Unit Title: Characteristics and Properties of Organisms and Objects

INSTRUCTIONAL UNIT AUTHORS
Woodland Park School District
Amanda Bryant
Eve Owen
Cheri Lin Porter

BASED ON A CURRICULUM OVERVIEW SAMPLE AUTHORED BY
Cheyenne Mountain School District
Judy Swanson
Mesa County School District
Kim Smith

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.

DATE POSTED: MARCH 31, 2014
## Colorado Teacher-Authored Sample Instructional Unit

<table>
<thead>
<tr>
<th>Content Area</th>
<th>Science</th>
<th>Grade Level</th>
<th>Kindergarten</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course Name/Course Code</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

### Colorado 21st Century Skills

- **Critical Thinking and Reasoning:** *Thinking Deeply, Thinking Differently*
- **Information Literacy:** *Untangling the Web*
- **Collaboration:** *Working Together, Learning Together*
- **Self-Direction:** *Own Your Learning*
- **Invention:** *Creating Solutions*

### Intrgrated Curriculum Design:
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.

<table>
<thead>
<tr>
<th>Unit Titles</th>
<th>Length of Unit/Contact Hours</th>
<th>Unit Number/Sequence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Characteristics and Properties of Organisms and Objects</td>
<td>On-going</td>
<td>1</td>
</tr>
<tr>
<td><strong>Unit Title</strong></td>
<td>Characteristics and Properties of Organisms and Objects</td>
<td><strong>Length of Unit</strong></td>
</tr>
<tr>
<td>---------------</td>
<td>--------------------------------------------------------</td>
<td>-------------------</td>
</tr>
<tr>
<td><strong>Focusing Lens(es)</strong></td>
<td>Patterns</td>
<td><strong>Standards and Grade Level Expectations Addressed in this Unit</strong></td>
</tr>
<tr>
<td><strong>Inquiry Questions (Engaging-Debatable):</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Unit Strands</strong></td>
<td>Life Science, Physical Science</td>
<td></td>
</tr>
<tr>
<td><strong>Concepts</strong></td>
<td>characteristics, organisms, properties, objects</td>
<td></td>
</tr>
</tbody>
</table>

### Generalizations

**My students will Understand that...**

#### 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)

- 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)
- 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)
- 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)
- 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)

**Factual**

- What is a pattern? (SC09-GR.K-S.2-GLE.1; IQ.1; RA.1)

**Conceptual**

- How do you sort to make a pattern? (SC09-GR.K-S.2-GLE.1; IQ.1; RA.1)

#### Characteristics group and describe organisms so that patterns can be detected
(SC09-GR.K-S.2-GLE.1; IQ.2; N.1,3)

- What does an organism look like?
- What is the same about a group of organisms?
- What is different about a group of organisms?

**Factual**

- How can organisms be described?
- How can organisms be sorted in groups?

#### Objects have and are grouped by properties
(SC09-GR.K-S.1-GLE.2-EO.a;IQ.1)

- What is the same about a group of objects?
- What is different about a group of objects?
- What does an object look like?
- What does an object feel like?

**Factual**

- How can objects be sorted in groups?
- How can objects be described?
- How can objects belong to more than one group? (SC09-GR.K-S.1-GLE.1; IQ.1)
### Critical Content:
My students will **Know**...

- The observable characteristics of organisms (SC09-GR.K-S.2-GLE.1-EO.a)
- Patterns in the natural world (SC09-GR.K-S.2-GLE.1; RA.1)
- Ways to classify a group of organisms (SC09-GR.K-S.2-GLE.1; RA.2)
- Physical properties of objects (SC09-GR.K-S.1-GLE.2-EO.a)
- How physical properties help determine an object’s uses (SC09-GR.K-S.1-GLE.2; RA.1)
- The reasons why scientists try to be clear and specific when they describe things (SC09-GR.K-S.1-GLE.2; N.1)

