

## **10th Grade Geometry Curriculum Map 2025-26**

### **First Semester Timeline**

*August 13 - December 19*

#### **Unit 1: Introduction to Logic and Euclidean Geometry (Aug 14-27)**

- Logical Arguments and Proofs
- Basic Geometric Concepts
- *No School: Sept 1, 19*

#### **Unit 2: Coordinate Geometry and Transformations (Aug 30-Sept 20)**

- Coordinate Plane
- Transformations
- Compositions of Transformations

#### **Unit 3: Lines and Transversals (Sept 26-Oct 3)**

- Parallel and Perpendicular Lines
- Angle Relationships
- *No School: Oct 13, 31*

#### **Unit 4: Triangle Relationships (Oct 7-Nov 1)**

- Triangle Congruence
- Triangle Similarity
- Triangle Proofs

#### **Unit 5: Right Triangles and Trigonometry (Nov 8-Dec 19)**

- Right Triangle Relationships
- Trigonometric Ratios
- Applications of Trigonometry
- *No School: Nov 24-28*
- *Half Week: Dec 19*
- *Winter Break: Dec 20-Jan 2*

## **Second Semester Timeline**

*January 3 - May 15*

### **Unit 6: Circles (Jan 7-22)**

- Circle Properties
- Radian Measure
- Circle Equations
- *No School: Jan 5, 23*

### **Unit 7: 2D and 3D Figures (Jan 27-Feb 13)**

- Polygons
- Three-Dimensional Figures
- *No School: Feb 13, 16*

### **Unit 8: Area and Perimeter (Feb 19-Mar 18)**

- Area of Polygons
- Composite Figures
- *Spring Break: March 9-13*

### **Unit 9: Volume and Surface Area (Mar 24-Apr 4)**

- Prisms and Pyramids
- Cylinders, Cones, and Spheres
- *No School: April 3*

### **Unit 10: Probability (Apr 9-25)**

- Probability Concepts
- Geometric Probability

### **Unit 11: Engineering Design and Final Applications (Apr 28-May 15)**

- Real-World Geometric Applications
- Engineering Design Projects
- Mathematical Modeling

- *Last Day of School: May 15*

**Key Assessments:**

- Mid-Course Test (December)
- End-of-Course Test (Early May)

## **Geometry Weekly Lesson Outlines 2023-2024**

### **UNIT 1: Introduction to Logic and Euclidean Geometry**

#### *Week 1 (Aug 14-18)*

- Monday: Course Introduction, Basic Geometric Terms
- Tuesday: Points, Lines, Planes, and Angles
- Wednesday: Measuring Angles and Segments
- Thursday: Introduction to Proofs
- Friday: Reasoning and Logic in Geometry

#### *Week 2 (Aug 21-25)*

- Monday: Conditional Statements
- Tuesday: Deductive Reasoning
- Wednesday: Algebraic Proofs
- Thursday: Geometric Proofs
- Friday: Unit 1 Assessment

### **UNIT 2: Coordinate Geometry and Transformations**

#### *Week 3 (Aug 28-31)*

- Monday: Coordinate Plane Review
- Tuesday: Distance Formula
- Wednesday: Midpoint Formula
- Thursday: Slope and Rate of Change
- *No School: Sept 1*

#### *Week 4 (Sept 5-8)*

- Tuesday: Translations
- Wednesday: Reflections
- Thursday: Rotations
- Friday: Dilations

*Week 5 (Sept 11-15)*

- Monday: Composition of Transformations
- Tuesday: Rigid Motions
- Wednesday: Similar Figures through Transformations
- Thursday: Applications of Transformations
- Friday: Practice and Review

*Week 6 (Sept 18-22)*

- *No School: Sept 19*
- Monday: Transformation Projects
- Wednesday: Review
- Thursday: Unit 2 Assessment
- Friday: Introduction to Lines and Angles

**UNIT 3: Lines and Transversals**

*Week 7 (Sept 25-29)*

- Monday: Parallel Lines
- Tuesday: Perpendicular Lines
- Wednesday: Angle Relationships
- Thursday: Transversals
- Friday: Proving Lines Parallel

*Week 8 (Oct 2-6)*

- Monday: Applications
- Tuesday: Review
- Wednesday: Unit 3 Assessment
- Thursday: Triangle Introduction
- Friday: Triangle Properties

**UNIT 4: Triangle Relationships**

*Week 9 (Oct 9-12)*

- Monday: Triangle Classifications
- Tuesday: Triangle Angle Sum
- *No School: Oct 13*
- Thursday: Exterior Angles

*Week 10 (Oct 16-20)*

- Monday: Triangle Congruence (SSS)
- Tuesday: Triangle Congruence (SAS)
- Wednesday: Triangle Congruence (ASA, AAS)
- Thursday: Triangle Proofs
- Friday: Applications

*Week 11 (Oct 23-27)*

- Monday: Similar Triangles
- Tuesday: Proving Triangles Similar
- Wednesday: Proportional Relationships
- Thursday: Applications
- Friday: Review

*Week 12 (Oct 30-Nov 3)*

- *No School: Oct 31*
- Monday: Triangle Projects
- Wednesday: Review
- Thursday: Unit 4 Assessment
- Friday: Right Triangle Introduction

**UNIT 5: Right Triangles and Trigonometry**

*Week 13 (Nov 6-10)*

- Monday: Pythagorean Theorem

- Tuesday: Special Right Triangles (45-45-90)
- Wednesday: Special Right Triangles (30-60-90)
- Thursday: Applications
- Friday: Introduction to Trigonometry

*Week 14 (Nov 13-17)*

- Monday: Sine Ratio
- Tuesday: Cosine Ratio
- Wednesday: Tangent Ratio
- Thursday: Solving Right Triangles
- Friday: Real-World Applications

*Week 15 (Nov 20-22)*

- Monday: Inverse Trigonometric Ratios
- Tuesday: Applications
- Wednesday: Review
- *No School: Nov 24-28*

*Week 16 (Nov 29-Dec 1)*

- Wednesday: Practice
- Thursday: Unit 5 Assessment
- Friday: Mid-Course Review

*Week 17 (Dec 4-8)*

- Monday: Mid-Course Review
- Tuesday: Mid-Course Test
- Wednesday: Circle Introduction
- Thursday: Circle Properties
- Friday: Radius and Diameter

*Week 18 (Dec 11-15)*

- Monday: Central Angles
- Tuesday: Inscribed Angles
- Wednesday: Arc Length
- Thursday: Semester Review
- Friday: Semester Review

*Week 19 (Dec 18-19)*

- Monday: Semester Final
- Tuesday: Half Day - First Semester Wrap-up

**WINTER BREAK (Dec 20-Jan 2)**

**UNIT 6: Circles**

*Week 20 (Jan 3-4)*

- Wednesday: Welcome Back/Review
- Thursday: Radian Measure
- *No School: Jan 5*

*Week 21 (Jan 8-12)*

- Monday: Converting Degrees and Radians
- Tuesday: Arc Length with Radians
- Wednesday: Circle Equations
- Thursday: Center-Radius Form
- Friday: General Form

*Week 22 (Jan 16-19)*

- Monday: Graphing Circles
- Tuesday: Writing Circle Equations
- Wednesday: Applications
- Thursday: Review
- Friday: Unit 6 Assessment

## **UNIT 7: 2D and 3D Figures**

*Week 23 (Jan 22-26)*

- *No School: Jan 23*
- Monday: Regular Polygons
- Wednesday: Interior Angles
- Thursday: Exterior Angles
- Friday: Polygon Properties

*Week 24 (Jan 29-Feb 2)*

- Monday: 3D Figure Introduction
- Tuesday: Prisms
- Wednesday: Pyramids
- Thursday: Cylinders and Cones
- Friday: Spheres

*Week 25 (Feb 5-9)*

- Monday: Cross Sections
- Tuesday: Nets
- Wednesday: 3D Applications
- Thursday: Review
- Friday: Unit 7 Assessment

*Week 26 (Feb 12-15)*

- Monday: Introduction to Area
- Tuesday: Area Review
- *No School: Feb 13, 16*
- Thursday: Triangle Area

## **UNIT 8: Area and Perimeter**

*Week 27 (Feb 19-23)*

- Monday: Parallelogram Area
- Tuesday: Trapezoid Area
- Wednesday: Regular Polygon Area
- Thursday: Circle Area
- Friday: Sector Area

*Week 28 (Feb 26-Mar 1)*

- Monday: Composite Figures
- Tuesday: Decomposing Figures
- Wednesday: Area Applications
- Thursday: Real-World Problems
- Friday: Practice

*Week 29 (Mar 4-8)*

- Monday: Area Projects
- Tuesday: Review
- Wednesday: Unit 8 Assessment
- Thursday: Volume Introduction
- Friday: Review

*SPRING BREAK (Mar 9-13)*

## **UNIT 9: Volume and Surface Area**

*Week 30 (Mar 18-22)*

- Monday: Prism Volume
- Tuesday: Surface Area of Prisms
- Wednesday: Pyramid Volume
- Thursday: Surface Area of Pyramids
- Friday: Applications

*Week 31 (Mar 25-29)*

- Monday: Cylinder Volume
- Tuesday: Cone Volume
- Wednesday: Sphere Volume
- Thursday: Surface Area Applications
- Friday: Review

*Week 32 (Apr 1-4)*

- Monday: Volume Projects
- Tuesday: Review
- Wednesday: Unit 9 Assessment
- *No School: Apr 3*

### **UNIT 10: Probability**

*Week 33 (Apr 8-12)*

- Monday: Probability Introduction
- Tuesday: Sample Space
- Wednesday: Theoretical Probability
- Thursday: Experimental Probability
- Friday: Geometric Probability

*Week 34 (Apr 15-19)*

- Monday: Compound Events
- Tuesday: Independent Events
- Wednesday: Dependent Events
- Thursday: Probability Applications
- Friday: Review

*Week 35 (Apr 22-26)*

- Monday: Probability Projects
- Tuesday: Review

- Wednesday: Unit 10 Assessment
- Thursday: Engineering Introduction
- Friday: Project Planning

### **UNIT 11: Engineering Design and Final Applications**

*Week 36 (Apr 29-May 3)*

- Monday: Engineering Design Process
- Tuesday: Project Development
- Wednesday: Mathematical Modeling
- Thursday: Project Work
- Friday: Project Work

*Week 37 (May 6-10)*

- Monday: Project Presentations
- Tuesday: Project Presentations
- Wednesday: Final Review
- Thursday: Final Review
- Friday: End-of-Course Test

*Week 38 (May 13-15)*

- Monday: Course Reflection
- Tuesday: Mathematical Applications
- Wednesday: Last Day - Course Wrap-up

