

Name _____

Class _____

Quick Hands

Can you catch the glass falling off the table before it hits the floor? Or snag your music player as it falls out of your pocket heading straight for the swimming pool? In this activity we are going to measure your reaction distance in centimeters.

1. Working with a partner, they will hold the “zero” of the ruler at the top of your hand that is cupped like a “c” with your fingers and thumb running parallel to each other.
2. WITHOUT saying a word your partner will drop the ruler and you need to catch it as quickly as possible by closing your fingers and thumb together.
3. Read the measurement in centimeters at the TOP of your fingers.
4. Each person may take 3 readings and record your best.
5. Submit that reading for class analysis.
6. What is the **MINIMUM** reaction distance? _____
7. What is the **MAXIMUM** reaction distance? _____
8. What is the **RANGE** of the reaction distance? _____
9. What is the **MEAN** reaction distance? _____
10. What is the **MEDIAN** reaction distance? _____
11. What is the **MODE** reaction distance? _____
12. Create a box and whisker plot of the class data.
13. Calculate the average reaction time if $t = \sqrt{\frac{2d}{g}}$ sec.
14. The water in the pool is $\frac{1}{2}$ meter below the pocket holding your iPod and you iPod falls at a rate of 80 cm/sec. Would the “average” person snag the iPod before it hits the water if takes their hand $\frac{1}{2}$ sec to get to the pocket?

Person	Reaction distance (cm)
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	
21	
22	
23	
24	
25	
26	
27	
28	
29	
30	

Quick Hands

TEACHER NOTES

1. Each student pair will need a ruler that measures in centimeters.
 - a. Have students follow the directions on the worksheet to find their reaction time.
 - b. When all students have gathered their reaction time, use Activity Center to collect "Time" list. (Load Activity Center settings: Quick Hands.act - File - Load - Load Activity settings)

2. When students log into Navigator send:
 - a. Reaction Time learn check
 - b. Time List (Will be under "collect" folder in class)

3. Working with the lists:

- a. Put "Time" into list screen

1. SetUpEditor

-In "Home" screen

-**2nd****[PRGM]** - arrow down to SetUpEditor

-**2nd****[LIST]** - Arrow down to Time **[ENTER]**

CATALOG	OPS MATH CALC
Select(1: L1
Send(2: L2
Rec(3: L3
AnsSetConst(4: L4
AnsSetMenu(5: L5
SetUpEditor	6: L6
Shade(7: HANG

SetUpEditor	L1	TIME	----	----	1
E		7.1			
		6.5			
		14.2			

		TIME(S) =			

OR

2. List Screen

-**[LIST]** - arrow up to name

- **2nd****[DEL]** - to insert a new list

- **2nd****[LIST]** - Arrow down to Time **[ENTER]** **[ENTER]**

[2nd]	L2	L3	1	[DEL]	L1	L2	1
----	----	----		----	----	----	
L1 =				Name =			

[2nd] [LIST]	L1	L2	1
7.1	----	----	
6.5			
14.2			

TIME = (7.1, 6.5, 2. ...			

1: OPS MATH CALC	SortA(LTIME)
2: SortA(
3: SortD(
4: ClrList	
5: dim(
6: List(
7: Select(
8: seq(

- b. Arrange "Time" list from smallest to largest
 - Go to Home screen
 - 2nd LIST OPS - choose 1: SORTA(
 - Put in Time list as before

- c. Do a Navigator Screen Capture to make sure everyone is on the same page.

4. Have students take the learn check "Reaction Time"
 - a. From Learn Check App
 - b. From NavNet
5. Collect and Analyze Learn Check
 - a. Open Class Analyze
 - b. Choose Assignment (4th icon on tool bar) to open the learn check
 - c. Will need to insert the correct answers for YOUR data in ITEM tab
 - d. Collect Answer Files from Class (6th icon on tool bar)
 - e. Run Slide Show (2nd for last icon on tool bar) and discuss
6. Create a Histogram
7. Create a Box & Whisker