### Key Skills:
My students will be able to **Do**...

- Communicate and justify an evidence-based scientific rationale (SC09-GR.K-S.2-GLE.1-EO.b)
- Ask questions about physical characteristics that will help them sort organisms (SC09-GR.K-S.2-GLE.1; N.1)
- Share scientific ideas verbally in a clear way (SC09-GR.K-S.2-GLE.1; N.2)
- 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)
- Use scientific tools such as magnifying glasses and rulers in investigations and play (SC09-GR.K-S.2-GLE.1; N.4)
- Observe, describe and investigate how objects can be sorted using their physical properties (SC09-GR.K-S.1-GLE.2-EO.a)
- Explain why objects are sorted into categories (SC09-GR.K-S.1-GLE.2-EO.b)
- Sort a set objects based on their physical characteristics (SC09-GR.K-S.1-GLE.2-EO.c)
- Share clear and precise observations with others like scientist (SC09-GR.K-S.1-GLE.2; N.2)

### Critical Language:
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: "Mark Twain exposes the hypocrisy of slavery through the use of satire."

A student in _________ can demonstrate the ability to apply and comprehend critical language through the following statement(s):

- Living things can be sorted in many different ways.
- Things can be sorted by how they look and feel.

### Academic Vocabulary:
same, different, sort, observe, describe, investigate, explain, communicate

### Technical Vocabulary:
organism, living thing, fur, feathers, scales, objects, hard, smooth, shiny characteristic, attribute, properties
Unit Description: 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.

Considerations: 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.

Unit Generalizations

**Key Generalization:**
Characteristics of organisms and properties of objects allow scientists to sort and categorize

**Supporting Generalizations:**
- Characteristics group and describe organisms so that patterns can be detected
- Objects have and are grouped by properties

Performance Assessment: The capstone/summative assessment for this unit.

**Claims:**
(Key generalization(s) to be mastered and demonstrated through the capstone assessment.)

**Stimulus Material:**
(Engaging scenario that includes role, audience, goal/outcome and explicitly connects the key generalization)

**Product/Evidence:**
(Expected product from students)

**Differentiation:**
(Multiple modes for student expression)

- The teacher may allow students to point to a picture of objects
- The teacher may provide a list of objects and students must match characteristics/properties using a sorting chart.
- The teacher may allow students to work with a partner or in small groups.
- To extend this work, students may sort the materials in the class.

Texts for independent reading or for class read aloud to support the content

<table>
<thead>
<tr>
<th>Informational/Non-Fiction</th>
<th>Fiction</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Next to an Ant</strong> - Mara Rockliff [lexile level 250]</td>
<td><strong>Dave’s Down the Earth Rock Shop</strong> - Stuart Murphy [lexile level 400]</td>
</tr>
<tr>
<td><strong>Scientists Ask Questions</strong> - Ginger Garrett [lexile level 330]</td>
<td><strong>Mouse Paint</strong> - Ellen Stoll Walsh (ages 5-6)</td>
</tr>
<tr>
<td><strong>Recognizing Patterns in Nature</strong> - Tony Hyland [lexile level 530]</td>
<td><strong>Colors and Shapes</strong> - Lynne Bradbury (ages 5-6)</td>
</tr>
</tbody>
</table>
## Ongoing Discipline-Specific Learning Experiences

<table>
<thead>
<tr>
<th>1.</th>
<th>Description:</th>
<th>Communicating like a scientist: Applying connections to literacy and math</th>
<th>Teacher Resources:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td><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)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><a href="https://www.hol.edu/syllabusuploads/teachingreadinginmathandscience.pdf">https://www.hol.edu/syllabusuploads/teachingreadinginmathandscience.pdf</a> (Teaching reading in math and science)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><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)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><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)</td>
</tr>
<tr>
<td></td>
<td>Skills:</td>
<td>Speaking clearly, Expressing thoughts, Asking clarifying questions, Looking for patterns, Sorting by shapes</td>
<td>Assessment:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>The student will keep a “sorting and classifying” journal drawing or constructing short phrases.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><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)</td>
</tr>
</tbody>
</table>

## Prior Knowledge and Experiences

The student must have an understanding of colors and basic animal features (e.g., legs, tails, fur, etc.).
## Learning Experience # 1

The teacher may utilize an informational text to introduce/review the 5 senses (e.g., *My Five Senses*) so that student can recognize each sense and its function.