## **Unit 1: Introduction to Logic and Euclidean Geometry**

### **Week 1, Day 1 - Course Introduction**

*TEKS G.1.A, G.1.B*

*Connected Learning Statements:*

I Can: I can identify geometric concepts in my everyday world

You Can: You can explain these concepts using proper vocabulary

We Can: Together, we can discover how geometry shapes our world

### **Week 1, Day 2 - Points, Lines, Planes**

*TEKS G.2.A, G.4.A*

*Connected Learning Statements:*

I Can: I can label geometric figures using correct notation

You Can: You can verify if notation is written correctly

We Can: We can communicate geometric ideas precisely

### **Week 1, Day 3 - Measuring Angles and Segments**

*TEKS G.5.A, G.2.B*

*Connected Learning Statements:*

I Can: I can measure geometric figures accurately

You Can: You can check measurements for precision

We Can: We can solve problems using measurement skills

### **Week 1, Day 4 - Introduction to Proofs**

*TEKS G.5.B, G.4.C*

*Connected Learning Statements:*

I Can: I can identify the parts of a geometric proof

You Can: You can explain each step's reasoning

We Can: We can build logical arguments together

### **Week 1, Day 5 - Reasoning and Logic**

*TEKS G.4.B, G.1.D*

*Connected Learning Statements:*

I Can: I can use logical reasoning to solve problems

You Can: You can justify your solution steps

We Can: We can validate geometric arguments

### **Week 2, Day 1 - Conditional Statements**

*TEKS G.4.B, G.1.G*

*Connected Learning Statements:*

I Can: I can write if-then statements in geometry

You Can: You can identify hypothesis and conclusion

We Can: We can analyze geometric conditions together

### **Week 2, Day 2 - Deductive Reasoning**

*TEKS G.4.C, G.1.D*

*Connected Learning Statements:*

I Can: I can follow logical steps to reach conclusions

You Can: You can explain each step's purpose

We Can: We can build valid geometric arguments

### **Week 2, Day 3 - Algebraic Proofs**

*TEKS G.2.B, G.4.D*

*Connected Learning Statements:*

I Can: I can connect algebra to geometric proofs

You Can: You can show how equations prove relationships

We Can: We can solve algebraic proofs systematically

### **Week 2, Day 4 - Geometric Proofs**

*TEKS G.5.A, G.4.C*

*Connected Learning Statements:*

I Can: I can write complete geometric proofs

You Can: You can verify proof statements and reasons

We Can: We can construct valid proofs together

### **Week 2, Day 5 - Unit Assessment**

*TEKS G.1.F, G.4.A-D*

*Connected Learning Statements:*

I Can: I can demonstrate my understanding of logic and proof

You Can: You can check your work for completeness

We Can: We can review and learn from our results

## **Unit 2: Coordinate and Transformational Geometry**

### **Week 3, Day 1 - Coordinate Plane Review**

*TEKS G.2.A, G.1.E*

*Connected Learning Statements:*

I Can: I can plot points and figures on coordinate plane

You Can: You can verify coordinates are accurate

We Can: We can describe locations precisely

### **Week 3, Day 2 - Distance Formula**

*TEKS G.2.B, G.1.D*

*Connected Learning Statements:*

I Can: I can find distances between points

You Can: You can explain why formula works

We Can: We can solve real-world distance problems

### **Week 3, Day 3 - Midpoint Formula**

*TEKS G.2.A, G.1.C*

*Connected Learning Statements:*

I Can: I can find the midpoint between two points

You Can: You can verify midpoint calculations

We Can: We can use midpoints to solve problems

### **Week 3, Day 4 - Slope and Rate of Change**

*TEKS G.2.B, G.1.E*

*Connected Learning Statements:*

I Can: I can calculate and interpret slope

You Can: You can explain what slope represents

We Can: We can analyze relationships using slope

### **Week 3, Day 5 - Transformations Introduction**

*TEKS G.3.A, G.3.B*

*Connected Learning Statements:*

I Can: I can identify types of transformations

You Can: You can describe how figures move

We Can: We can classify transformations in our world

### **Week 4, Day 1 - Translations**

*TEKS G.3.C, G.1.D*

*Connected Learning Statements:*

I Can: I can slide figures using vectors

You Can: You can describe translation movements

We Can: We can perform and verify translations

### **Week 4, Day 2 - Reflections**

TEKS G.3.C, G.3.D

*Connected Learning Statements:*

I Can: I can reflect figures across lines

You Can: You can identify lines of reflection

We Can: We can create symmetric designs

### **Week 4, Day 3 - Rotations**

TEKS G.3.A, G.3.C

*Connected Learning Statements:*

I Can: I can rotate figures around points

You Can: You can measure rotation angles

We Can: We can analyze rotational symmetry

### **Week 4, Day 4 - Dilations**

TEKS G.3.E, G.1.E

*Connected Learning Statements:*

I Can: I can enlarge/reduce figures using scale factors

You Can: You can determine scale factors

We Can: We can create similar figures

### **Week 4, Day 5 - Composition of Transformations**

TEKS G.3.C, G.3.D

*Connected Learning Statements:*

I Can: I can combine multiple transformations

You Can: You can sequence transformation steps

We Can: We can create complex geometric designs

## **Unit 3: Lines and Transversals**

### **Week 5, Day 1 - Parallel Lines**

TEKS G.2.B, G.5.A

*Connected Learning Statements:*

I Can: I can identify parallel lines

You Can: You can prove lines are parallel

We Can: We can find parallel lines in structures

### **Week 5, Day 2 - Perpendicular Lines**

TEKS G.2.B, G.5.A

*Connected Learning Statements:*

I Can: I can identify and construct perpendicular lines

You Can: You can verify right angle formation

We Can: We can find perpendicular lines in architecture

### **Week 5, Day 3 - Angle Relationships**

*TEKS G.5.A, G.5.B*

*Connected Learning Statements:*

I Can: I can identify corresponding and alternate angles

You Can: You can explain why angles are congruent

We Can: We can use angle relationships to solve problems

### **Week 5, Day 4 - Transversals**

*TEKS G.5.A, G.1.D*

*Connected Learning Statements:*

I Can: I can identify angles formed by transversals

You Can: You can measure angles in parallel lines

We Can: We can prove angle relationships

### **Week 5, Day 5 - Unit Review and Assessment**

*TEKS G.5.A-B, G.1.F*

*Connected Learning Statements:*

I Can: I can demonstrate my understanding of lines

You Can: You can justify your solutions

We Can: We can analyze geometric relationships

## **Unit 4: Triangle Relationships**

### **Week 6, Day 1 - Triangle Classification**

*TEKS G.5.C, G.6.A*

*Connected Learning Statements:*

I Can: I can classify triangles by sides and angles

You Can: You can explain triangle properties

We Can: We can identify triangles in structures

### **Week 6, Day 2 - Triangle Angle Sum**

*TEKS G.5.C, G.6.B*

*Connected Learning Statements:*

I Can: I can prove triangle angle sum is  $180^\circ$

You Can: You can find missing angles

We Can: We can solve triangle angle problems

### **Week 6, Day 3 - Triangle Congruence (SSS)**

*TEKS G.6.B, G.6.C*

*Connected Learning Statements:*

I Can: I can use SSS to prove triangles congruent

You Can: You can match corresponding parts

We Can: We can apply congruence in real situations

### **Week 6, Day 4 - Triangle Congruence (SAS, ASA)**

*TEKS G.6.B, G.6.C*

*Connected Learning Statements:*

I Can: I can use multiple methods to prove congruence

You Can: You can choose the correct method

We Can: We can verify congruent triangles

### **Week 6, Day 5 - Triangle Properties**

*TEKS G.6.D, G.1.E*

*Connected Learning Statements:*

I Can: I can apply triangle properties

You Can: You can explain why properties work

We Can: We can solve complex triangle problems

## **Unit 5: Right Triangles and Trigonometry**

### **Week 7, Day 1 - Right Triangle Properties**

*TEKS G.6.D, G.7.A*

*Connected Learning Statements:*

I Can: I can identify parts of right triangles

You Can: You can label legs and hypotenuse

We Can: We can apply right triangle concepts

### **Week 7, Day 2 - Pythagorean Theorem**

*TEKS G.7.A, G.7.B*

*Connected Learning Statements:*

I Can: I can apply the Pythagorean Theorem

You Can: You can verify if triangles are right

We Can: We can solve real-world distance problems

### **Week 7, Day 3 - Special Right Triangles (45-45-90)**

*TEKS G.7.B, G.1.D*

*Connected Learning Statements:*

I Can: I can identify and use 45-45-90 triangles

You Can: You can explain why ratios work

We Can: We can apply special triangles to problems

### **Week 7, Day 4 - Special Right Triangles (30-60-90)**

*TEKS G.7.B, G.1.D*

*Connected Learning Statements:*

I Can: I can identify and use 30-60-90 triangles

You Can: You can derive side relationships

We Can: We can solve special triangle problems

### **Week 7, Day 5 - Introduction to Trigonometry**

*TEKS G.9.A, G.9.B*

*Connected Learning Statements:*

I Can: I can define sine, cosine, and tangent

You Can: You can find trig ratios in right triangles

We Can: We can use trig to solve problems

## **Unit 6: Circles**

### **Week 8, Day 1 - Circle Basics**

*TEKS G.12.A, G.12.B*

*Connected Learning Statements:*

I Can: I can identify parts of circles

You Can: You can label circle components

We Can: We can describe circle relationships

### **Week 8, Day 2 - Central Angles**

*TEKS G.12.A, G.5.A*

*Connected Learning Statements:*

I Can: I can measure central angles

You Can: You can find arc measures

We Can: We can connect angles to arcs

### **Week 8, Day 3 - Inscribed Angles**

*TEKS G.12.B, G.12.C*

*Connected Learning Statements:*

I Can: I can find inscribed angle measures

You Can: You can relate inscribed to central angles

We Can: We can prove angle relationships

### **Week 8, Day 4 - Circle Equations**

*TEKS G.12.D, G.2.B*

*Connected Learning Statements:*

I Can: I can write equations of circles

You Can: You can graph circles from equations

We Can: We can analyze circle properties

### **Week 8, Day 5 - Circle Applications**

*TEKS G.12.E, G.1.A*

*Connected Learning Statements:*

I Can: I can solve circle problems

You Can: You can apply circle formulas

We Can: We can use circles in real situations

## **Unit 7: Area and Perimeter**

### **Week 9, Day 1 - Polygon Area Review**

*TEKS G.10.A, G.10.B*

*Connected Learning Statements:*

I Can: I can calculate areas of basic polygons

You Can: You can choose correct formulas

We Can: We can solve real-world area problems

### **Week 9, Day 2 - Regular Polygons**

*TEKS G.10.B, G.1.E*

*Connected Learning Statements:*

I Can: I can find areas of regular polygons

You Can: You can explain apothem relationships

We Can: We can analyze polygon patterns

### **Week 9, Day 3 - Circle Area and Circumference**

*TEKS G.12.D, G.1.D*

*Connected Learning Statements:*

I Can: I can use  $\pi$  in circle measurements

You Can: You can explain why formulas work  
We Can: We can apply circle measurements

### **Week 9, Day 4 - Sector Area and Arc Length**

*TEKS G.12.D, G.12.E*

*Connected Learning Statements:*

I Can: I can find sector areas and arc lengths  
You Can: You can relate parts to whole circles  
We Can: We can solve circular problems

### **Week 9, Day 5 - Composite Figures**

*TEKS G.10.B, G.1.A*

*Connected Learning Statements:*

I Can: I can break down complex shapes  
You Can: You can identify component parts  
We Can: We can find areas of any shape

## **Unit 8: Volume and Surface Area**

### **Week 10, Day 1 - Prisms**

*TEKS G.11.A, G.11.B*

*Connected Learning Statements:*

I Can: I can calculate prism volumes  
You Can: You can identify base and height  
We Can: We can solve 3D problems

### **Week 10, Day 2 - Cylinders**

*TEKS G.11.C, G.11.D*

*Connected Learning Statements:*

I Can: I can find cylinder measurements  
You Can: You can explain circular bases  
We Can: We can apply cylinder formulas

### **Week 10, Day 3 - Pyramids**

*TEKS G.11.A, G.11.C*

*Connected Learning Statements:*

I Can: I can calculate pyramid volumes  
You Can: You can relate pyramids to prisms  
We Can: We can compare 3D shapes

