

NAME: _____

Science Experiment: Spinning (#79)

Cycle 3, Week 6

Purpose: To demonstrate the effects of spinning the body around rapidly.



Will dizziness occur after spinning?

Make a hypothesis: (Color in the circle next to your guess).

- ☐ **Yes**, dizziness will occur after spinning.
- ☐ **No**, dizziness will **not** occur while resting after spinning.

Procedure:

1. Stand in an open area.
2. Turn around rapidly 5 times.
3. Sit on the ground and explain how you feel.



Conclusion: (Color in the circle next to what you observed.)

- ☐ I felt dizzy after I stopped spinning.
- ☐ I did **not** feel dizzy after I stopped spinning.



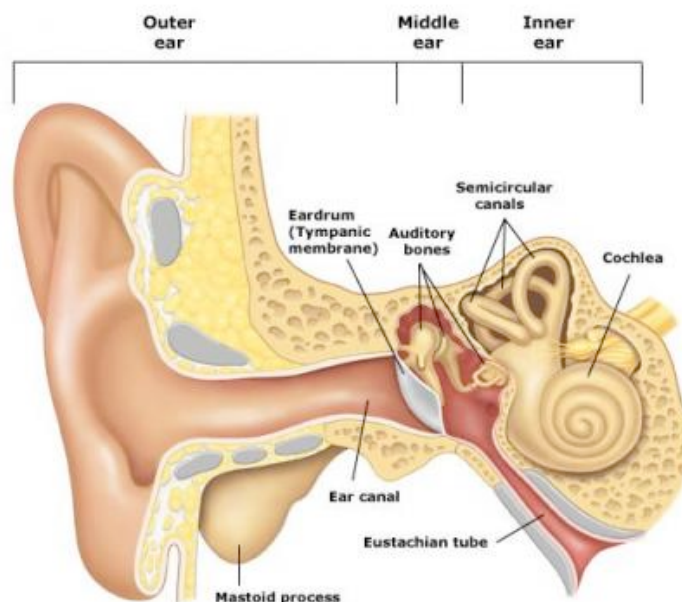
WHY WITH MISS WIZZLE

The root of dizziness lies in your inner ear. Only a small part of the inner ear, called the **cochlea** (kok'-lee-uh), actually helps you hear. *Find the cochlea in the picture below. It looks like the shell of a snail.*

The rest of the inner ear contains three semicircular **canals**. *Can you find them below?* These canals are filled with a watery fluid and contain a tiny sail-like structure called the **cupola** (kyoo'-puh-luh). The *cupola* is made of gel with tiny hair cells imbedded in it. When the fluid in the canals start to flow, the *cupolas* are pushed by the fluid and the sensitive hair cells are bent which triggers them to send a message to the brain that you are moving.

When you started spinning, the liquid in the canals of your inner ears started to flow around in a circle. You felt dizzy after spinning because the liquid in the canals continued to turn after you stopped. This motion was interpreted by the brain to mean that the body was still turning. Hence, you felt dizzy.

*Ears that hear and eyes that see -
the LORD has made them both.
~ Proverbs 20:12 NIV*



NAME: _____

Science Experiment: Change of Pattern (#80)

Cycle 3, Week 6

Purpose: To test your power of concentration.

Which takes more concentration:

- 1. doing the same motion with both of your hands?**
- 2. doing two different motions with both hands?**

Make a hypothesis: (Color in the circle next to your guess).

- ☐ It takes more concentration to do the **same** motion with both hands.
- ☐ It takes more concentration to do two **different** motions with both hands.

Needed materials for experiments 2 & 3: (Check off each material you have.)

- ☐ scrap paper
- ☐ 2 pencils, crayons or markers

Procedure:

EXPERIMENT 1

1. Pat the top of your head with one hand and your stomach with the other.
2. Continue patting your head, but start rubbing your stomach in a circular motion.
3. Reverse the movements and rub your head while patting your stomach.

EXPERIMENT 2

1. Fold a piece of paper in half. (The left hand side of the paper will be for your left hand to write on and the right hand side for your right hand).
2. Write the letter "L" simultaneously with both hands.
3. Next, write the letter "P" with one hand as you write the letter "S" with the other.

EXPERIMENT 3 *(for those who need a greater challenge)*

1. Write your first name with your left hand as you write your last name with your right hand.

Conclusion: (Color in the circle next to what you observed.)

- ☐ It took more concentration to do the **same** motion with both hands.
- ☐ It took more concentration to do two **different** motions with both hands.



WHY WITH MISS WIZZLE

The human brain is the most complex structure in the universe. It monitors and regulates unconscious bodily processes like breathing and heart rate, and is complex enough to coordinate the fingers of a concert pianist.

Different parts of your brain do different things. Some areas receive messages from sense organs, others control balance and muscle coordination, still others handle speech, or emotion, memories, basic motor skills, or complex calculations. You may think your legs take you down the street, but it's your brain instructing the muscles in your legs to move. Your eyes may take in light and an image may be projected onto the retina, but it's your brain that interprets what you see... *you get the picture.*



Your brain is divided into two sides. The left side of your brain controls the right side of your body; and, surprise, the right side of your brain controls the left side of your body. Through repetition of motion, you become proficient at moving your hands in the same pattern. Your brain is programmed to do this. Back-and-forth motions or circular motions are easily done, but only one pattern at a time. Both types of motion are in the brain's many programs. It takes more concentration, however, to activate the two programs at the same time.

*The mind of sinful man is death,
but the mind controlled by the Spirit is life and peace.
~ Romans 8:6 NIV*