<table>
<thead>
<tr>
<th>Generalization Connection(s):</th>
<th>Characteristics group and describe organisms so that patterns can be detected</th>
</tr>
</thead>
</table>
*My First Look at Touch* - Random House (ages 5-6)  
*Body Detectives* - Rita Golden Gelman (ages 5-6)  
*My Five Senses* - Aliki (ages 5-6) |
| Student Resources:            | [http://pbskids.org/sid/isense.html](http://pbskids.org/sid/isense.html) (PBS Kids 5 senses game, have to sign up) |
| Assessment:                   | 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. |
| Differentiation:              | **Access** (Resources and/or Process)  
The teacher may use instructional aide support  
The teacher may use student assistants  
The teacher may scaffold information  
The teacher may use a translator  
**Expression** (Products and/or Performance)  
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 |
| Extensions for depth and complexity: | **Access** (Resources and/or Process)  
The teacher may allow student s to create a story about their senses  
**Expression** (Products and/or Performance)  
The student may describe how they use their sense to identify things |
| Critical Content:             | • Sight, eye, touch, hand, smell, nose, hearing, ear, mouth, taste |
| Key Skills:                   | • Use senses, explore |
| Critical Language:            | 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.

| Generalization Connection(s): | Objects have and are grouped by properties |
# Characteristics and Properties of Organisms and Objects

## Teacher Resources:
* Colors and Shapes* - Lynne Bradbury (ages 5-6)

## Student Resources:

## Assessment:
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.

## Differentiation:
(Multiple means for students to access content and multiple modes for student to express understanding.)

<table>
<thead>
<tr>
<th>Access (Resources and/or Process)</th>
<th>Expression (Products and/or Performance)</th>
</tr>
</thead>
<tbody>
<tr>
<td>The teacher may use graphics and visualization</td>
<td>The student may point to object based on teacher’s description of a property</td>
</tr>
<tr>
<td>The teacher may use peer partnerships</td>
<td></td>
</tr>
<tr>
<td>The teacher may review vocabulary</td>
<td></td>
</tr>
</tbody>
</table>

## Extensions for depth and complexity:

<table>
<thead>
<tr>
<th>Access (Resources and/or Process)</th>
<th>Expression (Products and/or Performance)</th>
</tr>
</thead>
<tbody>
<tr>
<td>The teacher may allow students to work on multiple items at one time</td>
<td>The student may order multiple items based on a given property (longest to shortest, darkest to lightest)</td>
</tr>
</tbody>
</table>

## Critical Content:
- Physical properties of objects, length, color, structure, shape (2D and 3D), texture, weight

## Key Skills:
- Observe, ask questions, verbally describe

## Critical Language:
Physical properties of objects, length, color, structure, shape (2D and 3D), texture, weight, observe, describe, question

## Learning Experience # 3

The teacher may present images of various animals and relevant vocabulary so that the students can describe several characteristics of the animals.

### Generalization Connection(s):
Characteristics group and describe organisms so that patterns can be detected

### Teacher Resources:

### Student Resources:

### Assessment:
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.
Colorado Teacher-Authored Sample Instructional Unit

**Differentiation:**
(Multiple means for students to access content and multiple modes for student to express understanding.)

