Cyber Safety and Security

Guideline for School

Be safe in cyber world ...

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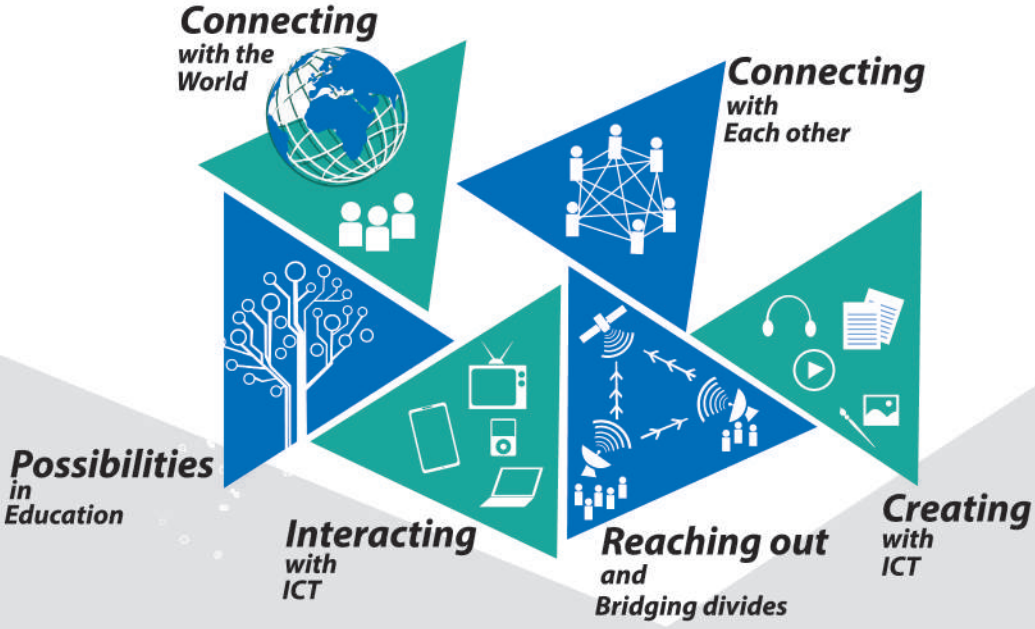
Curricula for Information and Communication Technology (ICT) in Education

सत्यमेव जयते

Department of School Education & Literacy
Ministry of Human Resource Development,
Government of India

The model curricula for ICT in Education is a significant vehicle for realization of the goals of the Digital India Programme. The curricula is rolled out for teachers and students to build capabilities in using ICT to enhance teaching –learning and critically interact with information.

The Curricula is organised into six strands:



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Cybersafety is the safe and responsible use of information and communication technology. It is about keeping information safe and secure, but also about being responsible with that information, being respectful of other people online, and using good 'netiquette' (internet etiquette).

As information infrastructure and Internet became more complex and larger, it also became critical to maintain systems up and running all the time with respect to security. Though the system administration tasks became easier in recent years, school administrators need to be more updated on the systems and network Security they are managing. In recent years, all systems are exposed to Internet; there is increased challenge for maintaining and protecting from the attackers.

Schools are primarily responsible for keeping systems/ computers/ network devices to work smoothly and securely. It is very important to keep the information as much securing the system and network devices in the organization. Schools play a key role in promoting internet safety.

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2 Develop protection and detection measures

3 Protect sensitive data

4 Respond to and recover from cyber security incidents

5 Educate your stakeholders

Identify threats vulnerability and assess risk exposure

1

- Slow and sluggish behavior of the system.
- Inexplicable disappearance of system screen while working.
- Unexpected popups or unusual error messages.
- Drainage of system battery life before expected period.
- Appearance of the infamous BSOD (Blue Screen of Death).
- Crashing of programs/ system.
- Inability to download updates.
- Navigation to new browser homepage, new toolbars and/or unwanted websites without any input.
- Circulation of strange messages from your email id to your friends.
- Appearance of new , unfamiliar icons on Desktop.
- Appearance of unusual message or programs which start automatically.
- Unfamiliar programs running in Task Manager.

2 Develop protection & detection measures

- Invest in a robust firewall.
- Have students and teachers create strong passwords.
- Have a password protocol that specifies strong password guidelines, frequent change of passwords, prevents reuse of old passwords.
- Use only verified open source or licensed software and operating systems.
- Ensure that computer systems and labs are accessed only by authorized personnel.
- Discourage use of personal devices on the network, such as personal USBs or hard drives.
- Set up your computer for automatic software and operating system updates.
- Check that antivirus softwares in each system are regularly updated.
- Consider blocking of file extensions such as .bat, .cmd, .exe, .pif by using content filtering software.

Develop protection & detection measures

2

- Read the freeware and shareware license agreement to check if adware and spyware are mentioned, before installing them on systems.
- Use encryption such as SSL or VPN for remote access to office or school lab through internet.
- Ensure that third-party vendors (who have contract with the school) have strong securitymeasures in place.
- Consider contracting with a trusted / verified third-party vendor to monitor the security of your school's network.
- Institute two or multi factor authentication for students, teachers and administrators when they log on.
- Protect your Wi-Fi Connection with secure password, WEP encryption, etc.
- Encrypt the network traffic.
- Change the administrator's password from the default password. If the wireless network does not have a default password, create one and use it to protect the network.
- Disable file sharing on computers .
- Turn off the network during extended periods of non-use etc.
- Use "restricted mode", "safesearch", "supervised users" and other similar filters and monitoring systems, so that no child can access harmful content via the school's IT systems, and concerns can be spotted quickly.

3

Protect sensitive data

- Design and implement information security and access control programmes and policies, by evaluating the storage (used/ unused), access, security and safety of sensitive information.
- Never store critical information in system's C drive.
- Backup critical data (mobile numbers, aadhaar number etc.,) in an off-site location.
- Establish safe reporting guidelines and escalation methods to protect the identity the person who reports.

4 Respond to and recover from cyber security incidents

- **Initial assessment**: To ensure an appropriate response, it is essential that the response team find out:
  - How the incident occurred ?
  - Which IT and/or OT systems were affected and how ?
  - The extent to which the commercial and/or operational data was affected ?
  - To what extent any threat to IT and OT remains ?
- **Recover systems and data**: Following the initial assessment of the cyber incident, IT and OT systems and data should be cleaned, recovered and restored, so far as is possible, to an operational condition by removing threats from the system and restoring software.
- **Investigate the incident**: To understand the causes and consequences of a cyber incident, an investigation should be undertaken by the company, with support from an external expert, if appropriate. The information from an investigation will play a significant role in preventing a potential recurrence.
- **Prevent re-occurrence**: Considering the outcome of the investigation mentioned above, actions to address any inadequacies in technical and/or procedural protection measures should be considered, in accordance with the company procedures for implementation of corrective action.

5

Educate your stakeholders.

- Frame cyber safety rules as Do's and Don'ts for the Schools.
- Orient school administrators with latest tools that can be used to monitor the sites visited by the students/ teachers.
- Orient the stakeholders on cyber laws (http://cyberlawsindia.net/)
- Bring in cybersecurity professionals to raise awareness levels about the risks in cyberspace and its preventative measures
- Introduce courses/ lessons/ activities for students and teachers on major components of cyber security and safety.
- Advocate, model, and teach safe, legal, and ethical use of digital information and technology.
- Promote and model responsible social interactions related to the use of technology and information
- Celebrate Cyber Security Week and conduct activities to create awareness through cyber clubs
- Establish a relationship with a reputable cybersecurity firm/ organisation.
- Be aware about policies and procedures to keep the school safe and secure in cyberspace.

CYBER SECURITY
MAJOR THREATS
PROTECTING
SAFE PRACTICE
Modification
Destruction
Curiosity
Money
Pornography
Slander
False Accusations
Websites
Insults
Teasing
Name Calling
Sexual Activities
Unauthorised Access
Revenge
Fake Account
Libel
IM
Lies
Rumors
Threats
Threats
Grooming
Disruption
Attention
Defamation
E-mails
Disclosure
Fun
Identity Theft
Cyber Stalking
Repeated Harassment
Phone
Online Groups
Cyber Bullying
Online Predators
Harassments
Use/Misuse
Theft
Information & Devices
Cyber Crime
Website Defacement
Spam
Piracy
Spyware
Virus
Scareware
Social Engineering
Changed
Share
Morphing
E-Mail Bombing
Malware
Ransomware
Websites Spoofing
Securely
Password
Hoax
Scam
Hacking
Worms
E-mail Spoofing
Strong
Firewall
Trojans
Adware
Password
Software
Latest Browser
Content Filtering
Copyright Violation
Before Discarding
Sensitive Information
Click jacking
Data
Desktop/ Laptop
Cyber Laws
WiFi
Friendship
Authorised Store
Phone Call
Tab Napping
Pirated Software
Antivirus
E-mail Tracer
Internet
Browser Pluggins
Unknown People Online
Mobile Devices
Instant Messaging
Operating System
Social Media
Threats
Untrusted Website
Meeting in Person
Call from Weired Number
Auto Lock
Authorised WiFi
Password
Scan
Strangers
URL
Parents
Spy Camera
Referral Links
Call back
IMEI Number
User Name
Personal Informtion
E-mail Attachments
Credit Card Details
Privacy Options
Security Options
User to be Old Enough
Cyber Police
Be Scared
Chat Screen
browser's cookies and cache
Unknown Persons
Type the URL
Bluetooth
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approach
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