

# Unit Title: Characteristics and Properties of Organisms and Objects

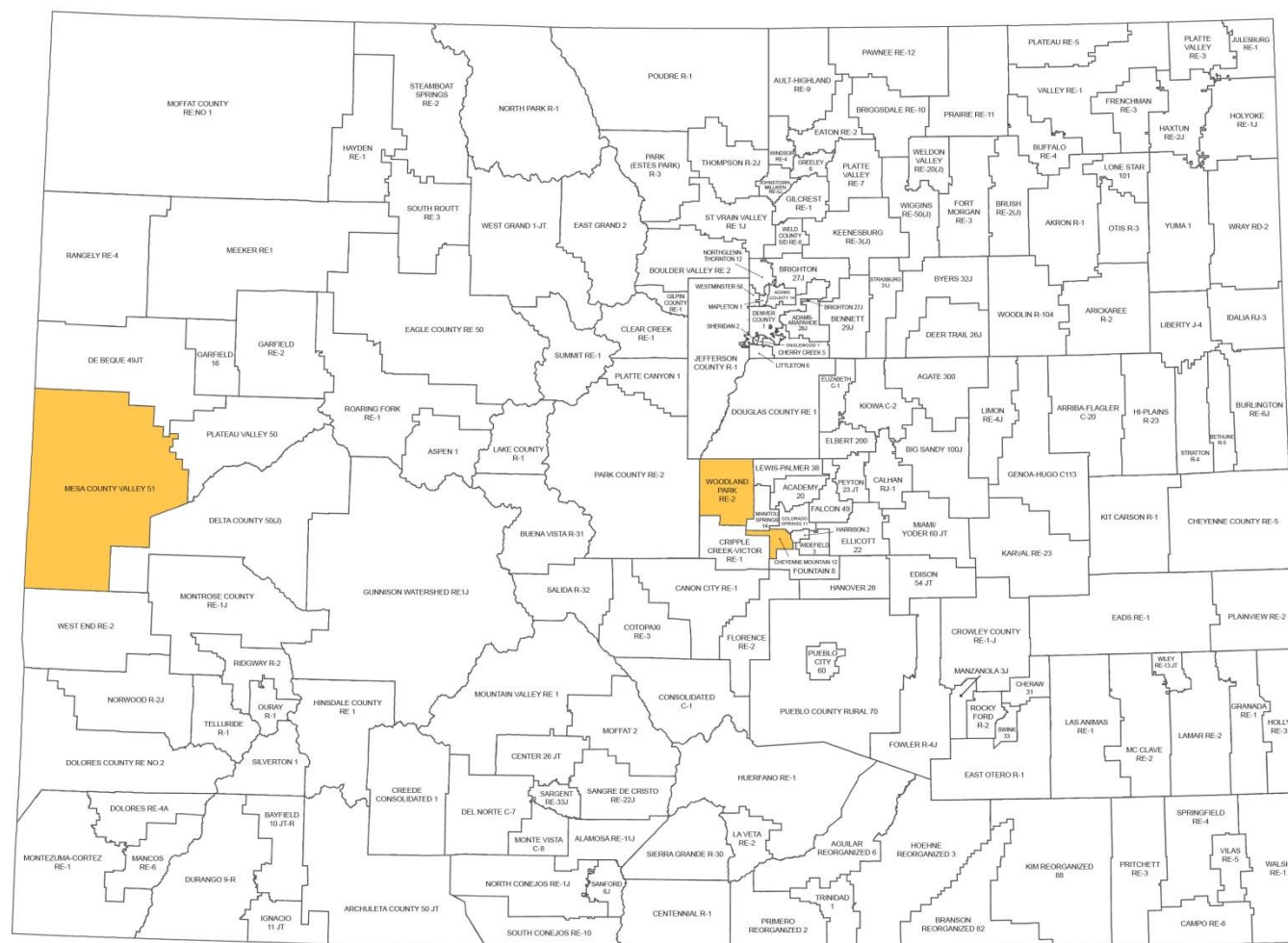
## INSTRUCTIONAL UNIT AUTHORS

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## BASED ON A CURRICULUM OVERVIEW SAMPLE AUTHORED BY

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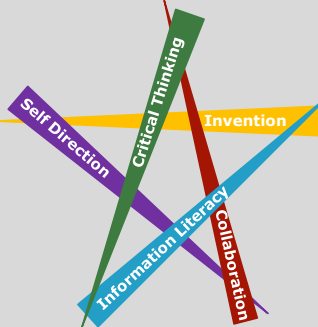
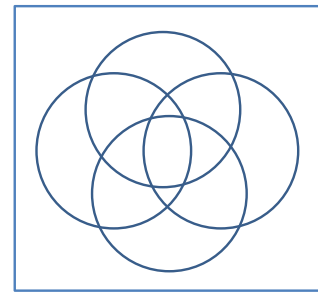


*This unit was authored by a team of Colorado educators. The template provided one example of unit design that enabled teacher-authors to organize possible learning experiences, resources, differentiation, and assessments. The unit is intended to support teachers, schools, and districts as they make their own local decisions around the best instructional plans and practices for all students.*

