

Auchenharvie Academy



Numeracy Three Year Strategy

June 2017

**Rationale:**

*All teachers have responsibility for promoting the development of numeracy. With an increased emphasis upon numeracy for all young people, teachers will need to plan to revisit and consolidate numeracy skills throughout school.* ***Building the Curriculum 1***

Auchenharvie Academy is fully committed to raising the standards of attainment and achievement for all learners. Regardless of the learner’s stage, we consider the ongoing development of numeracy to be a key driver in improving overall standards of attainment. We also believe that effectively delivering improvements in numeracy across our curriculum will assist in bridging the attainment gap created by socio-economic factors such as deprivation. To do this we are seeking to develop numeracy skills by consistent and accurate application across learning. This should reduce confusion, while improving understanding and retention.

Numeracy is a fundamental life skill. Being numerate involves developing a confidence and competence in using number that allows individuals to solve problems, interpret and analyse information, make informed decisions, function responsibly in everyday life and contribute effectively to society. It gives increased opportunities within the world of work and sets down foundations which can be built upon through life-long learning. Numeracy is a core skill which permeates all areas of learning, allowing pupils the opportunity to access the wider curriculum and contributes strongly to the development of all four capacities of *Curriculum for Excellence*. Numerical skills can be consolidated and enhanced when pupils have opportunities to apply and develop them across the curriculum. Poor numerical skills hold back pupils’ progress and can lower their self-esteem. It is therefore important that all teachers continue to look for opportunities to develop and reinforce numeracy skills within their own activities and through inter-disciplinary projects and studies.

 **Numeracy Themes**

The Numeracy outcomes are based around the following organisers:

* Estimation and rounding
* Number and number processes
* Fractions, decimal fractions and percentages (incorporating ratio & proportion)
* Money
* Time
* Measurement
* Data and analysis
* Ideas of chance and uncertainty

Teachers should provide opportunities to:

* Handle number and measurement competently (mentally, orally and in writing)
* Use calculators accurately, effectively and appropriately
* Interpret and use numerical and statistical data represented in a variety of ways.

Our long term numeracy strategy seeks to raise awareness, develop personal and professional knowledge and to actively implement a rigorous programme of developing numeracy across all aspects of our school curriculum. Central to the success of this strategy is the effective partnerships that exist between Auchenharvie Academy staff, parents and carers, our partner agencies and, crucially, our learners.

Auchenharvie Academy will work with outside agencies and partners such as Education Scotland and SQA to enhance numeracy provision across our school. We will contribute nationally, as requested by the Scottish Government and North Ayrshire Council, and plan appropriately for future developments based on the results of SSLN and other national data.

Developing numeracy is the responsibility of all and will be a cornerstone of the Auchenharvie Academy curriculum. High level numeracy skills will be developed through a range of departmental and whole school strategies. This will allow subject specific numeracy to be developed discretely and also allow for transferable numeracy skills to be developed across subjects through the effective use of interdisciplinary learning and whole school structures (assemblies, personal support and pupil council forums).

Staff knowledge, and practical application of experiences and outcomes pertaining to numeracy across learning, will be enhanced through professional dialogue and opportunities for continuing professional development. It is intended that following initial awareness raising and audit of our current position that staff and learners will benefit from consistent delivery, moderation and reporting of numeracy aspects within CfE. The school numeracy policy has been developed by the numeracy working group working with all Faculties. This policy will be reviewed on a regular basis.

Auchenharvie Academy values parental engagement and actively seeks to improve parental links to enhance outcomes for all learners. This will continue through active opportunities for parents and carers to develop their own knowledge and skills relating to numeracy across learning. A series of parental engagement events will be organised to support parents and to encourage high quality home support in the overall development of numeracy. This will be an important aspect of the long term whole school numeracy strategy. It is important that we strive towards equity for all pupils, no matter their backgrounds and home support, so that we can close the attainment gap. This will be done by working in collaboration with pupils, parents and family learning staff.

