

Osmani Primary School



Reach For The Stars

Computing and ICT Policy

May 2016



Our Motto
★ **Reach for the Stars**

Vision Statement

Our vision is to develop an inclusive school, which promotes and achieves excellence, and continues to nurture the values, confidence and skills of pupils, staff and the community, in order to meet the emerging opportunities of the 21st century.

Our vision and values support Articles 2, 12, 15, 19, 24, 27, 28, 29, 31 of the United Nations Convention on the Rights of a Child.

Articles 2/12: We respect the right to be listened to and listen to others.

Articles 19/24: We respect the right to feel safe at school and help others feel safe.

Article 28: We respect the right to learn and let others enjoy their learning.

Articles 15/31: We respect the right to join in and be part of a team.

Article 29: We respect the right to develop our potential and to do it with a growth mindset.

Article 27: We respect the right to look after our own and others property

Our Values

- ★ Striving
- ★ Teamwork
- ★ All Included
- ★ Responsibility
- ★ Success

★ **Striving**

Our aim is that we are a school that:

- **uses our Growth Mind-set (learning from mistakes and always willing to have a go)**
- **never gives up and always find ways of improving**
- **enjoys challenges and aim high**

★ **Teamwork**

Our aim is that we are a school that:

- **encourages and supports each other to be the best we can be**
- **learns from each other**
- **listens to and respects each other's ideas**

★ **All Included**

Our aim is that we are a school that:

- **has high expectations of everyone**
- **encourages everyone to take an active part in learning and life of our school**
- **nurtures and celebrates what makes each and every one of us unique**

★ **Responsibility**

Our aim is that we are a school that:



- **takes ownership of the choices we make**
- **takes ownership/charge of our own learning**
- **looks after each other and our school**

★ **Success**

Our aim is that we are a school that:

- **provides an education that encompasses academic, creative, social, emotional, physical and cultural development.**
- **celebrates our efforts and achievements.**

Equal Opportunities and the Single Equality Scheme

We believe that all those who work in Osmani - children and adults - have the right to be treated fairly and with respect by everyone connected with the school.

We aim for Osmani to be a safe, supportive place, where all children and adults feel valued as individuals, whatever their **ability, age, disability, gender reassignment, marriage or civil partnership, pregnancy & maternity, race, religion or belief, sex and sexual orientation.**

The school aims to foster the social and personal skills of co-operation, sharing and mutual respect.



Computing and ICT Curriculum Framework

The new Computing curriculum is statutory in schools from September 2014 and replaces the previous ICT curriculum.

There is a separate ICT and Computing Development Plan, which outlines the development of Computing and ICT in the school over the next three years, and offers a detailed action plan for the current year. There is also a separate e-Safety policy.

The new curriculum content can be divided broadly into three main areas:

1. Computer Science

This area is concerned with knowledge and skills about:

- Algorithms and sequences of instructions
- Computer programming and coding, both on screen and with physical systems
- Logical thinking and problem solving
- How computers, networks and the Internet are organised
- The uses of computer systems in the wider world

The Computer Science strand will be broken into two projects, one taught in the Spring term and one in the Summer term

- Coding, Programming and Computer Games
- Control Systems, Data Logging and Robots

2. Digital Literacy

This area is concerned with knowledge and skills about:

- Using technology and the Internet safely, respectfully and responsibly
- Understanding the uses of the Internet for communication
- Knowing when and where to ask for help and support
- Understanding and using search technologies effectively

The Digital Literacy strand is taught in the Autumn Term across the school and will form part of the Establishment Curriculum at the start of each school year.

These main areas of the Computing curriculum are taught discretely, with links made to other subjects and topics only if possible.

3. Information and Communication Technology

The skills and techniques we are familiar with as part of the broader aspects of ICT have been reduced to one statement in each key stage; however these skills are still vitally important for children to learn and use as part of the wide curriculum.

Our scheme of work has expanded these areas into separate strands

- Digital Publishing and Presentation
- Digital Media
- Digital Data
- Digital Research

The ICT strand of the curriculum is planned and taught as part of curriculum topics

Please see separate Computing and ICT Scheme of Work document for more details on subject content, skills and learning intentions for Computing and ICT.

Cross Curricular ICT

Planning

The Computing and ICT Scheme of Work has a summary of learning intentions for the four cross-curricular ICT strands

- Digital Data
- Digital Research,
- Digital Publishing
- Digital Media

The class teacher will highlight areas covered as the school year progresses on a digital copy of the Cross-Curricular ICT Summary sheet. This will help to ensure coverage across all four strands

	Digital Media	Digital Publishing and Presentation	Digital Data	Digital Res
ICT	<ul style="list-style-type: none"> Make pictures using the basic tools in a painting program Make simple digital animations Record and play back sounds using a digital recording device Create musical sequences using symbol-based software tools Describe the content of a range of photos and how and why they were made Take photos for a purpose, review and retake Plan and shoot short video film clips using a basic video camera and tripod 	<ul style="list-style-type: none"> Identify key features of a range of real world publications Create simple publications and presentations for different purposes – eg poster, leaflet Evaluate their own and other pupils work, with reasons Enter, revise and edit text using a keyboard (on screen or real) Format text to change font style, size and layout Combine images, text and sounds to create a multimedia publication or presentation 	<ul style="list-style-type: none"> Recognise different ways that everyday information can be organised and displayed Ask and answer simple questions using data – eg most popular pet Create simple tables, graphs and charts using software Know that computers can calculate numerical answers Explore online maths games and simulations Identify and correct obvious mistakes and errors in a set of prepared or collected data 	<ul style="list-style-type: none"> Explore games and simple and basic variables Search selected digital resources using keywords Compare a search engine web to a library Use buttons, icons, menus, navigate websites, apps Compare and contrast digital and traditional books Begin to understand that unregulated
US2	<ul style="list-style-type: none"> Use a range of painting and tools to create images for a purpose Use digital tools to edit and manipulate images and photos – eg add filters, crop, resize Create an simple animation for a purpose – eg to explain a process Edit and insert sound files into a presentation Create/edit musical sequence with two tracks Change the basic settings on a digital camera (eg: flash, macro, zoom etc) and take photos Storyboard and shoot a series of video clips Edit clips and combine to make a film 	<ul style="list-style-type: none"> Plan, create and edit publications for a specific audience/purpose Select from a range of software Evaluate work, annotate and give reasons for choices Use appropriate templates, layouts, and formatting tools Use tables, text boxes, graphics and borders to layout content to communicate effectively Manipulate images and sounds and insert into a presentation Use animations and transitions effectively in a presentation 	<ul style="list-style-type: none"> Organise and manage files and folders in their own My Docs Collect data and create a simple database with fields and records Use search, sort and filter tools within a prepared database to answer questions Create a range of different types of graph and chart with software Create a simple spreadsheet Use simple formulae in a spreadsheet for calculation – eg adding up a shopping list Understand some issues around bias and accuracy in online data 	<ul style="list-style-type: none"> Explore the variables in a and relate to real life app Use search tools within digital libraries Use online resources, tools explore information- eg n Use digital resources to take notes and prepare a simple report Understand that information is created Understand that information to be checked and evaluated Explain some of the rules and why it was made
US3	<ul style="list-style-type: none"> Use graphics tools to manipulate and 'fake' images and add text, filters, borders etc 	<ul style="list-style-type: none"> Plan, create, edit and evaluate more complex publications and presentations 	<ul style="list-style-type: none"> Create, edit and use a range of databases to organise and analyse information 	

ICT learning intentions are added to subject planning where appropriate. *e.g. an Art/ICT lesson where pupils use painting software to create firework pictures would be planned as part of Art and Design subject planning.*

There is a separate row for ICT learning intentions on the subject planning template

Expected pupil outcomes

Cross-curricular ICT outcomes are planned for on the relevant subject or topic plans. Possible pupil outcomes might include:

Recorded in Topic Books

- Notes and reports written using online research (with sources noted)
- An annotated photo taken by a pupil of a Science/DT Activity
- A printed publication/presentation about a topic area – eg History
- an annotated printed screenshot of an online activity

Recorded in English Book

- Extended writing created in Word and printed
- Notes and reports on authors created using online research (with sources noted)