<table>
<thead>
<tr>
<th>Access (Resources and/or Process)</th>
<th>Expression (Products and/or Performance)</th>
</tr>
</thead>
<tbody>
<tr>
<td>The teacher may allow students to use a scribe</td>
<td></td>
</tr>
<tr>
<td>The teacher may allow students to use voice to text software</td>
<td></td>
</tr>
<tr>
<td>The teacher may allow students to use story board (Legos) to make way for writing prompt</td>
<td></td>
</tr>
<tr>
<td>The student may verbally dictate the sentence</td>
<td></td>
</tr>
<tr>
<td>The student may draw a picture of the object using color, size, habitat to demonstrate knowledge</td>
<td></td>
</tr>
</tbody>
</table>

**Extensions for depth and complexity:**

<table>
<thead>
<tr>
<th>Access (Resources and/or Process)</th>
<th>Expression (Products and/or Performance)</th>
</tr>
</thead>
<tbody>
<tr>
<td>The teacher may allow students to use a scribe</td>
<td></td>
</tr>
<tr>
<td>The teacher may allow students to use voice to text software</td>
<td></td>
</tr>
<tr>
<td>The teacher may allow students to use story board (Legos) to make way for writing prompt</td>
<td></td>
</tr>
<tr>
<td>The student may verbally dictate the sentence</td>
<td></td>
</tr>
<tr>
<td>The student may draw a picture of the object using color, size, habitat to demonstrate knowledge</td>
<td></td>
</tr>
</tbody>
</table>

**Critical Content:**
- Characteristics of organisms, body structure, size, habitat (land/water, farm/city animals)

**Key Skills:**
- Observe, ask questions, verbally describe

**Critical Language:**
Characteristics of organisms, body structure, size, habitat, observe, question, describe

---

**Learning Experiences # 4 – 8**

**Instructional Timeframe:** Weeks 2-5

**Learning Experience # 4**

Through modeling the teacher may introduce the ideas of sorting and grouping so that students can begin (verbally) categorizing objects.

**Generalization Connection(s):**
- Characteristics group and describe organisms so that patterns can be detected
- Objects have and are grouped by properties

**Teacher Resources:**
*My First Look at Sorting* - Random House (ages 5-6)

**Student Resources:**
N/A

**Assessment:**
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.

https://www.google.com/search?q=sorting+tree+template&tbm=isch&tbo=u&source=univ&sa=X&ei=WccgU-S7DMfWyQHR-YGoBA&ved=0CCQQsAQ&biw=1366&bih=648 (Sorting tree template)

**Differentiation:**
(Multiple means for students to access content and multiple modes for student to express understanding.)

<table>
<thead>
<tr>
<th>Access (Resources and/or Process)</th>
<th>Expression (Products and/or Performance)</th>
</tr>
</thead>
<tbody>
<tr>
<td>The teacher may preview vocabulary</td>
<td></td>
</tr>
<tr>
<td>The teacher may use small group instruction</td>
<td></td>
</tr>
<tr>
<td>N/A</td>
<td></td>
</tr>
</tbody>
</table>
### Colorado Teacher-Authored Sample Instructional Unit

**Unit Title:** Characteristics and Properties of Organisms and Objects

**Kindergarten, Science**

<table>
<thead>
<tr>
<th>Extensions for depth and complexity:</th>
<th>Access (Resources and/or Process)</th>
<th>Expression (Products and/or Performance)</th>
</tr>
</thead>
<tbody>
<tr>
<td>- The teacher may allow students to consider the main differences between organisms and objects and then in turn the difference between sorting and grouping.</td>
<td>- The student may present difference between sorting and grouping to peers in the class or adults in the building.</td>
<td></td>
</tr>
</tbody>
</table>

**Critical Content:**

- Physical properties of objects, length, color, structure, texture, weight

**Key Skills:**

- Observe, ask questions, verbally describe, grouping, sorting, question peer’s reasoning

**Critical Language:**

Physical properties of objects, length, color, structure, texture, weight, observe, question, describe, sort, group, same, different

**Learning Experience # 5**

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.

**Generalization Connection(s):**

Objects have and are grouped by properties. Characteristics group and describe organisms so that patterns can be detected.

