

2018/2019

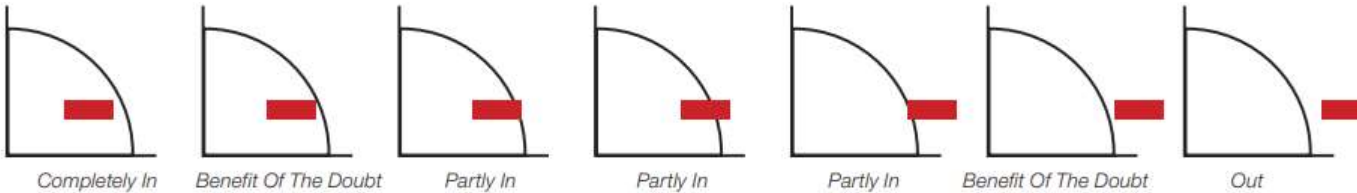
INTO ORBITSM Table Overview



#1 Into Orbit - Mission Brainstorming Sheet

1. Write down the rules, points, any limitations, and the location.
2. Brainstorm any strategies or mechanics for the missions.

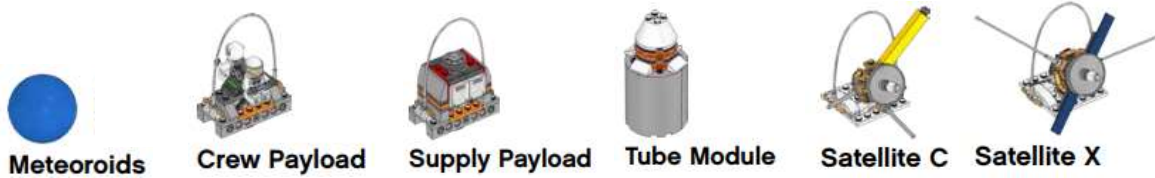
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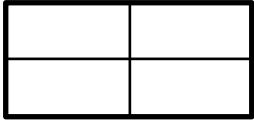
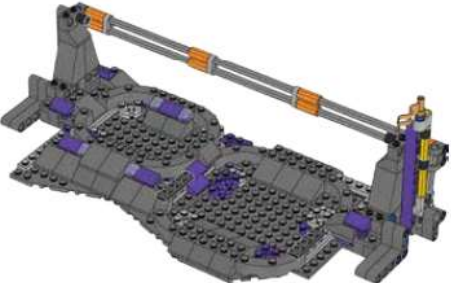
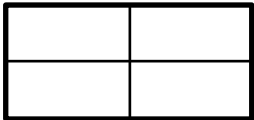
Scoring Requirement Signals

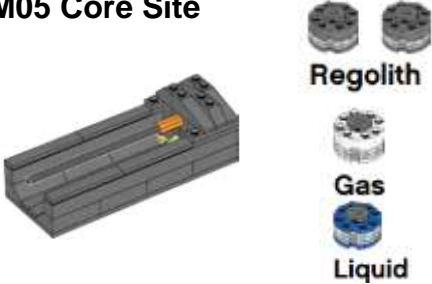



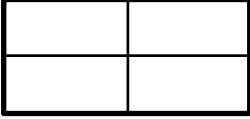

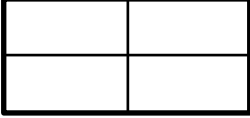
- ▶ Within the Mission descriptions, specific scoring requirements are written in **GREEN (bold)**.
- ▶ Methods with an asterisk "*" must be the **ONLY** ones used, and must be **OBSERVED** by the referee.
- ▶ Underlined **RESULTS/CONDITIONS** must be visible at the **END** of the match.

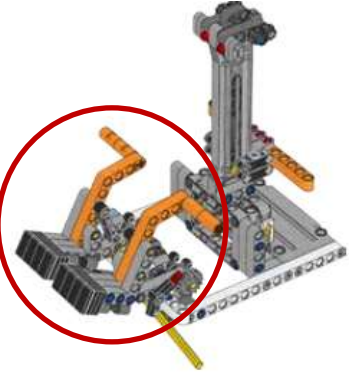

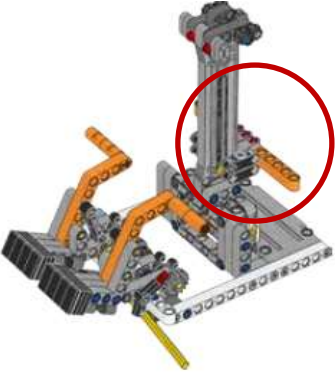
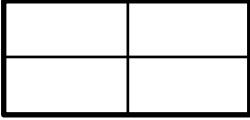


Base


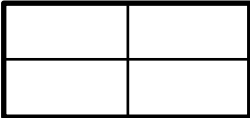
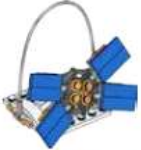


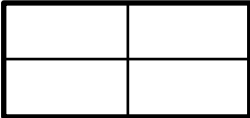
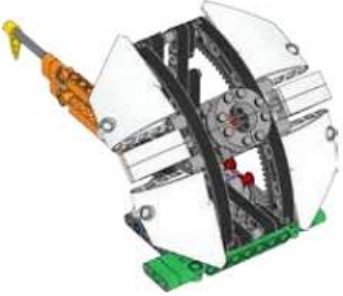
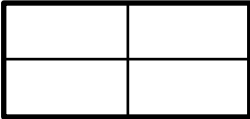





Element	Rules/Points	Location/Navigation	Mechanism
<p>M01 Space Travel Field</p> <p>Base</p>	<p>* Start each Payload clearly rolling down the Space Travel Ramp.</p> <p>• For each roll, the cart must * be Independent by the time it reaches the first track connection.</p> <p>• Vehicle Payload: 22 • Supply Payload: 14 • Crew Payload: 10</p>		