### **Week 10, Day 4 - Cones**

*TEKS G.11.C, G.11.D*

*Connected Learning Statements:*

I Can: I can find cone measurements

You Can: You can relate cones to cylinders

We Can: We can solve cone problems

### **Week 10, Day 5 - Spheres**

*TEKS G.11.D, G.1.E*

*Connected Learning Statements:*

I Can: I can calculate sphere measurements

You Can: You can use sphere formulas

We Can: We can analyze curved surfaces

## **Unit 9: Probability**

### **Week 11, Day 1 - Probability Basics**

*TEKS G.13.A, G.13.B*

*Connected Learning Statements:*

I Can: I can calculate simple probabilities

You Can: You can explain favorable outcomes

We Can: We can predict event likelihood

### **Week 11, Day 2 - Geometric Probability**

*TEKS G.13.C, G.13.D*

*Connected Learning Statements:*

I Can: I can use areas to find probability

You Can: You can compare geometric regions

We Can: We can solve spatial probability

### **Week 11, Day 3 - Compound Events**

*TEKS G.13.B, G.13.E*

*Connected Learning Statements:*

I Can: I can find multiple event probabilities

You Can: You can identify independent events

We Can: We can analyze complex outcomes

### **Week 11, Day 4 - Conditional Probability**

*TEKS G.13.D, G.13.E*

*Connected Learning Statements:*

I Can: I can calculate conditional probability

You Can: You can explain event dependencies

We Can: We can solve probability problems

### **Week 11, Day 5 - Probability Applications**

*TEKS G.13.A-E, G.1.A*

*Connected Learning Statements:*

I Can: I can apply probability to real situations

You Can: You can interpret probability results

We Can: We can make informed predictions

## **Unit 10: Engineering Applications**

### **Week 12, Day 1 - Design Principles**

*TEKS G.1.A, G.1.B*

*Connected Learning Statements:*

I Can: I can identify geometric design elements

You Can: You can explain design choices

We Can: We can analyze structural designs

### **Week 12, Day 2 - Geometric Modeling**

*TEKS G.1.C, G.1.D*

*Connected Learning Statements:*

I Can: I can create geometric models

You Can: You can justify model components

We Can: We can solve design challenges

### **Week 12, Day 3 - Project Planning**

*TEKS G.1.E, G.1.F*

*Connected Learning Statements:*

I Can: I can plan geometric projects

You Can: You can outline project steps

We Can: We can develop design solutions

### **Week 12, Day 4 - Project Development**

*TEKS G.1.G, G.1.A*

*Connected Learning Statements:*

I Can: I can build geometric projects

You Can: You can test design effectiveness

We Can: We can improve our designs

### **Week 12, Day 5 - Project Presentations**

*TEKS G.1.D, G.1.F*

*Connected Learning Statements:*

I Can: I can present my geometric design

You Can: You can evaluate design success

We Can: We can share design insights

### **Final Review Week**

#### **Week 13, Day 1 - Foundations Review**

*Connected Learning Statements:*

I Can: I can recall basic geometric concepts

You Can: You can explain key relationships

We Can: We can master foundational skills

#### **Week 13, Day 2 - Measurement Review**

*TEKS Review: G.10.A-B, G.11.A-D, G.12.A-E*

*Connected Learning Statements:*

I Can: I can solve complex measurement problems

You Can: You can select appropriate formulas

We Can: We can master area, volume, and surface area

#### **Week 13, Day 3 - Proof and Logic Review**

*TEKS Review: G.4.A-D, G.5.A-D*

*Connected Learning Statements:*

I Can: I can construct valid geometric proofs

You Can: You can verify logical arguments

We Can: We can demonstrate geometric reasoning

#### **Week 13, Day 4 - Transformations Review**

*TEKS Review: G.3.A-E, G.2.A-B*

*Connected Learning Statements:*

I Can: I can perform all types of transformations

You Can: You can describe geometric movements

We Can: We can analyze geometric changes

### **Week 13, Day 5 - Final Course Projects Due**

*TEKS Review: G.1.A-G*

*Connected Learning Statements:*

I Can: I can present my geometric understanding

You Can: You can evaluate project effectiveness

We Can: We can celebrate our geometric achievements

### **Course Wrap-Up**

#### **Week 14, Day 1 - Portfolio Review**

*Connected Learning Statements:*

I Can: I can organize my geometric work

You Can: You can reflect on your growth

We Can: We can document our learning journey

#### **Week 14, Day 2 - Real-World Connections**

*Connected Learning Statements:*

I Can: I can identify geometry in my world

You Can: You can explain practical applications

We Can: We can connect geometry to careers

#### **Week 14, Day 3 - Final Assessment**

*Connected Learning Statements:*

I Can: I can demonstrate mastery

You Can: You can solve complex problems

We Can: We can show geometric proficiency

#### **Week 14, Day 4 - Assessment Review**

*Connected Learning Statements:*

I Can: I can analyze my understanding

You Can: You can identify areas for growth

We Can: We can learn from our mistakes

#### **Week 14, Day 5 - Course Celebration**

*Connected Learning Statements:*

I Can: I can reflect on my achievement

You Can: You can share your success

We Can: We can appreciate geometry's role in our world

## **session 1: Introduction to Logic and Euclidean Geometry**

### **week 1 - Course Introduction**

*TEKS G.1.A, G.1.B*

*Pearson Unit 1: Logical Argument and Constructions*

*Edgenuity: Introduction Module*

*Connected Learning Statements:*

I Can: I can identify geometric concepts in my world

You Can: You can explain using proper vocabulary

We Can: We can discover how geometry shapes our world

45-Minute Lesson Structure:

#### 1. Warm-Up (5 minutes)

- Edgenuity: Get Ready activity
- Quick scavenger hunt
- Platform login practice

#### 2. Direct Instruction (15 minutes)

- Course Overview:
  - Navigate both platforms
  - Access digital resources
  - Review syllabus
- Geometry Introduction:
  - Edgenuity video segment
  - Pearson digital examples
  - Basic terminology

#### 3. Guided Practice (15 minutes)

- Platform Navigation:
  - Edgenuity tutorial
  - Pearson digital tools
  - Note-taking strategies
- Vocabulary Development:
  - Digital flashcards

- Interactive examples
- Term practice

#### 4. Closure (10 minutes)

- Digital exit ticket
- Platform homework preview
- Next day preparation

#### Platform Integration:

- Edgenuity: Introduction module
- Pearson: Unit 1 opener
- Digital resources from both

### **Week 2 - Points, Lines, Planes**

*TEKS G.2.A, G.4.A*

*Pearson Unit 1: Foundations of Geometry*

*Edgenuity: Geometric Basics Module*

*Connected Learning Statements:*

I Can: I can label geometric figures using correct notation

You Can: You can verify notation accuracy

We Can: We can communicate geometric ideas precisely

#### 45-Minute Lesson Structure:

##### 1. Warm-Up (5 minutes)

- Edgenuity: Quick Check
- Log into both platforms
- Digital warm-up activity

##### 2. Blended Instruction (15 minutes)

- Edgenuity Video Segment:
  - Basic geometric terms
  - Notation rules
  - Interactive examples

- Pearson Digital Support:
    - Visual models
    - Practice problems
    - Real-world connections
3. Dual Platform Practice (15 minutes)
- Edgenuity Guided Practice:
    - Point, line, plane identification
    - Notation practice
  - Pearson Reinforcement:
    - Interactive drawings
    - Digital manipulatives
    - Check understanding
4. Digital Closure (10 minutes)
- Platform progress check
  - Assignment navigation
  - Digital exit slip

### **Week 3 - Measuring Angles and Segments**

*TEKS G.5.A, G.2.B*

*Pearson: Angle Relationships*

*Edgenuity: Angle Measurement Module*

*Connected Learning Statements:*

I Can: I can measure angles accurately

You Can: You can verify measurements

We Can: We can solve measurement problems

45-Minute Lesson Structure:

1. Digital Warm-Up (5 minutes)
  - Edgenuity angle estimation
  - Pearson review questions
  - Digital protractor introduction
2. Multi-Platform Instruction (15 minutes)

- Edgenuity:
  - Measurement techniques
  - Digital tool usage
  - Practice problems
- Pearson Support:
  - Additional examples
  - Interactive exercises
  - Visual aids

### 3. Combined Practice (15 minutes)

- Digital Tool Practice:
  - Online protractor
  - Measurement exercises
  - Error analysis
- Platform Activities:
  - Edgenuity guided practice
  - Pearson problem sets
  - Mixed review

### 4. Digital Assessment (10 minutes)

- Progress monitoring
- Quick digital check
- Platform homework setup

## **Week 4 - Introduction to Proofs**

*TEKS G.4.B, G.4.C*

*Pearson Unit 1: Logical Arguments*

*Edgenuity: Logic and Reasoning Module*

*Connected Learning Statements:*

I Can: I can identify parts of a geometric proof

You Can: You can explain each step's reasoning

We Can: We can build logical arguments together

45-Minute Lesson Structure:

#### 1. Digital Warm-Up (5 minutes)

- Edgenuity: Logic puzzle starter
- Pearson: Quick review questions
- Login to both platforms

## 2. Multi-Platform Instruction (15 minutes)

- Edgenuity Module:
  - Proof structure
  - If-then statements
  - Logical reasoning
- Pearson Support:
  - Two-column proof format
  - Interactive examples
  - Digital practice

## 3. Integrated Practice (15 minutes)

- Platform Activities:
  - Edgenuity guided proofs
  - Pearson digital worksheets
  - Combined practice problems
- Student Work:
  - Digital note-taking
  - Online submissions
  - Real-time feedback

## 4. Technology-Based Closure (10 minutes)

- Digital progress check
- Cross-platform review
- Online exit ticket

Week 5 - Reasoning and Logic

*TEKS G.4.B, G.1.D*

*Pearson: Logic and Reasoning*

*Edgenuity: Geometric Logic Module*

*Connected Learning Statements:*

I Can: I can use logical reasoning to solve problems

You Can: You can justify your solution steps

We Can: We can validate geometric arguments

45-Minute Lesson Structure:

1. Platform Warm-Up (5 minutes)

- Edgenuity:
  - Logic review
  - Previous concept check
- Pearson:
  - Digital starter
  - Quick review

2. Dual-Platform Instruction (15 minutes)

- Main Concepts:
  - Logical statements
  - Deductive reasoning
  - Valid arguments
- Using Both Resources:
  - Edgenuity videos
  - Pearson examples
  - Interactive tools

3. Combined Practice (15 minutes)

- Digital Worksheets:
  - Logic problems
  - Reasoning exercises
- Platform Tools:
  - Online manipulatives
  - Digital submission
  - Instant feedback

4. Weekly Digital Review (10 minutes)

- Progress Updates:
  - Edgenuity completion
  - Pearson assessments

- Next Week Preview:
  - Coming topics
  - Platform preparation

Weekly Platform Integration:

*Edgenuity Tracking:*

- Module completion
- Time on task
- Assessment scores
- Activity logs

*Pearson Progress:*

- Digital homework
- Online quizzes
- Interactive practice
- Student analytics

Weekend Assignments:

- Complete any remaining Edgenuity modules
- Finish Pearson online homework

## **Week 2: Logical Arguments and Proofs**

### **Week 1 - Conditional Statements**

*TEKS G.4.B, G.1.G*

*Pearson Unit 1: Conditional Statements*

*Edgenuity: Logic and Reasoning Extended*

*Connected Learning Statements:*

I Can: I can write and identify conditional statements

You Can: You can determine hypothesis and conclusion

We Can: We can analyze geometric conditions

### **45-Minute Lesson Structure:**

1. Digital Entry (5 minutes)

- Edgenuity:
    - If-then statement warm-up
    - Previous knowledge check
  - Pearson:
    - Digital starter activity
    - Vocabulary review
2. Multi-Platform Direct Instruction (15 minutes)
- Edgenuity Module:
    - Types of statements
    - Conditional forms
    - Converse, inverse, contrapositive
  - Pearson Support:
    - Interactive examples
    - Visual models
    - Practice problems
3. Integrated Practice (15 minutes)
- Digital Activities:
    - Edgenuity guided practice
    - Pearson interactive problems
    - Online manipulatives
  - Student Work:
    - Digital submissions
    - Real-time checks
    - Partner verification
4. Platform Closure (10 minutes)
- Progress monitoring
  - Digital exit ticket
  - Next day preview

## **Week 2 - Deductive Reasoning**

*TEKS G.4.C, G.1.D*

*Pearson: Deductive Reasoning*

*Edgenuity: Logical Arguments Module*

*Connected Learning Statements:*

I Can: I can follow logical steps to conclusions

You Can: You can explain reasoning steps

We Can: We can build valid arguments

**45-Minute Lesson Structure:**

1. Two-Platform Warm-Up (5 minutes)

- Edgenuity:
  - Logic puzzle starter
  - Review previous concepts
- Pearson:
  - Quick digital check
  - Vocabulary activation

2. Blended Instruction (15 minutes)

- Core Content:
  - Deductive reasoning steps
  - Valid conclusions
  - Logical flow
- Using Both Platforms:
  - Edgenuity videos
  - Pearson examples
  - Interactive demonstrations

**Week 3 - Algebraic Proofs**

*TEKS G.2.B, G.4.D*

*Pearson: Algebraic Reasoning in Proofs*

*Edgenuity: Algebraic Connections Module*

*Connected Learning Statements:*

I Can: I can connect algebra to geometric proofs

You Can: You can show algebraic relationships

We Can: We can solve algebraic proofs systematically

**45-Minute Lesson Structure:**

1. Dual Platform Warm-Up (5 minutes)

- Edgenuity:
    - Equation review
    - Algebraic warm-up
  - Pearson:
    - Digital starter
    - Quick skills check
2. Integrated Instruction (15 minutes)
- Edgenuity Content:
    - Algebraic proof structure
    - Variable expressions
    - Equation solving
  - Pearson Support:
    - Interactive examples
    - Step-by-step guides
    - Digital practice tools
3. Cross-Platform Practice (15 minutes)
- Combined Activities:
    - Edgenuity guided proofs
    - Pearson practice problems
    - Digital submissions
  - Student Work:
    - Online worksheets
    - Real-time feedback
    - Partner checking
4. Digital Closure (10 minutes)
- Progress checks
  - Platform navigation
  - Online exit ticket

#### **Week 4 - Geometric Proofs**

*TEKS G.5.A, G.4.C*

*Pearson: Geometric Proof Writing*

*Edgenuity: Proof and Logic Module*

*Connected Learning Statements:*

I Can: I can write complete geometric proofs

You Can: You can verify proof statements

We Can: We can construct valid proofs together

**45-Minute Lesson Structure:**

1. Platform Entry (5 minutes)

- Edgenuity:
  - Proof structure review
  - Quick check understanding
- Pearson:
  - Digital warm-up
  - Previous concept review

2. Multi-Source Instruction (15 minutes)

- Proof Components:
  - Statements and reasons
  - Logical flow
  - Valid conclusions
- Using Both Resources:
  - Edgenuity demonstrations
  - Pearson interactive tools
  - Digital examples

3. Integrated Practice (15 minutes)

- Digital Worksheets:
  - Two-column proofs
  - Flow proofs
  - Mixed practice
- Online Tools:
  - Digital submission
  - Instant feedback
  - Peer review

4. Technology-Based Review (10 minutes)

- Progress monitoring

- Assignment check
- Next day preparation

### **Week 5 - Unit Assessment**

*TEKS G.1.F, G.4.A-D*

*Pearson: Unit 1 Assessment*

*Edgenuity: Module Quiz*

*Connected Learning Statements:*

I Can: I can demonstrate my understanding

You Can: You can verify your solutions

We Can: We can review and learn from results

### **45-Minute Assessment Structure:**

#### 1. Assessment Prep (5 minutes)

- Platform login
- Digital tool check
- Review instructions

#### 2. Digital Assessment (30 minutes)

- Combined Format:
  - Edgenuity quiz items
  - Pearson test bank
  - Mixed question types
- Topics Covered:
  - Logic and reasoning
  - Conditional statements
  - Proofs
  - Geometric concepts

#### 3. Post-Assessment (10 minutes)

- Submit all work
- Review process
- Preview next unit

### **Week 3: Coordinate and Transformational Geometry**

## **Week 1 - Coordinate Plane Review**

*TEKS G.2.A, G.1.E*

*Pearson Unit 2: Coordinate Geometry*

*Edgenuity: Coordinate Plane Module*

*Connected Learning Statements:*

I Can: I can plot points and figures on a coordinate plane

You Can: You can verify coordinate accuracy

We Can: We can describe locations precisely

### **45-Minute Lesson Structure:**

#### 1. Dual Platform Entry (5 minutes)

- Edgenuity:
  - Coordinate warm-up
  - Plot basic points
- Pearson:
  - Digital grid practice
  - Quick review

#### 2. Multi-Source Instruction (15 minutes)

- Coordinate Concepts:
  - Edgenuity video on plotting
  - Pearson interactive grid
  - Digital coordinate tools
- Key Topics:
  - Quadrant identification
  - Ordered pairs
  - Grid navigation

#### 3. Integrated Practice (15 minutes)

- Platform Activities:
  - Edgenuity guided practice
  - Pearson digital worksheets
  - Online graphing tools
- Student Work:
  - Plot points

- Graph figures
- Digital submission

4. Technology Review (10 minutes)

- Progress check
- Online exit ticket
- Next day preview

**Week 2 - Distance Formula**

*TEKS G.2.B, G.1.D*

*Pearson: Distance in the Coordinate Plane*

*Edgenuity: Distance and Midpoint Module*

*Connected Learning Statements:*

I Can: I can calculate distances between points

You Can: You can explain the distance formula

We Can: We can solve real-world distance problems

**45-Minute Lesson Structure:**

1. Platform Warm-Up (5 minutes)

- Edgenuity:
  - Pythagorean review
  - Quick plot points
- Pearson:
  - Distance estimation
  - Digital starter

2. Blended Instruction (15 minutes)

- Formula Development:
  - Edgenuity derivation
  - Pearson examples
  - Interactive models
- Applications:
  - Step-by-step process
  - Digital calculations
  - Real-world connections

## **Week 3 - Midpoint Formula**

*TEKS G.2.A, G.1.C*

*Pearson: Midpoint and Segment Relationships*

*Edgenuity: Coordinate Geometry Relationships*

*Connected Learning Statements:*

I Can: I can find midpoints between points

You Can: You can verify midpoint calculations

We Can: We can apply midpoint concepts

### **45-Minute Lesson Structure:**

1. Digital Entry (5 minutes)
  - Edgenuity:
    - Coordinate review
    - Quick calculations
  - Pearson:
    - Interactive grid warm-up
    - Previous concept check
2. Multi-Platform Instruction (15 minutes)
  - Core Content:
    - Midpoint formula derivation
    - Average of coordinates
    - Applications
  - Using Both Resources:
    - Edgenuity video segments
    - Pearson digital examples
    - Interactive graphing tools
3. Integrated Practice (15 minutes)
  - Digital Activities:
    - Edgenuity guided problems
    - Pearson practice sets
    - Online graphing exercises
  - Student Work:
    - Calculate midpoints

- Graph results
- Verify solutions

4. Technology-Based Closure (10 minutes)

- Digital progress check
- Platform homework preview
- Online exit ticket

**Week 4 - Slope and Rate of Change**

*TEKS G.2.B, G.1.E*

*Pearson: Slope and Linear Relationships*

*Edgenuity: Rate of Change Module*

*Connected Learning Statements:*

I Can: I can calculate and interpret slope

You Can: You can explain what slope means

We Can: We can analyze relationships using slope

**45-Minute Lesson Structure:**

1. Dual Platform Warm-Up (5 minutes)

- Edgenuity:
  - Rate of change review
  - Quick slope calculations
- Pearson:
  - Digital slope starter
  - Real-world connections

2. Blended Instruction (15 minutes)

- Slope Concepts:
  - Rise over run
  - Different forms
  - Applications
- Platform Integration:
  - Edgenuity demonstrations
  - Pearson interactive tools
  - Digital graphing

3. Cross-Platform Practice (15 minutes)

- Combined Activities:
  - Calculate slopes
  - Graph lines
  - Interpret results
- Digital Tools:
  - Online graphing calculator
  - Platform-specific tools
  - Real-time feedback

4. Digital Review (10 minutes)

- Progress monitoring
- Assignment clarification
- Next week preparation

**Week 5 - Transformations Introduction**

*TEKS G.3.A, G.3.B*

*Pearson: Introduction to Transformations*

*Edgenuity: Geometric Transformations Module*

*Connected Learning Statements:*

I Can: I can identify types of transformations

You Can: You can describe how figures move

We Can: We can analyze geometric changes

**45-Minute Lesson Structure:**

1. Platform Integration (5 minutes)

- Edgenuity:
  - Transformation preview
  - Basic movements
- Pearson:
  - Digital manipulation
  - Visual examples

2. Multi-Source Direct Instruction (15 minutes)

- Transformation Types:
  - Translations
  - Reflections
  - Rotations
  - Dilations
- Using Resources:
  - Edgenuity animations
  - Pearson interactive tools
  - Digital demonstrations

### 3. Guided Digital Practice (15 minutes)

- Platform Activities:
  - Transform figures
  - Identify movements
  - Describe changes
- Digital Tools:
  - Interactive geometry software
  - Online submissions
  - Instant feedback

### 4. Weekly Wrap-Up (10 minutes)

- Progress review
- Platform assignment check
- Preview next week's content

## **Week 4: Transformations and Geometric Movements**

### **Week 1 - Translations**

*TEKS G.3.C, G.1.D*

*Pearson: Translation Transformations*

*Edgenuity: Rigid Motions - Translations*

*Connected Learning Statements:*

I Can: I can translate figures using vectors

You Can: You can describe translation movements

We Can: We can perform and verify translations

### **45-Minute Lesson Structure:**

1. Digital Setup (5 minutes)

- Edgenuity:
  - Vector introduction
  - Movement preview
- Pearson:
  - Interactive grid warm-up
  - Translation vocabulary

2. Multi-Platform Instruction (15 minutes)

- Translation Concepts:
  - Vector notation
  - Direction and distance
  - Coordinate changes
- Using Both Resources:
  - Edgenuity animations
  - Pearson digital tools
  - Interactive examples

3. Integrated Practice (15 minutes)

- Platform Activities:
  - Edgenuity guided practice
  - Pearson digital worksheets
  - Online graphing tools
- Student Work:
  - Perform translations
  - Record movements
  - Verify positions

4. Digital Closure (10 minutes)

- Online progress check
- Digital exit ticket
- Next week preview

**Week 2 - Reflections**

*TEKS G.3.C, G.3.D*

*Pearson: Reflection Symmetry*

*Edgenuity: Rigid Motions - Reflections*

*Connected Learning Statements:*

I Can: I can reflect figures across lines

You Can: You can identify lines of reflection

We Can: We can create symmetric designs

**45-Minute Lesson Structure:**

1. Dual Platform Entry (5 minutes)

- Edgenuity:
  - Symmetry warm-up
  - Line identification
- Pearson:
  - Digital mirror activity
  - Quick review

