If the Discovery board is suddenly no longer able to be programmed: (usually the result of a program changing the operating mode of GPIO pins PA13-14)

- Open the *STM32CubeProgrammer* utility program. (Download link is on the course resources web page.)
- 2. Plug in your Discovery board.
- 3. In the upper right corner, select ST-LINK in the drop-down menu and click "Connect".
- 4. If the ST-LINK component on the Discovery board is able to communicate, you should now see the contents of the microcontroller flash memory in the window, your board and ST-LINK serial number in the Log window, and the Connect button changed to "Disconnect".
- 5. In the bottom left corner, click the "Erase" icon to erase the full chip flash memory. The memory window will show all locations erased to FFFFFFF.
- 6. You should now be able to program your microcontroller from uVision.

	Memo	Memory & File edition							Connected	
	Device	memory	Open file	+					ST-LINK	 Disconnect
	Addr	0x0800	🔻 000	0x400	Data w 3	2 ▼ Fin	d D Ox Rea	d 🔻	ST-LIN Serial number	Click "Conr
	Ad	dress	0	4	8	С	ASCII		Port	SWD
OB	0x080	00000	0005F04F	0111F04F	0201EB00	010CF101	0ð0ðëñ	^	Frequency (kHz)	4000
\equiv	0x080	00010	0000E7FE	FFFFFFF	FFFFFFF	FFFFFFF	þçÿÿÿÿÿÿÿÿÿÿÿÿÿ		Mode	Under reset
CPU	0x080	00020	FFFFFFF	FFFFFFF	FFFFFFF	FFFFFFF	ÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿ		Access port	0
	0x080	00030	FFFFFFF	FFFFFFF	FFFFFFF	FFFFFFF	ÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿ		Reset mode	Hardware reset
swv	0x080	00040	FFFFFFF	FFFFFFF	FFFFFFF	FFFFFFF	ÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿ		Speed	Reliable
	0x080	00050	FFFFFFF	FFFFFFF	FFFFFFF	FFFFFFF	ÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿ		Shared	Disabled 🔹
REG	0x080	00060	FFFFFFF	FFFFFFF	FFFFFFF	FFFFFFF	ÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿ		Debug in Low Pow	ver mode 🛛 🗸
DETA	0x080	00070	FFFFFFF	FFFFFFF	FFFFFFF	FFFFFFF	ÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿ		External loader	
	0x080	08000	FFFFFFF	FFFFFFF	FFFFFFF	FFFFFFF	ÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿ		Firmware version	s.21 v /2J38M27
	0x0800090		FFFFFFF	FFFFFFF	FFFFFFF	FFFFFFF	ÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿ			
	0x080	0x080000A0 FFFFFFF		FFFFFFF	FFFFFFF	FFFFFFF	ÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿ			
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	Log				l	Live Update	/erbosity level 💿 1 🔅	2 🔵 3	Targe	t information
	07:56:5 07:56:5 07:56:5 7:56:52 7:56:52 7:56:52	: ST-LINK : ST-LINK : Board : Voltage : SWD free : Connect	SN : 066AFF555 FW : V2J38M27 : 32F3348DISC : 3.22V q : 4000 KHz mode: Under Re	07149486721422 OVERY :set	8				Board Device STM Type Device ID Revision ID Flash size CPI	32F3348DISCOVER 132F303x4-x6-x8/F328xx/ MC 0x43 Rev 64 K Cottex-M