**Instructions:**

**1. Please complete the worksheet below. (Note: there are 4 pages.)**

**2. When you are finished,** [**click here to return to the course and upload or enter your work**](https://canvas.brown.edu/courses/851434/pages/virtual-lab-visit-to-the-brain-museum)**.**

**Brain 1**

Species:

Approximate Brain Length:

Approximate Brain Weight:

Source(s) of image/information:

Make a sketch (or sketches) of the brain, be as accurate as possible. Alternatively, cut and paste the image of the brain from your computer:

In the sketch, please identify (if possible) the following brain structures: **Olfactory bulbs,** **cerebral cortex** (or other principal forebrain structure if not a mammalian brain), **optic tectum** (also known as superior colliculus), **cerebellum** and **medulla**.

To the best of your ability, try to estimate the relative size of each of the brain structures above expressed as a percent of the total brain size. For this you can try and look up published data, physically measure the area of each region from your diagram estimating it by comparing to the closest shape, or anything else you can think of.

|  |  |
| --- | --- |
| **Brain Structure** | **% of total Brain** |
| Olfactory bulbs |  |
| Cerebral cortex (or other forebrain) |  |
| Optic tectum (or superior colliculus) |  |
| Cerebellum |  |
| Medulla |  |

**Brain 2**

Species:

Approximate Brain Length:

Approximate Brain Weight:

Source(s) of image/information:

Make a sketch (or sketches) of the brain, be as accurate as possible. Alternatively, cut and paste the image of the brain from your computer:

In the sketch, please identify (if possible) the following brain structures: **Olfactory bulbs,** **cerebral cortex** (or other principal forebrain structure if not a mammalian brain), **optic tectum** (also known as superior colliculus), **cerebellum** and **medulla**.

To the best of your ability, try to estimate the relative size of each of the brain structures above expressed as a percent of the total brain size. For this you can try and look up published data, physically measure the area of each region from your diagram estimating it by comparing to the closest shape, or anything else you can think of.

|  |  |
| --- | --- |
| **Brain Structure** | **% of total Brain** |
| Olfactory bulbs |  |
| Cerebral cortex (or other forebrain) |  |
| Optic tectum (or superior colliculus) |  |
| Cerebellum |  |
| Medulla |  |

**Brain 3**

Species:

Approximate Brain Length:

Approximate Brain Weight:

Source(s) of image/information:

Make a sketch (or sketches) of the brain, be as accurate as possible. Alternatively, cut and paste the image of the brain from your computer:

In the sketch, please identify (if possible) the following brain structures: **Olfactory bulbs,** **cerebral cortex** (or other principal forebrain structure if not a mammalian brain), **optic tectum** (also known as superior colliculus), **cerebellum** and **medulla**.

To the best of your ability, try to estimate the relative size of each of the brain structures above expressed as a percent of the total brain size. For this you can try and look up published data, physically measure the area of each region from your diagram estimating it by comparing to the closest shape, or anything else you can think of.

|  |  |
| --- | --- |
| **Brain Structure** | **% of total Brain** |
| Olfactory bulbs |  |
| Cerebral cortex (or other forebrain) |  |
| Optic tectum (or superior colliculus) |  |
| Cerebellum |  |
| Medulla |  |

**Questions**

1. Rank the brains you selected by size:

2. For each of the identified brain structures, rank them by size relative to the rest of the brain (1 is largest region 5 is smallest):

|  |  |  |  |
| --- | --- | --- | --- |
| **Brain Region** | **Brain 1** | **Brain 2** | **Brain 3** |
| **Species:** |  |  |  |
| Olfactory bulb |  |  |  |
| Cortex |  |  |  |
| Tectum |  |  |  |
| Cerebellum |  |  |  |
| Medulla |  |  |  |

3. What do the relative differences in brain regions tell you about the different evolutionary adaptations you see in each species? Can you identify other brain regions that are different?

4. What are some other key differences and similarities between the brains you chose?

5. Which of these animals do you think would be the most intelligent? Why?

5. What have you learned from this exercise?