

Teaming with Cells

Copy Instructions

Make Single-sided Copies

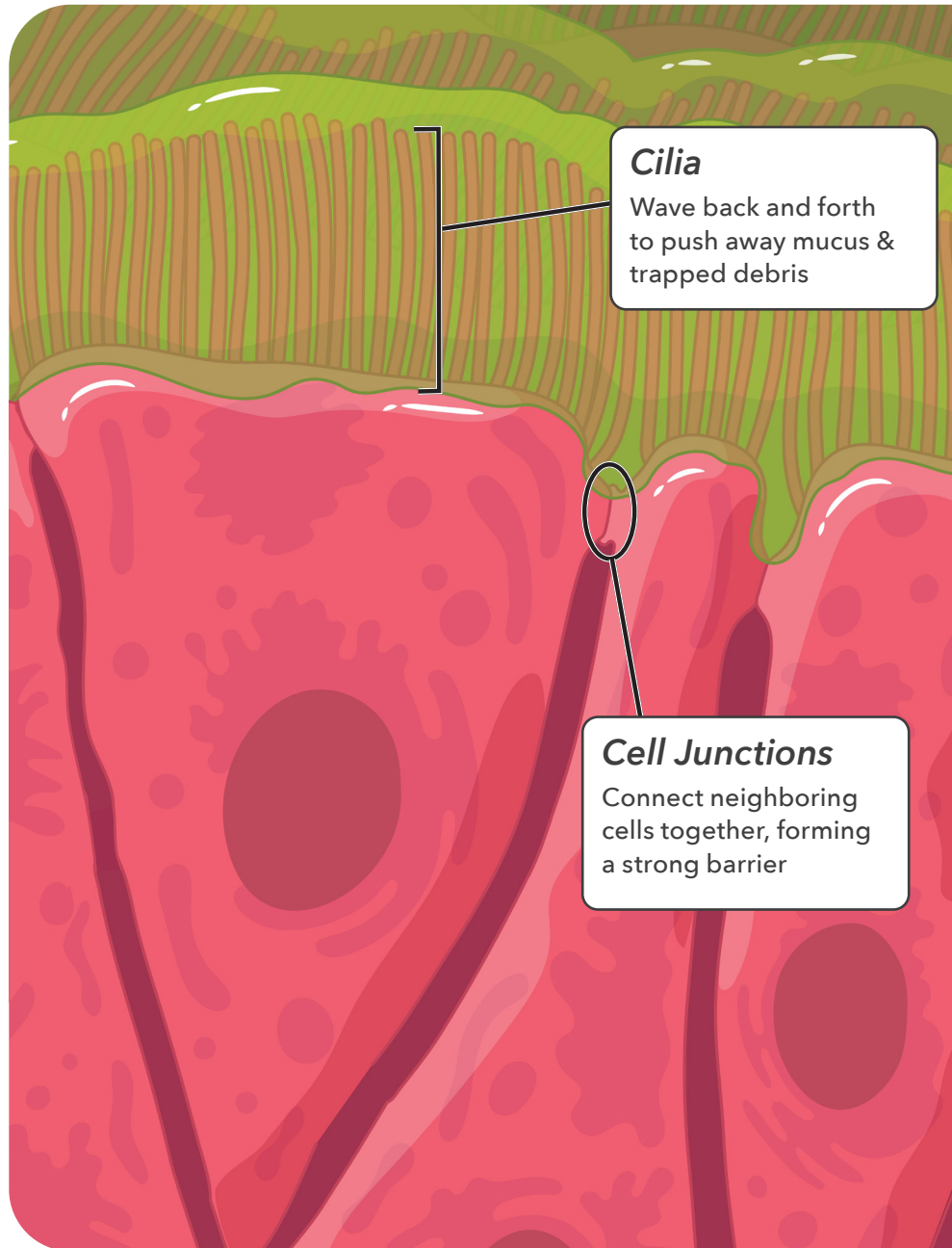
- Cut each page in half to make two cards.
- This document includes 3 sets of cards, marked A, B & C. Each set has 4 cards.
- The cards are companions for the cell types introduced in the Mystery Cell Models.

Tips

- Print in color and laminate for re-use.
- Print each set of cards on a different color of paper, to make it easier to keep track of which cards belong together.

