



Keeping Your Brain Active

e-Biome Brain Activity book



Table of Contents

About e-Biome	3
Importance of Brain Health	4
Brain Changes and Development	4
Mental Decline	5
Memory Changes	6
Math Activity	7-10
Game: Can you solve this?	10-12
Word Problems	13-14
Science Word Search	15
Brain Exercise- Meditation	16

About e-Biome

e-Biome is a key developer in the blue economy with a vested interest in using Science, Technology, Engineering and Mathematics (STEM) to drive development in the areas of Marine Biotechnological Research and Ecosystem Management. e-Biome provides scientific research and development consultations and employs innovative and creative strategies to discovering new leading product ideas in the medical, cosmetics and pharmaceutical fields using marine resources. A pioneer which uses technology to sustainably vitalize oceanic assets, e-Biome is also engaged in conducting Environmental Impact Assessments (EIA) of coastal developments.

With an interest which lies in shaping high-profile research on natural substances and herbal extracts from marine botanical resources to generate new products, e-Biome is serious about playing a vital role in enhancing the efficiency of human health and its environment.

Through consulting with experienced scientists and global investors, e-Biome bridges the gap between science and business. e-Biome provides services such as project management, proposal development and business development services to small to medium enterprises in the field of science and technology.



Aims of e-Biome:

- Develop and source highly talented researchers.
- Strengthening research in the fields of medicinal plants and natural substances.
 - Facilitation of scientific collaborations.
- Develop sustainable economies around the Blue Economy
 - Support initiatives that are for Sustainable Development and Environmental Sustainability.
 - Expansion and development of a research network.
- Provide high quality education and guidance.

Importance of Brain Health

We emphasize the importance of the health of our heart, however brain health has been in the shadow for too long. During a period of inactivity, the brain can undergo severe damages. Brain health is just as crucial for our ability to think and live well. Brain health is about reducing risk factors, keeping your mind active and getting the very best out of your brain as you get older. Maintaining a healthy brain will help your mind stay clear and active, so that you can continue to work, rest and play.



Brain changes

Even before you leave the womb, your brain works throughout your life to control your body's functions and helps you understand and interact with the world around you. The brain changes throughout life, adapting to things we have learned and experienced. In a healthy brain, new connections continually develop and broken ones are repaired. As we get older, particularly from middle age onwards, changes can start to happen within the brain so that there's a gradual decrease in mental capabilities. This is known as **age-related cognitive decline**, and it typically results in people becoming more forgetful and less mentally sharp.

Mental Decline

Mental decline is one of the most frightening aspects of aging, but it is not inevitable. By working to improve brain health **you can help maintain** your memory, understanding, communication and quality of life.

Senior Moment



Everyone has the occasional "senior moment." Maybe you've gone outside and can't remember what for, you started to search the kitchen and can't remember what item you have been searching for or can't recall a familiar name during a conversation. Memory lapses can occur **at any age**, but aging alone is generally not a cause of cognitive decline.

Studies have shown that you can help prevent cognitive decline and reduce the risk of dementia with some basic good health habits:

- Staying physically active
- Getting enough sleep

Memory Changes

Memory changes can be **frustrating**, but the good news is that, many thanks to scientific research, you can learn how to get your mind active.

Here are several you might try:

1. Keep learning

Challenging your brain with mental exercise is believed to activate processes that help maintain individual brain cells and stimulate communication among them.

2. Use all your senses

The more senses you use in learning something, the more of your brain that will be involved in retaining the memory.

3. Believe in yourself

Middle-aged and older learners do worse on memory tasks when they're exposed to negative stereotypes about aging and memory, and better when the messages are positive about memory preservation into old age. If you believe you can improve and you translate that belief into practice, you have a better chance of keeping your mind sharp.

4. Prioritize your brain use

Take advantage of calendars and planners, maps, shopping lists, file folders, and address books to keep routine information accessible. Designate a place at home for your glasses, purse, keys, and other items you use often.

Interactive Segment:

Let us stop for a brief moment and watch these videos. These videos were carefully selected to help you understand:

- <https://www.youtube.com/watch?v=EEmpK-HpUW0>
- https://www.youtube.com/watch?v=o7_gfh34Uik
- <https://www.youtube.com/watch?v=gZuN1J6sOLE>

Solve the following expressions

1. $11 - b = 9$

2. $4 \times i = 12$

3. $48 \div o = 6$

4. $4 \div m = 2$

5. $e \div 9 = 8$

6. $8 - b = 6$

7. $6 + i = 10$

8. $o - 5 = 1$

9. $m - 20 = 40$

10. $2e - 5 = 7$

11. $2b + 20 = 26$

12. $12 + 3i = 36$

13. $4o - 4 = 12$

14. $4m - 8 = 40$

$$15. 3e + 13 = 40$$

GAME: Can you Solve this?