**Colorado Teacher-Authored Sample Instructional Unit**

<b>Content Area</b>	Science	<b>Grade Level</b>	Kindergarten
<b>Course Name/Course Code</b>			

<b>Standard</b>	<b>Grade Level Expectations (GLE)</b>	<b>GLE Code</b>
1. Physical Science	1. Objects can move in a variety of ways that can be described by speed and direction	SC09-GR.K-S.1-GLE.1
	2. Objects can be sorted by physical properties, which can be observed and measured	SC09-GR.K-S.1-GLE.2
2. Life Science	1. Organisms can be described and sorted by their physical characteristics	SC09-GR.K-S.2-GLE.1
3. Earth Systems Science	1. The sun provides heat and light to Earth	SC09-GR.K-S.3-GLE.1

<p align="center"><b>Colorado 21<sup>st</sup> Century Skills</b></p>  <p><b>Critical Thinking and Reasoning:</b> <i>Thinking Deeply, Thinking Differently</i></p> <p><b>Information Literacy:</b> <i>Untangling the Web</i></p> <p><b>Collaboration:</b> <i>Working Together, Learning Together</i></p> <p><b>Self-Direction:</b> <i>Own Your Learning</i></p> <p><b>Invention:</b> <i>Creating Solutions</i></p>	<p><b>Intrigated Curriculum Design:</b> This intradisciplinary approach matches basic elements in each of the science strands – physical, life, earth systems sciences - forming overlaps in instruction of certain topics and concepts in an authentic integrated model.</p> 
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<b>Unit Titles</b>	<b>Length of Unit/Contact Hours</b>	<b>Unit Number/Sequence</b>
Characteristics and Properties of Organisms and Objects	On-going	1

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<b>Unit Title</b>	<b>Characteristics and Properties of Organisms and Objects</b>		<b>Length of Unit</b>	On-going
<b>Focusing Lens(es)</b>	Patterns	<b>Standards and Grade Level Expectations Addressed in this Unit</b>	SC09-GR.K-S.2-GLE.1 SC09-GR.K-S.1-GLE.1	
<b>Inquiry Questions (Engaging-Debatable):</b>	<ul style="list-style-type: none"> <li>• What would life be like if organisms had everything in common and there were no detectable patterns? (SC09-GR.K-S.2-GLE.1; IQ.1)</li> <li>• Why is there strength in diversity? (SC09-GR.K-S.2-GLE.1; IQ.2)</li> <li>• How do you decide which properties are most important when putting objects into groups?(SC09-GR.K-S.1-GLE.1; IQ.2)</li> </ul>			
<b>Unit Strands</b>	Life Science, Physical Science			
<b>Concepts</b>	characteristics, organisms, properties, objects			

<b>Generalizations</b> My students will <b>Understand</b> that...	<b>Guiding Questions</b>	
	<b>Factual</b>	<b>Conceptual</b>
Characteristics of organisms and properties of objects allow scientists to sort and categorize (SC09-GR.K-S.1-GLE.2-EO.a) and (SC09-GR.K-S.2-GLE.1-EO.a,b)	<p>What is the difference between an organism and an object? (SC09-GR.K-S.1-GLE.2) and (SC09-GR.K-S.2-GLE.1)</p> <p>What is the difference between a property and a characteristic? (SC09-GR.K-S.1-GLE.2) and (SC09-GR.K-S.2-GLE.1)</p> <p>What is the difference between an object and a property? (SC09-GR.K-S.1-GLE.2) and (SC09-GR.K-S.2-GLE.1)</p> <p>What is the difference between an organism and a characteristic? (SC09-GR.K-S.1-GLE.2) and (SC09-GR.K-S.2-GLE.1)</p>	<p>What is a pattern? (SC09-GR.K-S.2-GLE.1; IQ.1; RA.1)</p> <p>How do you sort to make a pattern? (SC09-GR.K-S.2-GLE.1; IQ.1; RA.1)</p>
Characteristics group and describe organisms so that patterns can be detected (SC09-GR.K-S.2-GLE.1; IQ.2; N.1,3)	<p>What does an organism look like?</p> <p>What is the same about of group of organisms?</p> <p>What is different about a group of organisms?</p>	<p>How can organisms be described?</p> <p>How can organisms be sorted in groups?</p>
Objects have and are grouped by properties (SC09-GR.K-S.1-GLE.2-EO.a;IQ.1)	<p>What is the same about of group of objects?</p> <p>What is different about a group of objects? What does an object look like?</p> <p>What does an object feel like?</p>	<p>How can objects be sorted in groups?</p> <p>How can objects be described?</p> <p>How can objects belong to more than one group?(SC09-GR.K-S.1-GLE.1; IQ.1)</p>

