The State Fair of TEXAS Curriculum

LIVESTOCK & AGRICULTURE

GRADE 6 STEM
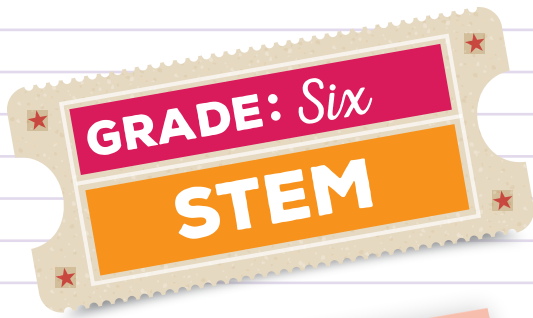
CLASSIFY THIS!

THE ANIMAL KINGDOM

STATE FAIR OF TEXAS

GRADE: *Six*
STEM

Classify This!
The Animal Kingdom

In this lesson students will:
★ Compare and contrast the various animals at the State Fair.
★ Use visual representations to make connections, and create an animal kingdom map or web for the animals found at the Fair.
★ Create a poster that displays the animals of the State Fair, complete with the proper Animal Kingdom names.

With so many animals at the Fair, it is hard to remember them all! Each of them, big and small, serves an important role in the Animal Kingdom.

Standards
★ Math TEKS:
6.1(D), 6.1(E), 6.1(G), 6.2(A)
★ Science TEKS: 6.4(A), 6.4(E), 6.12(C), 6.12(D), 6.12(F)
★ Art TEKS: 6.1(A), 6.2(A), 6.2(C)

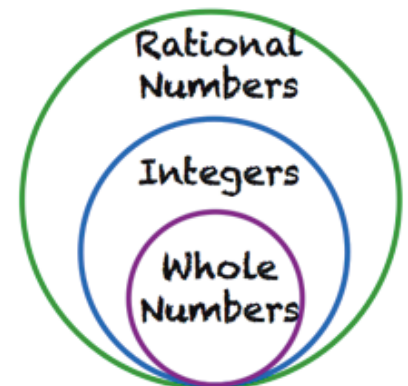### Before You Go
The Animal Kingdom
★ Watch the Classification of Living Things video from YouTube: https://www.youtube.com/watch?v=vqxomJIBGcY
  * Let students know that even though there are five kingdoms, you will be focusing only on the Animal Kingdom, for now.
★ Discuss the animals at the State Fair. Look at the list of animals and begin a class discussion about how they aren't JUST chickens, cows, goats, sheep, and pigs: http://bigtex.com/livestock/breeds/

