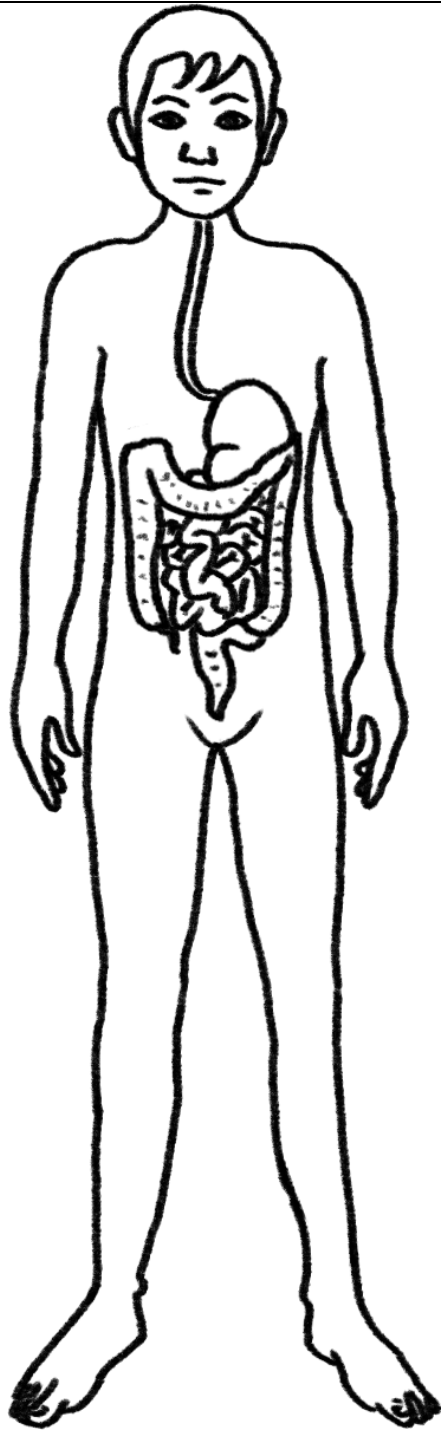


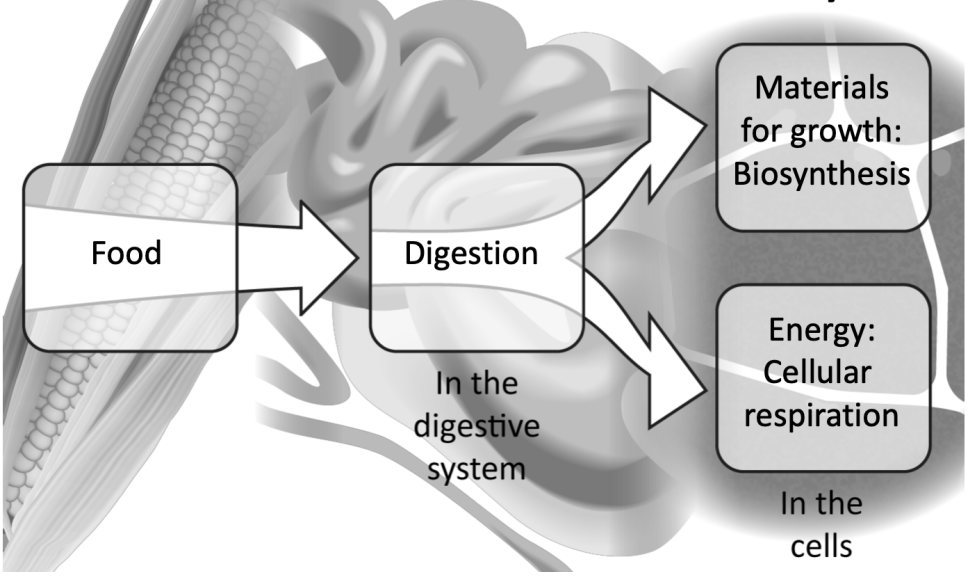
Matter Tracing Tool: Matter Movement Inside a Growing Child

Use the drawing below to show how matter moves into through, and out of a child who is eating, growing, moving, and breathing.

	<p>1. Draw colored arrows to show movement of carbon-containing molecules. When the molecules move to or from every cell in the child's body, you can choose one cell as an example.</p> <p>Key: Color of arrows for:</p> <ul style="list-style-type: none"> • Large organic molecules (LOM) <hr/> <ul style="list-style-type: none"> • Small organic molecules (SOM) <hr/> <ul style="list-style-type: none"> • Carbon dioxide (CO₂) <hr/> <p>2. Use the space below to list other molecules that also move through the child's body (you don't need to draw arrows).</p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
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Matter and Energy Changes in a Growing Child

Explain three processes that change matter and energy as a child eats, moves, grows, and breathes by answering the Three Questions for each process.

<p style="text-align: center;">Digestion</p> <p>Matter Movement in: Where molecules are coming from: _____</p> <p>Matter Change:</p> <p>Reactants: _____</p> <p>Products: _____</p> <p>Energy Change:</p> <p>From _____</p> <p>To _____</p> <p>Matter Movement Out: Where molecules are going to: _____</p>	<p style="text-align: center;">Biosynthesis for growth</p> <p>Matter Movement in: Where molecules are coming from: _____</p> <p>Matter Change:</p> <p>Reactants: _____</p> <p>Products: _____</p> <p>Energy Change:</p> <p>From _____</p> <p>To _____</p> <p>Matter Movement Out: Where molecules are going to: _____</p>
 <p>The diagram illustrates the metabolic pathways of a growing child. It starts with 'Food' (represented by a corn cob) entering the 'Digestion' process (represented by a stomach). From 'Digestion', which is noted as occurring 'In the digestive system', two arrows branch out. One arrow points to 'Materials for growth: Biosynthesis', and the other points to 'Energy: Cellular respiration'. Both of these final processes are noted as occurring 'In the cells'.</p>	
<p style="text-align: center;">Cellular Respiration for energy</p> <p>Matter Movement in: Where molecules are coming from: _____</p> <p>Matter Change:</p> <p>Reactants: _____</p> <p>Products: _____</p>	<p>Energy Change:</p> <p>From _____</p> <p>To _____</p> <p>Matter Movement Out: Where molecules are going to: _____</p>