



Xploris

One stop shop for k-6 STEAM

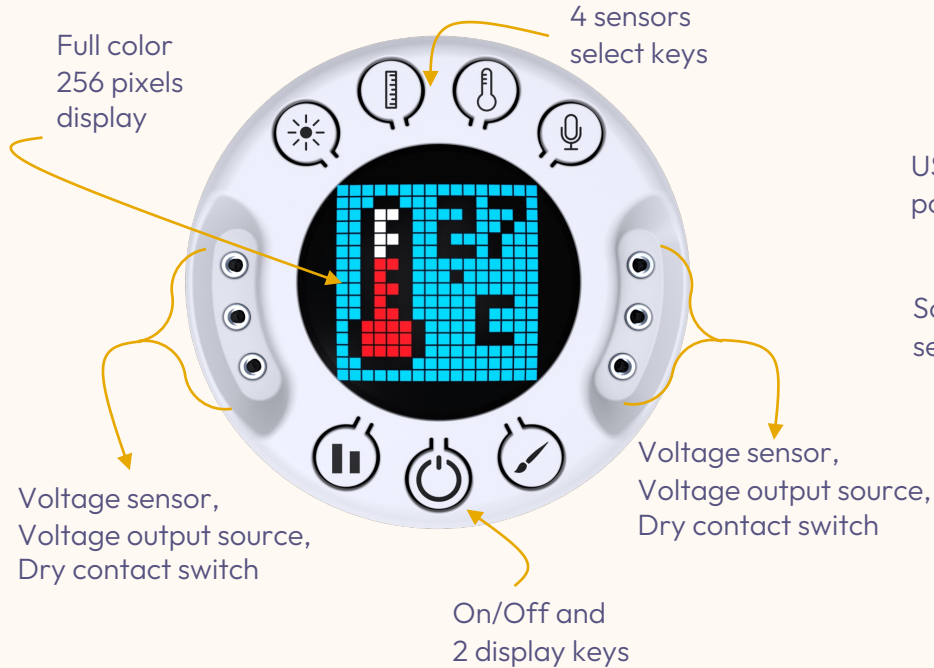


Unique STEAM solution

Xploris does it all: An orchestra of STEAM learning in a compact, hand-held disc



Xploris – ports and controls



Hardware features



Sensing & Data logging

- 5 sensors: Light, Temperature, Sound, Distance, Voltage.
- Displaying numeric sensor value and sensor bar graph.



Art

- 16x16 RGB LED matrix.
- Using the full color pixel matrix for creating graphics and animations.



Coding

- Internal processor directly supporting Python and Blocks.

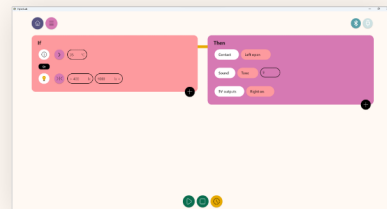
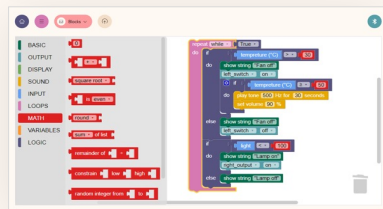
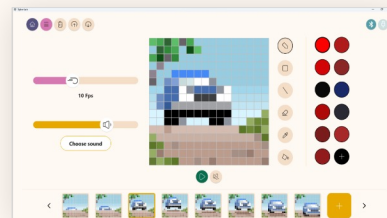
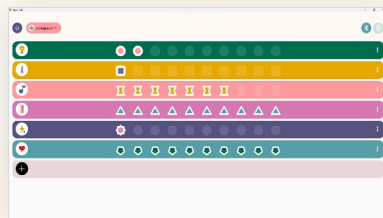


Control

- 2 on/off outputs.
- 2 voltage output.
- 2 servo engine outputs.