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<b>Critical Content:</b> <b>My students will Know...</b>	<b>Key Skills:</b> <b>My students will be able to (Do)...</b>
<ul style="list-style-type: none"> <li>• The observable characteristics of organisms (SC09-GR.K-S.2-GLE.1-EO.a)</li> <li>• Patterns in the natural world (SC09-GR.K-S.2-GLE.1; RA.1)</li> <li>• Ways to classify a group of organisms (SC09-GR.K-S.2-GLE.1; RA.2)</li> <li>• Physical properties of objects (SC09-GR.K-S.1-GLE.2-EO.a)</li> <li>• How physical properties help determine an object’s uses(SC09-GR.K-S.1-GLE.2; RA.1,)</li> <li>• The reasons why scientists try to be clear and specific when they describe things(SC09-GR.K-S.1-GLE.2; N.1)</li> </ul>	<ul style="list-style-type: none"> <li>• Communicate and justify an evidence-based scientific rationale (SC09-GR.K-S.2-GLE.1-EO.b)</li> <li>• Ask questions about physical characteristics that will help them sort organisms (SC09-GR.K-S.2-GLE.1; N.1)</li> <li>• Share scientific ideas verbally in a clear way (SC09-GR.K-S.2-GLE.1; N.2)</li> <li>• Question peers about reasons for how they sort organisms and encourage them to use evidence to support their ideas. (SC09-GR.K-S.2-GLE.1; N.3)</li> <li>• Use scientific tools such as magnifying glasses and rulers in investigations and play (SC09-GR.K-S.2-GLE.1; N.4)</li> <li>• Observe, describe and investigate how objects can be sorted using their physical properties(SC09-GR.K-S.1-GLE.2-EO.a)</li> <li>• Explain why objects are sorted into categories(SC09-GR.K-S.1-GLE.2-EO.b)</li> <li>• Sort a set objects based on their physical characteristics (SC09-GR.K-S.1-GLE.2-EO.c)</li> <li>• Share clear and precise observations with others like scientist(SC09-GR.K-S.1-GLE.2; N.2)</li> </ul>

<p><b>Critical Language:</b> includes the Academic and Technical vocabulary, semantics, and discourse which are particular to and necessary for accessing a given discipline.          EXAMPLE: A student in Language Arts can demonstrate the ability to apply and comprehend critical language through the following statement: <i>“Mark Twain exposes the hypocrisy of slavery through the use of satire.”</i></p>	
<p><b>A student in _____ can demonstrate the ability to apply and comprehend critical language through the following statement(s):</b></p>	<p><i>Living things can be sorted in many different ways.          Things can be sorted by how they look and feel.</i></p>
<p><b>Academic Vocabulary:</b></p>	<p>same, different, sort, observe, describe, investigate, explain, communicate</p>
<p><b>Technical Vocabulary:</b></p>	<p>organism, living thing, fur, feathers, scales, objects, hard, smooth, shiny characteristic, attribute, properties</p>

### Colorado Teacher-Authored Sample Instructional Unit

<b>Unit Description:</b>	This unit focuses on characteristics and properties of organisms and objects. Beginning with identifying characteristics/properties, across the unit students sort animals and objects based on attributes and characteristics. The unit culminates in a performance assessment that asks students to sort and categorize objects given to them in a box and have to explain their categories.
<b>Considerations</b>	Student group/partner work is a critical component to this unit. The authors of this unit realized that the concept of “patterns” was not utilized as originally intended in the standards. Therefore, the key generalization was re-written (represented in red in the unit overview) to reflect the original intention.
<b>Unit Generalizations</b>	
<b>Key Generalization:</b>	Characteristics of organisms and properties of objects allow scientists to sort and categorize
<b>Supporting Generalizations:</b>	Characteristics group and describe organisms so that patterns can be detected
	Objects have and are grouped by properties

<b>Performance Assessment: <i>The capstone/summative assessment for this unit.</i></b>	
<b>Claims:</b> (Key generalization(s) to be mastered and demonstrated through the capstone assessment.)	Characteristics of organisms and properties of objects allow scientists to sort and categorize
<b>Stimulus Material:</b> (Engaging scenario that includes role, audience, goal/outcome and explicitly connects the key generalization)	The principal of this school has just received an enormous box of donated items for kids. The box is a jumble of objects of different colors and sizes (small, large, fuzzy, hard, blue, etc.). As a group of budding scientists, the principal has asked you to find a way to categorize these objects and describe how you decided to sort the objects. Good luck!
<b>Product/Evidence:</b> (Expected product from students)	Students will sort and categorize objects given to them in a box and have to explain their categories to the (principal) and teacher. Students must sort items based on size, color, shape, texture, etc.
<b>Differentiation:</b> (Multiple modes for student expression)	<ul style="list-style-type: none"> <li>• The teacher may allow students to point to a picture of objects</li> <li>• The teacher may provide a list of objects and students must match characteristics/properties using a sorting chart.</li> <li>• The teacher may allow students to work with a partner or in small groups.</li> <li>• To extend this work, students may sort the materials in the class.</li> </ul>

<b>Texts for independent reading or for class read aloud to support the content</b>	
<b>Informational/Non-Fiction</b>	<b>Fiction</b>
<i>Next to an Ant</i> - Mara Rockliff [lexile level 250] <i>Scientists Ask Questions</i> - Ginger Garrett [lexile level 330] <i>Recognizing Patterns in Nature</i> - Tony Hyland [lexile level 530]	<i>Dave’s Down the Earth Rock Shop</i> - Stuart Murphy [lexile level 400] <i>Mouse Paint</i> - Ellen Stoll Walsh (ages 5-6) <i>Colors and Shapes</i> - Lynne Bradbury (ages 5-6)