Number Systems and Graphic Organizers
★ Driving Question: Why do we need a number system?
  * Like scientists, mathematicians use classification systems to describe, name, and categorize different types of numbers.
  * Today, Mr. Wifflebird just finished teaching his students about three categories of numbers within the number system– rational numbers, integers, and whole numbers. This is the graphic organizer Mr. Wifflebird drew to show the relationship between the three categories:
  * Driving Question: How does this graphic organizer show the relationship between rational numbers, integers, and whole numbers?
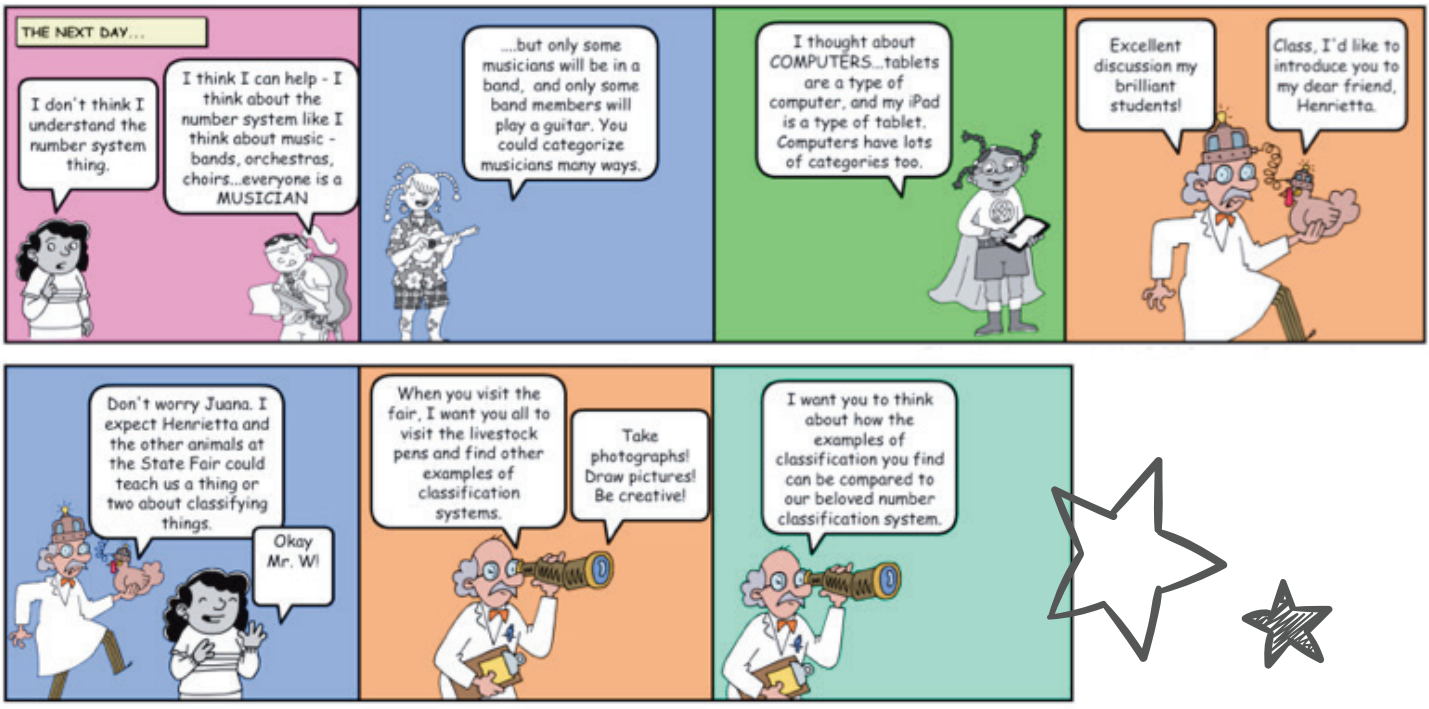
Rational Numbers

Integers

Whole Numbers

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THE NEXT DAY...

I don't think I understand the number system thing.

I think I can help - I think about the number system like I think about music - bands, orchestras, choirs...everyone is a MUSICIAN

....but only some musicians will be in a band, and only some band members will play a guitar. You could categorize musicians many ways.

I thought about COMPUTERS...tablets are a type of computer, and my iPad is a type of tablet. Computers have lots of categories too.

Excellent discussion my brilliant students!

Class, I'd like to introduce you to my dear friend, Henrietta.

Don't worry Juana. I expect Henrietta and the other animals at the State Fair could teach us a thing or two about classifying things.

Okay Mr. W!

When you visit the fair, I want you all to visit the livestock pens and find other examples of classification systems.

Take photographs! Draw pictures! Be creative!

I want you to think about how the examples of classification you find can be compared to our beloved number classification system.

★ Checking for Understanding: Draw a graphic organizer to represent the two examples Mr. Wifflebird's students gave about music and computers. What other people/things could be placed in those graphic organizers?

★ Driving Question: How is classifying numbers like classifying animals?

Plan Your Route.

★ From the Texas Star, head around the back of the Cotton Bowl Stadium.

★ Go to the Livestock Barns.

★ Wave hello to the Woofus!