Ciliated Epithelial Cell

A



Cilia

Wave back and forth to push away mucus & trapped debris

Cell Junctions

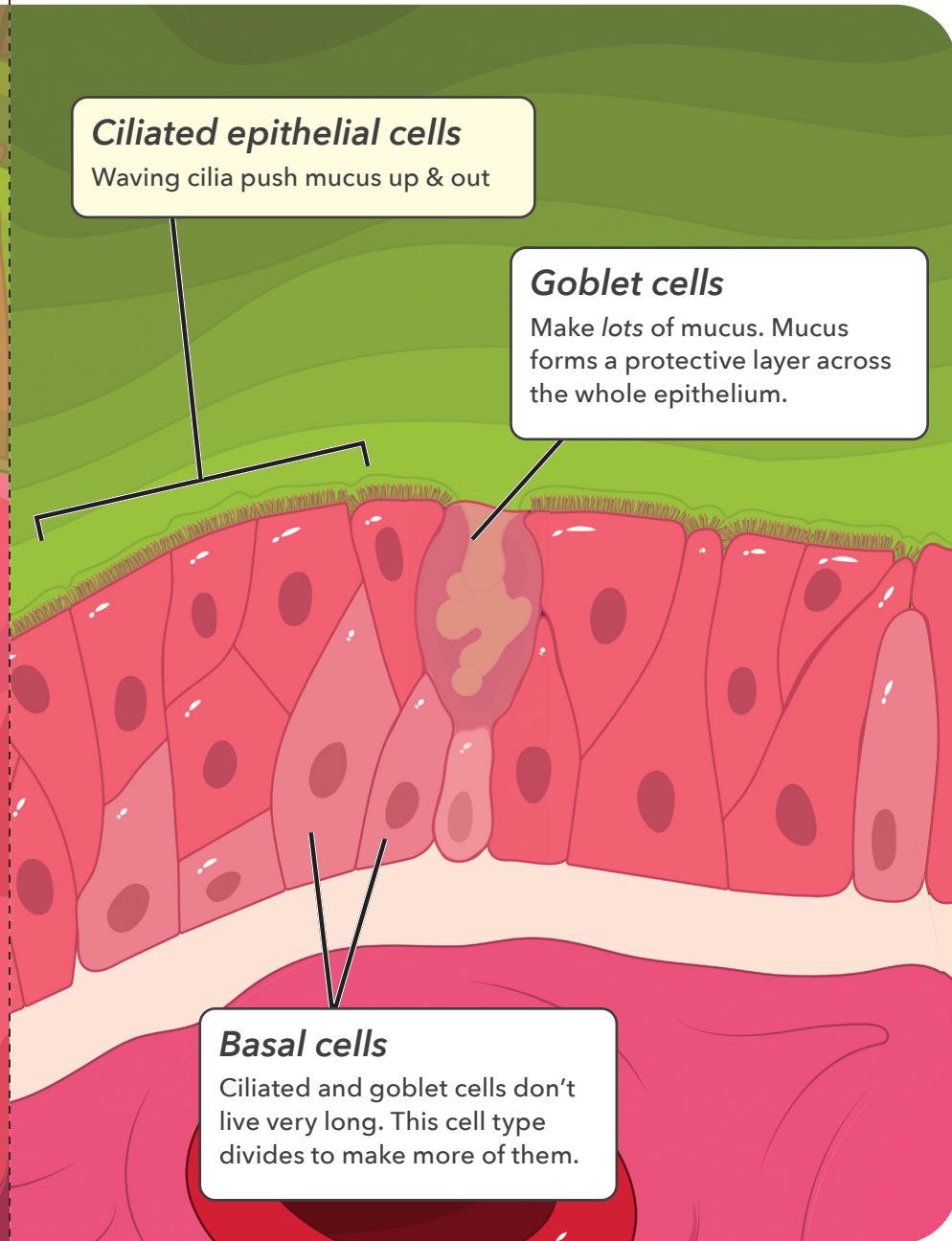
Connect neighboring cells together, forming a strong barrier

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Cell Types of the Airway Epithelium

A

These cells fit together tightly, forming a barrier that keeps harmful things away from the cells and tissues underneath.



Ciliated epithelial cells

Waving cilia push mucus up & out

Goblet cells

Make lots of mucus. Mucus forms a protective layer across the whole epithelium.

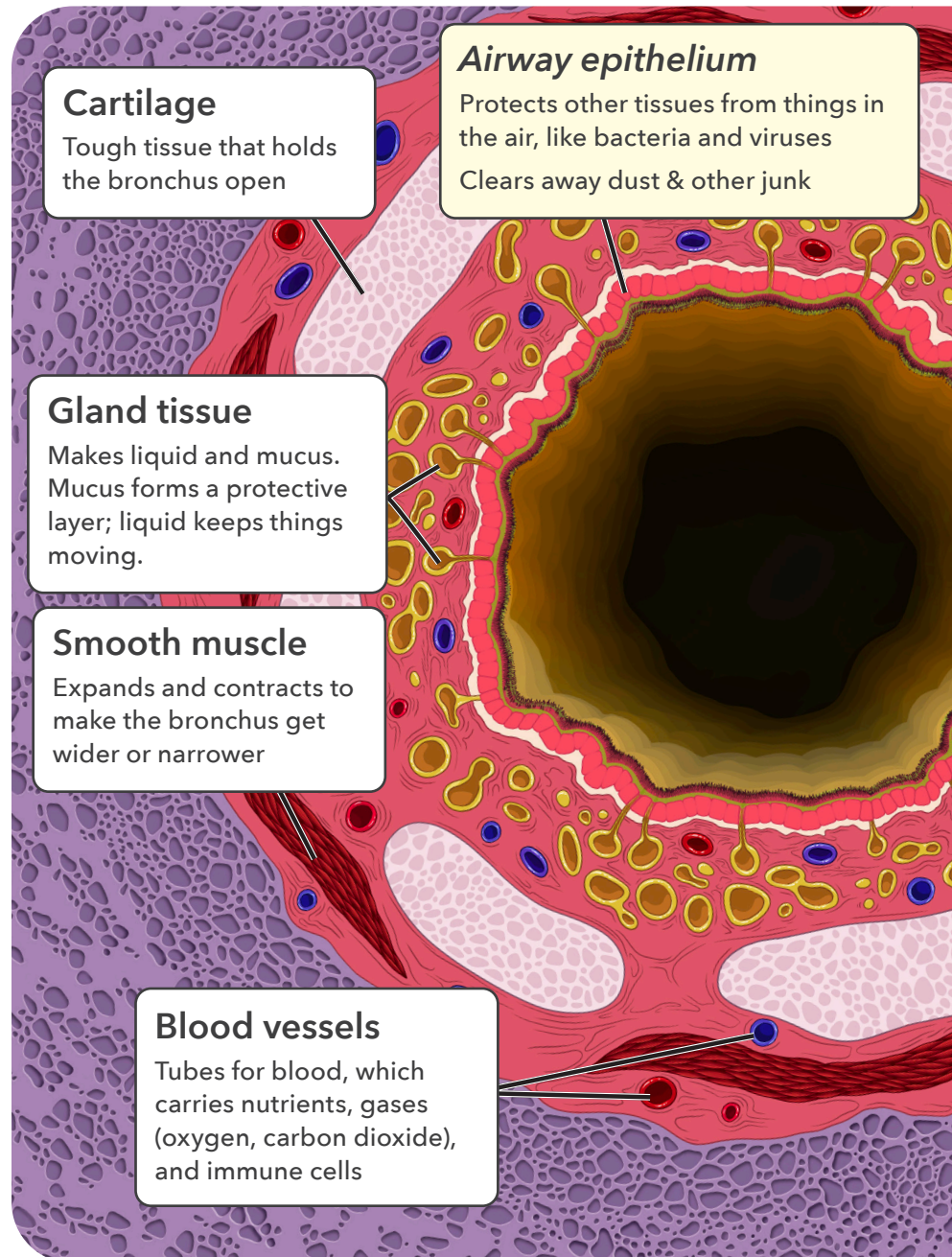
Basal cells

Ciliated and goblet cells don't live very long. This cell type divides to make more of them.