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<p><i>A Circle in the Sky</i> - Zachary Wilson [lexile level 320]  <i>On the Farm</i> - Kristen Hall [lexile level 20]  <i>Characteristics of Animals</i> - Libby Romero [lexile level 280]  <i>How much Does it Hold?</i> - Brian Sargent [lexile level 280]  <i>What do you like?</i> - Michael Grejniec [lexile level BR]  <i>A Game of Shapes</i> - Christine Lindop [lexile level BR]  <i>Sorting</i> - Dorling Kindersley  <i>Is it Red? Is it Yellow? Is it Blue?</i> - Tana Hoban (ages 5-6)  <i>My First Look at Sizes</i> - Random House (ages 5-6)  <i>My First Look at Sorting</i> - Random House (ages 5-6)  <i>My First Look at Touch</i> - Random House (ages 5-6)  <i>Shapes and Things</i> - Tana Hoban (ages 5-6)</p>	<p><i>Body Detectives</i> - Rita Golden Gelman (ages 5-6)  <i>My Five Senses</i> - Alikei (ages 5-6)</p>
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**Ongoing Discipline-Specific Learning Experiences**

1.	Description:	Communicating like a scientist: Applying connections to literacy and math	Teacher Resources:	<a href="http://www.wildlife.state.nh.us/Education/Project_Web/Project_WEB_news_Winter08.pdf">http://www.wildlife.state.nh.us/Education/Project_Web/Project_WEB_news_Winter08.pdf</a> (Newsletter explaining how to connect science and literacy) <a href="https://www.hol.edu/syllabusuploads/teachingreadinginmathandscience.pdf">https://www.hol.edu/syllabusuploads/teachingreadinginmathandscience.pdf</a> (Teaching reading in math and science) <a href="http://scholarworks.wmich.edu/cgi/viewcontent.cgi?article=1079&amp;context=reading_horizons">http://scholarworks.wmich.edu/cgi/viewcontent.cgi?article=1079&amp;context=reading_horizons</a> (Literacy in Science article) <a href="http://www.pinterest.com/january19/kindergarten-math-and-science-activities/">http://www.pinterest.com/january19/kindergarten-math-and-science-activities/</a> (Kindergarten math and science activities-Pintrest)
			Student Resources:	<a href="http://www.neok12.com/">http://www.neok12.com/</a> (Site with videos and games connecting literacy, math, and science)
	Skills:	Speaking clearly Expressing thoughts Asking clarifying questions Looking for patterns Sorting by shapes	Assessment:	The student will keep a “sorting and classifying” journal drawing or constructing short phrases.  <a href="http://www.abcteach.com/free/p/port_26pt_line_story.pdf">http://www.abcteach.com/free/p/port_26pt_line_story.pdf</a> (Blank, lined paper with room for illustrations/visuals-great for journal entries)

**Prior Knowledge and Experiences**

The student must have an understanding of colors and basic animal features (e.g., legs, tails, fur, etc.).

**Learning Experiences # 1 – 3**  
**Instructional Timeframe: Weeks 1-2**

Learning Experience # 1		
The teacher may utilize an informational text to introduce/review the 5 senses (e.g., <i>My Five Senses</i> ) so that student can recognize each sense and its function.		
<b>Generalization Connection(s):</b>	Characteristics group and describe organisms so that patterns can be detected	
<b>Teacher Resources:</b>	<a href="http://www.scholastic.com/magicschoolbus/games/sound/">http://www.scholastic.com/magicschoolbus/games/sound/</a> (Magic School Bus Hearing Game from Scholastic) <i>My First Look at Touch</i> - Random House (ages 5-6) <i>Body Detectives</i> - Rita Golden Gelman (ages 5-6) <i>My Five Senses</i> - Aliki (ages 5-6)	
<b>Student Resources:</b>	<a href="http://pbskids.org/sid/isense.html">http://pbskids.org/sid/isense.html</a> (PBS Kids 5 senses game, have to sign up)	
<b>Assessment:</b>	The student may point to the body part that is used with each sense to be able to use their five senses when making observations. And The student will begin their “sorting and categorizing” journal by documenting (drawing) one body part and writing the name of the sense associated with that body part.	
<b>Differentiation:</b> (Multiple means for students to access content and multiple modes for student to express understanding.)	<b>Access</b> (Resources and/or Process)	<b>Expression</b> (Products and/or Performance)
	The teacher may use instructional aide support The teacher may use student assistants The teacher may scaffold information The teacher may use a translator	The student may point to the body part that goes with vocabulary (nose, ear, mouth, eye, and hand) The student may use picture cards to identify the body part that is used with each sense
<b>Extensions for depth and complexity:</b>	<b>Access</b> (Resources and/or Process)	<b>Expression</b> (Products and/or Performance)
	The teacher may allow student s to create a story about their senses	The student may describe how they use their sense to identify things
<b>Critical Content:</b>	<ul style="list-style-type: none"> <li>Sight, eye, touch, hand, smell, nose, hearing, ear, mouth, taste</li> </ul>	
<b>Key Skills:</b>	<ul style="list-style-type: none"> <li>Use senses, explore</li> </ul>	
<b>Critical Language:</b>	Sight, eye, touch, hand, smell, nose, hearing, ear, mouth, taste, use, explore	