**What is the value
of Square ?**

$$\square + \bigcirc = 10$$
$$\triangle + \triangle = 6$$
$$\triangle + \bigcirc = 5$$

CAN YOU SOLVE THIS?

$$\square \times \square \times \square = 27$$

$$\square \times \triangle \times \triangle \times \triangle = 24$$

$$\square \times \triangle \times \bigcirc \times \bigcirc = 96$$

$$\bigcirc + \square \times \triangle = ?$$

© www.ShakeTheBrain.com

CAN YOU SOLVE THIS?

$$\triangle + \star = 36$$

$$\triangle - \star = 24$$

$$\triangle \div \star = ?$$

© www.ShakeTheBrain.com

CAN YOU SOLVE THIS?

© www.ShakeTheBrain.com

$$\triangle \div \star = 2$$

$$\triangle \times \star = 2$$

$$\triangle - \star = ?$$

Can you solve this?

$$\text{Red Flower} + \text{Red Flower} + \text{Red Flower} = 60$$

$$\text{Red Flower} + \text{Blue Flower} + \text{Blue Flower} = 30$$

$$\text{Blue Flower} - \text{Yellow Flower} = 3$$

$$\text{Yellow Flower} + \text{Red Flower} + \text{Blue Flower} = ?$$

Answer the following word problems:

1. There are 22 mango trees currently in the park. Park workers will plant 12 more mango trees today. How many mango trees will the park have when the workers are finished?
2. Theo has 11 books and he has read 8 of them. Fred has 39 books. How many books do they have together?
3. Stacy has 34 yellow and 42 red balloons. Sara has 32 yellow balloons. How many yellow balloons do they have in all?
4. Sabrina had 45 crayons and 36 pens in her backpack. Her father gave her 20 pencils and 14 pens. How many pens does she have now?
5. Giovanni went to twenty-five football games this year. He went to twenty-two games last year. How many football games did Giovanni go to in total?

6. Jason had thirty-five baseball cards, and eight were torn. Tim gave Jason twenty-five new baseball cards. How many baseball cards does Jason have now?

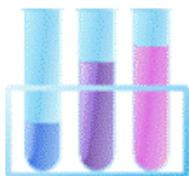
7. Mike found thirty-four seashells and Tim found twenty-seven seashells on the beach. When they cleaned them, they discovered that thirty-two were cracked. How many seashells did they find together?

8. Tom picked nineteen plums and Sam picked forty-five plums from the plum tree. How many plums were picked in all?

9. Mary grew 28 pumpkins. Sally grew 40 pumpkins. How many pumpkins did they grow in total?

10. There are thirty-eight pencils in the drawer. Dan placed sixteen more pencils in the drawer. How many pencils are now there in all?

Word Search



The Sciences



ANATOMY
ANTHROPOLOGY
ARCHEOLOGY
ASTRONOMY
BIOLOGY
BOTANY
CHEMISTRY
COMPUTER SCIENCE
ECOLOGY

ELECTRONICS
ENGINEERING
ENTOMOLOGY
FORESTRY
GENETICS
GEOLOGY
MATHEMATICS
MEDICINE
METEOROLOGY

OCEANOGRAPHY
PALEONTOLOGY
PHYSICS
PHYSIOLOGY
SEISMOLOGY
TAXONOMY
ZOOLOGY



© puzzle-to-print.com

Meditation



Up next is a brain exercise that has been in use for thousands of years but has recently gained considerable recognition for its effectiveness.

Studies from 2007 suggest that meditation can help engage new neural pathways, resulting in improved self-observational skills and increased mental flexibility. The 2007 research has also shown that meditation can help improve attention, focus, empathy, and even immunity.

Are you ready to try this brain exercise?

- Find a clean and quiet area
- Stay isolated for 50-100 minutes during meditation
- Close your eyes and Relax your mind

Interactive Segment:

Let us stop for a brief moment and watch these videos. These videos were carefully selected to help you understand:

- <https://www.youtube.com/watch?v=MKEUEWEVTiE>
- <https://www.youtube.com/watch?v=krKXXmnLQ80>
- <https://www.youtube.com/watch?v=pCpiteBel8E>