

How will the cashless system work?

Our Point of Sale tills at school will be replaced with new terminals which have built-in readers. When a student wishes to purchase items from the canteen or sandwich bar, they collect it in the usual way, and then proceed to a till. At this point, rather than paying with cash or coins, they will simply place their finger on the reader. The software will recognize the student, and automatically deduct the value of the items from their account.

Accounts are topped up using 'Revaluation' machines. These will be sited in the main dining hall, and will allow students to top-up their accounts using coins or notes.

In the near future, we hope to allow parents to top-up accounts from home using a credit card, although this feature isn't available straight away.

Spend Limits

To ensure students cannot spend all of the money in their account on a single day, there is a spend limit of £4.00 per day. This can be increased or decreased on request by contacting the school.

What if a student does not hold sufficient balance to pay for a school dinner?

There is no overdraft facility on our system, so students **MUST** have sufficient money on their account to be able to pay for their school dinner. If a student finds themselves without sufficient funds, they should go to their Head of Key Stage and explain the situation.

Students entitled to free school meals

Any students entitled to free school meals have their accounts automatically credited each day with the free school meal allowance. However, any underspend or missed dinner will be identified by the system and will not be added to the next day's balance.

Students can opt to add additional funds to their account using the revaluation units, which will allow them to purchase additional snacks before school, at break time or during lunch.

Opting Out

You can choose to opt-out of the biometric identification system. If you do this, your child will be issued with a PIN number, which they will use to top up with credit.

Frequently Asked Questions concerning fingerprint recognition

BioStore is the software used to record and recognize student fingerprints. This FAQ addresses some common questions and concerns related to fingerprint recognition technology.

What is BioStore – how does it work?

BioStore is a central database which stores the information which identifies pupils uniquely to each of the applications used within the school. It requires each pupil to register only once, usually by placing a finger on a fingerprint scanner, although other identification methods are available.

Why use BioStore's biometric system instead of other existing identification methods?

BioStore's centralised system speeds up the registration process – each student need only register once, no matter how many applications requiring identification are in place in the school.

With a biometric system, students cannot borrow or steal credentials from each other, reducing the opportunities for bullying.

Queues are reduced, because the identification of students is speeded up. Students need no longer carry cards, remember PIN numbers, or use cash to buy a meal.

Biometric systems save time and money for both school and pupils because the need to replace lost cards and forgotten passwords is eliminated.

Does BioStore record images of individual fingerprints?

BioStore never stores images of fingerprints on its system, and will never do so. Only mathematical representations of certain points of a finger image are recorded, typically between ten and sixty depending on the characteristics of the finger. The mathematical information is encrypted and is called a template. This data is extremely secure in its encrypted form, but even if it were not encrypted it would be impossible to recreate the original fingerprint image from the stored data.

Is it possible to recreate a fingerprint from the data stored by BioStore?

No. The BioStore system only stores a short string of encrypted numbers – too few numbers to provide enough detail for the original print to be reconstructed.

A simple way to think about how the system works is to consider an Ordnance Survey map of a given area. Imagine marking all the points where roads cross over rivers and where railway tracks cross roads, then record the coordinates of these crossing points. Use this information to examine a set of, say, 100 maps, and compare each map with the recorded information. The original Ordnance Survey map will be identifiable with some degree of certainty. However, using only the recorded coordinates it would be impossible to recreate the

original map with any accuracy - more than 99.99% of the information on the original map will have been discarded, leaving only the few recorded points. Even these points cannot be recreated because only a simple description of each has been kept.

How secure is the stored data? What would happen if somebody stole the data in some form?

The database is protected by a licence key, which means that the database and any backup of its contents can only be accessed on licensed hardware. The licensed hardware is stored in the school's own secure facility, so that the encrypted data is only available to the registered licensee. Even if a school's security were to be compromised and a backup of the database stolen, the encrypted data would still be unreadable, even by another school.

If I lose my bank card then it can be replaced, but I can't replace my finger. If a template is stolen, have I lost my identity forever?

The answer is no. The fingerprint template stored in the database is merely a string of encrypted numbers. If this string of numbers were to be removed from the database, it would be useless, because it cannot be recognised as a fingerprint. A fingerprint scanner checks for a real finger – it does not recognise a string of numbers, unlike a bank machine, which will accept a bank card from anybody who happens to know the PIN number.

If my child is fingerprinted could the police or a court of law use the fingerprint?

BioStore does not store a fingerprint image. The recorded templates are comprised of a set of numbers which represent each person. This set of numbers will be unique within populations of hundreds, or a few thousand, people. However, in the wider population the system is not accurate enough for the templates to be usable for forensic matching with any degree of certainty. A court of law would never be able to use this information as evidence.

Does everybody have a fingerprint? What happens about twins, or people with a disability which prevents them from providing biometric data, or somebody who has hurt their finger?

Even identical twins have different fingerprints, and will not be mistaken for each other by BioStore. In very rare cases there are people who are born without prints. Occasionally somebody's fingerprints will degenerate because of exposure to some chemical products, and sometimes temperature changes can cause reduction in fingerprint quality. However, a cut finger would not cause any problem for BioStore, unless it resulted in major disfigurement.