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Tissues of the Bronchus (cross-section) **A**

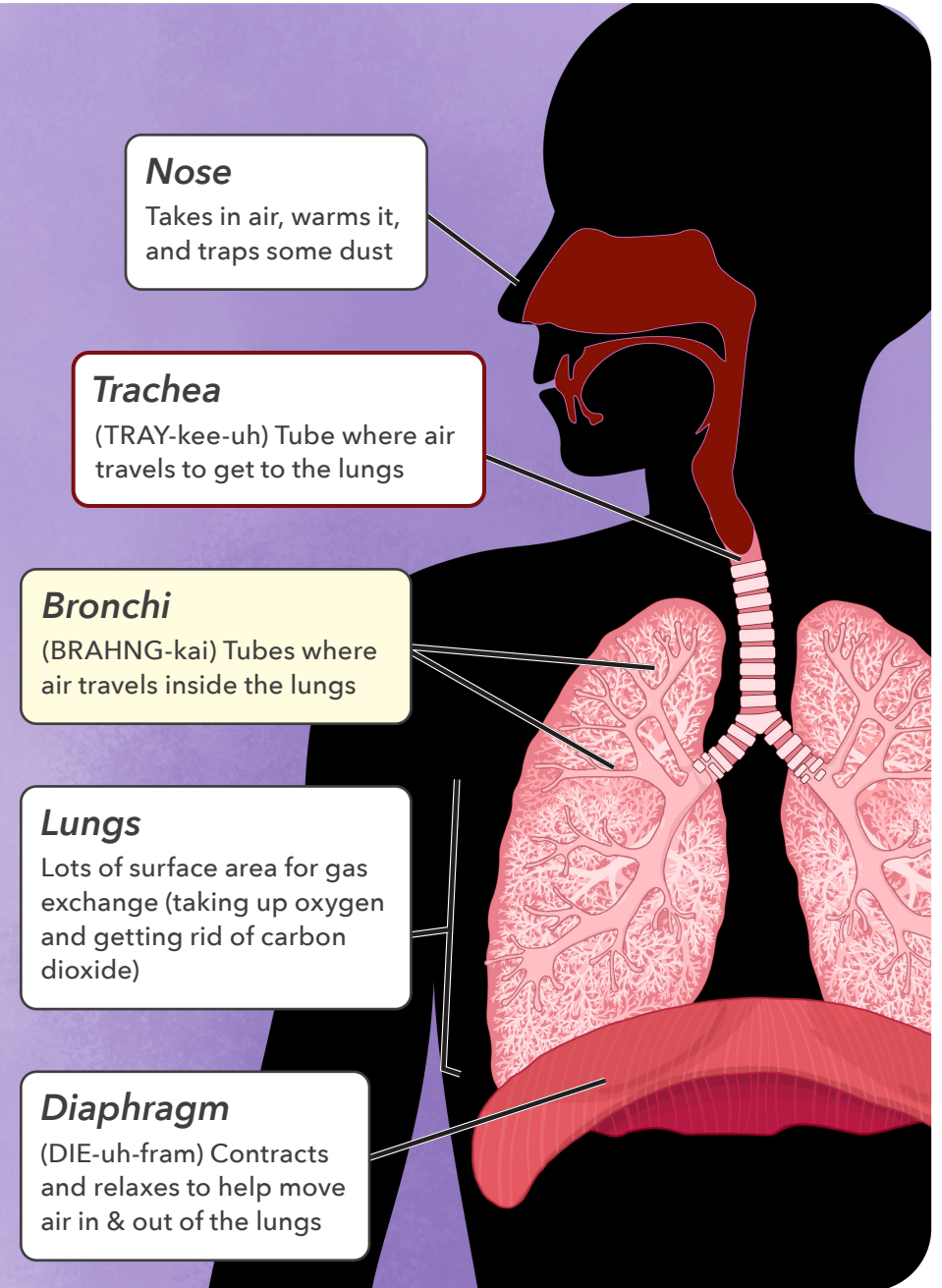
(BRAHN-kus)



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Organs of the Respiratory System **A**