2. Blended Instruction (15 minutes)

- Reflection Concepts:
  - Lines of symmetry
  - Coordinate changes
  - Properties preserved
- Digital Tools:
  - Edgenuity demonstrations
  - Pearson interactive mirrors
  - Online graphing

**Week 3 - Rotations**

*TEKS G.3.A, G.3.C*

*Pearson: Rotational Transformations*

*Edgenuity: Rigid Motions - Rotations*

*Connected Learning Statements:*

I Can: I can rotate figures around points

You Can: You can measure rotation angles

We Can: We can analyze rotational symmetry

## **45-Minute Lesson Structure:**

1. Platform Integration (5 minutes)
  - Edgenuity:
    - Angle measure review
    - Rotation preview
  - Pearson:
    - Digital protractor practice
    - Center point identification
2. Multi-Source Instruction (15 minutes)
  - Rotation Concepts:
    - Center of rotation
    - Angle measures ( $90^\circ$ ,  $180^\circ$ ,  $270^\circ$ )
    - Direction (clockwise/counterclockwise)
  - Digital Resources:
    - Edgenuity animation tools
    - Pearson interactive rotation
    - Online manipulatives
3. Cross-Platform Practice (15 minutes)
  - Combined Activities:
    - Perform rotations
    - Measure angles
    - Identify centers
  - Digital Tools:
    - Geometry software
    - Online submission
    - Instant feedback
4. Technology Review (10 minutes)
  - Progress monitoring
  - Digital homework setup
  - Next concept preview

## **Week 4 - Dilations**

*TEKS G.3.E, G.1.E*

*Pearson: Similar Figures and Dilations*

*Edgenuity: Non-Rigid Transformations*

*Connected Learning Statements:*

I Can: I can dilate figures using scale factors

You Can: You can determine scale factors

We Can: We can create similar figures

**45-Minute Lesson Structure:**

1. Dual Platform Warm-Up (5 minutes)

- Edgenuity:
  - Scale factor introduction
  - Ratio review
- Pearson:
  - Similar figure identification
  - Digital starter

2. Blended Instruction (15 minutes)

- Dilation Concepts:
  - Scale factors
  - Center of dilation
  - Coordinate changes
- Platform Integration:
  - Edgenuity step-by-step
  - Pearson visual models
  - Interactive examples

3. Digital Practice (15 minutes)

- Combined Activities:
  - Calculate scale factors
  - Perform dilations
  - Verify similarity
- Online Tools:
  - Graphing utilities
  - Digital measurement
  - Practice problems

4. Platform Closure (10 minutes)

- Digital progress check
- Assignment review
- Next week preparation

**Week 5 - Composition of Transformations**

*TEKS G.3.C, G.3.D*

*Pearson: Multiple Transformations*

*Edgenuity: Combining Transformations*

*Connected Learning Statements:*

I Can: I can combine multiple transformations

You Can: You can sequence transformation steps

We Can: We can create complex geometric designs

**45-Minute Lesson Structure:**

1. Multi-Platform Setup (5 minutes)

- Edgenuity:
  - Transformation review
  - Sequence preview
- Pearson:
  - Digital warm-up
  - Quick check understanding

2. Integrated Instruction (15 minutes)

- Combined Transformations:
  - Order of operations
  - Multiple steps
  - Final positions
- Digital Resources:
  - Edgenuity sequences
  - Pearson interactive tools
  - Online demonstrations

3. Final Practice (15 minutes)

- Platform Activities:
  - Multi-step transformations
  - Sequence identification
  - Complex designs
- Student Work:
  - Digital submission
  - Partner verification
  - Self-assessment

4. Weekly Wrap-Up (10 minutes)

- Unit progress review
- Platform completion check
- Next week preview

**Week 5: Lines, Angles, and Parallel Relationships**

**Week 1 - Parallel Lines**

*TEKS G.2.B, G.5.A*

*Pearson: Parallel Line Relationships*

*Edgenuity: Parallel Lines and Transversals*

*Connected Learning Statements:*

I Can: I can identify and prove lines parallel

You Can: You can verify parallel relationships

We Can: We can analyze parallel structures

**45-Minute Lesson Structure:**

1. Digital Entry (5 minutes)

- Edgenuity:
  - Parallel line identification
  - Symbol recognition (||)
- Pearson:
  - Interactive warm-up
  - Real-world examples

2. Multi-Platform Instruction (15 minutes)

- Parallel Concepts:
  - Definition and properties
  - Distance between parallel lines
  - Proving lines parallel
- Using Resources:
  - Edgenuity demonstrations
  - Pearson digital tools
  - Interactive examples

### 3. Integrated Practice (15 minutes)

- Platform Activities:
  - Edgenuity guided practice
  - Pearson digital worksheets
  - Online constructions
- Student Work:
  - Identify parallel lines
  - Prove relationships
  - Digital submissions

### 4. Technology-Based Closure (10 minutes)

- Progress monitoring
- Digital exit ticket
  - Key concept check
  - Understanding verification

## **Week 2 - Perpendicular Lines**

*TEKS G.2.B, G.5.A*

*Pearson: Perpendicular Relationships*

*Edgenuity: Special Line Relationships*

*Connected Learning Statements:*

I Can: I can identify and construct perpendicular lines

You Can: You can verify right angles

We Can: We can analyze perpendicular relationships

### **45-Minute Lesson Structure:**

1. Dual Platform Warm-Up (5 minutes)

- Edgenuity:
  - Right angle review
  - Symbol practice ( $\perp$ )
- Pearson:
  - Digital angle measure
  - Quick review

2. Blended Instruction (15 minutes)

- Core Concepts:
  - Perpendicular definition
  - Right angle formation
  - Distance relationships
- Digital Tools:
  - Edgenuity animations
  - Pearson interactive tools
  - Online protractor use

### **Week 3 - Angle Relationships**

*TEKS G.5.A, G.5.B*

*Pearson: Angles and Parallel Lines*

*Edgenuity: Angle Pairs and Relationships*

*Connected Learning Statements:*

I Can: I can identify corresponding and alternate angles

You Can: You can explain why angles are congruent

We Can: We can prove angle relationships

#### **45-Minute Lesson Structure:**

1. Multi-Platform Start (5 minutes)

- Edgenuity:
  - Angle pair identification
  - Quick angle measures
- Pearson:
  - Digital angle matching
  - Vocabulary activation

2. Integrated Instruction (15 minutes)

- Angle Relationships:
    - Corresponding angles
    - Alternate interior angles
    - Alternate exterior angles
    - Same-side interior angles
  - Using Both Platforms:
    - Edgenuity visual demos
    - Pearson interactive diagrams
    - Digital angle measurement
3. Cross-Platform Practice (15 minutes)
- Combined Activities:
    - Identify angle pairs
    - Measure angles
    - Prove relationships
  - Digital Tools:
    - Online protractor
    - Angle relationship simulator
    - Practice problems
4. Digital Review (10 minutes)
- Progress check
  - Online exit ticket
  - Next week preview

## **Week 4 - Transversals**

*TEKS G.5.A, G.1.D*

*Pearson: Transversals and Angles*

*Edgenuity: Lines Cut by Transversals*

*Connected Learning Statements:*

I Can: I can identify angles formed by transversals

You Can: You can measure transversal angles

We Can: We can solve angle relationships

### **45-Minute Lesson Structure:**

1. Platform Integration (5 minutes)

- Edgenuity:
    - Transversal definition
    - Quick angle review
  - Pearson:
    - Interactive diagram
    - Prior knowledge check
2. Blended Instruction (15 minutes)
- Transversal Concepts:
    - Definition and examples
    - Eight angle relationships
    - Parallel line implications
  - Digital Resources:
    - Edgenuity animations
    - Pearson interactive tools
    - Online demonstrations
3. Guided Digital Practice (15 minutes)
- Platform Activities:
    - Identify angles
    - Find measures
    - Prove relationships
  - Student Work:
    - Digital submissions
    - Partner checks
    - Real-time feedback
4. Technology-Based Closure (10 minutes)
- Understanding check
  - Assignment review
  - Digital exit slip

## **Week 5 - Unit Review and Assessment**

*TEKS G.5.A-B, G.1.F*

*Pearson: Chapter Review*

*Edgenuity: Module Test*

*Connected Learning Statements:*

I Can: I can demonstrate my understanding of lines and angles

You Can: You can justify your solutions

We Can: We can analyze geometric relationships

**45-Minute Assessment Structure:**

1. Digital Review (10 minutes)
  - Quick review:
    - Key concepts
    - Important relationships
    - Common errors
  - Platform navigation review
2. Blended Assessment (30 minutes)
  - Combined Format:
    - Edgenuity questions
    - Pearson problems
    - Digital submission
  - Topics Covered:
    - Parallel lines
    - Perpendicular lines
    - Angle relationships
    - Transversals
3. Assessment Wrap-Up (5 minutes)
  - Submit all work
  - Check completion
  - Preview next unit

**Week 6: Triangle Relationships and Congruence**

**Week 1 - Triangle Classification**

*TEKS G.5.C, G.6.A*

*Pearson: Triangle Properties*

*Edgenuity: Triangle Classifications*

*Connected Learning Statements:*

I Can: I can classify triangles by sides and angles

You Can: You can identify triangle types

We Can: We can analyze triangle properties

**45-Minute Lesson Structure:**

1. Digital Launch (5 minutes)
  - Edgenuity:
    - Triangle type sorting
    - Quick angle review
  - Pearson:
    - Interactive triangle explorer
    - Classification warm-up
2. Multi-Platform Instruction (15 minutes)
  - Triangle Types:
    - By angles:
      - Acute
      - Right
      - Obtuse
        - By sides:
    - Scalene
    - Isosceles
    - Equilateral
  - Using Resources:
    - Edgenuity animations
    - Pearson digital tools
    - Interactive diagrams
3. Blended Practice (15 minutes)
  - Platform Activities:
    - Edgenuity guided practice
    - Pearson digital sorting
    - Online measurements

- Student Work:
  - Classify triangles
  - Justify classifications
  - Digital submissions
- 4. Technology Review (10 minutes)
  - Digital progress check
  - Online exit ticket
  - Next week preview

## **Week 2 - Triangle Angle Sum**

*TEKS G.5.C, G.6.B*

*Pearson: Triangle Angle Properties*

*Edgenuity: Triangle Angle Measures*

*Connected Learning Statements:*

I Can: I can prove triangle angles sum to  $180^\circ$

You Can: You can find missing angles

We Can: We can solve triangle angle problems

### **45-Minute Lesson Structure:**

1. Dual Platform Entry (5 minutes)
  - Edgenuity:
    - Angle sum exploration
    - Measurement review
  - Pearson:
    - Digital angle practice
    - Prior knowledge activation
2. Integrated Instruction (15 minutes)
  - Angle Sum Concepts:
    - $180^\circ$  theorem
    - Proof development
    - Missing angle strategies
  - Digital Resources:
    - Edgenuity proof animation

- Pearson interactive triangles
- Online measurement tools

### 3. Cross-Platform Practice (15 minutes)

- Combined Activities:
  - Find missing angles
  - Verify angle sums
  - Apply theorem
- Digital Tools:
  - Online protractor
  - Angle calculator
  - Practice problems

### 4. Technology Closure (10 minutes)

- Progress monitoring
- Digital exit check
- Next concept preview

## **Week 3 - Triangle Congruence (SSS)**

*TEKS G.6.B, G.6.C*

*Pearson: Congruent Triangles*

*Edgenuity: SSS Congruence*

*Connected Learning Statements:*

I Can: I can use SSS to prove triangles congruent

You Can: You can match corresponding parts

We Can: We can apply SSS congruence criteria

### **45-Minute Lesson Structure:**

#### 1. Platform Setup (5 minutes)

- Edgenuity:
  - Congruence symbol ( $\cong$ )
  - Side measurement review
- Pearson:
  - Interactive matching
  - Quick review

