

Physical Model Rubric

0	1	2	3	4	5
No Points Requirements missing.	Poor Poor–Fair quality. Fulfills at least 20% of requirements.	Fair Fair–Average quality. Fulfills at least 50% of requirements.	Good Average quality. Fulfills at least 90% of requirements.	Very Good Above average quality. Fulfills 100% of requirements.	Excellent Excellent quality. Fulfills 100% of requirements. Additional distinctive features.

I. CITY DESIGN (20 POINTS)	0	1	2	3	4	5
1. City design <ul style="list-style-type: none"> Includes all zones: residential, commercial, industrial Clearly recognizable elements, identifiable structures, zones 	No evidence of zoning. No variety of structures.	Zoning unclear. Little variety of structures.	At least one zone; small variety of structures.	1–2 zones, some variety of structures.	2 or more zones and some variety of structures. Could be more comprehensive.	All 3 zones; very good variety of recognizable structures.
2. City infrastructure and services <ul style="list-style-type: none"> Includes essential infrastructure (water, roadways, power, utilities, etc.) Includes variety of essential city services (public safety, health, education, etc.) 	No infrastructure or services.	Shows very little infrastructure and services.	Few infrastructure or service components.	Some infrastructure and services. Not all essential to city operation.	Several infrastructure and services. Not all essential to city operation.	Several infrastructure and services essential to city operation.
3. Interconnectivity within city <ul style="list-style-type: none"> Interconnectivity of zones and infrastructure Transportation modes: pedestrian, public, good and services 	No interconnectivity.	Little interconnectivity.	Some interconnectivity, but some awkward design. Few transportation modes shown.	Adequate interconnectivity and transportation modes.	Good interconnectivity and illustration of transportation modes	Very good interconnectivity and illustration of transportation modes.
4. Model demonstrates theme: Feeding Future Cities (Urban Agriculture) <ul style="list-style-type: none"> Essay topic/theme incorporated into model Solutions for urban agriculture 	No illustration of problem or solution.	Little illustration of problem or solution.	Some illustration of problem and attempt at solution.	Fairly good illustration of urban agriculture solution.	Good overall illustration of the urban agriculture solution. Could be more comprehensive.	Excellent illustration and overall solution for urban agriculture problem.
II. BUILD IT: QUALITY & SCALE (15 POINTS)	0	1	2	3	4	5
5. Quality workmanship and age appropriateness <ul style="list-style-type: none"> Age appropriate for 6th, 7th, 8th grades Quality construction Reasonably durable 	Poor quality.	Mediocre quality.	Fair to good quality.	Good quality. Age appropriate.	Very good quality. Age appropriate.	Excellent quality. Age appropriate.
6. Appearance <ul style="list-style-type: none"> Use of color, graphics, shapes, etc. Realistic elements (flora, fauna, landscapes) Good use of available space 	No aesthetics.	Poor aesthetics.	Fair aesthetics.	Good aesthetics, enhance the model.	Very good aesthetics, enhance the model.	Excellent aesthetics, enhance the model.

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II. BUILD IT: QUALITY & SCALE (15 POINTS) (continued)	0	1	2	3	4	5
7. Model scale: _____ <ul style="list-style-type: none"> • Appropriate scale chosen to create a good city model • Consistent scale throughout model • Applied horizontally and vertically 	Scale not used.	Inconsistent scale for majority of model.	Fair scale choice. Some scale inconsistencies.	Good scale choice; city elements easy to identify. Scale consistently applied over majority of model.	Very good scale choice; city elements easy to identify. Consistent application.	Exceptional scale choice; city elements very easy to identify. Consistent application of chosen scale across entire model.
III. BUILD IT: MATERIALS AND MOVING PARTS (15 POINTS)	0	1	2	3	4	5
8. Innovative construction materials, techniques <ul style="list-style-type: none"> • Variety of materials, imaginative or unusual materials • Creative modification and application of recycled materials 	No creativity or innovation.	Very few creative materials or modifications.	Little creativity, variety. Little attempt to modify.	Some variety of innovative materials. Some creatively modified recycled materials.	Good variety of innovative materials. Many creative modifications of recycled materials and applications.	Exceptionally varied and innovative materials.
9. Moving part innovation and quality <ul style="list-style-type: none"> • At least one moving part • Quality workmanship, durability • Repeatability of movement • Innovative execution 	No moving part.	One moving part. Fair quality. One time movement.	One moving part. Good quality. Little innovation.	At least one moving part. Good quality. Repeatability. Somewhat innovative.	At least one moving part. Very good quality. Repeatability. Innovative.	More than one moving part. Excellent quality. Repeatability. Highly innovative.
10. Moving part relationship to the design or function of the city <ul style="list-style-type: none"> • At least one moving part • Closely related to function of the city 	No moving part.	Moving part cosmetic; not relevant to city function.	Moving part not relevant to city function.	At least one moving part closely related to city function.	At least one moving part intrinsic to city function.	More than one moving part essential to city function.

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IV. JUDGE ASSESSMENT OF MODEL (20 POINTS)	0	1	2	3	4	5
11. Well planned city <ul style="list-style-type: none"> Well planned city design; Considers livability concepts: <ul style="list-style-type: none"> Neighborhoods, green spaces, mixed use zones Interconnectivity throughout, transit options Sustainability and environmental elements Accessibility 	No planning.	Little planning. Little consideration of livability concepts.	Some planning is obvious. A few livability elements included.	Planned design. Incorporates some livability concepts.	Well planned design. Incorporates several livability elements.	Excellent planning. Excellent design. Highly livable.
12. Innovative solutions <ul style="list-style-type: none"> Innovative solutions to problems, such as: transportation, power, environment, services, urban agriculture, etc. Plausible, technologically sound 	No solutions.	One solution, not innovative.	One solution. Somewhat innovative.	More than one solution. Somewhat innovative and plausible.	More than one solution that is innovative.	Several innovative and plausible solutions.
13. Application of futuristic, advanced technologies and components <ul style="list-style-type: none"> Includes futuristic technologies, components, infrastructure Plausible extrapolations of technological/scientific advancements 	No futuristic examples.	1–2 futuristic examples. Artistic, but not technologically or scientifically sound.	Few futuristic examples. At least one technologically or scientifically sound.	Some futuristic examples, most of which are technologically and scientifically sound.	Several futuristic examples, many of which are technologically and scientifically sound.	Highly futuristic and based on sound technological and scientific principles.
14. Model effectiveness <ul style="list-style-type: none"> Functions as stand-alone representation of the city design Function and purpose of the model elements and their relationship to each other is evident on visual examination 	No effective representation.	Fair representation of a city. But for many elements, one asks “What is this and why is it here?”	Good representation of a city, however the function and purpose of many of the elements is not evident.	Good visual representation of a city, but purpose/function of some elements not evident.	Very good visual representation of a city. A few elements not obvious.	Extremely effective visual representation of a future city. Function and purpose of elements easy to understand.