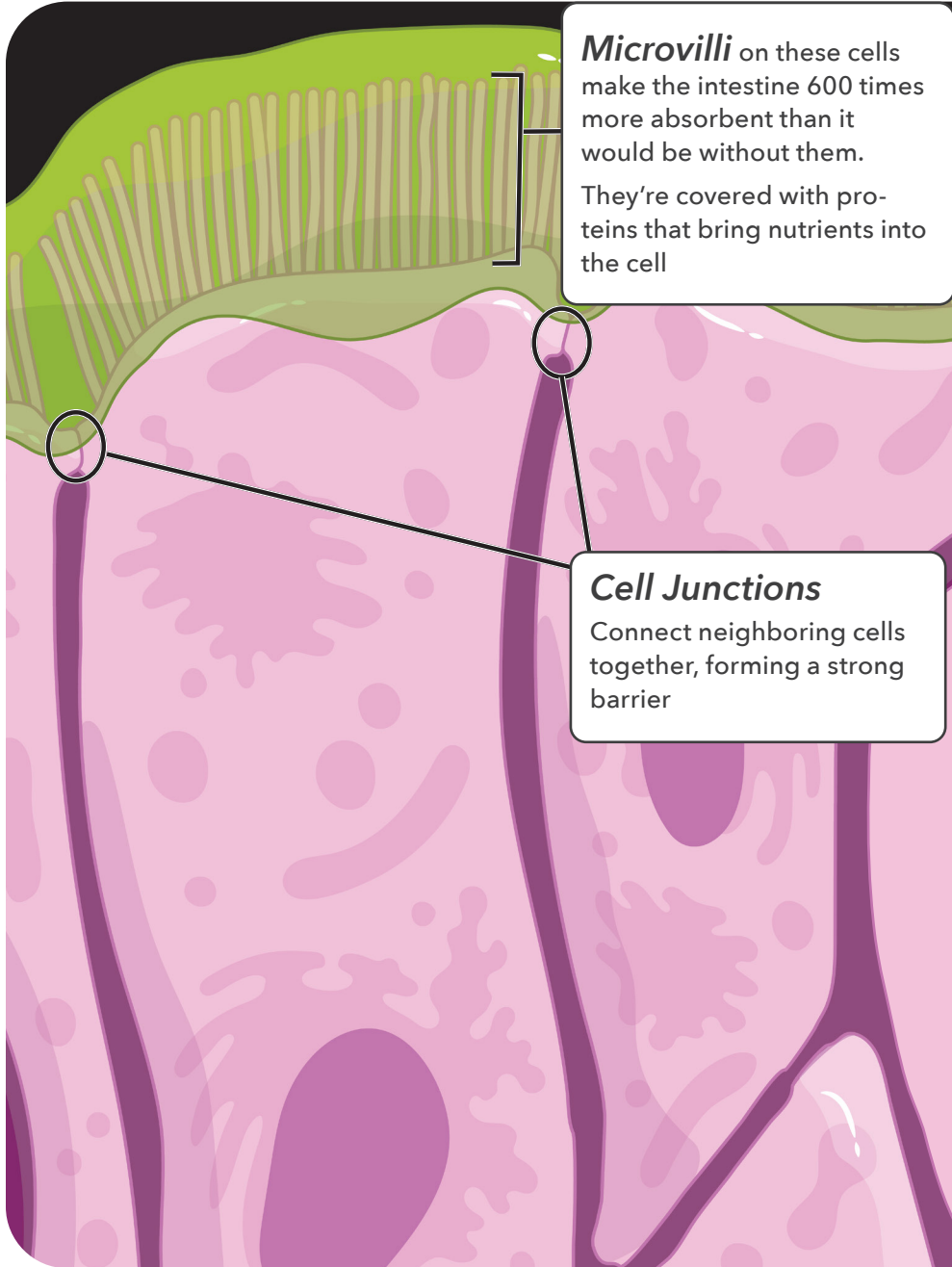
The respiratory system brings air in and out of the body, delivering oxygen and taking away carbon dioxide



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Intestinal Absorptive Cell

B



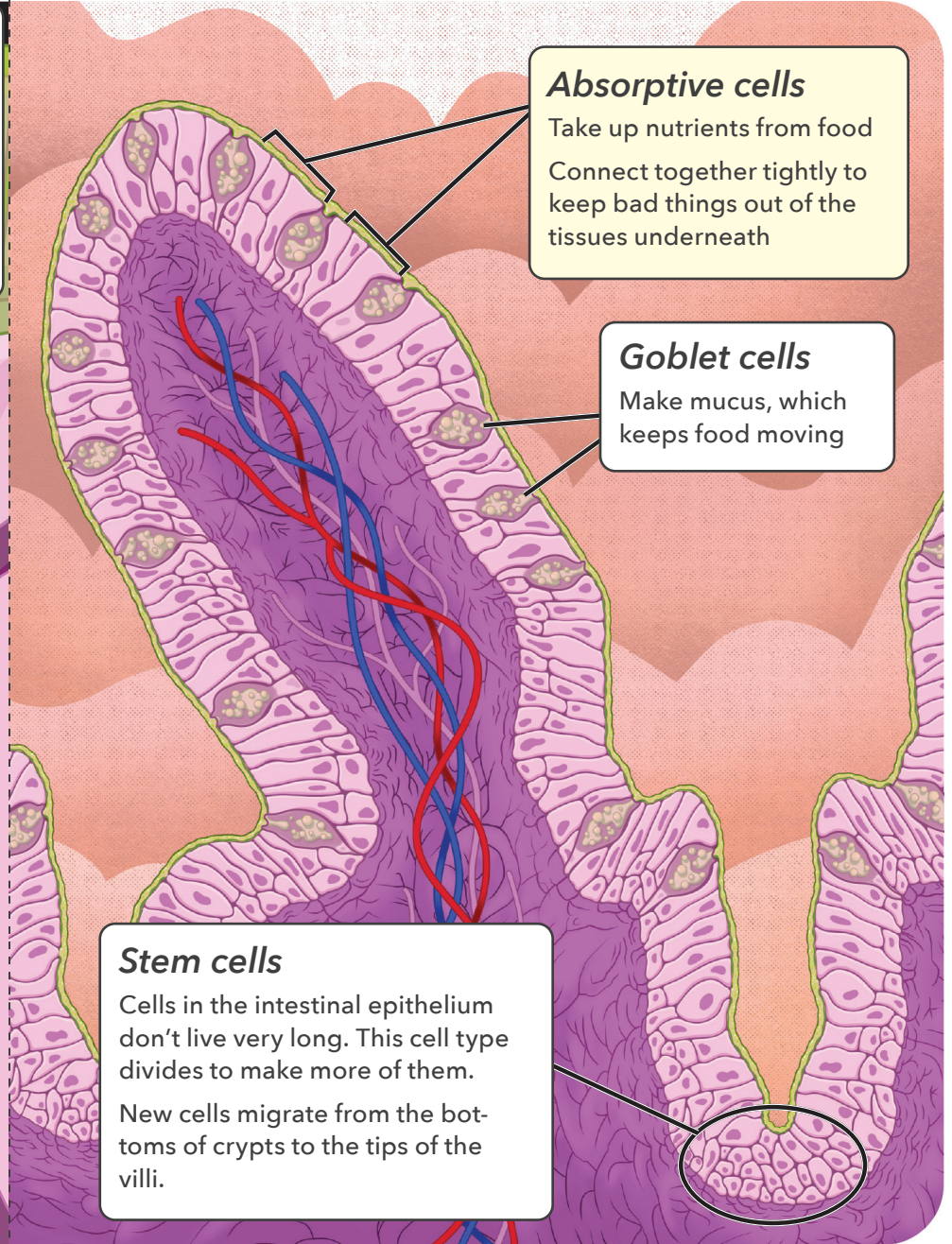
Microvilli on these cells make the intestine 600 times more absorbent than it would be without them. They're covered with proteins that bring nutrients into the cell

Cell Junctions Connect neighboring cells together, forming a strong barrier

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Cell Types of the Intestinal Epithelium