Learning Experience # 2	
The teacher may present various objects and relevant vocabulary so that the students can begin describing several properties of the objects.	
<b>Generalization Connection(s):</b>	Objects have and are grouped by properties

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<b>Teacher Resources:</b>	<i>Colors and Shapes</i> - Lynne Bradbury (ages 5-6)	
<b>Student Resources:</b>	<a href="http://www.harcourtschool.com/activity/loading_shapes/">http://www.harcourtschool.com/activity/loading_shapes/</a> (Harcourt shape matching game)	
<b>Assessment:</b>	The student may verbally describe multiple properties of a given object to demonstrate their knowledge of properties. And The student will begin their “sorting and categorizing” journal by documenting (drawing) one property.	
<b>Differentiation:</b> (Multiple means for students to access content and multiple modes for student to express understanding.)	<b>Access</b> (Resources and/or Process)	<b>Expression</b> (Products and/or Performance)
	The teacher may use graphics and visualization The teacher may use peer partnerships The teacher may review vocabulary	The student may point to object based on teacher’s description of a property
<b>Extensions for depth and complexity:</b>	<b>Access</b> (Resources and/or Process)	<b>Expression</b> (Products and/or Performance)
	The teacher may allow students to work on multiple items at one time	The student may order multiple items based on a given properties (longest to shortest, darkest to lightest)
<b>Critical Content:</b>	<ul style="list-style-type: none"> <li>Physical properties of objects, length, color, structure, shape (2D and 3D) , texture, weight</li> </ul>	
<b>Key Skills:</b>	<ul style="list-style-type: none"> <li>Observe, ask questions, verbally describe</li> </ul>	
<b>Critical Language:</b>	Physical properties of objects, length, color, structure, shape (2D and 3D) , texture, weight, observe, describe, question	

<b>Learning Experience # 3</b>		
The teacher may present images of various animals and relevant vocabulary so that the students can describe several characteristics of the animals.		
<b>Generalization Connection(s):</b>	Characteristics group and describe organisms so that patterns can be detected	
<b>Teacher Resources:</b>	<a href="http://www.shutterstock.com/cat.mhtml?searchterm=domestic+animals&amp;search_group=&amp;lang=en&amp;search_source=search_form">http://www.shutterstock.com/cat.mhtml?searchterm=domestic+animals&amp;search_group=&amp;lang=en&amp;search_source=search_form</a> (Images of domestic animals) <a href="http://www.shutterstock.com/cat.mhtml?searchterm=farm+animals&amp;search_group=&amp;lang=en&amp;search_source=search_form">http://www.shutterstock.com/cat.mhtml?searchterm=farm+animals&amp;search_group=&amp;lang=en&amp;search_source=search_form</a> (Images of farm animals)	
<b>Student Resources:</b>	<a href="http://www.shutterstock.com/cat.mhtml?searchterm=domestic+animals&amp;search_group=&amp;lang=en&amp;search_source=search_form">http://www.shutterstock.com/cat.mhtml?searchterm=domestic+animals&amp;search_group=&amp;lang=en&amp;search_source=search_form</a> (Images of domestic animals) <a href="http://www.shutterstock.com/cat.mhtml?searchterm=farm+animals&amp;search_group=&amp;lang=en&amp;search_source=search_form">http://www.shutterstock.com/cat.mhtml?searchterm=farm+animals&amp;search_group=&amp;lang=en&amp;search_source=search_form</a> (Images of farm animals)	
<b>Assessment:</b>	The student may write a descriptive sentence using the characteristics of an organism to demonstrate their understanding of characteristics (e.g., The red ant is small.) And The student will continue their “sorting and categorizing” journal by documenting (drawing) one characteristic.	



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<b>Differentiation:</b> (Multiple means for students to access content and multiple modes for student to express understanding.)	<b>Access</b> (Resources and/or Process)	<b>Expression</b> (Products and/or Performance)
	The teacher may allow students to use a scribe The teacher may allow students to use voice to text software The teacher may allow students to use story board (Legos) to make way for writing prompt	The student may verbally dictate the sentence The student may draw a picture of the object using color, size, habitat to demonstrate knowledge
<b>Extensions for depth and complexity:</b>	<b>Access</b> (Resources and/or Process)	<b>Expression</b> (Products and/or Performance)
		The student may order multiple organisms by characteristics (size, body structure, habitat) The student may write a descriptive sentence based on the story board
<b>Critical Content:</b>	<ul style="list-style-type: none"> <li>Characteristics of organisms, body structure, size, habitat(land/water, farm/city animals)</li> </ul>	
<b>Key Skills:</b>	<ul style="list-style-type: none"> <li>Observe, ask questions, verbally describe</li> </ul>	
<b>Critical Language:</b>	Characteristics of organisms, body structure, size, habitat, observe, question, describe	