XploriLab - full suite of STEAM apps

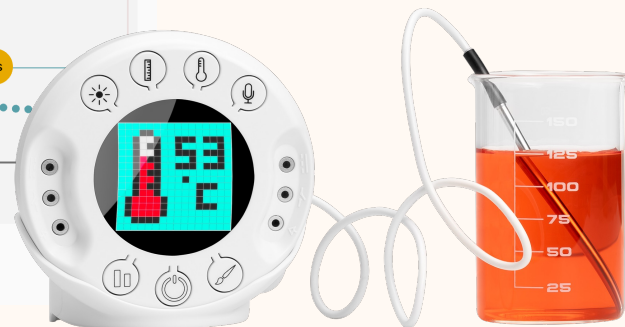
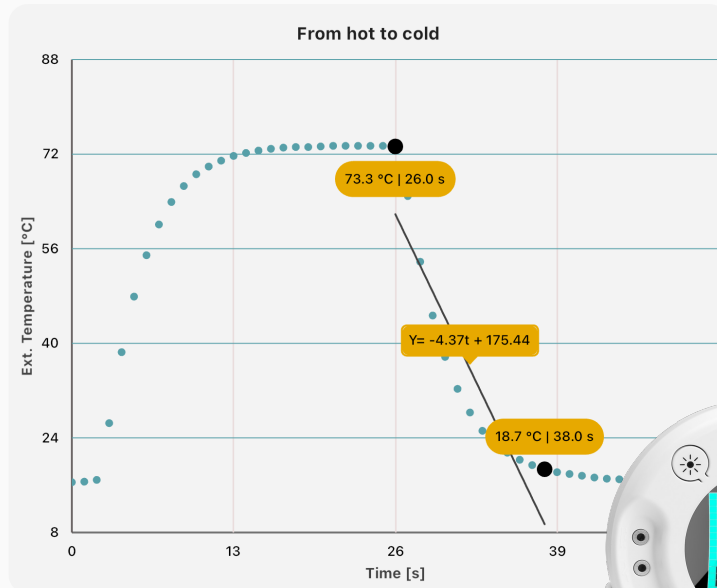
Science sensing, datalogging, coding, control and art.



For science & math



Time (s)	Ext. Temperature (°C)
43.00	17.1
44.00	17.0
45.00	16.8
46.00	16.7
47.00	16.6
48.00	16.5
49.00	16.5
50.00	16.4
51.00	16.4
52.00	16.3



For coding



BASIC

OUTPUT

DISPLAY

SOUND

INPUT

LOOPS

MATH

VARIABLES

LOGIC

repeat while True

do

if light [lux] < 300

do

right_switch on

display

else

right_switch off

count with j from 0 to 15 by 1

do

count with k from 0 to 15 by 1

do

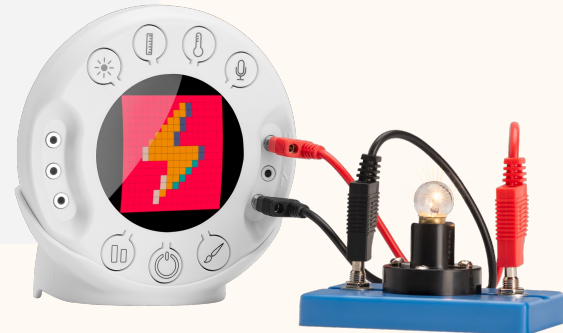
if sound [dB] < 75

do

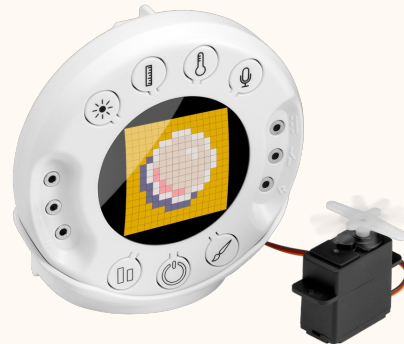
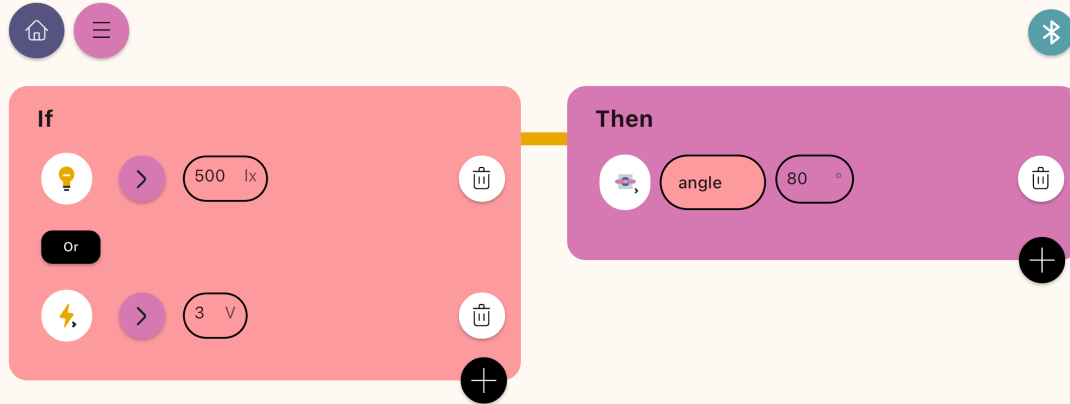
plot j k