2. Blended Instruction (15 minutes)

- SSS Concepts:
  - Corresponding sides
  - Congruence marks
  - Proof structure
- Using Resources:
  - Edgenuity demonstrations
  - Pearson digital tools
  - Interactive examples

3. Multi-Platform Practice (15 minutes)

- Activities:
  - Identify corresponding parts
  - Write SSS statements
  - Prove congruence
- Student Work:
  - Digital submissions
  - Partner verification
  - Online practice

4. Digital Review (10 minutes)

- Understanding check
- Assignment preview
- Next week preparation

**Week 4 - Triangle Congruence (SAS, ASA)**

*TEKS G.6.B, G.6.C*

*Pearson: Additional Congruence Criteria*

*Edgenuity: Triangle Congruence Theorems*

*Connected Learning Statements:*

I Can: I can use multiple methods to prove congruence

You Can: You can choose the correct method

We Can: We can verify congruent triangles

**45-Minute Lesson Structure:**

1. Dual Entry (5 minutes)

- Edgenuity:
  - Congruence review
  - Method sorting
- Pearson:
  - Digital warm-up
  - Previous concept check

2. Multi-Source Instruction (15 minutes)

- Congruence Methods:
  - SAS criteria
  - ASA criteria
  - Method selection
- Platform Integration:
  - Edgenuity visualizations
  - Pearson interactive proofs
  - Digital practice

3. Combined Practice (15 minutes)

- Digital Activities:
  - Identify correct method
  - Write proofs
  - Verify congruence
- Online Tools:
  - Proof templates
  - Digital submissions
  - Instant feedback

4. Technology-Based Closure (10 minutes)

- Progress check
- Digital exit ticket
- Next week preview

**Week 5 - Triangle Properties Applications**

TEKS G.6.D, G.1.E

*Pearson: Applying Triangle Properties*

*Edgenuity: Triangle Applications*

*Connected Learning Statements:*

I Can: I can apply triangle properties to solve problems

You Can: You can explain solution strategies

We Can: We can solve complex triangle problems

**45-Minute Assessment Structure:**

1. Review Setup (5 minutes)
  - Platform navigation
  - Digital tool check
  - Concept organization
2. Mixed Assessment (30 minutes)
  - Combined Format:
    - Classification problems
    - Angle relationships
    - Congruence proofs
    - Application problems
  - Digital Submission:
    - Edgenuity responses
    - Pearson problems
    - Show work digitally
3. Weekly Wrap-Up (10 minutes)
  - Assessment completion
  - Progress review
  - Next week preview

**Week 7: Right Triangles and Trigonometry**

**Week 1 - Right Triangle Properties**

TEKS G.6.D, G.7.A

Pearson: *Right Triangle Properties*

Edgenuity: *Right Triangle Relationships*

*Connected Learning Statements:*

I Can: I can identify parts of right triangles

You Can: You can label legs and hypotenuse

We Can: We can apply right triangle concepts

**45-Minute Lesson Structure:**

1. Dual Platform Launch (5 minutes)

- Edgenuity:
  - Right angle identification
  - Triangle part labeling
- Pearson:
  - Interactive right triangles
  - Quick vocabulary review
  - Terms: leg, hypotenuse, right angle

2. Multi-Source Instruction (15 minutes)

- Right Triangle Components:
  - $90^\circ$  angle properties
  - Hypotenuse identification
  - Leg relationships
- Using Resources:
  - Edgenuity animations
  - Pearson digital models
  - Interactive diagrams

3. Integrated Practice (15 minutes)

- Platform Activities:
  - Label triangle parts
  - Identify right triangles
  - Apply properties
- Digital Tools:
  - Online protractor

- Drawing tools
- Practice problems

#### 4. Technology Review (10 minutes)

- Digital progress check
- Online exit ticket
- Next week preview

### **Week 2 - Pythagorean Theorem**

*TEKS G.7.A, G.7.B*

*Pearson: Pythagorean Theorem*

*Edgenuity: Pythagorean Relationships*

*Connected Learning Statements:*

I Can: I can apply the Pythagorean Theorem

You Can: You can verify if triangles are right

We Can: We can solve real-world distance problems

#### **45-Minute Lesson Structure:**

##### 1. Platform Integration (5 minutes)

- Edgenuity:
  - $a^2 + b^2 = c^2$  introduction
  - Visual demonstration
- Pearson:
  - Digital exploration
  - Square area review

### **Week 2 (Continued) - Pythagorean Theorem**

##### 1. Blended Instruction (15 minutes)

- Theorem Development:
  - Visual proof using squares
  - Formula explanation
  - When to use it
- Digital Resources:
  - Edgenuity interactive proof

- Pearson animations
- Online calculators

## 2. Cross-Platform Practice (15 minutes)

- Combined Activities:
  - Find missing sides
  - Verify right triangles
  - Real-world problems
- Student Work:
  - Digital submissions
  - Step-by-step solutions
  - Online checking

## 3. Technology Closure (10 minutes)

- Understanding verification
- Digital homework setup
- Next concept preview

## **Week 3 - Special Right Triangles (45-45-90)**

*TEKS G.7.B, G.1.D*

*Pearson: Special Right Triangles*

*Edgenuity: 45-45-90 Triangles*

*Connected Learning Statements:*

I Can: I can identify and use 45-45-90 triangles

You Can: You can explain why ratios work

We Can: We can apply special triangle relationships

### **45-Minute Lesson Structure:**

#### 1. Multi-Platform Entry (5 minutes)

- Edgenuity:
  - Square diagonal exploration
  - Ratio introduction
- Pearson:
  - Interactive 45° angles
  - Pattern recognition

## 2. Integrated Instruction (15 minutes)

- 45-45-90 Properties:
  - Equal legs
  - Ratio development ( $1:1:\sqrt{2}$ )
  - Side relationships
- Using Resources:
  - Edgenuity visualizations
  - Pearson digital tools
  - Interactive examples

## 3. Digital Practice (15 minutes)

- Platform Activities:
  - Find missing sides
  - Apply ratios
  - Solve problems
- Online Tools:
  - Digital calculator
  - Drawing tools
  - Practice exercises

## 4. Progress Check (10 minutes)

- Digital understanding check
- Assignment review
- Next week preparation

## **Week 4 - Special Right Triangles (30-60-90)**

*TEKS G.7.B, G.1.D*

*Pearson: 30-60-90 Triangles*

*Edgenuity: More Special Right Triangles*

*Connected Learning Statements:*

I Can: I can identify and use 30-60-90 triangles

You Can: You can derive side relationships

We Can: We can solve special triangle problems

### **45-Minute Lesson Structure:**

1. Dual Platform Start (5 minutes)

- Edgenuity:
  - Equilateral triangle connection
  - Ratio exploration
- Pearson:
  - Interactive bisection
  - Previous concept review

2. Multi-Source Instruction (15 minutes)

- 30-60-90 Properties:
  - Ratio development ( $1:\sqrt{3}:2$ )
  - Side relationships
  - When to use
- Digital Resources:
  - Edgenuity step-by-step
  - Pearson visualizations
  - Online practice

3. Blended Practice (15 minutes)

- Combined Activities:
  - Identify triangle type
  - Apply ratios
  - Solve problems
- Student Work:
  - Digital submissions
  - Partner checking
  - Real-time feedback

4. Technology Review (10 minutes)

- Progress monitoring
- Digital exit ticket
- Next week preview

**Week 5 - Introduction to Trigonometry**

TEKS G.9.A, G.9.B

Pearson: *Trigonometric Ratios*

Edgenuity: *Introduction to Trigonometry*

*Connected Learning Statements:*

I Can: I can define sine, cosine, and tangent

You Can: You can find trig ratios in right triangles

We Can: We can use trig to solve problems

**45-Minute Lesson Structure:**

1. Platform Setup (5 minutes)

- Edgenuity:
  - Ratio review
  - Calculator setup
- Pearson:
  - Digital angle measure
  - Side identification

2. Integrated Introduction (15 minutes)

- Trig Ratios:
  - SOH-CAH-TOA
  - Ratio definitions
  - Calculator use
- Using Resources:
  - Edgenuity demonstrations
  - Pearson interactive tools
  - Digital practice

3. Multi-Platform Practice (15 minutes)

- Activities:
  - Find trig ratios
  - Use calculator
  - Basic applications
- Digital Tools:
  - Scientific calculator
  - Online protractor
  - Practice problems

#### 4. Weekly Wrap-Up (10 minutes)

- Progress review
- Platform completion check
- Preview next week's content

### **Week 8: Circles and Their Properties**

#### **Week 1 - Circle Basics**

*TEKS G.12.A, G.12.B*

*Pearson: Circle Properties*

*Edgenuity: Introduction to Circles*

*Connected Learning Statements:*

I Can: I can identify parts of circles

You Can: You can label circle components

We Can: We can describe circle relationships

#### **45-Minute Lesson Structure:**

##### 1. Digital Entry (5 minutes)

- Edgenuity:
    - Circle vocabulary preview
    - Parts identification
  - Pearson:
    - Interactive circle diagram
    - Quick vocabulary check
- Terms: radius, diameter, circumference, chord, arc

##### 2. Multi-Platform Instruction (15 minutes)

- Circle Components:
  - Center and radius
  - Diameter relationships
  - Chords and arcs
  - Tangent lines
- Using Resources:
  - Edgenuity animations

- Pearson digital tools
- Interactive diagrams

### 3. Cross-Platform Practice (15 minutes)

- Combined Activities:
  - Label circle parts
  - Measure segments
  - Identify relationships
- Digital Tools:
  - Online drawing tools
  - Measurement tools
  - Practice exercises

### 4. Technology Review (10 minutes)

- Progress check
- Digital exit ticket
- Next week preview

## **Week 2 - Central Angles**

*TEKS G.12.A, G.5.A*

*Pearson: Central Angles and Arcs*

*Edgenuity: Angles in Circles*

*Connected Learning Statements:*

I Can: I can measure central angles

You Can: You can find arc measures

We Can: We can connect angles to arcs

### **45-Minute Lesson Structure:**

#### 1. Platform Integration (5 minutes)

- Edgenuity:
  - Angle measure review
  - Arc notation introduction
- Pearson:
  - Digital protractor practice
  - Arc measure exploration

2. Blended Instruction (15 minutes)

- Central Angle Concepts:
  - Definition and location
  - Arc measure relationships
  - $360^\circ$  connection
- Digital Resources:
  - Edgenuity dynamic circles
  - Pearson interactive tools
  - Online measurement demos

3. Integrated Practice (15 minutes)

- Platform Activities:
  - Measure central angles
  - Find arc measures
  - Solve for missing values
- Student Work:
  - Digital protractor use
  - Online submissions
  - Real-time checking

4. Digital Closure (10 minutes)

- Understanding verification
- Assignment preview
- Next concept preparation

**Week 3 - Inscribed Angles**

*TEKS G.12.B, G.12.C*

*Pearson: Inscribed Angles*

*Edgenuity: Inscribed Angle Relationships*

*Connected Learning Statements:*

I Can: I can find inscribed angle measures

You Can: You can relate inscribed to central angles

We Can: We can prove angle relationships

**45-Minute Lesson Structure:**

1. Dual Platform Start (5 minutes)

- Edgenuity:
  - Inscribed angle definition
  - Quick review of central angles
- Pearson:
  - Interactive comparison
  - Visual relationships