**Learning Experiences # 4 – 8**  
**Instructional Timeframe: Weeks 2-5**

<b>Learning Experience # 4</b>		
Through modeling the teacher may introduce the ideas of sorting and grouping so that students can begin (verbally) categorizing objects.		
<b>Generalization Connection(s):</b>	Characteristics group and describe organisms so that patterns can be detected Objects have and are grouped by properties	
<b>Teacher Resources:</b>	<i>My First Look at Sorting</i> - Random House (ages 5-6)	
<b>Student Resources:</b>	N/A	
<b>Assessment:</b>	The student will sort and group simple objects (e.g., buttons, marbles, coins, etc.). And The student will continue their “sorting and categorizing” journal by documenting (drawing) the groups of objects they sorted.  <a href="https://www.google.com/search?q=sorting+tree+template&amp;tbm=isch&amp;tbo=u&amp;source=univ&amp;sa=X&amp;ei=WccgU-S7DMfWyQHR-YGoBA&amp;ved=0CCQQAQ&amp;biw=1366&amp;bih=648">https://www.google.com/search?q=sorting+tree+template&amp;tbm=isch&amp;tbo=u&amp;source=univ&amp;sa=X&amp;ei=WccgU-S7DMfWyQHR-YGoBA&amp;ved=0CCQQAQ&amp;biw=1366&amp;bih=648</a> (Sorting tree template)	
<b>Differentiation:</b> (Multiple means for students to access content and multiple modes for student to express understanding.)	<b>Access</b> (Resources and/or Process)	<b>Expression</b> (Products and/or Performance)
	The teacher may preview vocabulary The teacher may use small group instruction	N/A

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<b>Extensions for depth and complexity:</b>	<b>Access</b> (Resources and/or Process)	<b>Expression</b> (Products and/or Performance)
	The teacher may allow students to consider the main differences between organisms and objects and then in turn the difference between sorting and grouping	The student may present difference between sorting and grouping to peers in the class or adults in the building
<b>Critical Content:</b>	<ul style="list-style-type: none"> <li>Physical properties of objects, length, color, structure, texture, weight</li> </ul>	
<b>Key Skills:</b>	<ul style="list-style-type: none"> <li>Observe, ask questions, verbally describe, grouping, sorting, question peer’s reasoning</li> </ul>	
<b>Critical Language:</b>	Physical properties of objects, length, color, structure, texture, weight, observe, question, describe, sort, group, same, different	

<b>Learning Experience # 5</b>		
The teacher may provide a variety of objects (e.g., pattern blocks, different types of pencils, books, pencil grips, pebbles) so that students can begin exploring attributes by which to sort objects.		
<b>Generalization Connection(s):</b>	Objects have and are grouped by properties Characteristics group and describe organisms so that patterns can be detected	
<b>Teacher Resources:</b>	<a href="https://www.google.com/search?q=sorting+tree+template&amp;tbm=isch&amp;tbo=u&amp;source=univ&amp;sa=X&amp;ei=WccgU-S7DMfWyQHR-YGoBA&amp;ved=0CCQQAQ&amp;biw=1366&amp;bih=648#q=sorting+by+attributes&amp;tbm=isch">https://www.google.com/search?q=sorting+tree+template&amp;tbm=isch&amp;tbo=u&amp;source=univ&amp;sa=X&amp;ei=WccgU-S7DMfWyQHR-YGoBA&amp;ved=0CCQQAQ&amp;biw=1366&amp;bih=648#q=sorting+by+attributes&amp;tbm=isch</a> (Images of sorting by attribute) <a href="https://www.google.com/search?q=sorting+tree+template&amp;tbm=isch&amp;tbo=u&amp;source=univ&amp;sa=X&amp;ei=WccgU-S7DMfWyQHR-YGoBA&amp;ved=0CCQQAQ&amp;biw=1366&amp;bih=648#q=sorting+by+attributes+kindergarten&amp;tbm=isch&amp;facrc=&amp;imgdii=&amp;imgrc=wtlVTibZ5exVoM%253A%3Bn37giHCxyC3GaM%3Bhttp%253A%252F%252Fcrisscrossapplesauce.typepad.com%252F.a%252F6a00e55111563088340134857fbb66970c-pi%3Bhttp%253A%252F%252Fwww.kindergartenkindergarten.com%252Fsorting-by-attributes%252F%3B400%3B278">https://www.google.com/search?q=sorting+tree+template&amp;tbm=isch&amp;tbo=u&amp;source=univ&amp;sa=X&amp;ei=WccgU-S7DMfWyQHR-YGoBA&amp;ved=0CCQQAQ&amp;biw=1366&amp;bih=648#q=sorting+by+attributes+kindergarten&amp;tbm=isch&amp;facrc=&amp;imgdii=&amp;imgrc=wtlVTibZ5exVoM%253A%3Bn37giHCxyC3GaM%3Bhttp%253A%252F%252Fcrisscrossapplesauce.typepad.com%252F.a%252F6a00e55111563088340134857fbb66970c-pi%3Bhttp%253A%252F%252Fwww.kindergartenkindergarten.com%252Fsorting-by-attributes%252F%3B400%3B278</a> (Sorting by attribute) <i>Is it Red? Is it Yellow? Is it Blue?</i> - Tana Hoban (ages 5-6) <i>Shapes and Things</i> - Tana Hoban (ages 5-6) <a href="http://users.manchester.edu/Student/WKStarnes/ProfWeb/C5-SortingobjectsaccordingtophysicalpropertiesLessonPlan.pdf">http://users.manchester.edu/Student/WKStarnes/ProfWeb/C5-SortingobjectsaccordingtophysicalpropertiesLessonPlan.pdf</a> (Sorting objects by properties lesson plan) <a href="http://www.schoolsnet.com/pls/hot_school/sn_primary.page_pls_resource_detail?x=16180339&amp;p_res_id=1264">http://www.schoolsnet.com/pls/hot_school/sn_primary.page_pls_resource_detail?x=16180339&amp;p_res_id=1264</a> (Sorting objects by properties)	
<b>Student Resources:</b>	N/A	
<b>Assessment:</b>	Given a sorted set of objects, students will use the different objects to create a list of attributes they can sort by. AND The student will continue their “sorting and categorizing” journal by documenting (drawing) the attributes they listed.	
<b>Differentiation:</b> (Multiple means for students to access content and multiple modes for student to express understanding.)	<b>Access</b> (Resources and/or Process)	<b>Expression</b> (Products and/or Performance)
	The teacher may match a student with a partner The teacher may scaffold information The teacher may use an instructional aide to support students The teacher may use a translator	The student may act out how objects were sorted