B



Absorptive cells Take up nutrients from food. Connect together tightly to keep bad things out of the tissues underneath

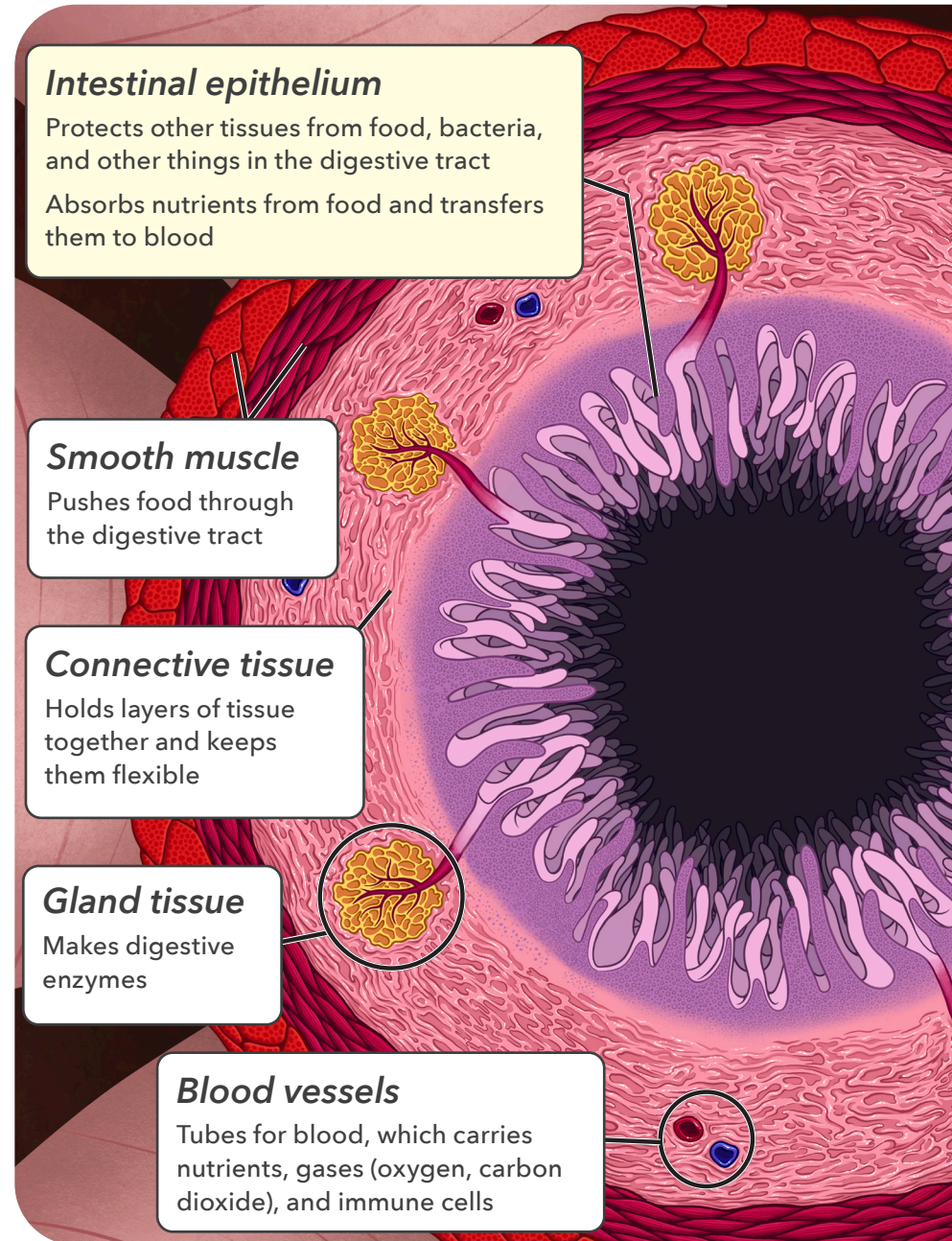
Goblet cells Make mucus, which keeps food moving

Stem cells Cells in the intestinal epithelium don't live very long. This cell type divides to make more of them. New cells migrate from the bottoms of crypts to the tips of the villi.

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Tissues of the Small Intestine

