## 3D Force Diorama Rubric

	10 points	7 points	5 points	0 points
Written	All parts present and	1 or 2 of the following	3 or 4 of the following	5 or 6 of the following
Solution 1	correct	is missing:	is missing:	is missing:
or 2	Shows appropriate	Correct Answer	Correct Answer	Correct Answer
(possible	starting equations and	Starting Equations	Starting Equations	Starting Equations
10 points	step by step work	Complete Work – step	Complete Work – step	Complete Work – step
for each	Correct answer	by step	by step	by step
solution)	Correct units throughout	Correct algebra	Correct algebra	Correct algebra
	problem	Units	Units	Units
	Typed up/neatly written	Typed up/neatly	Typed up/neatly	Typed up/neatly
		written	written	written
Drawing	All parts present and	1 drawing missing or	2 drawings missing or	3 drawings or more
(possible	correct	incorrect	incorrect	missing or incorrect
10 points)	Situation Picture – a 2D	Missing 1 or 2 of the	Missing 3 or 4 of the	Missing 5 or 6 of the
	drawing	following:	following:	following:
	System Schema	Appropriately sized	Appropriately sized	Appropriately sized
	Force Diagram 1 –	vectors	vectors	vectors
	appropriately sized	Vectors in wrong	Vectors in wrong	Vectors in wrong
	vectors, labeled with	direction	direction	direction
	Agent-Object notation,	Missing forces	Missing forces	Missing forces
	correct angles	Missing connections	Missing connections	Missing connections
	Force Diagram 2 –	in system schema	in system schema	in system schema
	approp. sized vectors, A-	Missing labels	Missing labels	Missing labels
	O notation, correct	Missing Agent-Object	Missing Agent-Object	Missing Agent-Object
	angles	notation	notation	notation
	Scale values for size of	Typed up/Neatly	Typed up/Neatly	Typed up/Neatly
	vectors	drawn	drawn	drawn
	Typed up/neatly drawn			

	20 points	16 points	12 points	8 points
3D model	All parts present and	1 or 2 of the following	3 or 4 of the following	5 or 6 of the following
(possible	correct	are missing	are missing	are missing
20 points)	All force vectors	Force vectors – all	Force vectors – all	Force vectors – all
	included – vectors are	included, labeled, to	included, labeled, to	included, labeled, to
	appropriately sized,	scale	scale	scale
	labeled	Elements constructed	Elements constructed	Elements constructed
	Elements are constructed	to scale	to scale	to scale
	to scale	Neat/Well put together	Neat/Well put together	Neat/Well put together
	Neat/Well put together	Depicts situation	Depicts situation	Depicts situation
	model	correctly	correctly	correctly
	Correctly depicts	Meets size	Meets size	Meets size
	situation	requirements	requirements	requirements
	Meets size requirements			

## 3D Force Diorama Checklist

Т	S	Item		
		Written Solution for Object 1		
		Starting equations		
		Step by step work		
		Correct algebra		
		Correct answer		
		Units carried throughout		
		Typed up/neatly written		
1		Written Solution for Object 2		
		Written Solution for Object 2 Starting aquations		
	Starting equations           Step by step work			
	Correct algebra Correct answer			
		Units carried throughout		
		Typed up/neatly written		
L		Typed up/nearly written		
		Drawings		
		Situation Picture – 2D drawing		
		System Schema		
		Force Diagram 1		
		To scale vectors		
		Labels with agent-object notation		
		Correct angles		
		Force Diagram 2		
		To scale vectors		
		Labels with agent-object notation		
		Correct angles		
		Typed up/neatly drawn		
		3D Model		
		All force vectors		
		To scale size vectors		
		Labels with agent-object notation		
		Correct angles		
		Elements are constructed to scale		
		Correctly depicts situation		
		Meets size requirements		
		Neat/Well put together		

Category	Points	Comments
Written Solution 1	/10	
Written Solution 2	/10	
Drawing (2D picture, System Schema, FD1, FD2)	/10	
3D Model	/20	
Total	/50	