

STEM 2 W1 Requirements (ADR)

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Description of Need:	Building a remote control for the client, who is easily confused by the complexity of her current remote.

#	Requirement Type	Requirement Statement	Level	CDR Remote	Arduino Uno	Trinket Pro	Arduino PCB	Current Model
1	Functional	Remote buttons work as intended.	1	Yes	Yes	Yes	Yes	Yes
2	Functional	Remote has methods to access all of users favorite channels.	1	No	No	No	Yes	Yes
3	Functional	Remote can interact with a TV from 8 feet away.	1	No	Yes	Yes	Yes	Yes
4	Functional	Remote issues a 5 minute warning to switch channels before a show on a different channel starts.	1	Yes	Yes	Yes	Yes	Yes
5	Functional	Remote is able to interact with multiple TVs.	3	No	No	No	No	No
6	Functional	Remote can withstand 20 drops from 1.6 meters.	3	No	No	No	No	No
7	User	Changing channels can be done within 20 seconds.	1	Yes	Yes	Yes	Yes	Yes
8	User	The buttons on the remote can be pressed with minimal force.	1	Yes	Yes	Yes	Yes	Yes
9	User	The buttons are at least 2 cm wide.	1	No	No	No	Yes	Yes
10	User	There are 8 buttons or fewer to limit confusion.	1	Yes	Yes	Yes	Yes	Yes
11	User	The client is able to access on demand with the remote.	1	No	No	No	Yes	Yes
12	User	The client can navigate through on demand.	1	No	No	No	Yes	Yes
13	User	Remote is easily programmable.	2	No	No	No	No	No
14	User	The remote has a lower cost than current assistive remotes.	2	No	No	No	No	No
15	User	The buttons on the remote have enough contrast (color or shape).	2	Yes	Yes	Yes	Yes	Yes
16	User	Specific television shows can be programmed into the remote.	2	Yes	Yes	Yes	Yes	Yes
17	Physical	All wires are enclosed.	1	No	No	No	Yes	Yes
18	Physical	The outside is made of light weight but durable plastic.	1	Yes	Yes	Yes	Yes	Yes
19	Physical	The whole remote weighs 6 ounces or less.	2	Yes	Yes	Yes	Yes	Yes
20	Physical	The buttons are evenly spaced out or organized in an intentional formation.	3	No	Yes	Yes	Yes	Yes
21	Documentation	The process is documented on instructables	1	No	No	No	Yes	Yes
22	Documentation	An Arduino diagram was made	1	Yes	No	No	Yes	Yes
23	Documentation	A CAD diagram was made	1	Yes	No	No	Yes	Yes