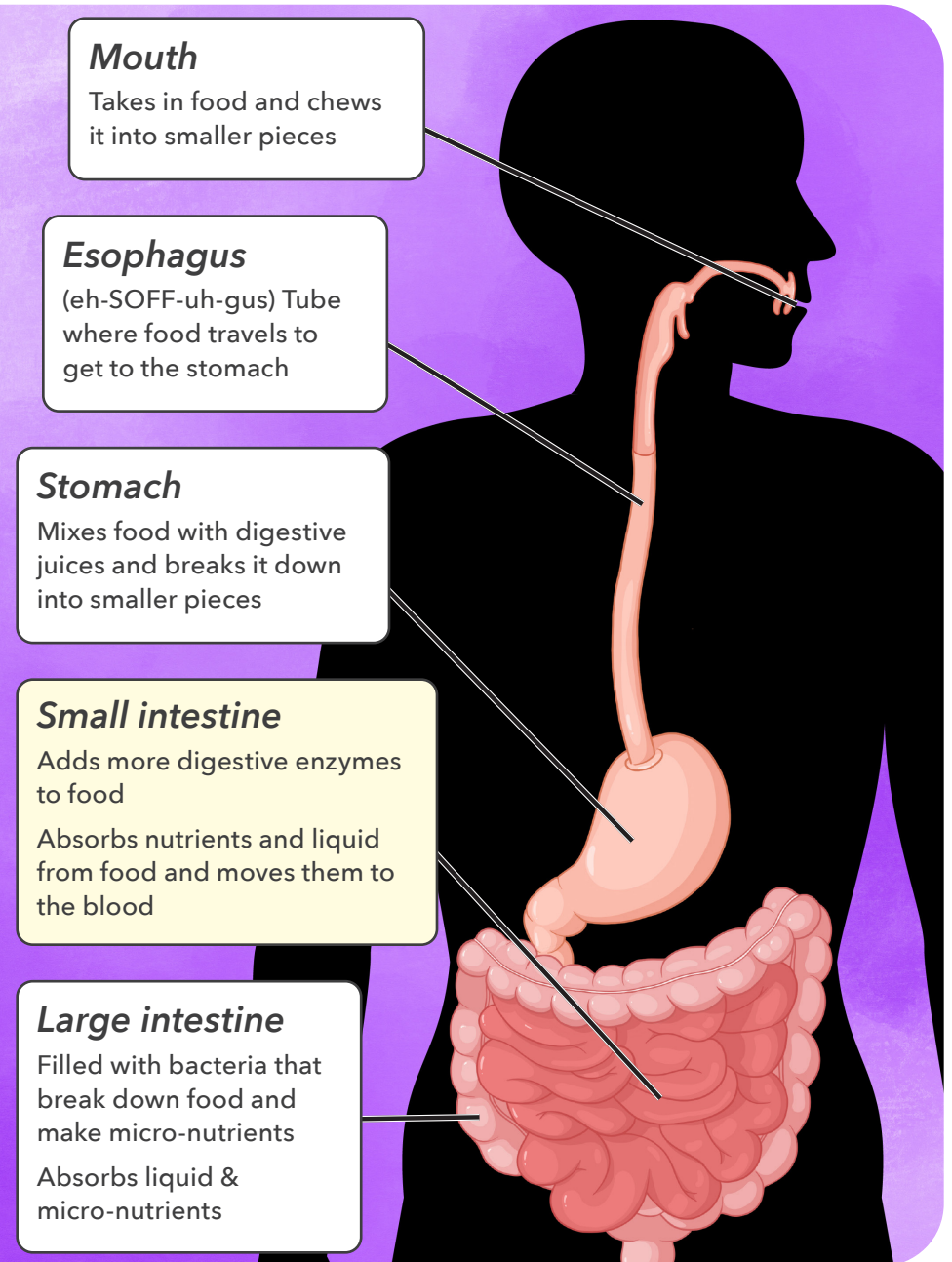
(cross-section) The inside of the small intestine is covered with finger-like structures called villi [VILL-ee]



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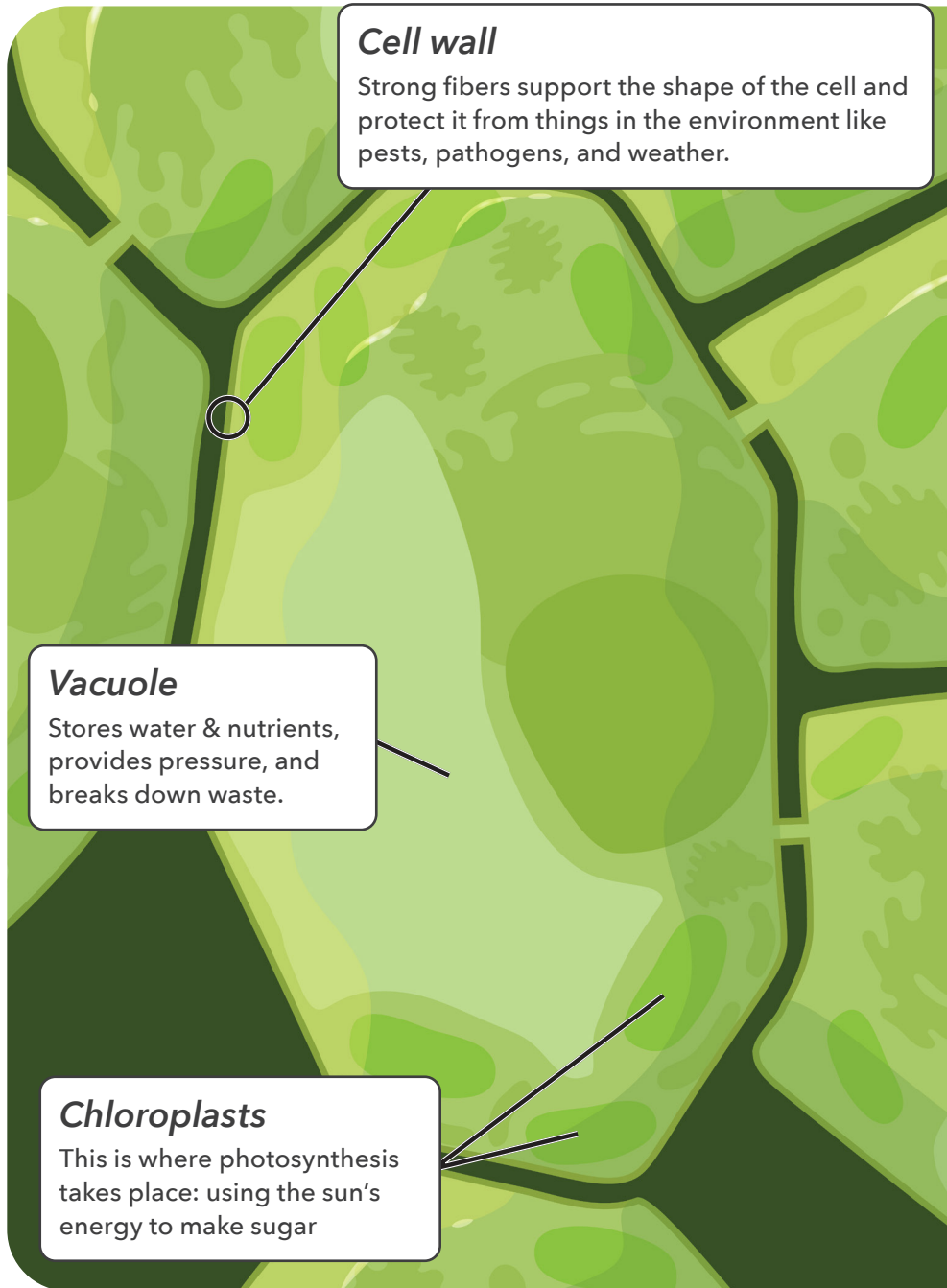
Organs of the Digestive System

The digestive system is a giant tube that takes in nutrients for the body.