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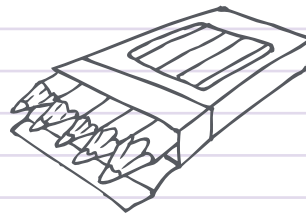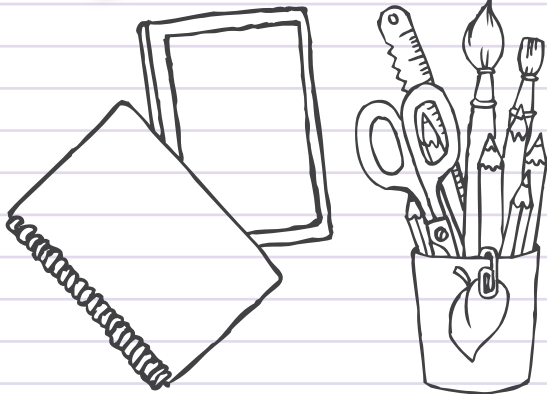
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Optional Materials to Bring

★ Pen/Pencil
★ Colored Pencils
★ Science Notebook or Paper
★ Smartphone/Tablet/Camera
★ Sketchbook for Arts Connection

While You're There

The goal of your visit is to gather information on as many animals in the Livestock Barns as you can.

ART
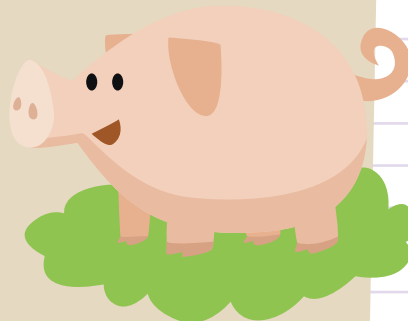- Sketch or take photos of animals so you remember them for your project!

ANIMAL CLASSIFICATION
- As you visit the livestock pens, take note of the different animals.
- Write down what it is (cow, sheep, chicken, pig, or goat).
- If there is a tag, write down the breed of cow, sheep, chicken, pig, or goat.
- How would you describe each of the animals?

- Is it a mammal?
- What shape are the feet?
- Does it lay eggs or give birth to live young?
- What characteristics do the animals have in common?
- What characteristics make the animals different?
- How would you classify or group the animals you observed?

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The Animal Kingdom

After the Fair

★ When you return to class following your State Fair visit, you will:

* Create a graphic organizer to classify the animals you discovered at the Fair.
* Map out an Animal Kingdom web on poster board or using a computer.
* Design an artistic poster of the animals you found.
* How could you combine these three goals into one awesome project?!

GRAPHIC ORGANIZER

* Create your own graphic organizer to show how you would classify the animals you observed at the State Fair of Texas.
* How is your graphic organizer similar to Mr. Wifflebird's graphic organizer used to classify numbers? How is it different?
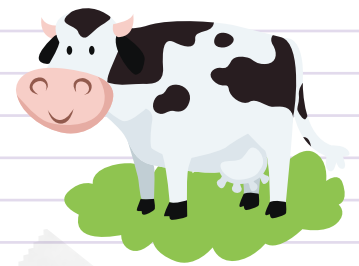
Checking for Understanding:
* Share your State Fair of Texas graphic organizer with another classmate.
* Ask him/her to tell you where certain animals should be placed within your graphic organizer.

ANIMAL KINGDOM MAP/WEB

* Use your notes and pictures from the Fair as well as Internet resources to create an Animal Kingdom Map or Web for the animals found at the Fair.
* Complete your map on poster board or on a Prezi to present to the class.

