

einstein™ Tablet+



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Welcome to  
**einstein™ Tablet+**



Congratulations on receiving your **einstein™Tablet+**, an Android tablet equipped with built-in sensors for advanced science investigation both indoors and outdoors.

In this booklet you'll find quick experiments you can run with your **einstein™Tablet+** right away. These are fun science investigations you can enjoy with just your tablet and some stuff you have lying around the house.

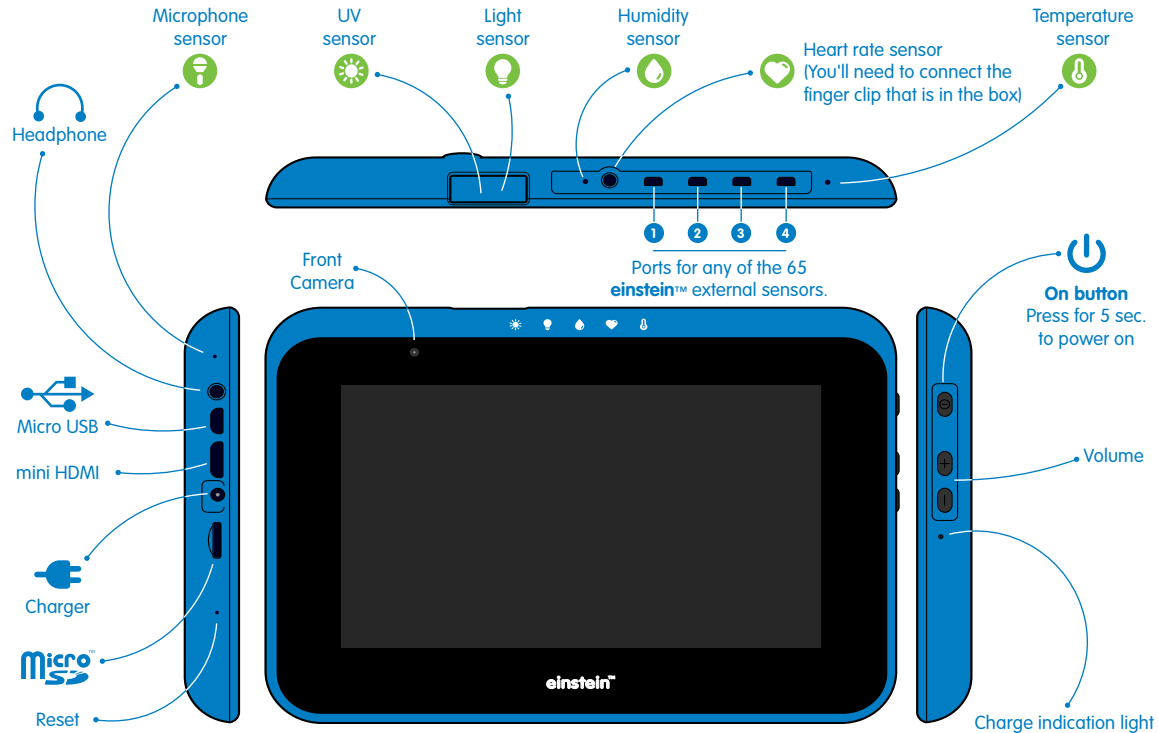
Also included, is a guide to the tablet's features and technical specifications so you can get to know your tablet better.

This, of course, is just a start; soon you'll be setting up bigger, better challenges and expanding your universe.

So pick up your **einstein™Tablet+** and start exploring!

Have fun,  
**einstein™** team

## einstein™ Tablet+ ports and sensors



Get more info at [einsteinworld.com](http://einsteinworld.com)

## Your Einstein™ Tablet+ already has in it:

- **MiLAB™**  
data collection and analysis app
  - **einstein™World**  
guided interactive science investigation app.  
**Coming Soon**
  - **Radix SmartClass**  
Classroom management system (Free trial)
- + A world of opportunities via **Google Play**.



## Quick Experiment: Measuring UV

Ultraviolet (UV) radiation is the section of the electromagnetic spectrum between x rays and visible light. Biology students need to study the effects of this phenomenon as it has significant impact on our health. While we need UV radiation to synthesize vitamin D it can also cause health problems including damage to eyesight. Using the **einstein™Tablet+** children can learn about UV radiation and test their own sunglasses to see if they got their money's worth.

- 1 Turn on your **einstein™Tablet+** and open the **MiLAB™** application.
- 2 Make sure only the UV sensor is selected
- 3 Leave the Rate and Duration at their default settings.



- 4 Press the Run button while aiming the sensor towards the sun for ten seconds.
- 5 Now place your sunglasses over the sensor and press the Run button again while aiming the sensor towards the sun.

**Note** the difference between the two measurements. Significant changes are an opportunity to discuss the damage UV radiation can do to eyesight and why. Insignificant changes can show children how science can help them be better consumers.