2. Multi-Source Instruction (15 minutes)

- Key Concepts:
  - Inscribed angle theorem
  - Half of central angle
  - Inscribed angle in semicircle
- Using Resources:
  - Edgenuity demonstrations
  - Pearson digital proofs
  - Interactive examples

3. Cross-Platform Practice (15 minutes)

- Combined Activities:
  - Compare angle measures
  - Apply theorems
  - Solve problems
- Digital Tools:
  - Online angle measure
  - Digital calculator
  - Practice problems

4. Technology Check (10 minutes)

- Progress monitoring
- Digital exit slip
- Next week preview

**Week 4 - Circle Equations**

TEKS G.12.D, G.2.B

Pearson: *Equations of Circles*

Edgenuity: *Analytic Geometry of Circles*

*Connected Learning Statements:*

I Can: I can write equations of circles

You Can: You can graph circles from equations

We Can: We can analyze circle properties algebraically

**45-Minute Lesson Structure:**

1. Platform Setup (5 minutes)

- Edgenuity:
  - Coordinate plane review
  - Center-radius form intro
- Pearson:
  - Digital graphing warm-up
  - Previous knowledge check

2. Integrated Instruction (15 minutes)

- Circle Equations:
  - $(x-h)^2 + (y-k)^2 = r^2$
  - Center and radius identification
  - Graphing process
- Digital Resources:
  - Edgenuity graphing tools
  - Pearson interactive graphs
  - Online calculators

3. Multi-Platform Practice (15 minutes)

- Activities:
  - Write equations
  - Graph circles
  - Find center and radius
- Student Work:
  - Digital graphing
  - Online submission
  - Partner checking

#### 4. Progress Review (10 minutes)

- Understanding check
- Assignment clarification
- Next week preparation

### **Week 5 - Circle Applications**

*TEKS G.12.E, G.1.A*

*Pearson: Applying Circle Properties*

*Edgenuity: Circle Applications*

*Connected Learning Statements:*

I Can: I can solve circle problems

You Can: You can apply circle formulas

We Can: We can use circles in real situations

#### **45-Minute Structure:**

##### 1. Multi-Platform Review (5 minutes)

- Edgenuity:
  - Formula review
  - Application preview
- Pearson:
  - Real-world connections
  - Quick concept check

##### 2. Blended Applications (25 minutes)

- Problem Types:
  - Area and circumference
  - Arc length
  - Sector area
  - Real-world scenarios
- Using Resources:
  - Edgenuity problem solving
  - Pearson applications
  - Digital tools

##### 3. Weekly Assessment (15 minutes)

- Combined Format:
  - Circle properties
  - Angle measures
  - Equations
  - Applications

## **Week 9: Area and Perimeter**

### **Week 1 - Polygon Area Review**

*TEKS G.10.A, G.10.B*

*Pearson: Area of Polygons*

*Edgenuity: Area Relationships*

*Connected Learning Statements:*

I Can: I can calculate areas of basic polygons

You Can: You can choose correct formulas

We Can: We can solve real-world area problems

### **45-Minute Lesson Structure:**

#### 1. Dual Platform Launch (5 minutes)

- Edgenuity:
  - Area formula review
  - Shape identification
- Pearson:
  - Interactive shape explorer
  - Quick formula check
 Formulas:  $A = bh$ ,  $A = \frac{1}{2}bh$ ,  $A = s^2$

#### 2. Multi-Source Instruction (15 minutes)

- Basic Area Review:
  - Rectangle/Square
  - Triangle
  - Parallelogram
  - Trapezoid
- Using Resources:
  - Edgenuity visualizations
  - Pearson digital tools
  - Formula sheet integration

### 3. Cross-Platform Practice (15 minutes)

- Combined Activities:
  - Calculate basic areas
  - Choose correct formulas
  - Solve word problems
- Digital Tools:
  - Online calculator
  - Area simulator
  - Digital submissions

### 4. Technology Review (10 minutes)

- Progress monitoring
- Digital exit ticket
- Next week preview

## **Week 2 - Regular Polygons**

*TEKS G.10.B, G.1.E*

*Pearson: Regular Polygon Properties*

*Edgenuity: Regular Polygon Area*

*Connected Learning Statements:*

I Can: I can find areas of regular polygons

You Can: You can explain apothem relationships

We Can: We can analyze polygon patterns

### **45-Minute Lesson Structure:**

#### 1. Platform Integration (5 minutes)

- Edgenuity:
  - Regular polygon definition
  - Apothem introduction
- Pearson:
  - Interactive polygon explorer
  - Property review

#### 1. Blended Instruction (15 minutes)

- Regular Polygon Concepts:
  - Apothem and radius
  - Perimeter method
  - Area formula:  $A = \frac{1}{2}ap$   
where  $a$  = apothem,  $p$  = perimeter
- Digital Resources:
  - Edgenuity animations
  - Pearson interactive diagrams
  - Online calculators

## 2. Multi-Platform Practice (15 minutes)

- Activities:
  - Find apothem
  - Calculate perimeter
  - Determine area
- Student Work:
  - Digital worksheet
  - Online submissions
  - Self-checking tools

## 3. Digital Review (10 minutes)

- Understanding check
- Assignment clarification
- Next week preparation

## **Week 3 - Circle Area and Circumference**

*TEKS G.12.D, G.1.D*

*Pearson: Circle Measurements*

*Edgenuity: Circle Area and Circumference*

*Connected Learning Statements:*

I Can: I can use  $\pi$  in circle measurements

You Can: You can explain why formulas work

We Can: We can apply circle measurements

### **45-Minute Lesson Structure:**

#### 1. Dual Platform Entry (5 minutes)

- Edgenuity:
  - $\pi$  introduction/review
  - Formula preview
- Pearson:
  - Interactive circle exploration
  - Quick diameter review

## 2. Integrated Instruction (15 minutes)

- Circle Formulas:
  - Circumference:  $C = 2\pi r$  or  $\pi d$
  - Area:  $A = \pi r^2$
  - Relationship exploration
- Using Resources:
  - Edgenuity step-by-step
  - Pearson visualizations
  - Digital manipulatives

## 3. Cross-Platform Practice (15 minutes)

- Combined Activities:
  - Calculate circumference
  - Find area
  - Solve applications
- Digital Tools:
  - $\pi$  calculator
  - Online measuring
  - Practice problems

## 4. Technology Check (10 minutes)

- Progress monitoring
- Digital exit slip
- Next week preview

## **Week 4 - Sector Area and Arc Length**

*TEKS G.12.D, G.12.E*

*Pearson: Sectors and Arcs*

*Edgenuity: Parts of Circles*

*Connected Learning Statements:*

I Can: I can find sector areas and arc lengths

You Can: You can relate parts to whole circles

We Can: We can solve circular problems

**45-Minute Lesson Structure:**

1. Platform Setup (5 minutes)

- Edgenuity:
  - Sector definition
  - Arc review
- Pearson:
  - Interactive sector explorer
  - Angle measure review

2. Multi-Source Instruction (15 minutes)

- Key Concepts:
  - Arc length formula
  - Sector area formula
  - Part-to-whole ratios
- Digital Resources:
  - Edgenuity demonstrations
  - Pearson interactive tools
  - Online calculators

3. Blended Practice (15 minutes)

- Activities:
  - Calculate arc length
  - Find sector area
  - Apply ratios
- Student Work:
  - Digital submissions
  - Partner checking
  - Real-time feedback

4. Progress Review (10 minutes)

- Understanding verification

- Assignment review
- Next week preparation

## **Week 5 - Composite Figures**

*TEKS G.10.B, G.1.A*

*Pearson: Complex Figures*

*Edgenuity: Area of Combined Shapes*

*Connected Learning Statements:*

I Can: I can break down complex shapes

You Can: You can identify component parts

We Can: We can find areas of any shape

### **45-Minute Structure:**

#### 1. Multi-Platform Review (5 minutes)

- Edgenuity:
  - Shape identification
  - Formula review
- Pearson:
  - Decomposition strategies
  - Quick check

#### 2. Integrated Assessment (30 minutes)

- Combined Format:
  - Basic areas
  - Regular polygons
  - Circles and sectors
  - Composite figures
- Digital Tools:
  - Online calculator
  - Formula sheet
  - Submission platform

#### 3. Weekly Wrap-Up (10 minutes)

- Assessment completion
- Progress review

- Preview next week's content

## **Week 10: Volume and Surface Area**

### **Week 1 - Prisms**

*TEKS G.11.A, G.11.B*

*Pearson: Prism Properties*

*Edgenuity: Volume of Prisms*

*Connected Learning Statements:*

I Can: I can calculate prism volumes

You Can: You can identify base and height

We Can: We can solve 3D problems

### **45-Minute Lesson Structure:**

#### 1. Dual Platform Launch (5 minutes)

- Edgenuity:
  - 3D shape identification
  - Base area review
- Pearson:
  - Interactive prism explorer
  - Volume formula introductionFormula:  $V = Bh$  (base area  $\times$  height)

#### 2. Multi-Source Instruction (15 minutes)

- Prism Concepts:
  - Right vs. oblique prisms
  - Base identification
  - Height measurement
  - Volume calculation
- Digital Resources:
  - Edgenuity 3D animations
  - Pearson virtual manipulatives
  - Online calculators

#### 3. Cross-Platform Practice (15 minutes)

- Combined Activities:
  - Identify prism types

- Find base areas
- Calculate volumes
- Student Work:
  - Digital submissions
  - Step-by-step solutions
  - Real-time checking

#### 4. Technology Review (10 minutes)

- Progress monitoring
- Digital exit ticket
- Next week preview

### **Week 2 - Cylinders**

*TEKS G.11.C, G.11.D*

*Pearson: Cylinder Volume*

*Edgenuity: Circular Base Solids*

*Connected Learning Statements:*

I Can: I can find cylinder measurements

You Can: You can explain circular bases

We Can: We can apply cylinder formulas

#### 1. Integrated Instruction (15 minutes)

- Cylinder Formulas:
  - Volume:  $V = \pi r^2 h$
  - Surface Area:  $SA = 2\pi r^2 + 2\pi r h$
- Using Resources:
  - Edgenuity 3D models
  - Pearson cross-sections
  - Digital visualization tools

#### 2. Multi-Platform Practice (15 minutes)

- Activities:
  - Calculate volumes
  - Find surface areas
  - Solve real-world problems

- Digital Tools:
  - 3D calculator
  - Virtual cylinders
  - Practice exercises

### 3. Digital Review (10 minutes)

- Understanding check
  - Quick volume calculation
  - Surface area verification
- Next concept preview

## **Week 3 - Pyramids**

*TEKS G.11.A, G.11.C*

*Pearson: Pyramid Properties*

*Edgenuity: Volume of Pyramids*

*Connected Learning Statements:*

I Can: I can calculate pyramid volumes

You Can: You can relate pyramids to prisms

We Can: We can compare 3D shapes

### **45-Minute Lesson Structure:**

#### 1. Platform Integration (5 minutes)

- Edgenuity:
  - Pyramid identification
  - Base review
- Pearson:
  - Interactive comparison
  - Volume relationship ( $\frac{1}{3}$ )

#### 2. Blended Instruction (15 minutes)

- Key Concepts:
  - Volume formula:  $V = \frac{1}{3}Bh$
  - Relationship to prisms
  - Height vs. slant height
- Digital Resources:
  - Edgenuity animations

- Pearson visualizations
- Online comparisons

3. Cross-Platform Practice (15 minutes)

- Combined Activities:
  - Find volumes
  - Compare shapes
  - Apply formulas
- Student Work:
  - Digital worksheets
  - Online submissions
  - Partner checking

