Body Systems Amusement Park

My company, The Way Too Many Millions, is interested in building a new amusement park and we need your innovative ideas to make it the most exciting park on the planet. The park's theme will be centered around human body systems, so every aspect of the park will relate in some way to the human body. Customers who come and enjoy this amusement park will not only have the time of their lives, but they will also learn a great deal about how the human body operates. Your job is to make it fun AND educational.

Requirements:
★ Build a 3-D model of a ride
★ Create a Portfolio

3-D Model
Create a ride (or game) that represents one of the body systems listed below:
Circulatory
Respiratory
Nervous
Digestive
Muscular
Skeletal

1. Include a large <u>sign</u> that displays the name of your amusement park.
2. Include a clever <u>name for your attraction</u> that is displayed clearly on or near your ride or game.
3. If your attraction has a roof, the model should be partially cut away so that the interior can be seen.
4. The <u>base</u> should be approximately 60 cm by 60 cm (or larger). Make the model large enough to easily show what it is all about.
5. Use materials that will make your display <u>sturdy.</u> It should not fall apart if it is lifted off of the table.
6. Use recycled plastics, cardboard, paper, blocks, Legos, clay, wire, fabric, etc. The only rule is that you must construct it yourself – you may not use a store bought roller coaster.
7. <u>Details</u> could include things like: park entrance, trees, ticket booth, parking lot, food stand, souvenir shops, benches, walkways, signs, recycling bins, etc.

Portfolio

This can be done digitally (through PPT, Prezi, a web page, etc.) or using good old-fashioned paper and a professional looking folder or binder

★ **Cover page** – Includes the <u>name of the park</u> and the <u>name of the attraction</u> that is featured in your 3-D model.

★ **Introduction -** Give a brief <u>summary of the amusement park</u> (Where? How big? Special features?   Target audience? Etc.) and a general overview of your main attraction.

★ **Page 1** - A colored <u>drawing of the ride </u>or game with as much detail as possible. No clip art or photos can be copied or pasted. This is your original creation.

★ **Page 2** - A complete <u>description of the attraction </u>- use science terms and details. This is an overview of the ride. One solid paragraph is the minimum.

★ **Page 3** - <u>Description of the seat</u> in which you ride and an illustration of it. For example, am I sitting in a boat? Am I sitting on a slide? Is the seat I'm on in the shape of a particular organ?

★ **Page 4** – <u>Description of the entrance</u> to your attraction including an illustration. Is it a gate? A tunnel? An open area? Is it a particular organ? What color is it?

★ **Page 5** - <u>Description of the middle</u> portion of your attraction including an illustration. When I am halfway through the ride, what will I be experiencing? What will I see? What will I hear? What is around me? Am I moving quickly or slowly? What other organs might be involved?

★ **Page 6** – <u>Description of the ending</u> section of your attraction including an illustration. How does the attraction end? Describe what I would see, hear and feel when it comes to a stop.

★ **Page 7** - A map of the entire park. Include other rides, restaurants, games, etc.   Make it fun, educational, and interesting

★ **Page 8** - Create an admission ticket to align with your theme. Be creative. The shape does not need to be a rectangle. You may want to include: price, QR code, image of your featured attraction, vocabulary words that relate, etc.

You have 15 days to complete this project. Most of those days will be with me – during class. I will assist, advise, and help you construct your projects. Use your class time wisely. The final product should be of professional quality with lots of attention to details.

Step 1

In the space provided, write down several amusement parks you have been to and some attraction that you have seen.   What are the names of some of the parks and rides? What are your favorites?

Use your device and research some theme parks.   Some examples would be: Disney World, Lego Land, Sea World, Universal Studios, Bush Gardens, Wet n Wild, Hershey Park, and Epcot Center.   What kinds of attractions are interesting there? Use the space below to write down names and ideas of things that you like.

Now that you have spent some time looking at attractions, think about HOW you could create your own body system attraction. Brainstorm below!

Step 2

What is the name of your Amusement Park? _____

Select (circle) the body system you would like to feature in your park
Circulatory
Respiratory
Nervous
Digestive
Muscular
Skeletal

What are the most important functions of your selected system? In other words, what does this system DO? How does it work?

_____
_____
_____
_____

What are the necessary organs involved with this system?

_____
_____

What are the key vocabulary/science terms that relate to this system?

_____

Considering all of the information above, think about a ride (or some kind of activity) that would allow the customer to travel through the body system while learning about the process. Use the space below to create a fist draft. Sketch some ideas.

Step 3 (Thinking it Through)

What materials do you have available for this design?

_____
_____

Is there anything you can bring from home that will help with your construction? If so, list here.

_____

What materials do you think may be needed that you do not have?

_____

If getting these things is not possible, what can you use as a substitute?