The following table identifies the 3 year strategy for numeracy development in Auchenharvie Academy. Whilst staff, pupils, and parents are documented separately, numeracy will be developed holistically throughout the school and will feature prominently in the school improvement planning process.

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| **Details** | **Task** | **Staff** | **Timescale** | **Intended Impact** | **Monitoring Progress** |
| **Year 1: 2017/18** |  |  |  |  |  |
| Pupils  | Collaborate with cluster in order to improve quality of data generated during transition period.Numeracy key skills support booklet, with answers, written and issued to all P7 learners (& parents) at P7 open evening.Competition to design numeracy logo was undertaken by S1 pupils. The winning logo to be used throughout the school to represent numeracy.Pupils will be given the opportunity to participate in numeracy focus groupsNumeracy skills routinely highlighted in lessons.Pupils will benefit from a consistent approach in teaching numeracy. Staff will be able to refer to the common methodology booklet to ensure that pupils are taught using the same method across subjects in order that no confusion takes place.Senior pupils will be given the opportunity to build on S4 numerical success regardless of level. Targeted support will be in place for those identified, from school data, who are not continuing with the study of mathematics, but who have the opportunity to gain a further numeracy qualification.“Mymaths” purchased, which is an interactive program, with lessons and homework which will be used to improve numeracy skills from S1 to S6.Pupil assemblies will be held that showcase numeracy across the curriculum.A poster will be made to promote numeracy for each classroom. | Maths Faculty Staff/Cluster colleaguesMaths Faculty staffNumeracy working GroupMaths FacultyAll staffAll staffMaths StaffMF/KDMaths staffAll FacultiesMF | June 2017Nov 2017August 2017April 2018All session All sessionAll sessionAll sessionDec2017onwardsOngoingDec 2017 | This will allow more effective planning in the secondary sector which increases appropriate pace and challenge for learners. Learners building on prior achievement with appropriate support targeted immediately.Increase in learner’s confidence with and awareness of key skills, improvement in numerical based attainment. Improved parental engagement and confidence in supporting learners.Raised profile of numeracy across the curriculum. Clear visual of where numeracy is being taught across learning.Pupils given voice so that appropriate changes to teaching and learning can be made Awareness/reinforcement of transferable numeracy skills as they naturally occur in all curricular areas.Standard methods will be used to confidently deliver numeracy in all curricular areas. Numerical progression will be encouraged either with N5 following on from N4 success or next level up numeracy with Personal Finance for those who can’t cope with the full course. This will provide opportunity to maximise numerical attainment for all stakeholders.Pupils will benefit from the opportunity to progress numerically, if realistically possible, to maximise attainment potential.Awareness of and increase in learner’s confidence in identifying key numerical skills S1-6, supporting continued improvement in numerical based attainment across all curricular areas. Pupils will be more aware of where numeracy is used in each subject they study.This will act as a reminder to staff to inform their pupils, when and where, they are using numeracy within their lesson. | Implemented pre summer 2017 in time for induction visit. Learning groups reviewed October 2017.Issued to all P7 Nov 2017.Logo on staff intranet and staff reminded to use it on a regular basis.Survey monkey to be used to find out views.Common methodology guidance issued to all staff. This will be reviewed annually.Ongoing. Pupils will be extracted from skills and RMPS to sit the interdisciplinary numeracy assessment.Pupil’s progress will be tracked via the pupil reports on the mymaths system.A focus group will be used to determine the success of raising awareness of numeracy.Will audit which classrooms are displaying the posters in February. |
