ACTIVITY 2:
How do microplastics get into the brain?

Casey wondered how the microplastics ended up in the brain tissue samples.

Locate the round **microplastic chip**. This chip will be used to represent tiny pieces of microplastics flowing through the body.

Inhalation

1. Use the **Human Body Model** diagram, the **microplastic chip**, and the steps below to figure out how microplastics inhaled from the air could end up in the brain. Use the arrow diagram below to keep track of the movement of the chip through the human body.

    - Place the chip on the **Human Body Model** diagram to identify where the microplastics go in the body after being inhaled.
    - Write the number of this location under START on the arrow diagram below.
    - Follow the arrows to move the chip to the next location on its pathway to the brain.
    - Write the number of the next location to the right of your starting number on the arrow diagram below.
    - Continue to follow the arrows, moving the chip on the pathway toward the brain. Record each numbered location your chip moves through on the arrow diagram below.

START → BRAIN

_____ _____ _____ _____ _____

Ingestion

2. Use the **Human Body Model** diagram and the **microplastics chip** to explain how microplastics ingested from food or bottled water could end up in the brain. Follow the steps below to record the path the microplastics would travel in the human body.

    - Place the chip on the **Human Body Model** diagram to identify where the microplastics go in the body after being ingested.
    - Write the number of this location under START on the arrow diagram below.
    - Follow the arrows to move the chip to the next location on its pathway to the brain.
    - Write the number of the next location to the right of your starting number on the arrow diagram below.
    - Continue to follow the arrows, moving the chip on the pathway toward the brain. Record each numbered location your chip moves through on the arrow diagram below.

START → BRAIN

_____ _____ _____ _____ _____ _____ _____ _____ _____

3. The research team claims that finding microplastics in brain tissue means that microplastics are present in other organs. Explain why they would expect microplastics in other parts of the body.

4. Your observations in Activity 1 indicated that there were more of the small-sized microplastics in the brain tissue samples. Based on the **Human Body Model**, why do you think there are more small-sized microplastics in the brain?