3D Force Diorama Rubric

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

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

3D Force Diorama Checklist

T	S	Item
		Written Solution for Object 1
		Starting equations
		Step by step work
		Correct algebra
		Correct answer
		Units carried throughout
		Typed up/neatly written
		Written Solution for Object 2
		Starting equations
		Step by step work
		Correct algebra
		Correct answer
		Units carried throughout
		Typed up/neatly 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**	