The Brain-Body Connection
Classroom Activity

SYNOPSIS

Students will conduct a study to see if there is a brain-body connection.

OBJECTIVES

Students will be able to:

- use bar graphs.
- compare data sets.

MATERIALS

- At least 8 people
- 50 small household items
- Towel or blanket
- Paper

- Pencils
- Timer
- Obstacle course or other exercise
- Board games

SET UP

1. Design an obstacle course or other aerobic activity for active participants.
2. Set up board games for the non-active participants.
3. Set up both tables of 25 items and cover them with a towel.

PROCEDURE

1. Have the volunteers take the initial memory test by uncover items.
2. Have volunteers study items for one minute.
3. Cover items.
4. Ask volunteers to write down as many of the items as they can remember for three minutes.
5. Collect answer sheets and tally scores.
6. Randomly assign volunteers to exercise (active) or games (non-active).
7. Each group will perform their assigned activity for 10 minutes.
8. Quickly gather group and repeat the memory test with the second group of 25 items.
9. Collect answer sheets and tally scores.

ANALYZE DATA

1. Make a table of the scores for both groups using the following data sheet or in Excel.

2. Compute the average before and after score for each group, and for entire group.

3. Make bar graphs to show the change in scores for each group.

CHECK FOR UNDERSTANDING

1. Any differences in scores before activities and after activities?

2. Did the exercise have an effect on the memory test?

3. What other factors could influence these scores?

EXTENSIONS

• Have the students use Excel to log data, calculate averages, and make graphs.

• Add other types of activities, like group of students who does nothing or read a book for non-active and running in place or jumping rope for the active.

• Repeat the activity at a different time of the school day to see if that impacts the results.

Brain-Body Connection Data Sheet

Volunteer	Group (active/nonactive)	Test 1	Test 2	Change of Score (Test 2 - Test 1)

Average Active Group Change in Score =

Average Non-Active Group Change in Score =

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