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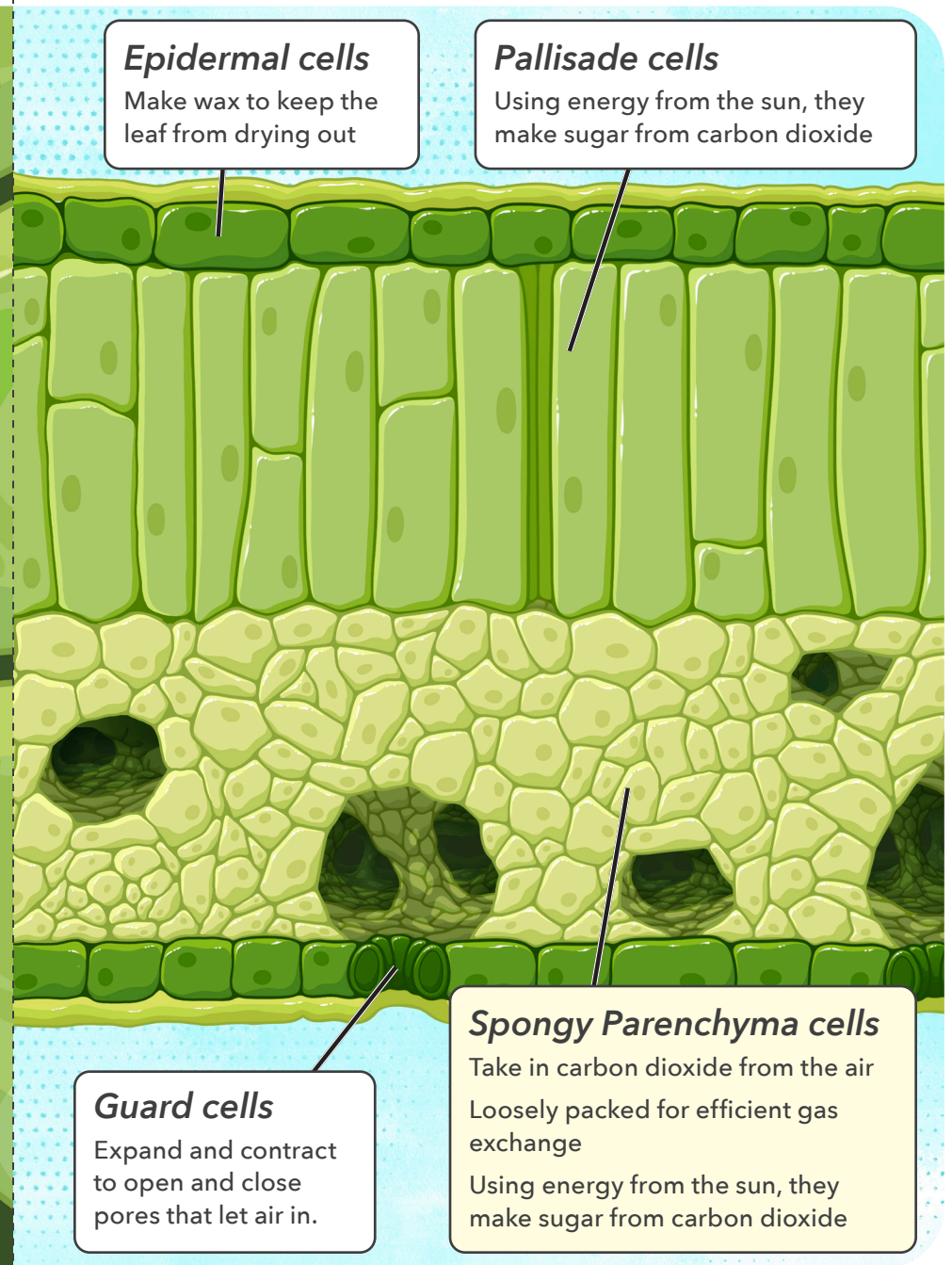
Spongy Parenchyma Cell