Element	Rules/Points	Location/Navigation	Mechanism
<p>M02 Solar Panel</p> 	<ul style="list-style-type: none"> • <u>Both Solar Panels are Angled toward the same Field:</u> 22 For Both Teams • <u>Your Solar Panel is Angled toward the other team's Field:</u> 18 		
<p>M03 3D Printer</p> 	<ul style="list-style-type: none"> • Eject the 2x4 Brick * by placing a Regolith Core Sample into the 3D Printer. • The 2x4 Brick ejected and <u>completely in the Northeast Planet Area:</u> 22 • OR The 2x4 Brick <u>ejected and not completely</u> in the Northeast Planet Area: 18 		
<p>M04 Crater</p> 	<ul style="list-style-type: none"> • All weight-bearing features of the crossing equipment must cross * <u>completely between the towers.</u> • Crossing must be * <u>from east to west, and make it completely past the flattened Gate:</u> 20 		

Element	Rules	Location/Navigation	Mechanism
<p>M05 Core Site</p>  <p>Regolith</p> <p>Gas</p> <p>Liquid</p>	<ul style="list-style-type: none"> • Move all <u>four Core Samples so they are no longer touching the axle that held them in the Core Site Model</u>: 16 • Place the Gas Core Sample so it is <u>touching the mat, and completely in the Lander's Target Circle</u>: 12 • OR Place the Gas Core Sample <u>completely in Base</u>: 10 • Place the Water Core Sample so it is <u>supported only by the Food Growth Chamber</u>: 8 		
<p>M06 Habitation Hub Base</p> <p>Field</p>  <p>Tube Module</p> <p>Dock Module</p> <p>Cone Module</p> 	<ul style="list-style-type: none"> • Inserted Modules must <u>not be touching anything except the Habitation Hub</u>. • Move the Cone Module <u>completely into Base</u>: 16 • Insert the Tube Module <u>into the Habitation Hub port, west side</u>: 16 • Transfer/Insert the Dock Module <u>into the Habitation Hub port, east side</u>: 14 		
<p>M07 Habitation Hub</p> 	<ul style="list-style-type: none"> • Move Gerhard so his body is <u>inserted at least partly into the Habitation Hub's Airlock Chamber</u>. • Completely In: 22 • OR Partly In: 18 		

Element	Rules	Location/Navigation	Mechanism
<p data-bbox="92 180 426 212">M08 Aerobic Exercise</p> 	<ul data-bbox="617 180 1058 716" style="list-style-type: none"> • Advance the Exercise Machine's Pointer along its Dial * by moving one or both of the Handle Assemblies. • Get the Pointer tip <u>completely in orange, or partly covering either of orange's end-borders:</u> 22 • OR Get the Pointer tip <u>completely in white:</u> 20 • OR Get the Pointer tip <u>completely in gray, or partly covering either of gray's end-borders:</u> 18 		
<p data-bbox="92 769 438 802">M09 Strength Exercise</p> 	<ul data-bbox="617 769 1052 915" style="list-style-type: none"> • Lift the Strength Bar <u>so the tooth-strip's 4th hole comes at least partly into view as shown:</u> 16 		
<p data-bbox="92 1192 422 1224">M10 Food Production</p> 	<ul data-bbox="617 1192 1010 1386" style="list-style-type: none"> • Spin the Food Growth Chamber's colors so the <u>gray weight is DROPPED after green, but before tan, * by moving the Push Bar:</u> 16 		

Element	Rules	Location/Navigation	Mechanism
<p>M11 Escape Velocity</p> 	<ul style="list-style-type: none"> • Get the spacecraft to go so fast and high that it <u>stays up, * by pressing/hitting the Strike Pad:</u> 24 		
<p>M12 Satellite Orbits Field</p>  <p>Satellite V</p> <p>Base</p>  <p>Satellite C</p>  <p>Satellite X</p>	<ul style="list-style-type: none"> • Move any part of a Satellite <u>on or above the area between the two lines of the Outer Orbit:</u> 8 Each 		
<p>M13 Observatory</p> 	<ul style="list-style-type: none"> • Get the pointer tip <u>completely in orange, or partly covering either of orange's end-borders:</u> 20 • OR Get the pointer tip <u>completely in white:</u> 18 • OR Get the pointer tip <u>completely in gray, or partly covering either of gray's end-borders:</u> 16 		

Element	Rules	Location/Navigation	Mechanism
<p>M14 Meteoroid Deflection <u>Base</u> <u>Field</u></p> 	<ul style="list-style-type: none"> • Send Meteoroids * over the <u>Free-Line to touch the mat in the Meteoroid Catcher.</u> • The Meteoroids must be hit/released while they are * clearly and completely west of the Free-Line. • While between hit/release and scoring position, the Meteoroid * must be clearly Independent. • Meteoroids in the Center Section: 12 Each • Meteoroids in Either Side Section: 8 Each <p><i>If ever the Ring-Set Meteoroid is off its Ring, you may remove the Ring from the Field by hand (this is a special exception to the Rules)</i></p>		
<p>M15 Lander Touch-Down</p> 	<ul style="list-style-type: none"> • Move the Lander to be <u>intact, touching the Mat, and completely in its Target Circle:</u> 22 • OR Move the Lander to be <u>intact, touching the Mat, and completely in the Northeast Planet Area:</u> 20 • OR Move <u>both parts of the Lander completely into Base:</u> 16 <p><i>The Lander is "Intact" if its parts are connected by at least two of its four tan location axles.</i></p>	