**Colorado Teacher-Authored Sample Instructional Unit**

<b>Extensions for depth and complexity:</b>	<b>Access</b> (Resources and/or Process)	<b>Expression</b> (Products and/or Performance)
	The teacher may allow students to use science notebooks to record scavenger hunt	The student may sort by two or more characteristics The student may sort during a scavenger hunt (find sorted objects within the school)
<b>Critical Content:</b>	<ul style="list-style-type: none"> <li>Physical properties of objects, length, color, structure, texture, weight, sorting</li> </ul>	
<b>Key Skills:</b>	<ul style="list-style-type: none"> <li>Sorting, observing, questioning, describing</li> </ul>	
<b>Critical Language:</b>	Physical properties of object, length, color, structure, texture, weight, sorting, observe, question, describe, sort, question peer's reasoning	

<b>Learning Experience # 6</b>		
The teacher may provide a variety of objects (e.g., pattern blocks, different types of pencils, books, pencil grips, pebbles) so that students can begin exploring ways to group objects using more than one shared attribute.		
<b>Generalization Connection(s):</b>	Objects have and are grouped by properties Characteristics group and describe organisms so that patterns can be detected	
<b>Teacher Resources:</b>	<i>Is it Red? Is it Yellow? Is it Blue?</i> - Tana Hoban (ages 5-6) <i>Shapes and Things</i> by Tana Hoban (ages 5-6) <a href="http://users.manchester.edu/Student/WKStarnes/ProfWeb/C5-SortingobjectsaccordingtophysicalpropertiesLessonPlan.pdf">http://users.manchester.edu/Student/WKStarnes/ProfWeb/C5-SortingobjectsaccordingtophysicalpropertiesLessonPlan.pdf</a> (Sorting objects by properties lesson plan) <a href="http://www.schoolsnet.com/pls/hot_school/sn_primary.page_pls_resource_detail?x=16180339&amp;p_res_id=1264">http://www.schoolsnet.com/pls/hot_school/sn_primary.page_pls_resource_detail?x=16180339&amp;p_res_id=1264</a> (Sorting objects by properties)	
<b>Student Resources:</b>	<a href="http://www.education.com/activity/sorting-categorizing/">http://www.education.com/activity/sorting-categorizing/</a> (Sorting and classifying activities)	
<b>Assessment:</b>	Given various sets of sorted objects, students will verbally describe how they can be grouped together using more than one shared attribute. AND The student will continue their "sorting and categorizing" journal by documenting (drawing) the groupings and the attributes.	
<b>Differentiation:</b> (Multiple means for students to access content and multiple modes for student to express understanding.)	<b>Access</b> (Resources and/or Process)	<b>Expression</b> (Products and/or Performance)
	The teacher may scaffold information The teacher may use a translator The teacher may use an instructional Aide	N/A
<b>Extensions for depth and complexity:</b>	<b>Access</b> (Resources and/or Process)	<b>Expression</b> (Products and/or Performance)
	The teacher may allow students to think about multiple ways to group organisms	The student may come up with multiple ways two or more objects could be grouped together (orally, written, individual, partner)

**Colorado Teacher-Authored Sample Instructional Unit**

<b>Critical Content:</b>	<ul style="list-style-type: none"> <li>Physical properties of objects, length, color, structure, texture, weight, sorting, grouping</li> </ul>
<b>Key Skills:</b>	<ul style="list-style-type: none"> <li>Grouping, observing, questioning, describing</li> </ul>
<b>Critical Language:</b>	Physical properties of objects, length, color, structure, texture, weight, sorting, grouping, observe, question, describe, question peer reasoning

**Learning Experience # 7**

The teacher may provide a variety of images of animals so that students can begin exploring physical characteristics by which to sort animals.