Recorded in Maths Book

- Printed graphs and data tables created using software (Purple Mash 2Graph/Excel)
- Printed photos taken by pupils of shapes, numbers etc

Saved digitally Pupil Network Folder/Purple Mash folder

- A photograph/video clip/film taken by the pupil
- A piece of topic-based writing created in Word/Purple Mash
- An annotated screenshot of an activity created in Word/PPT
- A presentation created in PPT/Purple Mash
- A digital painting/artwork/animation/mindmap

Planning and Work Scrutiny

- The ICTCO carries out a termly scrutiny of a selection of pupil work folders to look for evidence of cross-curricular ICT and records example screenshots in a PPT presentation
- The ICTCO monitors the Cross-Curricular ICT section of half termly TLL monitoring feedback reports to gain an overview of planning for Cross-Curricular ICT and pupil outcomes.

Computing

	Week/Session 1	
Learning Intention	Knowledge	<ul style="list-style-type: none"> recognise that environments can change and that this can sometimes pose dangers to living things
	Skills	<ul style="list-style-type: none"> ask relevant questions and using different types of scientific enquiries to answer them Change the settings on a digital camera (macro) and then take photographs for a purpose
Key Questions vocabulary	<ul style="list-style-type: none"> How hard is it for a plant to grow in the city? How have they adapted? 	
Activity	<ul style="list-style-type: none"> Plant Diary observations and measurements Explore school and local area and identify plants growing in different habitats Demo how to set up Macro on camera to get a better close-up photograph in focus take photos of plants in local areas and then annotate with explanations on adaptations and challenges of the urban environment for plants 	
Differentiation Match		
Adult Support		

Planning

Medium Term Plans for the Computer Science and Digital Literacy Strands of the Computing curriculum have been written by the ICTCO. They can be found on the Teacher drive: Computing and ICT folder. These plans include:

- Learning Objectives
- Suggested Lesson Activities
- Vocabulary
- Space for notes and evaluation

Computing Half Term Plan: SPRING – Year 3		Coding Programming and Computer Games		
Weeks	Learning Intentions	Lesson Activities	Vocab	
1	<ul style="list-style-type: none"> • Know that an algorithm is a series of steps that lead to an outcome. • Break down more complex tasks into precise instructions. • Create simple flow diagrams to explain how everyday devices & machines are controlled e.g. traffic lights. 	<ul style="list-style-type: none"> • Look at an everyday process (emptying a car, making a sandwich – set out instructions or steps – see SHEET • Describe the steps using ordered language, then re-write as series of instructions or steps – see SHEET • Look at simple flow diagram examples (Car Park barrier, traffic light etc) and then discuss what is happening – the machine has a 'brain' (computer) that can store instructions and carry them out – see SHEET • Create three for other less familiar devices and machines eg. road floor cleaner, Meters Rover 	<ul style="list-style-type: none"> • Task • Instructions • Algorithm • Flow diagram • Break down • Brain • Computer chip • memory 	Notes and Evaluation
2	<ul style="list-style-type: none"> • Control an onscreen character using precision or keyboard commands. • Use and record symbols to record sequences of instructions (programs). • Combine several symbols or instruction blocks to achieve an outcome on screen. 	<ul style="list-style-type: none"> • Use a range of software and interactive resources – (Example 2 Go) • Explore what the onscreen buttons do and how they control the onscreen character to complete a specific task – eg move through a maze, visit places in a story etc. • Give a route through a maze on paper then try out on screen – will the instructions work when your partner sees them? 	<ul style="list-style-type: none"> • Program • Symbols • Path • Right • Left • Down • direction 	Notes and Evaluation
3	<ul style="list-style-type: none"> • Use a wider range of commands in sequence to achieve an more complex outcome. • Identify errors by noticing unintended outcomes. • Suggest ways to change the instructions to make them better. 	<ul style="list-style-type: none"> • Demo symbol-based programming activity – (UNIT) The Robot • Discuss the 'language' being used – (not only understands it commands – in symbol form) • Relate to previous work done with Algorithms – what do the symbols stand for? – Put head up – Take 1 Step Forward etc. • Discuss differences between Practice blocks (what is stored and Program Mode (instructions are stored and only happen when RFB is pressed) • Explain that a worked instructions for a computer is called a program • Work through Balloon Popping activity – encourage testing and debugging as they go – no program run after every three or four commands are added 	<ul style="list-style-type: none"> • Command • Language • Program • Symbols • Instructions • Practice • Test • Bug • De-Bug 	Notes and Evaluation
4	<ul style="list-style-type: none"> • Use a wider range of commands in sequence to achieve an more complex outcome. • Identify errors by noticing unintended outcomes. • Suggest ways to change the instructions to make them better. 	<ul style="list-style-type: none"> • Continue with task the Robot activity – pupils work at their own pace in ability grouped pairs, discussing and collaborating as much as possible • Work through Spider Picking activity in Practice and/or Program Modes • Complete recording sheet with screenshot and explanation, questions, etc. • Extend using Oz Turtle http://www.ozturtle.com in Advanced Mode 	<ul style="list-style-type: none"> • Discuss • Collaborate • Explain 	Notes and Evaluation