else

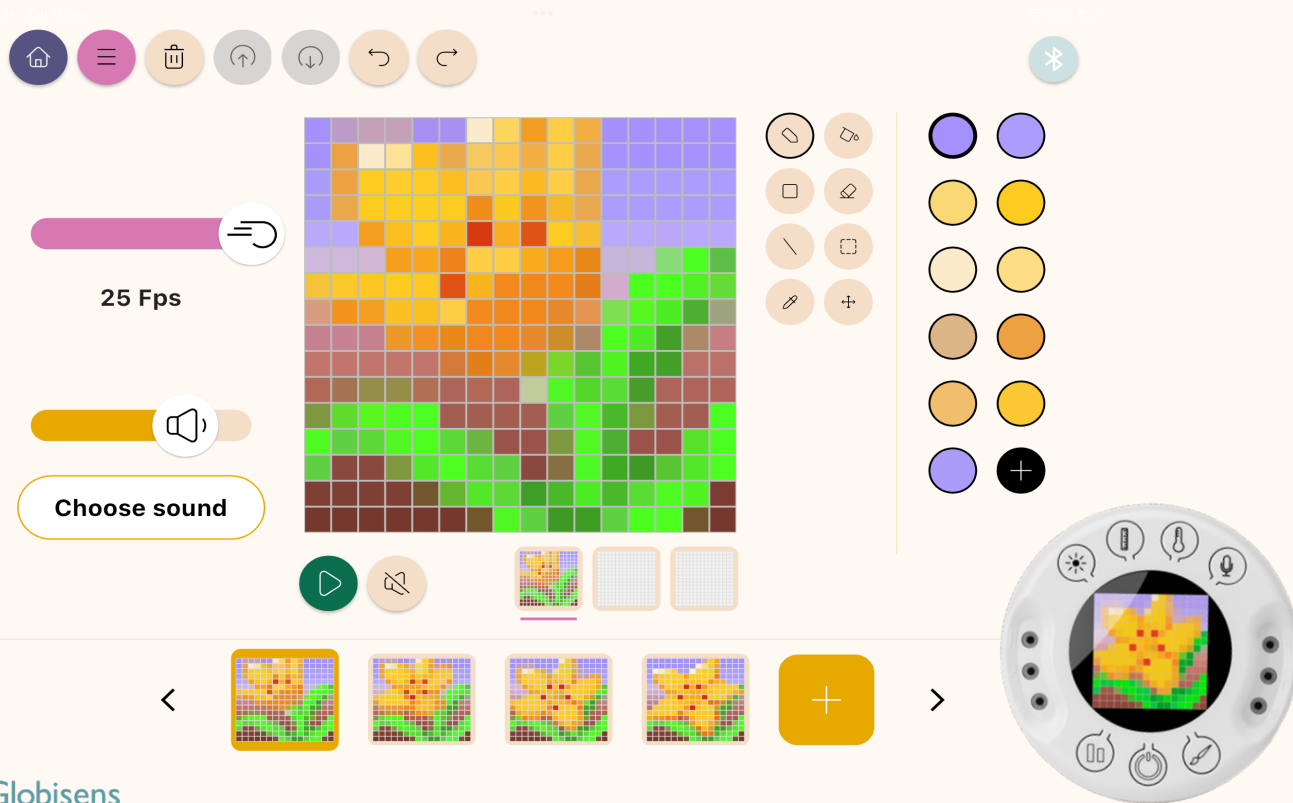
plot j k



For control & engineering



For art



Pedagogic coverage

Full integration of all STEAM subjects



Science & Math

- **Data visualization:** gauges, pictographs, bar graphs, tables, line graphs.
- **Data analysis:** markers, annotations, linear regressions, Export to EXCEL.



Coding

- **Platforms:** Blockly, and Python editor.
- **Covering:** data types, variables, logical operators, If/else conditions, loops, Input and output operations.



Art

- **Introduction to:** colors, drawing, pixel art and character creation.
- **Covering:** frame by frame animation, shapes and geometry, sensors and code controlled animation.



Control

- **Method:** sensors based output levels.
- **Controlling:** animation speed, servo speed, servo angle, contact open/close, 5V output on/off.



Xploris offers students an integrated end-to-end STEAM experience, from creating a pixel art flower animation to apply coding that opens the flower's leaves when sunlight is projected on a light sensor”



Thank you!