_____

Before you begin your 3-D model, be sure you have a plan for these important items:

The seat in which you ride. For example: As the customer, am I sitting in a boat? Am I sitting on a slide? Is the seat I'm on in the shape of a particular organ? Is there a safety bar? Am I sitting alone, or with several other people?

The entrance to your attraction. Is it a gate? A tunnel? An open area? Is it a particular organ? What color is it? What things can I see around and above me?

The ending (exit) section of your attraction. How does the attraction end? What I would see when it comes to a stop?

What obstacles do you think you may encounter in designing this and constructing it?

_____
_____

What can you do now (before you begin) to help with these obstacles?

_____

If your ideas are solid and you have a great design, then jump in and begin your construction.

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Below are some examples of human body amusement park rides that were created by 8th graders. The base of each one is thin foam board. They used lots of air-dry clay, cardboard, paper towel and toilet paper rolls, colored card stock and hot glue. Other items that were popular are: pipe cleaners, Lego pieces, drinking straws, toothpicks, popsicle sticks, pom poms, 3-D printed items, and lots and lots of recycled boxes and various containers.
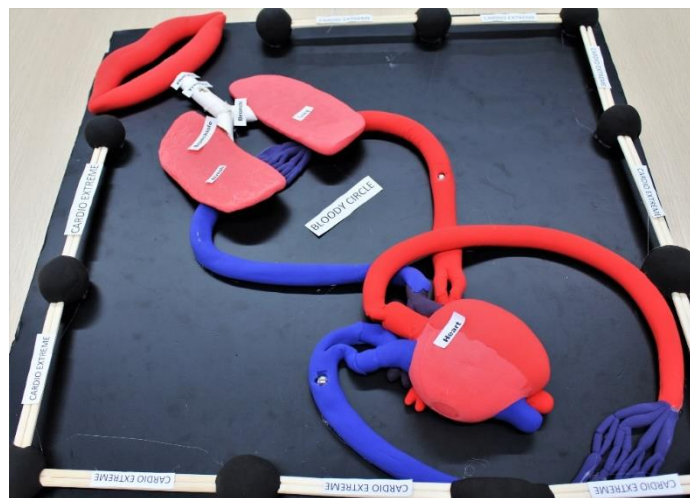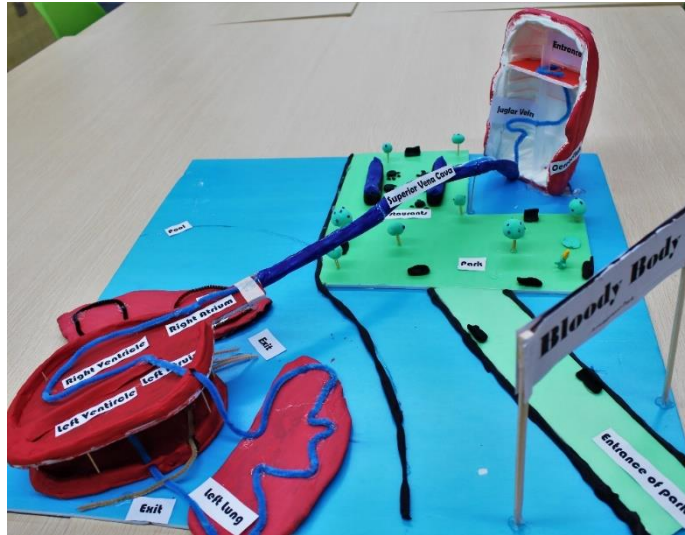
This was a Skeletal System zip line tour with learning stations at various platforms
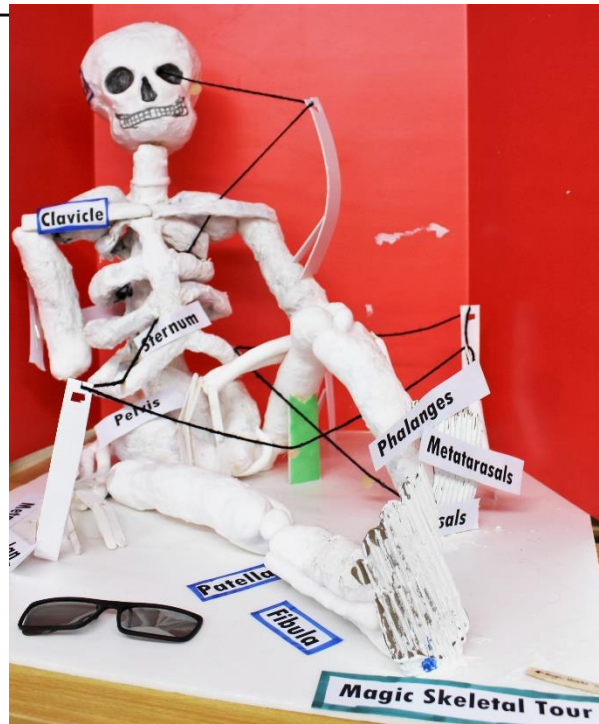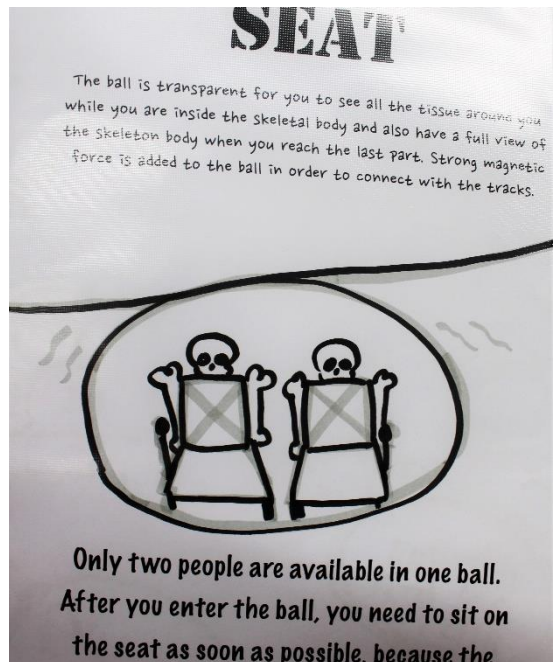
This was a type of roller coaster. Notice the green seat.

