Winslow Schools
Mathematics Curriculum – Grade 3
Unit 3

Overview	Standards for Mathematical Content	Unit Focus	Standards for Mathematical Practice
Unit 3 **Fractions as Numbers and Measurement**	• 3.NF.A.2 • 3.NF.A.3 • 3.MD.A.1 • 3.MD.A.2 • 3.G.A.1 • 3.MD.D.8 • 3.OA.C.7*	• Develop understanding of fractions as numbers • Solve problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects • Reason with shapes and their attributes • Recognize perimeter as an attribute of plane figures and distinguish between linear and area measure • Multiply and divide within 100	MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. MP.6 Attend to precision. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.
Unit 3: Suggested Open Educational Resources	3.NF.A.2 Closest to 1/2 3.NF.A.2 Find 1 Starting from 5/3 3.NF.A.2 Locating Fractions Greater than One on the Number Line 3.NF.A.3b, 3.G.A.2, 3.MD.C.6 Halves, thirds, and sixths 3.MD.A.1 Dajuana's Homework 3.MD.A.2 How Heavy? 3.MD.D Shapes and their Insides		

Major Supporting Additional (Identified by PARCC Model Content Frameworks).

Curriculum Unit 3	Standards		Pacing	
			Days	Unit Days
Unit 3 **Fractions as Numbers and Measurement**	• 3.NF.A.2	Draw a number line depicting the position of 1/b (with b = 2, 3, 4, 6, or 8); represent the unit fraction ¼ on the number line by partitioning the number line between 0 and 1 into 4 equal lengths and name the point at the end of the first length as the position of the unit fraction ¼; apply the same method for placing points 1/2, 1/3, 1/6, and 1/8 on the number line. Draw a number line depicting the position of fraction *a*/*b* (with *b* = 2, 4, 3, 6, or 8, and including whole numbers up to 5).	5	45
	• 3.NF.A.3	Generate simple equivalent fractions, explain why they are equivalent, and support the explanation with visual fraction models; locate them on the number line. Express whole numbers as fractions, identify fractions equivalent to whole numbers and locate them on the number line. Compare two fractions having the same numerator; compare two fractions having the same denominator; reason about their size and use the symbols >, =, or < to record the comparison.	12	
	• 3.MD.A.1	Tell and write time to the nearest minute, and solve word problems with addition and subtraction involving time intervals in minutes.	6	
	• 3.MD.A.2	Solve one step word problems by estimating and measuring volume and mass using appropriate tools and standard units of grams, kilograms, and liters.	6	
	• 3.G.A.1	Recognize rhombuses, rectangles, and squares as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories.	2	
	• 3.MD.D.8	Solve real world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths, finding an unknown side length, and exhibiting rectangles with the same perimeter and different areas or with the same area and different perimeters.	5	
	• 3.OA.C.7*	Fluently multiply and divide within 100 using strategies such as the relationship between multiplication and division.	5	
	Assessment, Re-teach and Extension		4	

