

Mysterious Workings of the Adolescent Brain
By Sarah-Jayne Blakemore

Historical and current perspectives of brain development:

1. What was widely assumed 15 years ago? Why?
2. What are neuroscientists now able to do? How are they able to do this?
3. What are many labs around the world involved in doing?
4. How has the research changed concerning brain development?

Brain regions & activities:

5. During adolescence, what brain region changes dramatically? What cognitive functions are controlled by this part of the brain?
6. What is happening with gray matter volume in people from the ages 4 to 22? Be specific.
7. Why does gray matter peak later for boys than girls?
8. What do neuroscientists think is happening in the adolescent brain when the gray matter volume is declining?

In Blakemore's lab:

9. What is Sarah-Jayne Blakemore interested in studying? Explain what she means by the term.

10. How does Blakemore do her research about what she is interested in?

11. What major finding does Blakemore explain that a meta-analysis of 9 different developmental fMRI studies also support?

12. Why do neuroscientists think the results they got are happening?

13. Briefly describe the experiment that Blakemore talks about concerning *perspectives*.

14. What did her large developmental study reveal?

15. What is the significance of this developmental study?

Understanding teenagers:

16. How are teenagers often viewed (seen)?

17. In what way do neuroscientists try to understand teenagers today?

18. What is the limbic system and what is happening in the limbic system during adolescence?

19. How does this compare to what is happening in the prefrontal cortex in the adolescent brain?

Implications for current research in neuroscience:

20. What implications does understanding the adolescent brain have for education?

Synthesis of ideas:

21. In the story *Curious Incident of the Dog in the Night-time*, Christopher is an adolescent. How does understanding what is happening in the adolescent brain impact how you think about him?