**Teacher Resources:**

https://www.google.com/search?q=sorting+tree+template&tbm=isch&uq=sn=univ&sa=X&ei=WccgUG7oGobfWyQHR-YG0BA&ved=0CCQQsAQ&biw=1366&bih=648&q=sorting+by+attributes+within+objects+and+groups&tbm=isch (Images of sorting by attribute)

https://www.google.com/search?q=sorting+tree+template&tbm=isch&uq=sn=univ&sa=X&ei=WccgUG7oGobfWyQHR-YG0BA&ved=0CCQQsAQ&biw=1366&bih=648&q=sorting+by+attributes+kindergarten&tm=isch&facrc= &imgdii= &imgrc=wtlVTibZ5exVoM%253A%3Bn37giHCKyC3GaM%3Bhttp%253A%252F%252Fcrisscrosstassausc.typepad.com%252Fkindergarten%252Fsorting+by+attributes%252F%252F%252Fhttp%253A%252F%252Fwww.kindergartenkindergarten.com%252Fsorting-by-attributes%252F%252F%252F%252F%252F%252F%252F 115630834013485766970d-pi%252Fhttp%253A%252F%252Fwww.kindergartenkindergarten.com%252Fsorting+by+attributes%252F 115630834013485766970d-pi%252Fhttp%253A%252F%252Fwww.kindergartenkindergarten.com%252Fsorting+by+attributes%252F%252F%252F%252F%252F%252F%252F 115630834013485766970d-pi%252Fhttp%253A%252F%252Fwww.kindergartenkindergarten.com%252Fsorting+by+attributes%252F%252F%252F%252F%252F%252F%252F 115630834013485766970d-pi%252Fhttp%253A%252F%252Fwww.kindergartenkindergarten.com%252Fsorting+by+attributes%252F%252F%252F%252F%252F%252F%252F 115630834013485766970d-pi%252F

- *Shapes and Things* - Tana Hoban (ages 5-6)

http://users.manchester.edu/Student/WKStarnes/ProfWeb/CS-SortingobjectsaccordingtoophysicalpropertiesLessonPlan.pdf (Sorting objects by properties lesson plan)

http://www.schoolsnet.com/pls/hot_school/sn_primary.page_pls_resource_detail?x=16180339&p_res_id=1264 (Sorting objects by properties)

**Student Resources:**

N/A

**Assessment:**

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.

**Differentiation:**

(Multiple means for students to access content and multiple modes for student to express understanding.)

<table>
<thead>
<tr>
<th>Access (Resources and/or Process)</th>
<th>Expression (Products and/or Performance)</th>
</tr>
</thead>
<tbody>
<tr>
<td>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.</td>
<td>The student may act out how objects were sorted.</td>
</tr>
</tbody>
</table>
## Extensions for depth and complexity:

<table>
<thead>
<tr>
<th>Access (Resources and/or Process)</th>
<th>Expression (Products and/or Performance)</th>
</tr>
</thead>
<tbody>
<tr>
<td>The teacher may allow students to use science notebooks to record scavenger hunt</td>
<td>The student may sort by two or more characteristics. The student may sort during a scavenger hunt (find sorted objects within the school).</td>
</tr>
</tbody>
</table>

## Critical Content:

- Physical properties of objects, length, color, structure, texture, weight, sorting

## Key Skills:

- Sorting, observing, questioning, describing

## Critical Language:

- Physical properties of object, length, color, structure, texture, weight, sorting, observe, question, describe, sort, question peer’s reasoning

## Learning Experience # 6

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.

### Generalization Connection(s):

- Objects have and are grouped by properties
- Characteristics group and describe organisms so that patterns can be detected

### Teacher Resources:

- *Is it Red? Is it Yellow? Is it Blue?*- Tana Hoban (ages 5-6)
- *Shapes and Things* by Tana Hoban (ages 5-6)
- [Sorting objects according to physical properties Lesson Plan.pdf](http://users.manchester.edu/Student/WKStarnes/ProfWeb/CS-SortingobjectsaccordingtophyscialpropertiesLessonPlan.pdf) (Sorting objects by properties lesson plan)

### Student Resources:


### Assessment:

- 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.