This ride has everyone seated together (white) as they slowly move upward, then drop.

Here are a few
sample pages from
one of the portfolios

SEAT

The ball is transparent for you to see all the tissue around you while you are inside the skeletal body and also have a full view of the skeleton body when you reach the last part. Strong magnetic force is added to the ball in order to connect with the tracks.

Only two people are available in one ball. After you enter the ball, you need to sit on the seat as soon as possible, because the

END

Enter

Hinge Joint Ship

Pivot Joint Round

Gliding Joint Slide

Yellow Bone Marrow 4D

Bone Restaurant

Ball and S

Outer Membrane Roller Coaster

After the roller coaster, you will reach to the left foot and exit from the left foot.

Magic Skeletal Tour

MAGIC
Skeletal
Tour

Student name (s)_____   Period # _____

Ride name _____

Checklist

Complete (check when done)   ### **3-D Model**

——   Include a large sign that displays **the name of your amusement park**.

——   Include a clever **name of your ride** that is displayed clearly on or near your ride

——   Use materials that will make your display sturdy. It should not fall apart if it is lifted off of the table.

——   Details could include things like: park entrance, trees, ticket booth, parking lot, food stand, benches, walkways, signs, recycling bins, etc.

——   It is clear where the entrance is? The exit? The beginning of ride?

——   Body parts are typed and clearly labeled.

Portfolio

This can be done digitally (through PPT, Prezi, a web page, etc.) or using good old-fashioned paper and a professional looking folder or binder If you create anything by hand (using a pencil or pen) you MUST use a ruler and make it very neat.

Cover page

——   Student name and period number on the outside cover of the portfolio

——   Include the name of the park

——   Include the name of the ride that is featured in your 3-D model

——   Introduction - summary of the amusement park (Where? How big? Special features?   Target audience? and a general overview of your main ride.

——   **Page 1** - A colored drawing of the ride or game with as much detail as possible. No clip art or photos can be copied or pasted. This is your original creation.

——   **Page 2** - A complete description of the attraction - use science terms and details. This is an overview of the ride. One solid paragraph is the minimum.

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Rubric

Human Body System Portfolio

	4 - 4	3 - 3	2 - 2	1 - 1
Ideas	Strong ideas are carefully and imaginatively presented, showing real insight into the topic.	Clear ideas support the main topic.	Ideas sometimes do not support the main topic.	Ideas are confusing and do not support the main topic in any way.
Content	The content is substantial, intriguing, and original. It relates directly to the topic.	The content is clear and directly related to the topic.	The content is ordinary and somewhat related to the topic.	The content is absent or not related to the topic.
Description	Concrete language and sensory images create a highly imaginative and descriptive piece; rich use of literary devices such as simile, metaphor, and alliteration	Concrete language and sensory images create a descriptive piece; uses many literary devices	Some concrete language and sensory images; uses some literary devices	Uses little or no concrete language or sensory images
Grammar	Uses completely appropriate grammar that helps readers understand meaning.	Uses appropriate grammar that does not interfere with meaning.	Grammar choices sometimes confuse readers.	Grammar choices keep readers from understanding the piece.

Total Score: _____ points out of 16 possible points.

Human Body System 3-D Attraction

	4 - 4	3 - 3	2 - 2	1 - 1
Ideas	Strong ideas are carefully and imaginatively presented, showing real insight into the topic.	Clear ideas support the main topic.	Ideas sometimes do not support the main topic.	Ideas are confusing and do not support the main topic in any way.

Total Score: _____ points out of 4 possible points.

Teacher Comments: