The Central Nervous System

Concept Map

A concept map can help you organize information and show how ideas are connected. As you read Lesson 2, fill in the missing information.

The Brain and Spinal Cord

The Brain

The brain is a part of the central nervous system. It helps send messages. It also processes and analyzes information. Different body functions are controlled by different parts of the brain.

Follow the directions.

1. Color the cerebrum brown.
2. Color the cerebellum yellow.
3. Color the spinal cord green.
4. Color the brain stem blue.
5. Color the thalamus and hypothalamus red.
Answer the questions. Circle the correct answer.

6. Which is the largest part of the brain?
   - cerebellum
   - brainstem
   - cerebrum

7. Which part of the brain is located in the back of the head?
   - cerebellum
   - brainstem
   - cerebrum

8. Which part of the brain is found inside the cerebrum?
   - brainstem
   - hypothalamus
   - cerebellum

The Brain

The brain is made up of several parts. Some parts control voluntary actions, or those you have to think about. Others control involuntary actions. Complete the table below.

<table>
<thead>
<tr>
<th>Part of Brain</th>
<th>Function</th>
<th>How It Affects Your Everyday Life</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Connects the brain and spinal cord and controls involuntary body functions</td>
<td>Regulating heart rate and breathing while you sleep</td>
</tr>
<tr>
<td></td>
<td>Coordinates muscle and joint movements</td>
<td></td>
</tr>
<tr>
<td><strong>Cerebrum</strong></td>
<td>Controls voluntary activities, intelligence, learning, and judgment</td>
<td>Completing your homework and studying for a test</td>
</tr>
<tr>
<td></td>
<td>Recognizes and responds to hunger, thirst, body temperature, and fatigue</td>
<td>Feeling anxious or stressed when meeting new people</td>
</tr>
<tr>
<td></td>
<td>Center for emotion, behavior, and memory</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Receives and processes sensory messages</td>
<td>Sending the sensation of a loud noise to your cerebrum</td>
</tr>
</tbody>
</table>

Answer the questions.

1. Which part of the brain is involved in fear and anxiety? __________

2. What are four functions of the hypothalamus? ___________________________  
   ___________________________  
   ___________________________  
   ___________________________

3. Which part of the brain controls involuntary actions? Circle the correct answer.
   - brainstem
   - cerebrum

4. A student wants to learn to play the piano.
   a. What part of the brain will help her learn the movements needed to play the piano? __________
   b. What part of the brain will help her learn to read music? ___________________________