Grade Level	Content Area	Course Title *(For 9-12 Samples Only)*	Unit Title
4th grade	Science		How big are things around me?

Length of Unit	Time of Year Taught	Expected Prior Knowledge
5 days- 40 minutes/day	2nd quarter	Strand 1: inquiry process: Concept 2: scientific PO 1. Demonstrate safe behavior and appropriate procedures (e.g., use and care of technology, materials, organisms) in all science inquiry. PO 2. Plan a simple investigation that identifies the variables to be controlled. PO 3. Conduct controlled investigations (e.g., related to erosion, plant life cycles, weather, magnetism) in life, physical, and Earth and space sciences.

Unit Description: In this unit, students will measure objects and parts of the body using appropriate tools. Students will use rulers and tape measures. Students will demonstrate mastery by choosing appropriate scientific measurement tools to perform measurements.

Standards: See instructions on page 15.	Strand 1: inquiry process: Concept 2: scientific testing -PO4: Measure using appropriate tools (e.g., ruler, scale, balance) and units of measure (i.e., metric, U.S. customary).
Summative Assessment *In addition to the description, include a copy of the summative assessment in the application package.*	Students will demonstrate mastery by choosing appropriate scientific measurement tools to perform measurements on a quiz.
Scoring for Summative Assessment *In addition to the description, include a copy of the answer key and scoring rubric (if applicable) for the summative assessment in the application package.*	Students will complete a quiz about measuring with different tools. Each question is worth one point. Students will demonstrate mastery with 70% when they score a 6 out of 8.
Materials/Resources Needed *Include all items for the entire unit.*	Ruler with metric and U.S. customary measurements, yard stick, scale, balance, measuring tape, pencils, paper (white and lined), assessment

	Lesson 1	Lesson 2	Lesson 3	Lesson 4	Lesson 5
Instruction	Objective: Students will measure using a ruler.	Objective: Students will measure using a scale.	Objective: Students will demonstrate using a	Objective: Students will demonstrate measuring	Objective: Students will demonstrate mastery in

and Timeline	Anticipatory Set: Hold up different tools. Ask students what they are and what kinds of things they measure. Instructional Input/Modeling: Teacher will discusses using rulers to measure items. What items can be measured with a ruler? Which ones cannot? Teacher will discuss metric (cm, m) vs customary (ft, inches) measurement. Guided Practice: Teacher gives directions for group pairing and demonstrates using a ruler to measure different classroom items Active Participation: Teacher gives a measurement such as centimeter, students write on whiteboards metric or customary. Independent Practice: In pairs, students will measure 5 common classroom items with either a ruler. Students will record the lengths in both inches and	Anticipatory Set: What is the increment that scales measure? Lbs, kg. Instructional Input/Modeling: Teacher will discusses using scales to weigh items. What items can be weighed with a scale? Teacher will discuss metric (lbs) vs customary (kg) measurement. Guided Practice: Teacher gives directions for group pairing and demonstrates using a scale to measure different classroom items Active Participation: Teacher gives a measurement such as lb or kg, students write on whiteboards metric or customary. Independent Practice: In pairs, students will weigh 5 common classroom items with a scale Students will record the weights in both lbs and kgs in their science notebooks. Closure: What did you	balance. Anticipatory Set: What is this? Show scale? How do you use it? Instructional Input/Modeling: Teacher will discusses using a balance to see what weighs more. What items can be weighed with a balance? Guided Practice: Teacher gives directions for group pairing and demonstrates using a balance to measure different classroom items Check for Understanding: What does a balance tell us? How do you know if two things weigh the same? What happens? Independent Practice: In pairs, students will weigh 6 common classroom items with a balance Students will record the which one weighs more in their science notebooks. One of the pairs must be the same weight.	using the most appropriate tools. Anticipatory Set: Remind students of the human body unit they just finished in science. Instructional Input/Modeling: Teacher will review ruler, scales, balances and introduce measuring tape. Teacher will review metric vs customary including lbs, kg, cm, in, ft, m. Ask students to name if each is customary or metric.. Guided Practice: Teacher tells students they will be measuring parts of their body today using all of the measurement tools they've been using this week. With a partner, students will measure, the length of each finger, the weight of an arm, the length of an arm, how big around a head is. Each one will be measured in both customary and metric. Check for Understanding: What would the measuring	measuring using appropriate tools (e.g., ruler, scale, balance) and units of measure Anticipatory Set: Give an example of metric and give an example of customary. Instructional Input/ Modeling: Directions for assessment. Students will measure objects with appropriate increment choice. Closure: Why is it important to know customary vs metric measurement?