4. Technology Check (10 minutes)

- Progress monitoring
- Digital exit slip
- Next week preparation

**Week 4 - Cones**

*TEKS G.11.C, G.11.D*

*Pearson: Cone Measurements*

*Edgenuity: Volume of Cones*

*Connected Learning Statements:*

I Can: I can find cone measurements

You Can: You can relate cones to cylinders

We Can: We can solve cone problems

**45-Minute Lesson Structure:**

1. Dual Platform Entry (5 minutes)

- Edgenuity:
  - Cone exploration
  - Cylinder relationship
- Pearson:
  - Interactive models
  - Formula preview

## 2. Multi-Source Instruction (15 minutes)

- Cone Formulas:
  - Volume:  $V = \frac{1}{3}\pi r^2 h$
  - Surface Area:  $SA = \pi r^2 + \pi r s$   
(s = slant height)
- Using Resources:
  - Edgenuity demonstrations
  - Pearson digital tools
  - Virtual manipulatives

## 3. Integrated Practice (15 minutes)

- Activities:
  - Calculate volumes
  - Find surface areas
  - Real applications
- Digital Tools:
  - Online calculator
  - 3D viewers
  - Practice problems

## 4. Progress Review (10 minutes)

- Understanding verification
- Assignment check
- Next week preview

### **Week 5 - Spheres**

*TEKS G.11.D, G.1.E*

*Pearson: Sphere Properties*

*Edgenuity: Spherical Geometry*

*Connected Learning Statements:*

I Can: I can calculate sphere measurements

You Can: You can use sphere formulas

We Can: We can analyze curved surfaces

### **45-Minute Structure:**

1. Platform Setup (5 minutes)

- Edgenuity:
  - Sphere introduction
  - Formula review
- Pearson:
  - Digital exploration
  - Quick check

2. Weekly Assessment (30 minutes)

- Combined Format:
  - Prism/cylinder problems
  - Pyramid/cone calculations
  - Sphere measurements
  - Mixed applications
- Digital Resources:
  - Online calculators
  - Formula sheet
  - Submission platform

3. Week Review (10 minutes)

- Assessment completion
- Progress check
- Preview next week

**session 11: Probability**

**week 1 - Probability Basics**

*TEKS G.13.A, G.13.B*

*Pearson: Introduction to Probability*

*Edgenuity: Basic Probability Concepts*

*Connected Learning Statements:*

I Can: I can calculate simple probabilities

You Can: You can explain favorable outcomes

We Can: We can predict event likelihood

**45-Minute Lesson Structure:**

1. Dual Platform Launch (5 minutes)

- Edgenuity:
    - Probability definition
    - Fraction review
  - Pearson:
    - Interactive probability explorer
    - Quick ratio review
- Formula:  $P(\text{event}) = \frac{\text{favorable outcomes}}{\text{total outcomes}}$

2. Multi-Source Instruction (15 minutes)

- Basic Concepts:
  - Sample space
  - Favorable outcomes
  - Probability scale (0 to 1)
  - Percentage conversion
- Digital Resources:
  - Edgenuity simulations
  - Pearson probability tools
  - Online calculators

3. Cross-Platform Practice (15 minutes)

- Combined Activities:
  - List sample spaces
  - Calculate probabilities
  - Convert to percentages
- Student Work:
  - Digital spinners
  - Virtual dice
  - Online experiments

4. Technology Review (10 minutes)

- Progress monitoring
- Digital exit ticket
- Next week preview

**Week 2 - Geometric Probability**

*TEKS G.13.C, G.13.D*

*Pearson: Area and Probability*

*Edgenuity: Geometric Probability*

*Connected Learning Statements:*

I Can: I can use areas to find probability

You Can: You can compare geometric regions

We Can: We can solve spatial probability

1. Integrated Instruction (15 minutes)

- Area Probability Concepts:
  - Area ratios
  - Region comparisons
  - Geometric likelihood
- Using Resources:
  - Edgenuity area models
  - Pearson interactive regions
  - Digital measuring tools

2. Multi-Platform Practice (15 minutes)

- Activities:
  - Calculate area probabilities
  - Compare regions
  - Solve spatial problems
- Digital Tools:
  - Area calculator
  - Virtual regions
  - Online submissions

3. Digital Review (10 minutes)

- Understanding check
- Assignment preview
- Next concept preparation

**Week 3 - Compound Events**

*TEKS G.13.B, G.13.E*

*Pearson: Multiple Event Probability*

*Edgenuity: Compound Probability*

*Connected Learning Statements:*

I Can: I can find multiple event probabilities

You Can: You can identify independent events

We Can: We can analyze complex outcomes

**45-Minute Lesson Structure:**

1. Platform Integration (5 minutes)

- Edgenuity:
  - Event tree introduction
  - Multiplication principle
- Pearson:
  - Interactive probability trees
  - Quick review

2. Blended Instruction (15 minutes)

- Key Concepts:
  - Independent vs. dependent
  - "AND" probabilities (multiply)
  - "OR" probabilities (add)
- Digital Resources:
  - Edgenuity simulations
  - Pearson visualizations
  - Online calculators

3. Cross-Platform Practice (15 minutes)

- Combined Activities:
  - Create probability trees
  - Calculate compound events
  - Solve word problems
- Student Work:
  - Digital submissions
  - Partner verification
  - Real-time feedback

4. Technology Check (10 minutes)

- Progress monitoring
- Digital exit slip
- Next week preview

**week 4 - Conditional Probability**

*TEKS G.13.D, G.13.E*

*Pearson: Dependent Events*

*Edgenuity: Conditional Probability*

*Connected Learning Statements:*

I Can: I can calculate conditional probability

You Can: You can explain event dependencies

We Can: We can solve probability problems

**45-Minute Lesson Structure:**

1. Dual Platform Entry (5 minutes)

- Edgenuity:
  - Conditional concept intro
  - Dependency examples
- Pearson:
  - Interactive scenarios
  - Prior knowledge check

2. Multi-Source Instruction (15 minutes)

- Conditional Concepts:
  - $P(A|B)$  notation
  - Dependent events
  - Probability adjustment
- Using Resources:
  - Edgenuity demonstrations
  - Pearson digital tools
  - Online practice

3. Integrated Practice (15 minutes)

- Activities:
  - Calculate conditionals
  - Identify dependencies
  - Real-world applications
- Digital Tools:
  - Probability calculators
  - Virtual manipulatives
  - Practice problems

#### 4. Progress Review (10 minutes)

- Understanding verification
- Assignment check
- Next week preparation

### **week 5 - Probability Applications**

*TEKS G.13.A-E*

*Pearson: Real-World Probability*

*Edgenuity: Applying Probability*

*Connected Learning Statements:*

I Can: I can apply probability to real situations

You Can: You can interpret probability results

We Can: We can make informed predictions

#### **45-Minute Structure:**

##### 1. Multi-Platform Review (5 minutes)

- Edgenuity:
  - Concept summary
  - Formula review
- Pearson:
  - Application preview
  - Quick check

##### 2. Weekly Assessment (30 minutes)

- Combined Format:
  - Basic probability

- Geometric probability
- Compound events
- Conditional probability
- Digital Resources:
  - Online calculators
  - Formula reference
  - Submission platform

### 3. Unit Wrap-Up (10 minutes)

- Assessment completion
- Progress review
- Preview final unit

## **session 12: Engineering Applications and Final Projects**

### **week 1 - Design Principles**

*TEKS G.1.A, G.1.B*

*Pearson: Geometric Design*

*Edgenuity: Engineering and Geometry*

*Connected Learning Statements:*

I Can: I can identify geometric design elements

You Can: You can explain design choices

We Can: We can analyze structural designs

### **45-Minute Lesson Structure:**

#### 1. Dual Platform Launch (5 minutes)

- Edgenuity:
  - Engineering connection
  - Geometry in design
- Pearson:
  - Real-world examples
  - Design principles

#### 2. Multi-Source Instruction (15 minutes)

- Design Elements:
  - Geometric shapes in architecture

- Structural strength
- Symmetry and balance
- Proportion and scale
- Digital Resources:
  - Edgenuity virtual tours
  - Pearson design tools
  - Online examples

### 3. Project Introduction (15 minutes)

- Final Project Options:
  - Architectural design
  - Bridge construction
  - Urban planning
  - Art installation
- Digital Tools:
  - CAD software basics
  - Drawing platforms
  - Measurement tools

### 4. Planning Session (10 minutes)

- Project selection
- Timeline creation
- Resource identification

## **Week 2 - Geometric Modeling**

*TEKS G.1.C, G.1.D*

*Pearson: 3D Modeling*

*Edgenuity: Geometric Construction*

*Connected Learning Statements:*

I Can: I can create geometric models

You Can: You can justify model components

We Can: We can solve design challenges

### 1. Integrated Instruction (15 minutes)

- Modeling Concepts:
  - Scale drawings

- Dimensional accuracy
- Geometric constraints
- Using Resources:
  - Edgenuity modeling tools
  - Pearson digital workspace
  - Online CAD tutorials

## 2. Project Work Time (15 minutes)

- Activities:
  - Create initial models
  - Apply measurements
  - Document process
- Digital Tools:
  - Modeling software
  - Digital rulers
  - Project templates

## 3. Progress Check (10 minutes)

- Model review
- Next steps planning
- Resource needs

### **week 3 - Project Planning**

*TEKS G.1.E, G.1.F*

*Pearson: Project Development*

*Edgenuity: Engineering Process*

*Connected Learning Statements:*

I Can: I can plan geometric projects

You Can: You can outline project steps

We Can: We can develop design solutions

### **45-Minute Lesson Structure:**

#### 1. Platform Integration (5 minutes)

- Edgenuity:
  - Engineering process review
  - Planning strategies
- Pearson:
  - Project management tools
  - Timeline templates

## 2. Development Time (30 minutes)

- Project Components:
  - Geometric principles used
  - Measurements and calculations
  - Design justifications
- Working Tools:
  - Digital worksheets
  - Online calculators
  - Documentation platforms

## 3. Daily Review (10 minutes)

- Progress sharing
- Problem-solving
- Next week preparation

## **Week 4 - Project Development**

*TEKS G.1.G, G.1.A*

*Pearson: Project Implementation*

*Edgenuity: Design Solutions*

*Connected Learning Statements:*

I Can: I can build geometric projects

You Can: You can test design effectiveness

We Can: We can improve our designs

### **45-Minute Lesson Structure:**

#### 1. Quick Start (5 minutes)

- Project goals review
- Daily objectives

- Resource check
2. Extended Work Time (30 minutes)
    - Project Refinement:
      - Final calculations
      - Design adjustments
      - Visual presentations
    - Digital Integration:
      - Platform tools
      - Documentation
      - Presentation prep
  3. Peer Review (10 minutes)
    - Partner feedback
    - Final adjustments
    - Presentation practice

### **week 5 - Project Presentations**

*TEKS G.1.D, G.1.F*

*Pearson: Project Showcase*

*Edgenuity: Engineering Communication*

*Connected Learning Statements:*

I Can: I can present my geometric design

You Can: You can evaluate design success

We Can: We can share design insights

#### **45-Minute Structure:**

1. Setup (5 minutes)
  - Digital displays
  - Presentation order
  - Rubric review
2. Project Presentations (30 minutes)
  - Each Student:
    - Design explanation

- Geometric concepts used
- Problem-solving process
- Results and reflection

3. Course Wrap-Up (10 minutes)

- Year review
- Key concept summary
- Achievement celebration