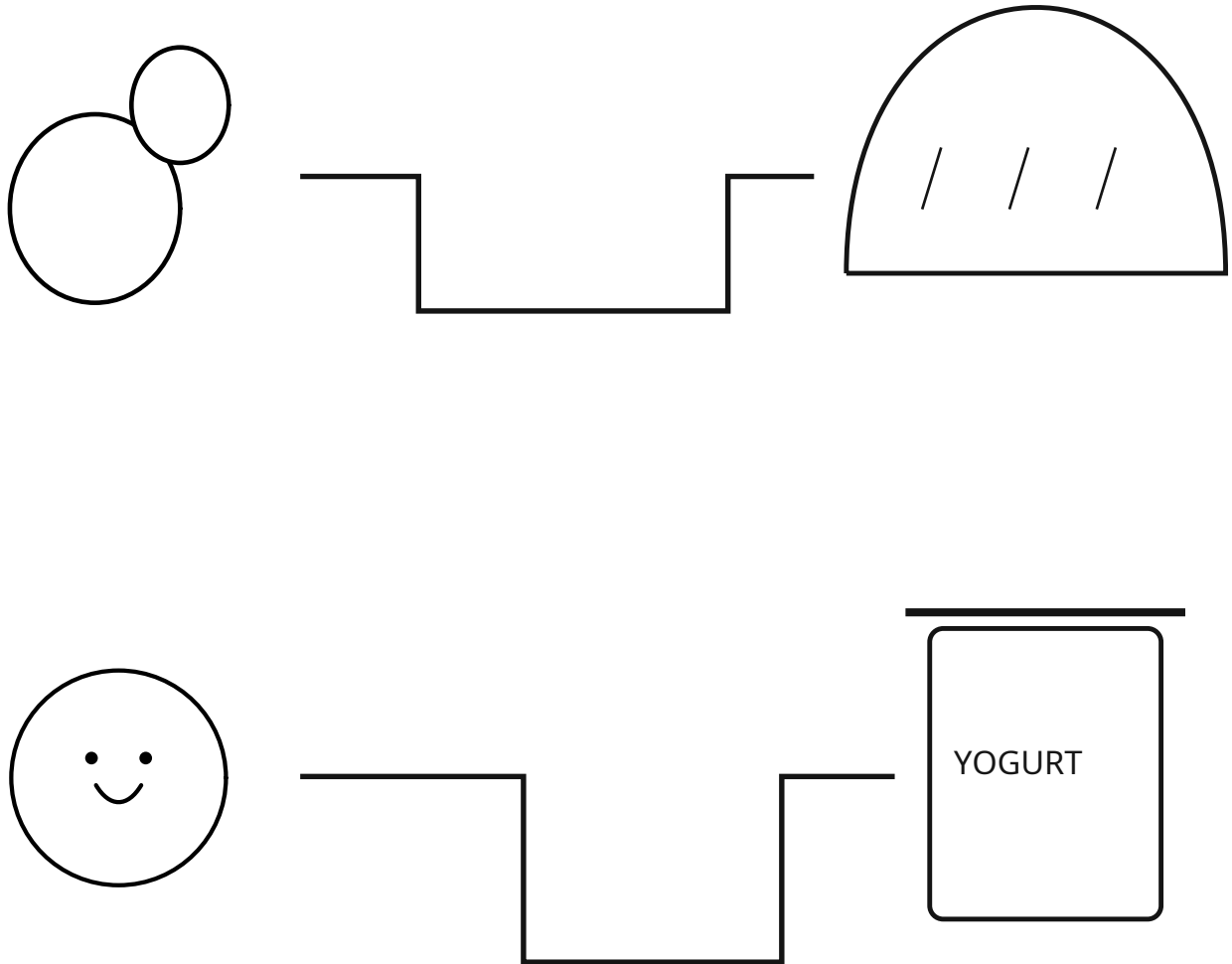
One shape is different

Put a gentle X on the picture that does not match its row.



Tiny helpers in food

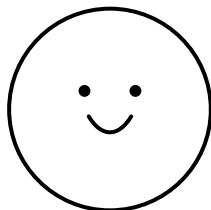
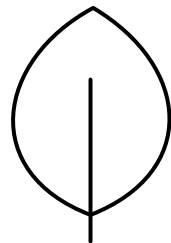
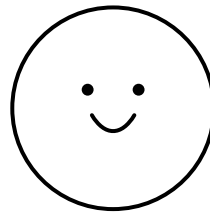
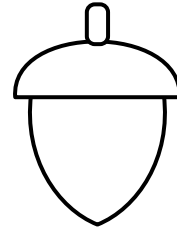
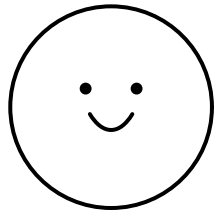
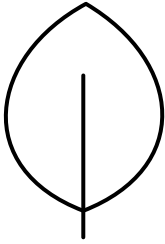
Follow yeast to bread. Follow the helpful bacteria to yogurt.