Unit 3 Grade 3		
Content Standards	**Suggested Standards for Mathematical Practice**	**Critical Knowledge & Skills**
● 3.NF.A.2. Understand a fraction as a number on the number line; represent fractions on a number line diagram. 3.NF.A.2a. Represent a fraction 1/*b* on a number line diagram by defining the interval from 0 to 1 as the whole and partitioning it into *b* equal parts. Recognize that each part has size 1/*b* and that the endpoint of the part based at 0 locates the number 1/*b* on the number line. 3.NF.A.2b. Represent a fraction *a*/*b* on a number line diagram by marking off *a* lengths 1/*b* from 0. Recognize that the resulting interval has size *a*/*b* and that its endpoint locates the number *a*/*b* on the number line. *[Grade 3 expectations in this domain are limited to fractions with denominators 2, 3, 4, 6, and 8.]	MP.5 Use appropriate tools strategically.	Concept(s): ● Fraction is a number and has its place on the number line. ● When placing unit fractions on a number line, the space between 0 and 1 is the whole and must be partitioned into equal parts. ● Each part of a whole has the same size (one-half, one-third, one-fourth, one-sixth or one-eighth). ● Parts of the whole that begin at 0 and ends at 1/b on the number line is the location of fraction 1/b (one-half, one-third, one-fourth, one-sixth, or one-eighth). Students are able to: ● partition a number line into parts of equal sizes between 0 and 1 (halves, thirds, fourths sixths and eighths). ● plot unit fractions on the number line. ● identify multiple parts (of length 1/b) on the number line. ● plot a fraction on the number line by marking off multiple parts of size 1/b. ● plot fractions equivalent to whole numbers including 0 and up to 5. Learning Goal 1: Draw a number line depicting the position of 1/b (with b = 2, 3, 4, 6, or 8); represent the unit fraction ¼ on the number line by partitioning the number line between 0 and 1 into 4 equal lengths and name the point at the end of the first length as the position of the unit fraction ¼; apply the same method for placing points 1/2, 1/3, 1/6, and 1/8 on the number line. Learning Goal 2: Draw a number line depicting the position of fraction *a*/*b* (with *b* = 2, 4, 3, 6, or 8, and including whole numbers up to 5).
● 3.NF.A.3. Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size 3.NF.A.3a. Understand two fractions as equivalent (equal) if they are the same size, or the same point on a number line.	MP 2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. MP.7 Look for and make use of structure.	Concept(s): ● Comparing fractions, each referencing the same *whole*. ● Fractions are equivalent if they are the same size. ● Fractions are equivalent if they are at the same point on a number line. Students are able to: ● find equivalent fractions (limited to fractions with denominators 2, 3, 4, 6, and 8). ● explain why two fractions are equivalent; use a visual fraction model to support explanation.

3.NF.A.3b. Recognize and generate simple equivalent fractions, e.g., 1/2 = 2/4, 4/6 = 2/3). Explain why the fractions are equivalent, e.g., by using a visual fraction model. 3.NF.A.3c. Express whole numbers as fractions, and recognize fractions that are equivalent to whole numbers. *Examples: Express 3 in the form 3 = 3/1; recognize that 6/1 = 6; locate 4/4 and 1 at the same point of a number line diagram.* 3.NF.A.3d. Compare two fractions with the same numerator or the same denominator by reasoning about their size. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with the symbols >, =, or <, and justify the conclusions, e.g., by using a visual fraction model. *[Grade 3 expectations in this domain are limited to fractions with denominators 2, 3, 4, 6, and 8.]		• write whole numbers as fractions. • identify fractions that are equivalent to whole numbers. • compare two fractions having the same numerator by reasoning about their size. • compare two fractions having the same denominator by reasoning about their size. • explain why comparing fractions that do not have the same whole is not valid (reason about their size and support reasoning with a model). • use <, =, and > symbols to write comparisons of fractions and justify conclusions with a visual fraction model. Learning Goal 3: Generate simple equivalent fractions, explain why they are equivalent, and support the explanation with visual fraction models; locate them on the number line. Learning Goal 4: Express whole numbers as fractions, identify fractions equivalent to whole numbers and locate them on the number line. Learning Goal 5: Compare two fractions having the same numerator; compare two fractions having the same denominator; reason about their size and use the symbols >, =, or < to record the comparison.

● 3.MD.A.1. Tell and write time to the nearest minute and measure time intervals in minutes. Solve word problems involving addition and subtraction of time intervals in minutes. (e.g., by representing the problem on a number line diagram)	MP.1 Make sense of problems and persevere in solving them. MP 2 Reason abstractly and quantitatively. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically.	Concept(s): ● Analog clocks represent hours as numbers and minutes are represented as tick marks. Students are able to: ● tell time to the nearest minute using digital and analog clocks. ● write time to the nearest minute using analog clocks. ● choose appropriate strategies to solve real world problems involving time. ● use the number line as a visual model to determine intervals of time as *jumps* on a number line. ● measure time intervals. Learning Goal 6: Tell and write time to the nearest minute, and solve word problems with addition and subtraction involving time intervals in minutes.
● 3.MD.A.2. Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l). Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units.	MP.1 Make sense of problems and persevere in solving them. MP 2 Reason abstractly and quantitatively. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. MP.6 Attend to precision.	Concept(s): ● Mass may be measured in grams and kilograms. ● Mass is measured by weighing. ● Volume may be measured in liters. ● Volume may be measured with instruments such as beakers. Students are able to: ● measure and read a scale to estimate volume. ● measure and read a scale to estimate mass. ● add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes. Learning Goal 7: Solve one step word problems by estimating and measuring volume and mass using appropriate tools and standard units of grams, kilograms, and liters.
● 3.G.A.1. Understand that shapes in different categories (e.g., rhombuses, rectangles, and others) may share attributes (e.g., having four sides), and that the shared attributes can define a larger category (e.g., quadrilaterals). Recognize rhombuses, rectangles, and squares as	MP.5 Use appropriate tools strategically. MP.6 Attend to precision. MP.7 Look for and make use of structure.	Concept(s): ● Shapes in different categories share attributes. ● Quadrilaterals are closed figures with four sides. ● Rhombuses, rectangles, etc, and other quadrilaterals share attributes. Students are able to: ● classify and sort shapes by attributes. ● explain why rhombuses, rectangles, and squares are examples of quadrilaterals. ● draw examples of quadrilaterals.

examples of quadrilaterals, and draw examples of quadrilaterals.		Learning Goal 9: Recognize rhombuses, rectangles, and squares as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories.
● 3.MD.D.8. Solve real world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths, finding an unknown side length, and exhibiting rectangles with the same perimeter and different areas or with the same area and different perimeters.	MP.1 Make sense of problems and persevere in solving them. MP 2 Reason abstractly and quantitatively. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically.	Concept(s): ● Perimeter of a figure is equivalent to the sum of the length of all of the sides. ● Rectangles that have same perimeter can have different areas. ● Rectangles that have same area can have different perimeters. Students are able to: ● determine the perimeter of various plane shapes and irregular shapes given the side lengths. ● determine the unknown side length give the perimeter and other sides. ● show rectangles having the same perimeter and different areas. ● show rectangles having different perimeters and the same area. Learning Goal 10: Solve real world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths, finding an unknown side length, and exhibiting rectangles with the same perimeter and different areas or with the same area and different perimeters.
● 3.OA.C.7. Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that $8 \times 5 = 40$, one knows $40 \div 5 = 8$) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers. *(benchmarked)	MP 2 Reason abstractly and quantitatively. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.	Concept(s): No new concept(s) introduced Students are able to: ● multiply and divide <u>within 100</u> with accuracy and efficiency. Learning Goal 8: Fluently multiply and divide <u>within 100</u> using strategies such as the relationship between multiplication and division.

Unit 3 Grade 3	
School/District Formative Assessment Plan	**School/District Summative Assessment Plan**
Pre-Assessment, Quizzes Do Now Exit Tickets Daily Monitoring Lesson Check Assessments: ● Teacher constructed ● Provided by Textbook or online resource	Go Math! Unit Benchmarks Link It Mid-Chapter Checkpoint Chapter Tests: ● Online Assessments ● Textbook Review/Test

Focus Mathematical Concepts

Prerequisite skills:

Achieve the Core Coherence Map

https://achievethecore.org/coherence-map/

Standards: Prerequisite

3.NF.A.2: 2.MD.6, 3.G.2, 3.NF.1
3.NF.A.3: 3.NF.1, 3.NF.2
3.MD.A.1: 1.MD.3, 2.NBT.2, 2.MD.7
3.MD.A.2: 2.MD.1, 2.MD.3, 2.MD.4, 2.MD.5
3.G.A.1: K.G.2, 1.G.1, 2.G.1
3.MD.D.8: 2.G.2, 2.MD.5, 3.MD.5, 3.MD.6
3.OA.C.7: 3.OA.5, 3.OA.6

Common Misconceptions:

3.MD.A.1 Students may read the mark on a scale that is below a designated number on the scale as if it was the next number. For example, a mark that is one mark below 80 grams may be read as 81 grams. Students realize it is one away from 80, but do not think of it as 79 grams.
Avoid the use of paper plate clocks. Students need to see the actual relationship between the hour and the minute hand. This is not adequately represented on student made clocks. Students forget to label the measurement or choose the incorrect unit.

3.MD.A.2 Students often focus on size to determine estimates of mass. They can be confused by a big fluffy object and a tiny dense object. Because students cannot tell actual mass until they have handled an object, it is important that teachers do not ask students to estimate the mass of objects until they have had the opportunity to lift the objects and then make an estimate of the mass.

3.MD.D.8 Students think that when they are presented with a drawing of a rectangle with only two of the side lengths shown or a problem situation with only two of the side lengths provided, these are the only dimensions they should add to find the perimeter. Encourage students to include the appropriate dimensions on the other sides of the rectangle. With problem situations, encourage students to make a drawing to represent the situation in order to find the perimeter.

Number Fluency:

3.OA.7 Students fluently multiply and divide within 100. By the end of grade 3, they know all products of two one-digit numbers from memory.

3.NBT.2 Students fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.

Think Central Online Resource: Strategies and Practice for Skills and Facts Fluency
Achieve the Core – GoMath Fluency Activities
https://achievethecore.org/page/2853/go-math-k-5-guidance-documents

Achieve the Core – Fluency Activities
https://achievethecore.org/page/2948/fluency-resources-for-grade-level-routines

Xtra Math
https://xtramath.org/#/signin/student_other

Engage NY Sprints
https://www.saugerties.k12.ny.us/site/handlers/filedownload.ashx?moduleinstanceid=9558&dataid=14912&FileName=G3-M1-SPRINTS-FINAL.pdf

Math Coach – Fact Fluency **http://schoolwires.henry.k12.ga.us/Page/21865**
Math Wire – Basic Facts Link **http://mathwire.com/numbersense/bfactslinks.html**
Math Fact Practice **http://www.playkidsgames.com/games/mathfact/mathFact.htm**

District/School Tasks	District/School Primary and Supplementary Resources
NJDOE Digital Item Library https://nj.digitalitemlibrary.com/home **NJSLA Mathematics Evidence Statements** https://docs.google.com/spreadsheets/d/18M5r1jk4P729fTpAlWAzrw1gE6tken233I-Yk0U712M/edit#gid=554025491 **LinkIt! Form A, B, & C**	Text: Go Math Think Central Online Resources: https://www-k6.thinkcentral.com/ePC/start.do Go Math- Strategic Intervention Teacher Activity Guide HMH Getting Ready for the PARCC Assessments Go Math Chapter Resources ● Chapter 8 ● Chapter 9 ● Chapter 10 ● Chapter 11 **3rd grade Flip Book:** http://community.ksde.org/Default.aspx?tabid=5646 **North Carolina Dept of Ed. Wikispaces:** http://maccss.ncdpi.wikispaces.net/Elementary **PARCC Math Resources** http://www.parcc-assessment.org/assessments/test-design/mathematics/math-test-specifications-documents **101 Math Discourse Questions:** http://www.casamples.com/downloads/100MathDiscourseQuestions_Printable.pdf **Asking Effective Questions** http://www.edu.gov.on.ca/eng/literacynumeracy/inspire/research/CBS_AskingEffectiveQuestions.pdf