Teachers are expected transfer these outline plans to weekly planning formats and adjust to suite their own pupils, timetables and topic. They should add match, pupil outcomes, THEAL etc where appropriate

Expected pupil outcomes

The Computing half term plans suggest a range of pupil outcomes. These outcomes form the basis of pupil pupil scrutiny by SLT and the ICTCO. Possible pupil outcomes might include:

Recorded in the Computing Book

- A completed worksheet/reflection sheet stuck into the Computing Book
- a written explanation of a key concept in their Computing book
- A written record of a discussion in Computing book
- an annotated photocopy of a screenshot of an online activity in Computing book
- A dated reference to work saved digitally

Saved digitally in Pupil Network folder/Purple Mash folder

- a digital publication/presentation
- an annotated screenshot of an online activity created in Word

Planning and Work Scrutiny

- The ICTCO monitors Computing plans termly to ensure that progression, match and pupil outcomes are being planned appropriately for pupil needs
- Work is scrutinised termly in 3 selected Computing books and pupil folders on the school network/Purple Mash
- It is expected that there will be evidence of the planned pupil outcomes from planning
- Feedback is given to staff on the standard TLL Monitoring and Scrutiny Feedback Form.

Printing work

- Not all work is printed. With KS1 pupils this is made clear at the start of a lesson
- Children are taught how to print only one copy, and to collect their printout immediately



Teaching and learning

Classroom Practice

A range of teaching and learning styles will be reflected in classroom practice

Teaching strategies might include:

- Using the computer or appropriate presentation technologies (i.e. data projector, interactive whiteboard etc) to demonstrate to a group of pupils or the whole class
- Leading a group or class discussion about the benefits and limitations of ICT in the wider world as well as the classroom
- Working with individual, pairs or groups to support and scaffold practical activities and teach computing and ICT skills

Pupils might engage in:

- Individual, paired or group work developing Computing and ICT concepts and skills using non electronic media.
- Collaborative and co-operative activities in groups.
- Guided discussion and evaluation of work-in-progress and finished work.
- Evaluating their own and others work and giving written and verbal feedback
- Pupils working individually (independently or supported by an adult)
- Group and paired work with devices such as data loggers, digital cameras, robots etc

Differentiation and Match

- The Computing and ICT Scheme of Work provides learning objectives across a phase rather than a single year group to allow differentiation and matching.
- Planning and assessment of ICT show appropriate differentiation. Teaching assistants and other adults provide appropriately focused support.

Vocabulary and language structures

- Pupils are taught the correct subject specific and technical vocabulary consistently across the school and are given opportunities to consolidate their understanding e.g. equipment and displays are appropriately labeled.
- THEAL language structures are identified when planning.

Special Educational Needs

- The SENCO and ICTCO jointly advise teachers suitable ICT support, which can be provided to individual pupils with particular educational needs, including high ability pupils.
- Where appropriate external specialists are used to assess a child's specific needs.
- The SENCO, ICTCO and class teacher will work together to ensure that appropriate ICT and Computing resources are available to all pupils on the SEN register

Assessment

- There are end of year group expectations for Computing, based on the NC End of Key Stage expectations – pupils are assessed to be emerging, expected or exceeding against these
- Teachers monitor pupil progression and curriculum coverage across each topic and through the phase learning objectives in the scheme of work
- There are opportunities for pupil reflection and self-assessment built into planning and teaching



Early Years

- Within the EYFS pupils are introduced to a range of technological devices (i.e. computers, remote controlled toys, sound recording devices, etc) and basic vocabulary.
- They are also encouraged to explore a variety of carefully selected software programs to support the full range of the Early Learning goals and the Foundation Stage curriculum.