Some yeast helps make bread. Some bacteria help make yogurt. A shape or a smile cannot tell us whether a real microbe is helpful or harmful.

Picture hide-and-seek

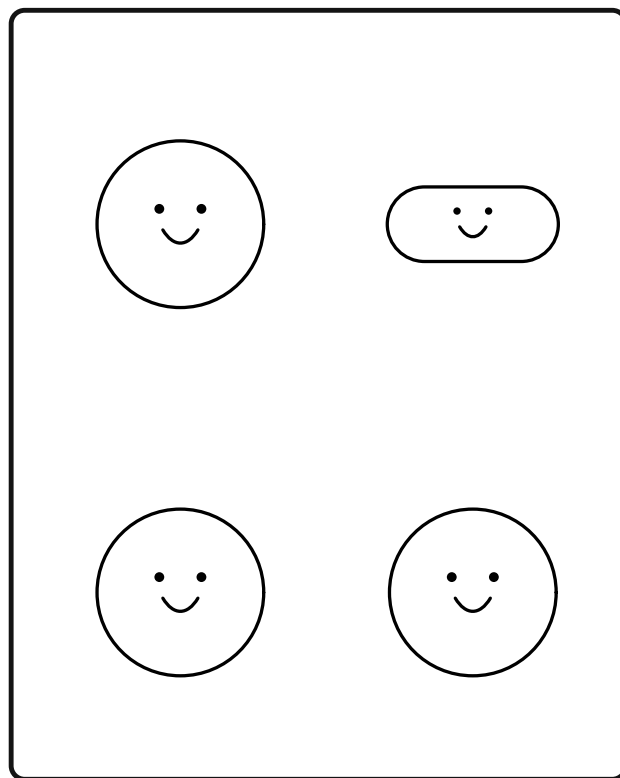
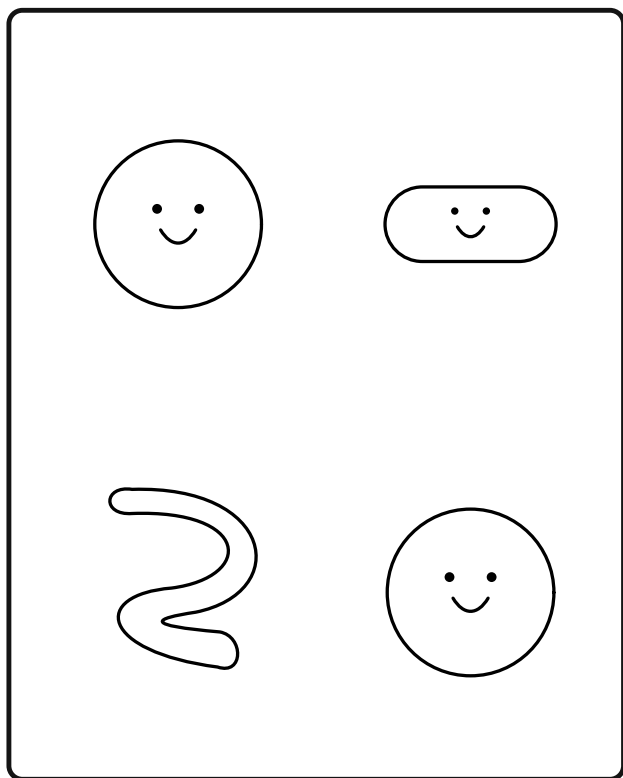
Find and circle three round tiny-life characters.



A pretend search scene: real microbes are generally too small to spot on a leaf this way.

