



CREATURE FEATURE – TIER A

Due Date	Task #	Explanation	Possible Points	Your Points	Comments
	1	Make 4 solids from cardboard (they MUST be 3 Dimensional). Choose your shapes from the chart on Appendix 1. For help building: watch the “How to” video on mrsgumas.com ; click on projects & MCAS tab, and go to Creature Feature.	8 pts		
	2	List your solids and the polygons that will appear on your drawing on Appendix 2.	4 pts		
	3	Give the dimensions of your solids on Appendix 2.	8 pts		
	4	Make your Slide # 1(see Appendix 3 for sample). Then, upload your slide to your class’ slide show. Be sure to keep the slides in alphabetical order. Include: <ul style="list-style-type: none"> • Picture of your torso (2 pts) • Arrows labeling your shapes (4 pts) • Clip from Little Bits Workshop (be sure to give me permission to view) (3 pts) • Highlights (2 pts) • Hardships (2 pts) • Grammar/spelling (2 pts) 	15 pts		
	5	Your scale factor is $\frac{1}{2} in : 1 in$. This will be your scale factor for the entire project. Write it on your graph paper.	2 pts		
	6	Scale the length and width of your torso shapes using proportions. Show your work on Appendix 4. There is a sample completed for you on Appendix 4a.	8 pts		
	7	Use your scaled measurements to draw your creature on the graph paper accurately. Use <u>inches</u> . When drawing round your measurements to the nearest quarter inch. Be sure to draw your scale drawing as your creature looks. Your 3-dimensional shapes will be drawn as polygons on your graph paper. You may color your drawing, but it does not have to be colored in its final colors. Drawing must include: <ul style="list-style-type: none"> • 4 polygons (4 pts) 	23 pts		

		<ul style="list-style-type: none"> • All polygons labeled (like “rectangle”) Do NOT label them on your actual creature. (4 pts) • Accurate drawing with measurements from your scale calculation sheet (Appendix 4). (8 pts) • Neatness (3 pts) • Creativity and effort (see Appendix 5 for rubric) (4 pts) 			
	8	<p>Make your Slide #2. Sample is on Appendix 3 Include:</p> <ul style="list-style-type: none"> • Photo of your graph paper (2 pts) • Label shapes with arrows (2 pts) • Put your scale factor clearly on your slide (2 pts) • Highlights (2 pts) • Hardships (2 pts) • Grammar/spelling (2 pts) 	12 pts		
	9	<p>Find the perimeter and area of 2 of your polygons as they are drawn on your graph paper (not of the real creature). Measure in inches and round to the nearest quarter inch. Use Appendix 6 to show your work.</p>	6 pts		
	10	<p>Measure the actual length, width and height of the rectangular prism, which is on your creature. Record on Appendix 7.</p>	3 pts		
	11	<p>Use your measurements from #10 and calculate the surface area and volume of your rectangular prism. Show your work on Appendix 7.</p>	4 pts		
	12	<p>Write the surface area in the polygon on your drawing and label it SA = _____.</p>	2 pts		
	13	<p>Write the volume in the polygon on your drawing and label it V = _____.</p>	2 pts		
	14	<p>Add 1 obtuse, 1 acute, and 1 right triangle to the torso of your creature. These can be cut out of any material and do not need to be built in 3-D.</p>	6 pts		
	15	<p>Use your scale factor and proportions to determine the size of the triangles on your drawing. Do this on Appendix 8.</p>	6 pts		
	16	<p>Draw your triangles to scale on your graph paper.</p>	6 pts		
	17	<p>Find the perimeter of one of the 3 triangles on your graph paper (scale drawing, not actual</p>	3 pts		

		triangle). Show the calculations for the perimeter on Appendix 9.			
	18	Find the area of one of the 3 triangles on your graph paper (scale drawing, not actual drawing). Show the calculations for the area on Appendix 9.	3 pts		
	19	Measure the 3 angles of 1 of your triangles on your graph paper with a protractor. Clearly write each measurement at its angle on the graph paper.	6 pts		
	20	Make your Slide #3. (see sample on Appendix 3) Include: <ul style="list-style-type: none"> • Photo of your graph paper (2 pts) • Label your triangles with arrows (2 pts) • Circle the perimeter and area (2 pts) • Highlights (2 pts) • Hardships (2 pts) • Grammar/Spelling (2 pts) 	12 pts		
	21	Add 2 appendages to your creature. They should be 2 identical cylinders. You may add more than 2 if you want.	2 pts		
	22	Scale your cylinder by using your scale factor and showing your proportions for height and width on Appendix 10.	6 pts		
	23	Draw your appendages to scale on your drawing. They may look like rectangles because you are not drawing in 3-D.	4 pts		
	24	Make your Slide #4. (See sample on Appendix 3)Include: <ul style="list-style-type: none"> • Photo of your creature (2 pts) • Label appendages with arrows (2 pts) • Highlights (2 pts) • Hardships (2 pts) • Grammar/spelling (2 pts) 	10 pts		
	24	Add one sphere to your creature.	2 pts		
	25	Scale your sphere by using the diameter. Get the diameter by measuring the circumference and using the correct formula (use your reference sheet). Show your work on Appendix 11.	3 pts		
	26	Draw the sphere to scale on your drawing. It will look like a circle.	3 pts.		
	27	Calculate the circumference and area of the circle on your drawing (which represents your sphere). Use Appendix 11.	4 pts		

	28	Write $C = \underline{\hspace{2cm}}$ and $A = \underline{\hspace{2cm}}$ on your drawing.	2 pts		
	29	Add 2 identical circles (really flat cylinders) to your creature. (they are items like bottle lids, rings, coins, buttons).	4 pts		
	30	Scale the circles by measuring the diameter. Show your work on Appendix 12.	4 pts		
	31	Add the scaled circles to your drawing. Label them circle 1 and circle 2.	4 pts		
	32	Find the circumference and area of your circle on your drawing. Show your work on Appendix 12.	4 pts		
	33	Write $C = \underline{\hspace{2cm}}$ and $A = \underline{\hspace{2cm}}$ in your circles.	2 pts		
	34	Make your Slide #5. Include: <ul style="list-style-type: none"> • Photo of your creature (2 pts) • Label sphere, and circles with arrows (2 pts) • Highlights (2 pts) • Hardships (2 pts) • Grammar/spelling (2 pts) 	10 pts		
	35	Final creature: <ul style="list-style-type: none"> • Measurement check (10 pts) • 4 solids (4 pts) • 1 triangle (3 pts) • 2 appendages (3 pts) • Shere (2 pts) • 2 identical circles (2 pts) • Stands alone (5 pts) • Your name and creature's name on creatue (2 pts) • Stays together with no falling parts (6 pts) • Circuit included (5 pts) • Creative, as shown by: (8 pts) <ul style="list-style-type: none"> - Fun, lively, engaging - Visually exciting - Original ideas - Innovative - Imaginative 	50 pts		
	36	Make your final slide #6. (See sample in Appendix 3) Include: <ul style="list-style-type: none"> • Photo of your final creature (no labels necessary) (2 pts) • "Clip" of your Little Bits in action – be sure to give permission. In your clip describe how it works in your creature. (5 pts) 	17 pts		

		<ul style="list-style-type: none">• Final Reflection: in paragraph form, include your feelings about the project, what you learned, what you reviewed, what you practiced. (5 pts)• A quick summary of your story. (3 pts)• Grammar/spelling (2 pts)			
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