| Parents & carers | S1 parents sent a letter inviting them to attend numeracy workshop.Interested parents invited to attend workshop in May.Promote the maths Facebook page as a means of communicating with parents.Conduct a survey with parents to find their views on different aspects of family learning. | MFMFCSWorking group | Nov 2017May2018OngoingOngoing | Increased engagement with parentsIncrease in parental confidence in ability to support learners at home.Will be used to keep parents and pupils more informed about homework and assessments.This will allow increased parental engagement and let them understand that their views are vital to driving change. | Returns from parents collated.Evaluations sheets to be completed by parents after attending the workshop.Parental uptake will be assessed by the number of people who “like” the page.Results will effect change. |
| Staff | Opportunities provided for staff numeracy development sessions – CPD.Two collegiate sessions organised with the PLA.Session 1 looking at the progression of core numeracy skills from Level 1 to Level 3.Session 2 Looking at what Level 3 numeracy looks like.Numeracy across the curriculum booklet to be issued to all new staff. Three pieces of pupils work at Level 3 to be collected twice a year to showcase numeracy across the curriculumP7-S1 Transition arrangement reviewed.Schemes of work to be audited to make sure that the benchmarks are fully covered across the curriculum. They will be updated to reflect the benchmarks.Holistic assessments to be produced for Level 3 and Level 4 numeracy that will cover a variety of E’s and O’s. | Open to all AA staffWorking groupFH’sMF/P7 staffJan to JuneJan to June | January 2018Dec 2017May 2018April 2018Maths working groupMaths Faculty  | Confidence in delivery of numeracy in the classroom and making assessment judgements.Consistency in delivery of numeracy in all curricular areas.Clear visuals of transferable numerical skills and their relevance in various curricular areas. Reinforce importance/relevance of numeracy as a responsibility of all.To quality assure standards across the curriculum.To ensure consistency across the sectors and that Secondary staff are more informed about the capabilities of each pupil.To make sure that there is complete coverage across the curriculum of all the benchmarks for numeracy.The number of assessments will be reduced. | Staff will complete an evaluation at the end of each session.Implemented. Copies available in numeracy folder on public drive.Will be used as materials for staff training 2017/2018.P7 staff to be invited to meet with MF to discuss the transition information.Pupils will be taught all the numeracy content at the correct level.Samples of pupils work to be assessed at department meetings to ensure consistency of Levels. |
| Details | Task | Staff | Timescale | Intended Impact | Monitoring Progress |
| Year 2: 2018/19 |  |  |  |  |  |
| Pupils  | Collaborate with cluster in order to improve quality of data generated during transition period.Numeracy focus groups.Numeracy key skills support booklet available to all S1 learners & parents. Numeracy key skills support booklet available to all P7 learners & parents at P7 open evening.Numeracy skills routinely highlighted in class.Senior pupils will be given the opportunity to build on S4 numerical success regardless of level. Targeted support will be in place for those identified, from school data, who are not continuing with the study of mathematics, but who have the opportunity to gain a further numeracy qualification.Numeracy Ambassadors to be appointed.New numeracy resources will be produced using Kahoots.Numeracy themed IDL project for S2 | Maths Faculty Staff/ Cluster colleaguesNumeracy working groupMaths StaffMaths staffAll staffMaths staffMFMaths dept.KDWorking group | May/June2018May/Jun 2018Aug 2018Nov 2018OngoingOngoing from Aug 2018OngoingSeptember Ongoing | This will allow more effective planning in the secondary sector which increases appropriate pace and challenge for learners. Learners building on prior achievement with appropriate support targeted immediately.Consideration of pupil voice in developing numeracy across learning to meet learner’s needs. Evaluation of impact session 2017-18Increase in learner’s confidence with and awareness of key skills, improvement in numerical based attainment. Improved parental engagement and confidence in supporting learners.Pupils benefit from consistent approach across all curricular areas. Awareness/reinforcement of transferable numeracy skills as they naturally occur in all curricular areas.Numerical progression will be encouraged either with N5 following on from N4 success or next level up numeracy with Personal Finance for those who can’t cope with the full course. This will provide opportunity to maximise numerical attainment for all stakeholders.Pupils will benefit from the opportunity to progress numerically, if realistically possible, to maximise attainment potential..Pupils will promote numeracy by being part of the literacy and numeracy peer assisted learning programme.Fun way to practice numeracy skills.Pupils to experience numeracy in action across the curriculum. | Implemented pre summer 2018 in time for induction visit. Learning groups reviewed October 2018.SurveysIssued to all P7 Nov 2018.Learning walks will be used to evaluate impact.All pupils sitting Personal finance passed Numeracy 5Pupils removed from PSE to sit Numeracy test.Number of Ambassadors will be monitored.MF to visit 3.5 and 4.6 to evaluate impact and their enjoyment of using kahoots.Postponed. |
| Parents & carers | S1 parents sent a letter inviting them to attend numeracy workshop.Interested parents invited to attend workshop in January.Update school website to inform parents of numeracy strategies across the curriculum.To work with family learning staff to facilitate improvement in numeracy skills. | MFMaths staffNumeracy working group.All staff | Nov 2018Jan 2019Throughout the session.As required | Increased engagement with parents.Increase in parental confidence in ability to support learners at home.Increased engagement with parents.Working with parents to ensure equity and work on closing attainment gap. | Returns from parents collated.Evaluations sheets to be completed by parents after attending the workshop. |
| Staff | CPD - numeracy developmentSession 3: moderation of numeracy E’s & O’s at third level from a range of work across the curriculum. Will use the evaluation sheets used by QAMSO to check consistency of Levels. Numeracy across the curriculum booklet to be updated to reflect any recent numeracy research and issued to all staff. IDL planning to be undertaken to organise project for S2.Three pieces of pupils work at Level 3 to be collected twice a year to showcase numeracy across the curriculum | All StaffNumeracy working groupAll staffFH’s |  Session 2018/19OngoingOngoingDec 2018May 2019 | Improved understanding of the current delivery of E’s & O’s across the BGE.Clear visuals of transferable numerical skills and their relevance in various curricular areas. Reinforce importance/relevance of numeracy as a responsibility of allStaff more aware of numeracy across learning via the project.To see what the impact staff training has had on the quality of resources used to assess numeracy at Level 3 across the curriculum. | Copy on intranet.Staff views sought on what worked well and what needs to be improved.PostponedWork more consistently at Level 3. |
| Cluster | Work with the cluster to organise maths clubs for P7 pupils. | Maths staff/cluster | Ongoing throughout session. | This will give staff from primary and secondary an opportunity to work collaboratively in order to make the transition process smoother. | Due to staffing issues this was postponed. However moderation with cluster is taking place. |