Instructional Best Practices and Exemplars	
1. Identifying similarities and differences 2. Summarizing and note taking 3. Reinforcing effort and providing recognition 4. Homework and practice 5. Nonlinguistic representations	6. Cooperative learning 7. Setting objectives and providing feedback 8. Generating and testing hypotheses 9. Cues, questions, and advance organizers 10. Manage response rates
Vocabulary	
3.NF.A.2 **Develop understanding of fractions as numbers.** partition(ed), equal parts, fraction, equal distance (intervals), numerator, denominator, halves, thirds, fourths, sixths, eights, compare, equivalent 3.MD.A.1 & 2 **Solve problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects.** estimate, time, time intervals, a.m, p.m, digital clock, analog clock, minute, hour, fourth, half hour, elapsed time, measure, liquid volume, mass, standard units, metric, gram (g), kilogram (kg), liter (L)	3.G.A.1 **Reason with shapes and their attributes.** attributes, properties, quadrilateral, open figure, closed figure , three-sided, 2-dimensional, 3-dimensional, rhombi, rectangles, and squares are subcategories of quadrilaterals, cubes, cones, cylinders, and rectangular prisms are subcategories of 3-dimensional figures shapes: polygon, rhombus/rhombi, rectangle, square, hexagon, angle, polygon, parallel lines, perpendicular lines 3.MD.D.8 **Geometric measurement: recognize perimeter as an attribute of plane figures and distinguish between linear and area measures.** attribute, perimeter, plane figure, linear, area, polygon, side length 3.OA.C.7 **Multiply and divide within 100.** operation, multiply, divide, factor, product, quotient, unknown, strategies, reasonableness, mental computation, property

9.1 Personal Financial Literacy, 9.2 Career Awareness, Exploration, Preparation and Training & 9.4 Life Literacies and Key Skills

9.1.5.PB.2: Describe choices consumers have with money (e.g., save, spend, donate).
9.2.5.CAP.1: Evaluate personal likes and dislikes and identify careers that might be suited to personal likes.
9.2.5.CAP.2: Identify how you might like to earn an income.
9.2.5.CAP.3: Identify qualifications needed to pursue traditional and non-traditional careers and occupations.
9.2.5.CAP.4: Explain the reasons why some jobs and careers require specific training, skills, and certification (e.g., life guards, child care, medicine, education) and examples of these requirements.
9.2.5.CAP.5: Identify various employee benefits, including income, medical, vacation time, and lifestyle benefits provided by different types of jobs and careers.

The implementation of the 21st Century skills and standards for students of the Winslow Township District is infused in an interdisciplinary format in a variety of curriculum areas that include, English language Arts, Mathematics, School Guidance, Social Studies, Technology, Visual and Performing Arts, Science, Physical Education and Health, and World Language.: Additional opportunities to address 9.1, 9.2 & 9.4:

Philadelphia Mint

https://www.usmint.gov/learn/kids/resources/educational-standards

Different ways to teach Financial Literacy.

https://www.makeuseof.com/tag/10-interactive-financial-websites-teach-kids-money-management-skills/

Suggested Modifications for Special Education/504

Students with special needs: The students' needs will be addressed on an individual and grade level using a variety of modalities. Accommodations will be made for those students who need extra time to complete assignment. Support staff will be available to aid students related to IEP specifications. 504 accommodations will also be attended to by all instructional leaders. Physical expectations and modifications, alternative assessments, and scaffolding strategies will be used to support this learning. The use of Universal Design for Learning (UDL) will be considered for all students as teaching strategies are considered.

☐ Provide the opportunity to re-take tests
☐Modify activities/assignments/projects/assessments
☐ Breakdown activities/assignments/projects/assessments into manageable units
☐Additional time to complete activities/assignments/projects/assessments
☐ Provide an option for alternative activities/assignments/projects/assessments
☐ Modify Content
☐ Modify Amount
☐ Small Group Intervention/Remediation
☐ Individual Intervention/Remediation
☐ Additional Support Materials
☐ Guided Notes
☐ Graphic Organizers
☐ Adjust Pacing of Content
☐ Increase one on one time
☐ Peer Support
☐ Other Modifications for Special Education:

- Think Central Online Resources:
  - Reteach
  - Strategic Intervention
  - Intensive Intervention Skill Pack
  - Response to Intervention Activities

Suggested Modifications for At-Risk Students

Formative and summative data will be used to monitor student success. At first signs of failure, student work will be reviewed to determine support. This may include parent consultation, basic skills review and differentiation strategies. With considerations to UDL, time may be a factor in overcoming developmental considerations