* Begin with the Animal Kingdom. Then, work your way down through the taxonomy chart dividing the animals by phylum, class, order, family, genus, and species. The students' taxonomy web will look similar to the example below, except that it will contain animal names.
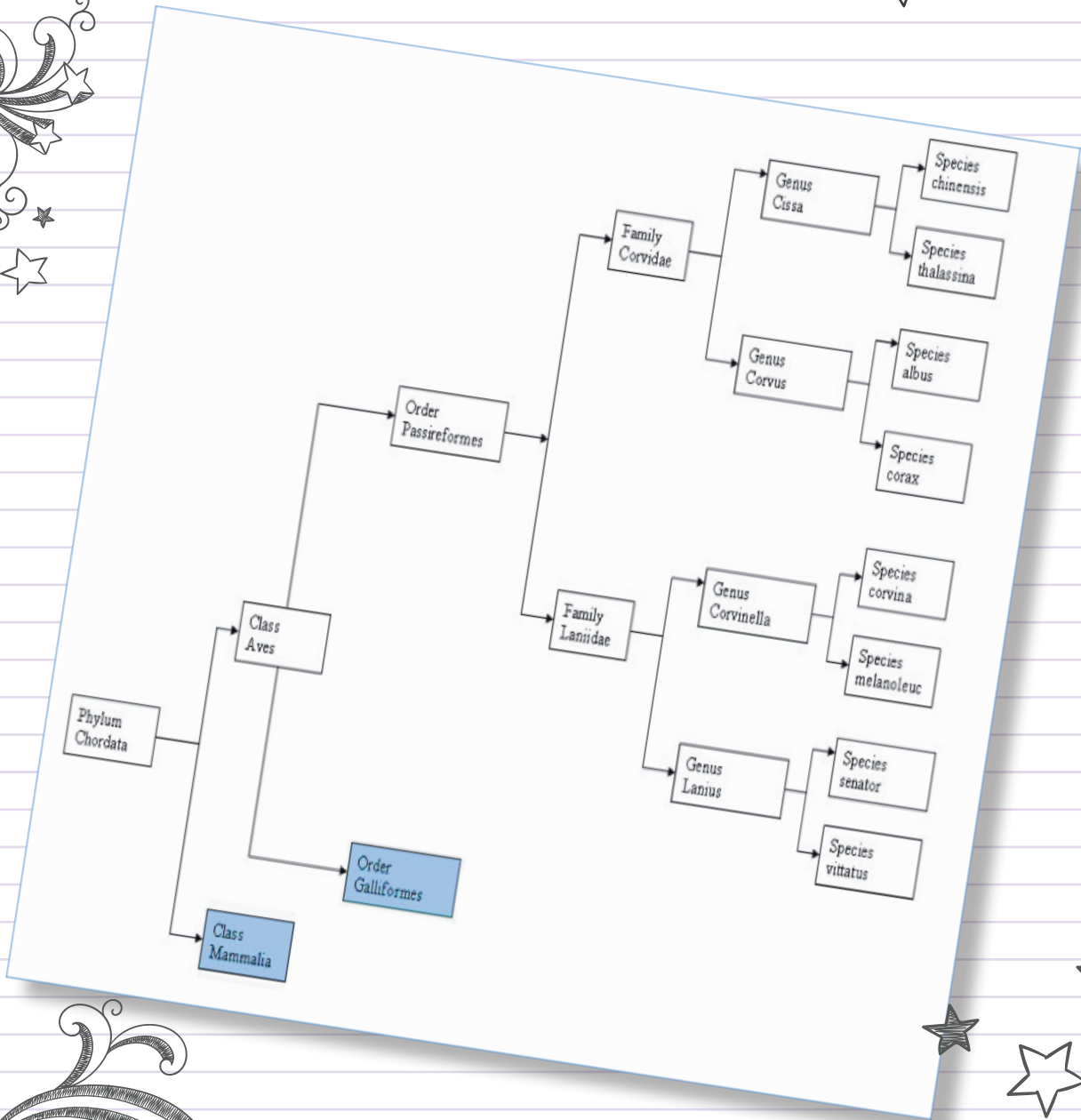
* Note: there are only two species of domestic cattle, one specie of sheep, one specie of chicken, one specie of domestic pig, and one specie of goat.
* Although animal breeds are not part of the taxonomy chart, students may have fun and get extra practice with classification by listing breeds, as well.
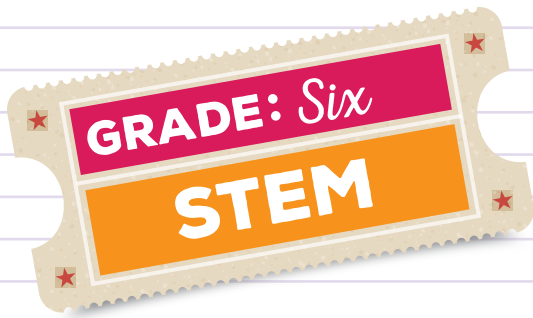
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A classification tree diagram:

- Phylum Chordata
  - Class Aves
    - Order Passireformes
      - Family Corvidae
        - Genus Cissa
          - Species chinensis
          - Species thalassina
        - Genus Corvus
          - Species albus
          - Species corax
      - Family Laniidae
        - Genus Corvinella
          - Species corvina
          - Species melanoleuc
        - Genus Lanius
          - Species senator
          - Species vittatus
    - Order Galliformes
  - Class Mammalia

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Arts Connection:
"Animals of the State Fair" Poster

In this lesson students will:
★ Create an "Animals of the State Fair" poster.

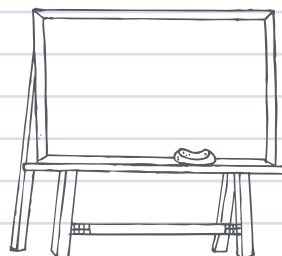### Before You Go

Prior to visiting the Texas State Fair:

★ Review the classification levels from the Science lesson. https://www.youtube.com/watch?v=vqxomJIBGcY.

★ Show the students some examples of "Animals of the World" posters.
* UK illustrator Andy Ward has created a fantastic "Animals of the World" series of posters.
* Informative posters include images of various animals that live in regions of the world.
* Visit the following link with the students and discuss how the artist displays the animals and uses colors and balance to create a successful artwork.
* http://www.mymodernmet.com/profiles/blogs/andy-ward-natural-history-poster-series
* Be sure to draw attention to the fact that the artist includes the common name and the scientific name of each animal.
* There are also some drawing tips at the bottom of the page!

Iguana
brachylophus vitiensis
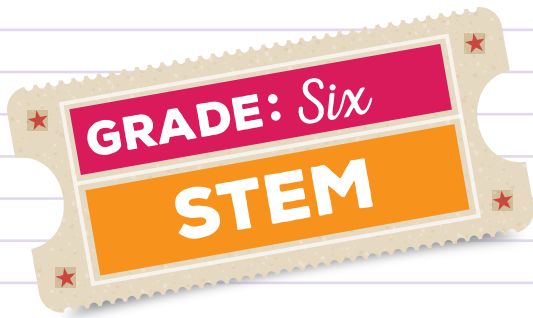
"Iguana" by Andy Ward

While You're There

As you make your way through the livestock barns, take notes of all of the different animals you see, including the various breeds. If possible, stop and create sketches of each animal, or take a photo for later reference.

* Do any of these animals look familiar?
* Are there some that you have never seen before?
* How would you group these on a poster to make it easy for the viewer to tell the difference between the various breeds of the same animal?

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Arts Connection:
"Animals of the State Fair" Poster

After the Fair

When you return to the classroom, create an "Animals of the State Fair" poster!

★ Using a poster board, plan where you will place your animals.
  * It might be easiest to, first, see how many animals you will place on your poster; then, place a small dot where each animal will go. That way, you can spread them out evenly and create a nice, balanced artwork.

★ Create a small sketch of your animals in pencil , first.
  * It's always a good idea to do a drawing in pencil before going over it in marker, just in case you need to erase.

★ Once you have drawn all of your animals, research their scientific names.
  * First, write the common name of the animal, such as "cow".
  * Then, write the kingdom under that, then phylum, then class.

★ Don't forget to add color and a title to your poster.

★ It might be a good idea to revisit the posters you reviewed in class, to refresh your memory.

★ Have fun with this, and be as creative as possible!