	centimeters in their science notebooks. Closure: What did you measure with the ruler? Did you try to measure any items with the ruler that you couldn't measure?	measure with the scale? Did you try to measure any items with the scale that you couldn't measure?	Closure: What things did you find that are the same weight?	tape be good for? Independent Practice: Students work in pairs to measure each of the body parts. Closure: What was difficult to measure? What was easy?	

	Lesson 1	Lesson 2	Lesson 3	Lesson 4	Lesson 5
Student Activities and Timeline	Students tell what they are and what kinds of things they measure. Students recieve directions for group pairing and demonstrates using a ruler to measure different classroom items Students write if a measurement such as cm or in on whiteboards metric or customary. In pairs, students will measure 5 common classroom items with either a ruler. Students will record the lengths in both inches and centimeters in their science notebooks. Students discuss: What did you measure with the ruler? Did you try to measure any items with the ruler that you couldn't measure?	Students tell What is the increment that scales measure? Lbs, kg. Students recieve directions for group pairing. Students write if a measurement such as ln or kg on whiteboards metric or customary. In pairs, students will weigh 5 common classroom items with a scale Students will record the weights in both lbs and kgs in their science notebooks. Students tell: What did you measure with the scale? Did you try to measure any items with the scale that you couldn't measure?	Students view a balance: What is this? Show scale? How do you use it? Students recieve directions for group pairing. Students tell: What does a balance tell us? How do you know if two things weigh the same? What happens? In pairs, students will weigh 6 common classroom items with a balance Students will record the which one weighs more in their science notebooks. One of the pairs must be the same weight. Students tell: what things did you find that are the same weight?	Students review human body unit they just finished in science. Students name if each is customary or metric: including lbs, kg, cm, in, ft, m. With a partner, students will measure, the length of each finger, the weight of an arm, the length of an arm, how big around a head is. Each one will be measured in both customary and metric. Students tell: What would the measuring tape be good for? Students work in pairs to measure each of the body parts. Students tell: What was difficult to measure? What was easy?	Students give an example of metric and give an example of customary. Students receive directions for assessment. Students will measure objects with appropriate increment choice. Students tell: why is it important to know customary vs metric measurement?

Grade 4 Assessment for Measurement

Could you measure this with a ruler? Write yes or no on the line.

1. texbook_____
2. basketball_____
3. car_____
4. bird feather_____
5. house_____

6. How do you know if two things weight the same thing with a balance?

Please measure the image below and then measure the pencil provided by your teacher. Record both below in both metric and customary.

7. Model: _____

8. Actual:_____

Grade 4 Assessment for Measurement (Answer Key)

Could you measure this with a ruler? Write yes or no on the line.

1. texbook_____yes_____
2. basketball_____no_____
3. car_____no_____
4. bird feather_____yes_____
5. house_____no_____

6. How do you know if two things weight the same thing with a balance?
They stay the same height on both sides.

Please measure the image below and then measure the pencil provided by your teacher. Record both below in both metric and customary.

7. Model: ___4 inches/ 10 cm____
8. Actual:_____8 inches/ 20 cm_____

Rubric

Score: _____/8

Each correct answer is worth one point. 7 out of 9 points is the minimum needed for mastery.

Number correct:	Percent:	
0-3	0% -49%	Falls Far Below
4-5	50%-69%	Approaches
6-8	70%-100%	Meets Mastery Level