### Differentiation:

(Multiple means for students to access content and multiple modes for student to express understanding.)

<table>
<thead>
<tr>
<th>Access (Resources and/or Process)</th>
<th>Expression (Products and/or Performance)</th>
</tr>
</thead>
<tbody>
<tr>
<td>The teacher may scaffold information</td>
<td>N/A</td>
</tr>
<tr>
<td>The teacher may use a translator</td>
<td></td>
</tr>
<tr>
<td>The teacher may use an instructional Aide</td>
<td></td>
</tr>
</tbody>
</table>

### Extensions for depth and complexity:

<table>
<thead>
<tr>
<th>Access (Resources and/or Process)</th>
<th>Expression (Products and/or Performance)</th>
</tr>
</thead>
<tbody>
<tr>
<td>The teacher may allow students to think about multiple ways to group organisms</td>
<td>The student may come up with multiple ways two or more objects could be grouped together (orally, written, individual, partner).</td>
</tr>
</tbody>
</table>
**Colorado Teacher Authored Sample Instructional Unit**

<table>
<thead>
<tr>
<th>Critical Content:</th>
<th>• Physical properties of objects, length, color, structure, texture, weight, sorting, grouping</th>
</tr>
</thead>
<tbody>
<tr>
<td>Key Skills:</td>
<td>• Grouping, observing, questioning, describing</td>
</tr>
<tr>
<td>Critical Language:</td>
<td>Physical properties of objects, length, color, structure, texture, weight, sorting, grouping, observe, question, describe, question peer reasoning</td>
</tr>
</tbody>
</table>

**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.

<table>
<thead>
<tr>
<th>Generalization Connection(s):</th>
<th>Characteristics group and describe organisms so that patterns can be detected Objects have and are grouped by properties</th>
</tr>
</thead>
</table>

| Assessment: | 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. |

| Differentiation: | Access (Resources and/or Process) Expression (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 |

| Extensions for depth and complexity: Access (Resources and/or Process) Expression (Products and/or Performance) | 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 |

| Critical Content: | • Characteristics of organisms, body structures, size, habitat |
| Key Skills:       | • Observe, ask questions, verbally describe, sorting, questioning peers |
| Critical Language:| Characteristics of organisms, body structures, size, habitat, observe, question, describe, sorting |
## Learning Experience # 8

The teacher may provide images of animals so that students can begin exploring ways to group animals using more than one shared characteristic.

### Generalization Connection(s):
- Objects have and are grouped by properties
- Characteristics group and describe organisms so that patterns can be detected

### Teacher Resources:

### Student Resources:

### Assessment:
- 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.

### Differentiation:
(Thank means for students to access content and multiple modes for student to express understanding.)

<table>
<thead>
<tr>
<th>Access (Resources and/or Process)</th>
<th>Expression (Products and/or Performance)</th>
</tr>
</thead>
<tbody>
<tr>
<td>The teacher may scaffold information The teacher may use a translator The teacher may use an instructional Aide</td>
<td>N/A</td>
</tr>
</tbody>
</table>

### Extensions for depth and complexity:

<table>
<thead>
<tr>
<th>Access (Resources and/or Process)</th>
<th>Expression (Products and/or Performance)</th>
</tr>
</thead>
<tbody>
<tr>
<td>The teacher may allow students to think about multiple ways to group organisms</td>
<td>The student may come up with multiple ways two or more organisms could be grouped together (orally, written, individual, partner)</td>
</tr>
</tbody>
</table>

### Critical Content:
- Characteristics of organisms, body structures, size, habitat

### Critical Language:
- Characteristics of organisms, body structures, size, habitat, observe, question, describe, sorting, grouping

### Key Skills:
- Observe, ask questions, verbally describe, grouping, questioning peers