

## STEM 2 W5 Requirements (ADR)

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<b>Description of Need:</b>	The client does not have enough hand strength to hold a regular guitar pick.

#	Requirement Type	Requirement Statement	Level	Half Ring	Thumb Pick	Pick Holder	Acrylic Pick	3D-printed Half Ring
	Design #, Version #			Design 2, Version 2	Design 1, Version 2	Design 3, Version 1	Design 4, Version 1	Design 2, Version 1
1	Functional	The device must be durable enough to withstand multiple uses without breaking.	1	Yes	Yes	No	No	Yes
2	Functional	Should be able to accommodate the needs of various patients, ranging from those with deficiency in muscle tone to those with severe hand contractures.	1	Yes	Yes	Yes	No	Yes
3	Functional	The device shall be used to create clean sound similar to that of a normal pick when used with a guitar.	1	Yes	Yes	No	Yes	Yes
4	Functional	The device must be able to stay secured to the hand while strumming the strings.	1	Yes	Yes	No	No	Yes
5	Functional	The device must be usable without extra materials or electricity.	1	Yes	Yes	Yes	Yes	Yes
6	Functional	The device must be physically comfortable.	1	Yes	Yes	Yes	No	Yes
7	Functional	The device must stay in a fixed position on the user's skin.	1	Yes	Yes	Yes	No	Yes
8	Functional	The device should be easy to put on and take off.	1	Yes	Yes	Yes	No	Yes
9	Physical	The device shall be compatible with an unmodified guitar.	1	Yes	Yes	Yes	Yes	Yes
10	Physical	The final design shall not require 3D printing.	1	Yes	Yes	Yes	Yes	Yes
11	Physical	The design shall be mass-producible.	1	Yes	No	No	No	No
12	Physical	The device is small yet not discreet.	2	Yes	Yes	Yes	Yes	Yes
14	Physical	The device shall weigh less than 50 grams.	3	Yes	Yes	Yes	No	Yes
15	Physical	The design shall be visually appealing.	3	Yes	Yes	Yes	No	Yes
16	User	The user does not need to have all of their fingers	1	Yes	Yes	Yes	Yes	Yes
17	User	The user shall be able to use the device by themselves.	1	Yes	Yes	Yes	Yes	Yes
18	Cost	The cost shall be less than \$4 per unit.	1	Yes	Yes	Yes	Yes	Yes
19	Cost	The cost shall be less than \$3 per unit.	2	Yes	Yes	Yes	Yes	Yes
20	Documentation	The device shall be delivered with a video tutorial.	1	Yes	Yes	Yes	Yes	Yes
21	Documentation	The device shall be delivered with an instructable.	1	Yes	Yes	Yes	Yes	Yes
22	Documentation	The device shall be delivered with a design document.	1	Yes	Yes	Yes	Yes	Yes
23	Documentation	The device shall come with a clear user's manual.	2	Yes	Yes	Yes	Yes	Yes