Resources

Please see separate ICT Resources document (Appendix 1) for details on school ICT Resources .

Health and Safety

- The school follows the LGFL and Local Authority advice with regards to ICT health and safety.
- Class teachers and the technical support team are responsible for checking that there are no obvious breaches in health and safety
- The school ensures that all monitors are height appropriate and safely placed, that chairs are appropriate, that work surfaces are sufficiently large, that there are no trailing electrical wires or devices, and that rooms are well ventilated.
- Osmani Primary School ensures that all equipment is given annual electrical checks by the Local Authority electrical testing officer.

Extra-curricular

- Osmani Primary School encourages pupils to attend events outside of the school such as the ICT club and planned local technological events.
- Additionally, local business links are being established.

Parental involvement

- Parent meetings are held throughout the year where teaching and learning Computing and ICT can be discussed and relevant questions/concerns answered.
- E-safety workshops are also held for parents, in which their awareness is raised in regards to the safe use of computers and the internet at home and outside of school.

Monitoring of policy

This impact of this policy will be monitored using various strategies, including

- planning and work scrutiny,
- lesson observations
- drop-in by the SLT
- learning walks
- regular meetings with class, year and phase groups with the ICTCO

Evaluation of policy

- This policy document sets out the school's aims, principles and strategies for the delivery of Computing Curriculum.
- This policy will be evaluated through termly or annual reports by the post holder to the Head teacher and Governing Body.

Policy completed and agreed: July 2013

Updated May 2016

Review date: May 2017

Appendix 1: ICT and Computing Resources Staff Handbook



Start of the School Year:

e-Safety

- At the start of each academic year, all staff should read and sign the acceptable use policy.
- Staff should login using only their own username and passwords.
- At the start of the academic year parents will be sent a copy of the 'safe use of internet' letter
- The Autumn term Computing Curriculum will cover e-Safety as part of teaching and learning

Establishment Curriculum

- The ICT Establishment Curriculum covers the first two weeks of term
- It contains activities to support logging in, using the ICT suite computers and laptops etc

Use of the ICT suite

- Each class is allocated a weekly timeslot for the ICT suite - the timetable is in the staffroom and on the ICT Suite door
- Classes can use the suite at any other time when it is free – liaise with colleagues
- KS2 children should all use their own school login and password - this can be obtained from the ICTCO/Tech Support
- KS1 children can use their personal usernames and passwords when they are ready and able to do so – at least by the end of Year 2
- Any computers that are not working should be reported and logged for the ICT Technician via the Help Desk link on any computer
- At the end of lessons, children should log off the computers and ensure they take all their papers, books and belongings with them
- If your class is the last class to use the ICT suite the computers should be shut down

Laptops

Chrome Books in KS1

- Year 1 and Year 2 classes each have a trolley with 8 Chromebook laptops located permanently in their classrooms
- Year group logins and passwords are generic, and information can be found on the trolley

Laptop Trolleys in Key Stage 2

- There are four laptop trolleys on the top floor with 7/8 laptops stored in each. These can be used by KS2 classes – timetables and rotas to be agreed in phase teams.
- The laptops need to be logged in in batches of five at a time, as the Wi-Fi network can only support this number accessing the network at once. If possible, log the laptops on before the lesson to allow for issues to be resolved.
- Ask the TSA to help with logging laptops in at the start of the lesson

Trouble Shooting laptops

1. Check that the blue WiFi light is on at the front – Use the Function Key/WiFi key to turn it on
2. Check the username and password. If in doubt use the class name login as a temporary solution and then check with TSA to correct the problem with the pupil username
3. Restart the laptop and try again



Technical Support

- We have a full time Technical Support Assistant (TSA) from Levett Consultancy
- He is in school from 8.00 until 4.00 each day

The TSA has the following roles and responsibilities

Technical Support

- ICT suite technical support and maintenance
- Classroom computers, whiteboards and projectors and visualizers
- Laptops and tablets
- Printers and toner replacement
- Curriculum Computing and ICT resources – maintenance and booking/loans

Classroom and teaching support

- We are developing this role.

Currently the TSA can:

- support children with using digital cameras, video cameras, audio recording devices etc as part of a planned lesson led by the teacher
- Offer general advice and guidance on use of ICT equipment across the school
- Support with audio and visual technology – eg digital cameras

The TSA is not available to cover classes or lessons in the ICT suite

Reporting Technical issues

- Please use the LC Help Desk link on the desktop to report ICT technical issues – this allows the TSA to organize work by priority and not on a first come-first served basis
<https://support.levettconsultancy.co.uk/support/login>
- Technical issues reported on the helpdesk system will generally be dealt with **before** other unreported issues
- Give as much detail about the equipment, the fault or error message, the location etc as possible.
- Check back to see if there have been any updates by the technical support team
- If you feel the problem is continuing, please contact the ICTCO for further advice

Keys

ICT equipment is expensive to replace, therefore where possible it is held securely. In order to minimise disruption to access please return keys to the key holder as soon as possible and report lost keys to the office

- KS1 classes have their own Chrome Book Trolley keys. The TSA also holds keys for these trolleys
- The TSA holds the keys for the ICT Suite Curriculum Resources cupboard



Classroom Resources

Interactive Whiteboards and Projectors

- Each class has a SMARTboard interactive whiteboard, a projector and a class computer
- IWBs might need orientating each day to ensure that the touch control is aligned with the mouse – see Mitchell if you are not sure how to do this from your computer
- Please keep the projector remote control in a safe place
- Projectors should be switched off when not in use for more than half an hour and at the end of the day – bulbs are VERY expensive and switching them off when not in use extends the bulb life

Class Computers

- Staff should NOT use class computers for personal use at any time when pupils are present
- Pupils should not use the class computer when it is logged in with a staff username

Class Visualisers

- Each class is provided with a visualiser document camera.
- Please ask Mitchell if you are not sure how to use it
- This should be returned to the ICT suite at the end of the school year for secure storage

Class Digital Camera and Flip Video Camera

- Each class should have their own class digital camera, with a memory card and appropriate charging leads
- KS2 classes should also have a flip video camera
- The cameras and leads etc are stored in a plastic wallet and should be kept safely in the classroom and returned to the ICT suite at the end of the school year
- Staff are expected to take care of their camera, taking precautions to prevent loss or damage
- Pupils may use the class camera when directed by an adult

ICT Resources for Pupil Use

All of the following resources are located in the ICT Suite, in locked cupboards.
Please ask the TSA for information on booking and access, and contact Marion for support in using them

Digital Cameras

- A set of 15 Canon Ixus 140 Digital Cameras, with case and memory card
(Any images on the cameras when they are returned will be deleted ready for the next user)



Digital Video Cameras

- A set of 15 small video cameras for pupil use
(Any footage still on the cameras when they are returned will be deleted ready for the next user)

Digital Microscopes

- Two Easi-Scope Digital Microscopes
(They connect to a computer/Smartboard and allow magnified images to be viewed on screen and captured as images)

Data Logging

- A set of 6 LogIt Explorer data loggers with built in sound, and light sensors
(They can be used independently or connected to a computer where the LoGit Explorer software will record the data as it is collected and display it as a graph, table or meter on screen. Data can be printed, exported as a spreadsheet etc)

temperature

computer
is logged live
collected can

Robots

- Two sets of 6 BeeBot robots with a charging tray - for use in EYFS and KS1
- Two sets of 6 Probot robots - for use in KS2
(Each robot set comes with relevant accessories, including cards, grids and mats etc)

Computer-controlled Construction

- 15 boxes of Lego WeDo computer-controlled Lego and programming software
(Build moving Lego models and then program them with the WeDo software)

Sound Recording

- a set of 10 Easispeak digital sound recorder/players
- A set of PC wand microphones for use with a computer or laptop

Headphones

- A set of 30 Easi-headphones, with removable audio lead