☐ Provide the opportunity to re-take tests
☐ Increase one on one time
☐ Oral prompts can be given
☐ Using visual demonstrations, illustrations, and models
☐ Give directions/instructions verbally and in simple written format
☐ Peer Support
☐ Modify activities/assignments/projects/assessments
☐ Additional time to complete activities/assignments/projects/assessments
☐ Provide an option for alternative activities/assignments/projects/assessments

☐ Modify Content
☐ Modify Amount
☐ Adjust Pacing of Content
☐ Small Group Intervention/Remediation
☐ Individual Intervention/Remediation
☐ Additional Support Materials
☐ Guided Notes
☐ Graphic Organizers
☐ Other Modifications for Students At-Risk:

- Think Central Online Resources:
  - Reteach
  - Strategic Intervention
  - Intensive Intervention Skill Pack
  - Response to Intervention Activities

English Language Learners	Suggested Modifications for Gifted Students
All WIDA Can Do Descriptors can be found at this link: https://wida.wisc.edu/teach/can-do/descriptors ☐ Grades 2-3 WIDA Can Do Descriptors: ☐ Listening ☐ Speaking ☐ Reading ☐ Writing ☐ Oral Language Students will be provided with accommodations and modifications that may include: • Relate to and identify commonalities in mathematics studies in student's home country • Assist with organization • Use of computer • Emphasize/highlight key concepts • Teacher Modeling • Peer Modeling • Label Classroom Materials - Word Walls	Students excelling in mastery of standards will be challenged with complex, high level challenges related to the topic. • Raise levels of intellectual demands • Require higher order thinking, communication, and leadership skills • Differentiate content, process, or product according to student's readiness, interests, and/or learning styles • Provide higher level texts • Expand use of open-ended, abstract questions • Critical and creative thinking activities that provide an emphasis on research and in-depth study • Enrichment Activities/Project-Based Learning/ Independent Study Additional Strategies may be located at the links: ❖ Gifted Programming Standards ❖ Webb's Depth of Knowledge Levels and/or Revised Bloom's Taxonomy ❖ REVISED Bloom's Taxonomy Action Verbs

Suggested Activities	
☐ Do Now/Warm-Up	☐ Centers
☐ Whole Group	☐ Intervention/Remediation
☐ Small Groups	☐ Projects
☐ Guided Practice	☐Link It Library
☐ Independent Practice	☐Academic Games
☐HMH Getting Ready for the PARCC Assessments	☐ Other Suggested Activities:
☐Go Math Concepts Readers	☐Khan Academy
☐Go Math Stem Activities	☐Brain Pop Jr.
☐Mega Math- Think Central Online Resource	☐Prodigy
☐Go Math Animated Math Models	☐Kahoot
☐Go Math Grab and Go Activity Center Cards	
☐Math on the Spot Video Tutorials- Think Central Online Resource	
☐Go Math! Personal Math Trainer	

Interdisciplinary Connections
Go Math Grab and Go! Activities (Reading, Science, Math, Social Studies)
Go Math Real World Project: Big Idea, Measurement and Data (Math, Reading, Writing, Science, Social Studies)
Go Math Cross-Curricular Science and Social Studies questions, experiments, and activities embedded throughout the chapter.
Integration of Computer Science and Design Thinking NJSLS 8
8.1.5.CS.1: Model how computing devices connect to other components to form a system.
8.1.5.CS.3: Identify potential solutions for simple hardware and software problems using common troubleshooting strategies.
8.1.5.NI.2: Describe physical and digital security measures for protecting sensitive personal information.
8.1.5.IC.1: Identify computing technologies that have impacted how individuals live and work and describe the factors that influenced the changes.
8.1.5.IC.2: Identify possible ways to improve the accessibility and usability of computing technologies to address the diverse needs and wants of users.
8.1.5.AP.1: Compare and refine multiple algorithms for the same task and determine which is the most appropriate.