Cell Types in Leaf Tissue

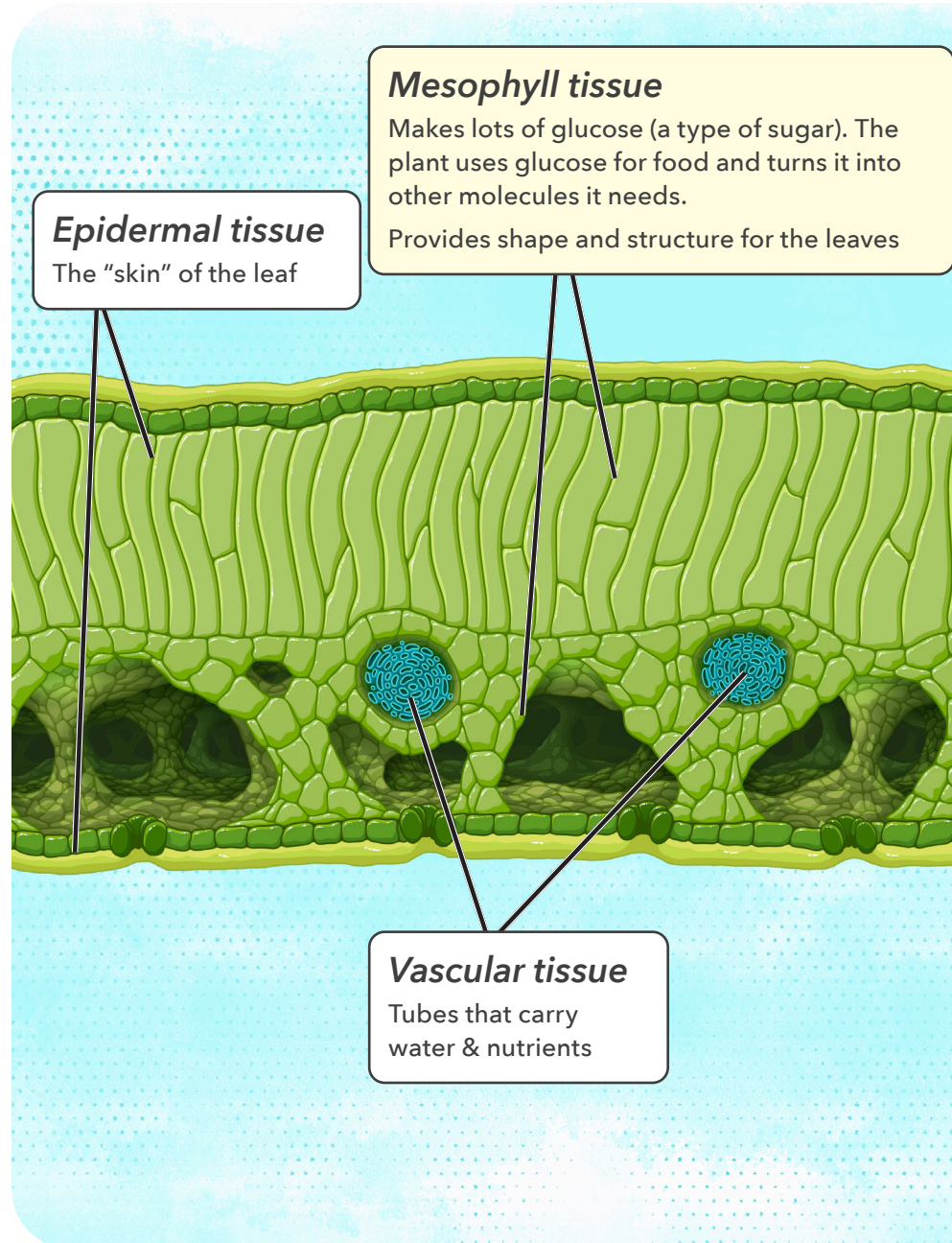


(cross-section)



Tissues of the Leaf

(cross-section)



Epidermal tissue

The "skin" of the leaf

Mesophyll tissue

Makes lots of glucose (a type of sugar). The plant uses glucose for food and turns it into other molecules it needs.

Provides shape and structure for the leaves

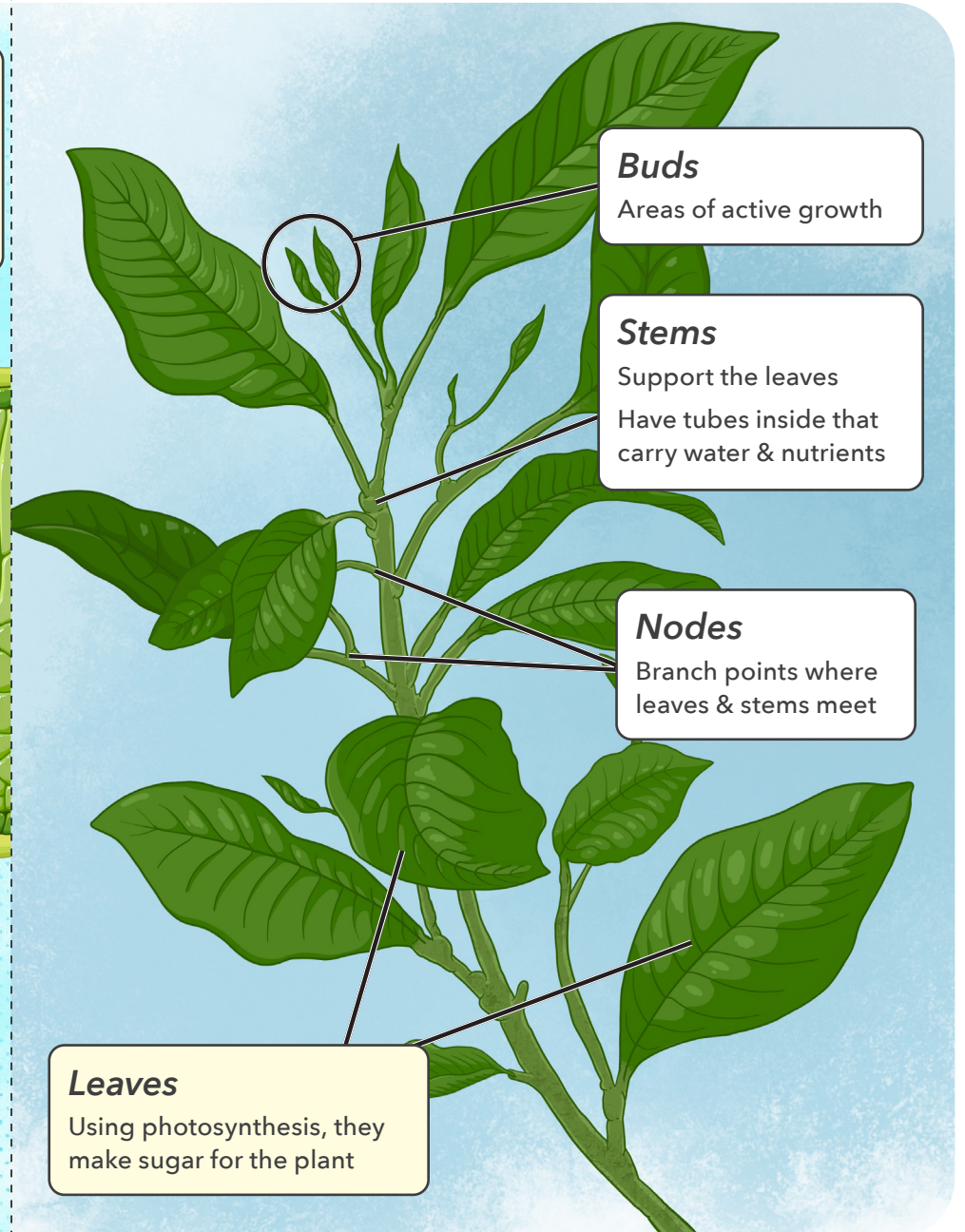
Vascular tissue

Tubes that carry water & nutrients

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Organs of the Plant Shoot System

The shoot system includes the parts of a plant that are above the ground (or above the root system).



Buds

Areas of active growth

Stems

Support the leaves

Have tubes inside that carry water & nutrients

Nodes

Branch points where leaves & stems meet

Leaves

Using photosynthesis, they make sugar for the plant

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