One picture has changed

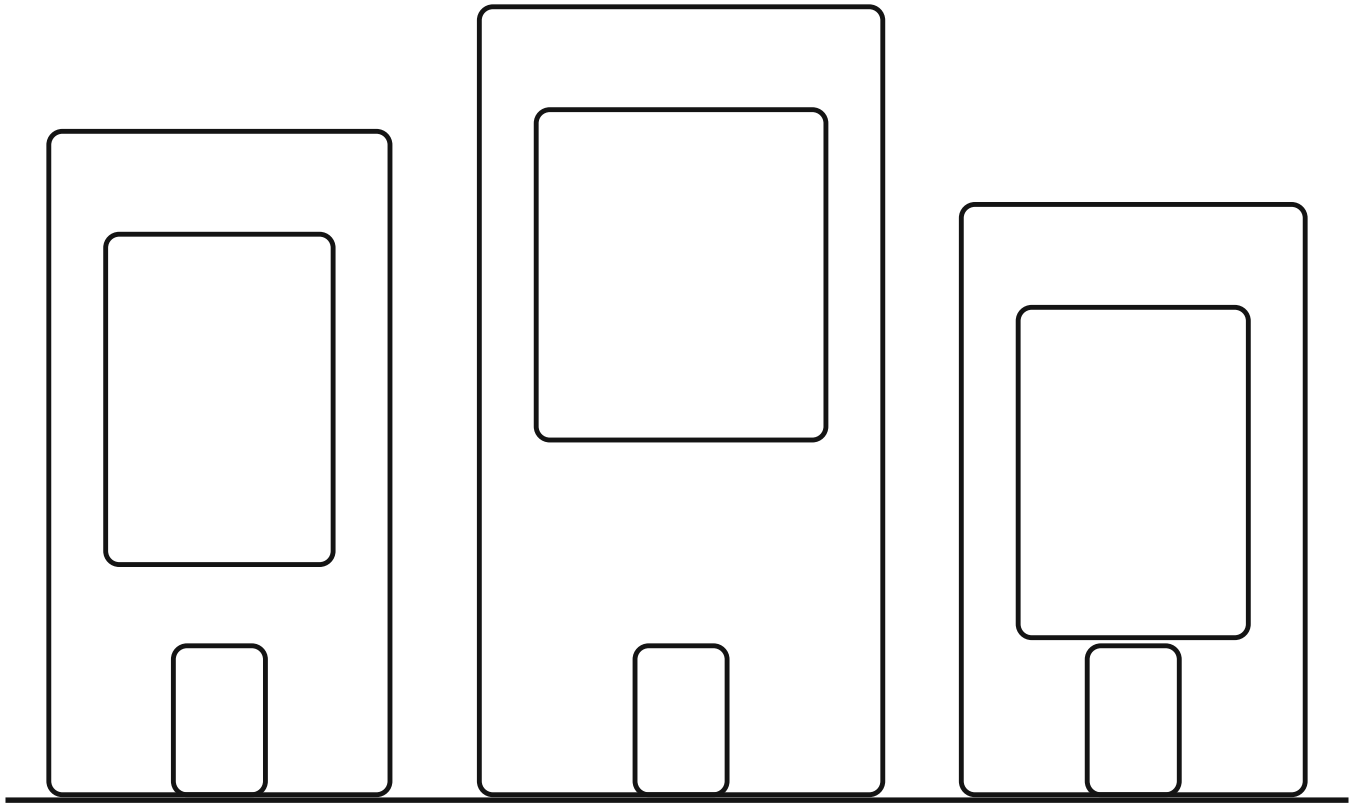
Look at both windows. Point to the one shape that changed.



Tell your grown-up what you noticed.

Draw a tiny-life town

Draw pretend tiny neighbors in the three empty windows.



Give one neighbor a round shape and one a long shape.

Your invented neighbors can have smiles. Real microbes do not have faces, houses, or jobs like people; the town helps us talk about a world too small to see.

Grown-up guide

Read aloud, point together, and let drawing replace writing.

What this pack teaches

Shape comparison, counts of 1-5, careful looking, and simple examples of microbes in food. The pictures are enlarged models. Round, rod, and spiral shapes do not identify a species or tell us whether it is safe.

Talk without testing

Do every task on paper. Do not swab surfaces, collect samples, culture microbes, or taste unknown things. Activity 9 is a picture story, not a timing guide for handwashing.

Keep the science honest

Some bacteria help make yogurt; baker's yeast can make gas that helps dough rise. Some yeast reproduces by budding. Not every microbe does these things.

Make participation easy

Offer a finger trace before a pencil trace. Ask one prompt at a time. A child can point to a pair instead of circling it. Counts can be taps, fingers, or spoken words. No child needs to read the labels.

Print and return

Print at Actual Size or 100%. Try a few pages at a sitting. Crayons or colored pencils and a pencil are enough; no scissors or glue are needed.

Sources for grown-ups (click a title in the PDF)

AMNH: Microbiology for Kids

Microbiology Society: Microbes and the food supply

Microbiology Society: Marvellous Microbes - Baking Bread

Answer and conversation notes

Open drawings have many good answers. These checks use picture positions.

- 1 The round character is on the right. Ask what the child notices.
- 2 The middle big picture matches the little rod-shaped picture.
- 3 Round matches middle; rod matches bottom; spiral matches top.
- 4 Top group 1 goes to middle dots; middle 3 to bottom; bottom 5 to top.
- 5 Top row: left and middle. Bottom row: left and right.
- 6 Follow the upper round character's path to the round window.
- 7 Right window: four round pictures; left window: two.
- 8 The next picture is round. The sequence alternates round and rod.
- 9 Soap, rinse with water, dry. Accept pointing and pretend actions.
- 10 Trace upward. The larger dough on the right is the risen example.
- 11 Circle each small attached bud, not the larger parent outline.
- 12 Top: third picture. Bottom: second picture.
- 13 Yeast path ends at bread; the bacteria path ends at yogurt.
- 14 Three round characters: upper middle, middle right, lower left.
- 15 Lower-left picture changes from spiral to round.
- 16 Accept three invented neighbors, including round and long shapes.