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| **Details** | **Task** | **Staff** | **Timescale** | **Intended Impact** | **Monitoring Progress** |
| **Year 3: 2019/20** |  |  |  |  |  |
| Pupils  | Collaborate with cluster in order to improve quality of data generated during transition period.Pupils will benefit from the opportunity to participate in numeracy focus groups.Numeracy key skills support booklet available to all S1 learners & parents. Numeracy key skills support booklet available to all P7 learners & parents at P7 open evening.Numeracy skills routinely highlighted in class. Numeracy Policy and methodology booklet issued to all new staff.Pupil assemblies will be held that showcase numeracy across the curriculum.Senior pupils will be given the opportunity to build on S4 numerical success regardless of level. Applications of Mathematics at National 5 will be introduced to the Senior School. This course involves Numeracy 5 which will give those with N4 another opportunity to achieve Numeracy 5.Targeted support will be in place for those identified, from school data, who are not continuing with the study of mathematics, but who have the opportunity to gain a further numeracy qualification.Numeracy Ambassadors to be appointed.New Numeracy booklet will be produced for Personal Finance class.New “real life” assessments produced for Numeracy.Numeracy logo competition will be organised in conjunction with Expressive Arts. | Maths Faculty Staff/ Cluster colleaguesNumeracy working groupMaths Faculty StaffAll staffFacultiesNumeracy AmbassadorsFLMrs McNayNumeracy working groupFLFLFLFL of Maths and Expressive Arts. | May/June 2019Sept 2019Aug 2019Nov 2019OngoingOngoingOngoing from Aug 2019OngoingOngoingSeptemberJune 2019OngoingSeptember | This will allow more effective planning in the secondary sector which increases appropriate pace and challenge for learners. Learners building on prior achievement with appropriate support targeted immediately.Evaluation of impact session 2018-19. Pupil feedback to develop efficacy of numeracy across learning strategies.Increase in learner’s confidence with key skills, improvement in numerical attainment. Improved parental engagement and confidence in supporting learners.Pupils will benefit from consistent approach in all curricular areas highlighting transferable skills.Increase in learner confidence. Improved numeracy skills for all.Pupils will be more aware of where numeracy is used in each subject they study.Numerical progression will be encouraged either with N5 following on from N4 success or next level up numeracy with Personal Finance for those who can’t cope with the full course. This will provide opportunity to maximise numerical attainment for all stakeholders.More pupils expected to achieve Numeracy 5.Pupils will benefit from the opportunity to progress numerically, if realistically possible, to maximise attainment potential.Pupils will promote numeracy by being part of the literacy and numeracy peer assisted learning programme.This will allow a non-maths specialist to teach numeracy rigour as part of the Personal Finance course.Pupils fully prepared to use numeracy in the world of work.Pupils given the opportunity to contribute to the design of the logo. | Implemented pre summer 2019 in time for induction visit. Learning groups reviewed October 2019.Results from focus group will be available.Pupils will be assessed on core numeracy skills and results recorded on the intranet.Classroom observations will reflect this.Pupils asked their opinion on the impact of the assembly.The number of pupils who pass Numeracy 5 from Personal Finance will be closely monitored.The number of pupils who pass Numeracy 5 from Maths Applications will be closely monitored.The number of pupils achieving Numeracy 5 to be tracked closely.Ambassadors achieve Saltire Award.Pupils fully prepared for Numeracy 5.Pupils will be more numerate.Pupils feel included. |
| Parents & carers | Organise parent survey as part of Self-evaluation in order to understand what parents require in terms of numeracy support.Organise parents numeracy workshops both as part of Parents in Partnership and as twilight sessions.Liaise with Family learning to provide support as required.Organise Numeracy/ Maths Instagram and twitter account. | Mrs McNay/ Mrs FletcherMrs HoptonMaths FacultyMr Hosie | May 2019Jan 2020August 2019 | Department more informed as what to offer parents next session.Increased awareness of the importance of numeracy across learning.Identify specific parental needs relating to development of numeracy for future sessions.To allow parents to be more informed about Numeracy across the curriculum. | Surveys completed and discussed at departmental meeting.Parents more confident in helping their children with their numeracy homework.Number of followers will be noted to see audience impact. |
| Staff | Mastery CPD to be undertaken by Mr Hosie and cascaded to the maths department and then to whole staff.Each member of the maths department will be the link for Numeracy for a Faculty. They will be used as consultants to review or discuss any numeracy issues a faculty has. They will also be used to lead the discussions with their Faculty groups on in-service days or at collegiate time set aside for numeracy. All faculties to celebrate Numeracy week. Exemplification of pupil ‘numeracy’ work to be displayed and celebrated throughout all departments.Three pieces of pupils work at Level 3 to be collected twice a year to showcase numeracy across the curriculum.All members of staff will be given the opportunity to achieve the Numeracy 5 qualification.  | Mr HosieAll StaffFaculty Heads and link maths staff.Faculty LinksFL | OngoingThroughout the sessionThroughout the session.Throughout the session.Throughout the session. | This training will allow staff to understand how to teaching number bonds.Improved staff confidence in various aspects of numeracy across learning.Improved understanding of the current delivery of numeracy E’s and O’s through the BGE.Evidence of delivery of numeracy skills across subject areas.Pupil achievements celebrated across school, raising numeracy profile.To quality assure standards across the curriculum.To allow staff to be more confident in their Numeracy skills. | All will be more confident in delivering Early years or Level 1 Numeracy.Staff will be more confident.Examples from all Faculties will be displayed.Evidence Folder will be kept by faculty leader of Mathematics and Numeracy.The number of passes will be celebrated. |
| Cluster | Work closely with P7 staff to ensure a smooth transition.Moderation activities will take place within the cluster at Collegiate/in-service time. | Maths FacultyMaths Faculty | All sessionongoing | This will allow the maths staff to get to know the pupils before they arrive in S1.This will lead to consistency of standards across the cluster. | More accurate data which can be used to organise “next steps”. |