

#### Reading questions for Arroyo et al., 2019

- Most historical work from sensory cortices used sensory deprivation rather than sensory enrichment. Why did Arroyo et al. choose to use sensory enrichment rather than sensory deprivation?
- Fig. 5 shows the evidence for the authors' main claims. Do you find the evidence in Fig. 5 convincing? Why or why not?
- If you were designing a future experiment (either in *Fmr1* knockout mice or in people with fragile X syndrome) following up on the results from Arroyo et al., what question would you want to ask? There is no right or wrong answer here; we're simply inviting you to think about future directions for a project like this.

#### Reading questions for Krueger et al., 2011

- To identify behavioral deficits in *Fmr1* KO mice, the authors use the five-choice serial reaction time task (5CSRTT). How efficiently does this task reflect the behavioral deficits we see in FXS patients? Would you have chosen a different task?
- In figure 4, the authors claim that neuronal activity is decreased in KO mice. What is *c-Fos* measuring? Is this conclusion well supported? If not, what would you have done differently?
- What are the key features that would need to be present in an animal model to comfortably make claims regarding FXS?

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