



HOMESCHOOL SCIENCE EXPERIMENT



Testing the reaction speed of different age groups

Name: _____

Date: _____



QUESTION

Do people of different ages have different reaction speeds?



HYPOTHESIS

If age affects reaction speed,
then _____



MATERIALS

- Ruler (30 cm)
- Partner from a different age group
- Table or flat surface
- Data sheet (this sheet)
- Pen or pencil
- (Optional) Calculator for finding averages



SAFETY NOTE: Be careful when catching the ruler. Keep fingers clear of the bottom.



PROCEDURE

1. Work with a partner from a different age group.
2. The "dropper" holds the ruler at the top (0 cm mark) so the bottom of the ruler is level with the catcher's open hand. The catcher's thumb and index finger should be ready to catch the ruler.
3. Without warning, the dropper lets go of the ruler.
4. The catcher catches the ruler as quickly as possible.
5. Record the distance (in cm) where the catcher caught the ruler.
6. Repeat 3 more times for this partner.
7. Switch roles and repeat steps 2–6.
8. Test at least 2–3 people from each age group.
9. Calculate the average reaction distance for each person.

DATA TABLE

Participant (Age)	Role (Dropper/Catcher)	Trial Distance (cm)				Average Distance (cm)	Reaction Speed (Faster = Smaller Distance)
		1	2	3	4		



ANALYSIS

1. Which age group had the fastest (smallest) average reaction distance? _____
2. Which age group had the slowest (largest) average reaction distance? _____
3. What patterns did you notice in the data? _____
4. What might explain the differences in reaction speed between age groups? _____
5. How could you improve this experiment? _____



TIPS

- Make sure the dropper does not give any warning before releasing the ruler.
- Do not move your hand toward the ruler early.
- More trials make the results more accurate.