## Quick Experiment: Transparency

Transparency is a measure of how much light can penetrate a material. Materials can be divided into 3 types:

- **Transparent**  
Light penetrates easily through the material
- **Translucent**  
Light has difficulty penetrating the material
- **Opaque**  
Light cannot penetrate the material.

Prepare one piece of aluminum foil, one piece of wax paper and one piece of plastic wrap.

- 1 Turn on your **einstein™Tablet+** and open the **MiLAB™** application.
- 2 Make sure only the light sensor is selected.

- 3 Leave the Rate and Duration at their default settings.
- 4 Aim the light sensor toward a light source.
- 5 Click Run.
- 6 Hold the piece of aluminum foil over the sensor for ten seconds and remove.
- 7 Hold the piece of wax papers over the light sensor for ten seconds and remove.
- 8 Hold the piece of plastic wrap over the light sensor for ten seconds and remove.
- 9 Press Stop.

**Note** the difference in the measurements. The more light a material lets through the more transparent or see-through it is.

## Quick Experiment: Measuring Heart Rate

Understanding how the heart works is basic to all biology studies and is one of the first experiments any science student should learn to perform. **einstein™Tablet+** makes these first steps fun and easy. This simple experiment shows the effect of exertion on our hearts.

- 1 Connect the heart rate sensor to your **einstein™Tablet+**
- 2 Turn on your **einstein™Tablet+** and open the **MiLAB™** application.
- 3 Make sure only the heart rate sensor is selected.
- 4 Leave the Rate and Duration at their default settings.
- 5 Connect the heart rate sensor to your finger.



- 6 Press the Run button; at about 8 seconds the heart rate BPM will display.
- 7 Remove the heart rate sensor from your finger, run in place for 30 seconds and reattach the heart rate sensor;
- 8 Press the Run button; at about 8 seconds the heart rate BPM will display.

**Note** the difference between the two readings and how activity ramps up our heart rate.

## General operation

- **Charge the battery:**  
Connect the AC power adapter to **einstein™Tablet+** to charge the battery. **einstein™Tablet+** battery may not be fully charged upon first use. Use only the charging unit that comes with **einstein™Tablet+**.  
**Note:**
  - Using an unauthorized charger may damage the tablet.
  - The tablet may become warm when connected to the power adapter.
- **Power on **einstein™Tablet+**:**  
Press and hold the Power button for 5 seconds. **einstein™Tablet+** will power on to the lock screen.
- **Micro USB connector:**  
The micro USB connector allows you to:
  - Connect to a computer for data transfer
  - Connect to various accessories
- **Micro SD card slot:**  
Install a micro SD card (not included) into the card reader for extra data storage. **einstein™Tablet+** memory can accommodate up to a 32 GB micro SD card.
- **Volume control button:**  
Press the volume up and down buttons to adjust the volume of the speaker.
- **Reset:**  
Deletes personal information including downloaded apps

## Connecting external sensors

- External sensors can be added by connecting a sensor cable to **einstein™Tablet+**. Insert the sensor cable into one of **einstein™Tablet+**'s 4 sensors ports, then, connect the other end of the sensor cable to the sensor. Up to 8 external sensors can be added by adding a splitter to each port. Please note the position of the sensor's USB connector. When properly positioned, the sensor should glide in smoothly.
- einstein™Tablet+** supports all 65 of Fourier Education's sensors, though some sensors may require an additional cable or adapter. For a complete list of sensors, please visit our website. [www.einsteinworld.com](http://www.einsteinworld.com)



## Specifications:

Hardware	
CPU	ROCKCHIP Dual Core 1.2GHz
Screen Size	7" Capacitive (1024x600)
Camera	Front 0.3 M pixel Back 2.0 M pixel
Connectivity	
WiFi	
Bluetooth	
Memory	
Internal Memory	4GB
Ports	
AV out	Projector
External sensor port	4 x Mini USB 8pin
Micro USB	1 port
Power Supply	
AC/DC	AC 110~240V (50/60Hz)
Battery	Li-Polymer, 5000mAh

## Internal sensors

- Light:**  
0-600lux, 0-6000lux, 0-150klux
- Heart Rate:**  
0-200 bpm
- Relative Humidity:**  
Range: 0-100%
- Temperature:**  
-30°C to 50°C
- UV:**  
10 W/m<sup>2</sup>, 200 W/m<sup>2</sup>,  
UV wave length 290-390 nm
- GPS**
- Microphone**
- 3 Axis Accelerometer**



## Get more Information



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## Technical support

**Fourier help desk:**  
[support@einsteinworld.com](mailto:support@einsteinworld.com)

**Contact information:**  
**1-866-771-6682**  
(toll-free from within USA only)  
**1-708-478-5333**

**Hours of operation:**  
**Monday - Friday, 9AM to 5PM**  
(UTC -06:00)