<b>Generalization Connection(s):</b>	Characteristics group and describe organisms so that patterns can be detected Objects have and are grouped by properties	
<b>Teacher Resources:</b>	<a href="http://rmpbs.pbslearningmedia.org/resource/cg8.sci.phys.sortout/curious-george-sort-it-out/">http://rmpbs.pbslearningmedia.org/resource/cg8.sci.phys.sortout/curious-george-sort-it-out/</a> (Curious George – classifying dogs. PBSkids – have to sign up) <a href="http://www.shutterstock.com/cat.mhtml?searchterm=domestic+animals&amp;search_group=&amp;lang=en&amp;search_source=search_form">http://www.shutterstock.com/cat.mhtml?searchterm=domestic+animals&amp;search_group=&amp;lang=en&amp;search_source=search_form</a> (Images of domestic animals) <a href="http://www.shutterstock.com/cat.mhtml?searchterm=farm+animals&amp;search_group=&amp;lang=en&amp;search_source=search_form">http://www.shutterstock.com/cat.mhtml?searchterm=farm+animals&amp;search_group=&amp;lang=en&amp;search_source=search_form</a> (Images of farm animals) <a href="http://www.discoveryeducation.com/teachers/free-lesson-plans/animal-classification.cfm">http://www.discoveryeducation.com/teachers/free-lesson-plans/animal-classification.cfm</a> (Animal classification lessons)	
<b>Student Resources:</b>	N/A	
<b>Assessment:</b>	Given a sorted set of animals, students will use the different characteristics to create a list of attributes they can sort by. AND The student will continue their “sorting and categorizing” journal by documenting (drawing) the attributes they listed.	
<b>Differentiation:</b> (Multiple means for students to access content and multiple modes for student to express understanding.)	<b>Access</b> (Resources and/or Process)	<b>Expression</b> (Products and/or Performance)
	The teacher may provide the student with a partner The teacher may scaffold information The teacher may use an instructional aide support The teacher may use a translator	N/A
<b>Extensions for depth and complexity:</b>	<b>Access</b> (Resources and/or Process)	<b>Expression</b> (Products and/or Performance)
	N/A	The student may sort by two or more characteristics The student may bring in something from home that fits into one of the categories that can be shared with classmates
<b>Critical Content:</b>	<ul style="list-style-type: none"> <li>Characteristics of organisms, body structures, size, habitat</li> </ul>	
<b>Key Skills:</b>	<ul style="list-style-type: none"> <li>Observe, ask questions, verbally describe, sorting, questioning peers</li> </ul>	
<b>Critical Language:</b>	Characteristics of organisms, body structures, size, habitat, observe, question, describe, sorting	

**Colorado Teacher-Authored Sample Instructional Unit**

<b>Learning Experience # 8</b>		
The teacher may provide images of animals so that students can begin exploring ways to group animals using more than one shared characteristic.		
<b>Generalization Connection(s):</b>	Objects have and are grouped by properties Characteristics group and describe organisms so that patterns can be detected	
<b>Teacher Resources:</b>	<a href="http://www.discoveryeducation.com/teachers/free-lesson-plans/animal-classification.cfm">http://www.discoveryeducation.com/teachers/free-lesson-plans/animal-classification.cfm</a> (Animal classification lessons)	
<b>Student Resources:</b>	<a href="http://www.education.com/activity/sorting-categorizing/">http://www.education.com/activity/sorting-categorizing/</a> (Sorting and classifying activities)	
<b>Assessment:</b>	Given various sets of sorted animals, students will verbally describe how they can be grouped together using more than one shared physical characteristic. AND The student will continue their “sorting and categorizing” journal by documenting (drawing) the groupings and the physical characteristics.	
<b>Differentiation:</b> (Multiple means for students to access content and multiple modes for student to express understanding.)	<b>Access (Resources and/or Process)</b>	<b>Expression (Products and/or Performance)</b>
	The teacher may scaffold information The teacher may use a translator The teacher may use an instructional Aide	N/A
<b>Extensions for depth and complexity:</b>	<b>Access (Resources and/or Process)</b>	<b>Expression (Products and/or Performance)</b>
	The teacher may allow students to think about multiple ways to group organisms	The student may come up with multiple ways two or more organisms could be grouped together (orally, written, individual, partner)
<b>Critical Content:</b>	<ul style="list-style-type: none"> <li>Characteristics of organisms, body structures, size, habitat</li> </ul>	
<b>Key Skills:</b>	<ul style="list-style-type: none"> <li>Observe, ask questions, verbally describe, grouping, questioning peers</li> </ul>	
<b>Critical Language:</b>	Characteristics of organisms, body structures, size, habitat, observe, question, describe, sorting, grouping	