

Attachment-2: Available Items (1/13)

No.1



**Blocks
Weight Kit (Blocks)**

Material

Aluminum, Steel, Polymer, Wood

Size

L 30 x W 30 x H 30 [mm]

Mass

Aluminum : 73 [g]
Steel : 210 [g]
Polymer : 38 [g]
Wood : 12 [g]

Quantity

1 set

Reference

- [Astronaut Hoshide, 2012](#)
(3:13-5:10, 7:00-7:48)
- [Astronaut Wakata, 2014](#)
(7:43-12:29)
- [Astronaut Yui, 2014](#)
- [Astronaut Kanai, 2018](#)

No.2



Mass Comparison Kit (Balls)

Material

Aluminum, Polyethylene, Vinyl,
Rubber, Wood, Steel

Size

dia. 27 [mm]

Mass

Aluminum : 40 [g]
Polyethylene : 14 [g]
Vinyl : 20 [g]
Rubber : 21 [g]
Wood : 9 [g]
Steel : 110 [g]

Quantity

2 sets

Reference

- [Astronaut Yui, 2015](#)
- [Astronaut Onishi, 2016](#)
- [Astronaut Onishi, 2016](#)
- [Astronaut Kanai, 2018](#)

No.3



Compass

Material

Aluminum

Size

L 73 x W 54 x H 23 [mm]

Mass

66 [g]




Quantity

1




Reference

[Astronaut Furukawa, 2011](#)



Attachment-2: Available Items (2/13)

No.4	No.5	No.6
 <p style="text-align: center;">Slinky</p> <p><u>Material</u> Steel</p> <p><u>Size</u> dia. 40 x L 32 [mm] (Inside dia. 37 [mm])</p> <p><u>Mass</u> 46 [g]</p> <p><u>Quantity</u> 1</p> <p><u>Reference</u> <ul style="list-style-type: none"> • Astronaut Yui, 2015 • Astronaut Kanai, 2018 </p>	 <p style="text-align: center;">Spring Kit (Springs, Weights)</p> <p><u>Material</u> Steel</p> <p><u>Size</u> Large Spring : dia. 14 x L 91 [mm] Medium Spring : dia. 9 x L 75 [mm] Small Spring : dia. 5 x L 46 [mm] Weight : dia. 20 x L 9 [mm] (include hooks: L 29 x W 20 x H 20 [mm])</p> <p><u>Mass</u> Large Spring : 17 [g] Medium Spring : 6 [g] Small Spring : 1.25 [g] Weight : 25 [g]</p> <p><u>Quantity</u> 1 set (Spring: each 1, Weight: 3)</p> <p><u>Reference</u> Astronaut Furukawa, 2011</p>	 <p style="text-align: center;">Spring Balance</p> <p><u>Material</u> Case: Acrylic resin, Spring: Steel</p> <p><u>Size</u> L 30 x W 250 x H 20 [mm]</p> <p><u>Mass</u> 69 [g]</p> <p><u>Quantity</u> 1</p> <p><u>Reference</u> <ul style="list-style-type: none"> • Astronaut Hoshide, 2012 (0:00-1:34) </p>

Attachment-2: Available Items (3/13)

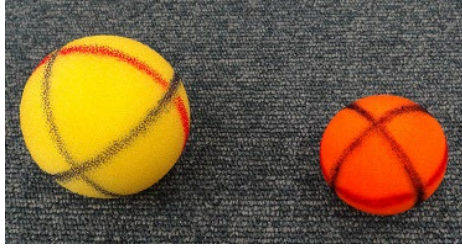
No.7	No.8	No.9
		
<p>Ink Brush</p>	<p>Origami Paper</p>	<p>Star Chart</p>
<p><u>Material</u> Polyester</p>	<p><u>Material</u> Paper</p>	<p><u>Material</u> Plastic</p>
<p><u>Size</u> L 234 x W 9 x H 5 [mm]</p>	<p><u>Size</u> L 150 x W 150 x H 0.1 [mm]</p>	<p><u>Size</u> L 273 x W 276 x H 1 [mm]</p>
<p><u>Mass</u> 5 [g]</p>	<p><u>Mass</u> 1 [g]</p>	<p><u>Mass</u> 68 [g]</p>
<p><u>Quantity</u> 1</p>	<p><u>Quantity</u> 3 sets</p>	<p><u>Quantity</u> 1</p>
<p><u>Reference</u></p> <ul style="list-style-type: none"> • Astronaut Wakata, 2014 (0:00-2:23, 7:43-12:29) • Astronaut Yui, 2015 • Astronaut Kanai, 2018 	<p><u>Reference</u></p> <ul style="list-style-type: none"> • Astronaut Furukawa, 2011 	<p><u>Reference</u></p> <ul style="list-style-type: none"> • Astronaut Yui, 2018

Attachment-2: Available Items (4/13)

<p style="text-align: center;">No.10</p>  <p style="text-align: center;">Tape measure</p> <p><u>Material</u> Case: Plastic, Tape: Vinyl</p> <p><u>Size</u> L 52 x W 52 x H 17 [mm] (Tape length: 1.5 [m])</p> <p><u>Mass</u> 27 [g]</p> <p><u>Quantity</u> 1</p>	<p style="text-align: center;">No.11</p>  <p style="text-align: center;">Ttpe Top</p> <p><u>Material</u> Wood</p> <p><u>Size</u> dia. 26 x L 34 [mm]</p> <p><u>Mass</u> 8 [g]</p> <p><u>Quantity</u> 2</p> <p><u>Reference</u> Astronaut Kanai, 2018</p>	<p style="text-align: center;">No.12</p>  <p style="text-align: center;">Gyroscope</p> <p><u>Material</u> Steel</p> <p><u>Size</u> dia. 61 x L 87 [mm] (Thread length: 500 [mm])</p> <p><u>Mass</u> 80 [g]</p> <p><u>Quantity</u> 2</p> <p><u>Reference</u> Astronaut Kanai, 2018</p>
---	---	--

Attachment-2: Available Items (5/13)

No.13



Sponge Ball

Material
Polyurethane



Size
Yellow: dia. 75 [mm]
Orange 1: dia. 50 [mm]
Orange 2: dia. 26 [mm]

Mass
Yellow: 6.3 [g]
Orange 1: 1.2 [g]
Orange 2: 0.22 [g]

Quantity
Yellow: 1
Orange 1: 1
Orange 2: 2

Reference
• [Astronaut Onishi, 2016](#)
• [Astronaut Kanai, 2018](#)

No.14



Plastic Syringe

Material
Plastic

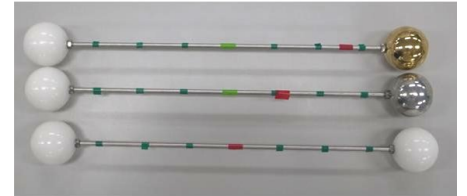
Size
30ml: L 139 x W 40 D 29 [mm]
50ml: L 144 x W 47 D 35 [mm]

Mass
30ml: 20 [g]
50ml: 24 [g]

Quantity
30ml: 2
50ml: 5

Reference
• [Astronaut Onishi, 2016](#)
• [Astronaut Onishi, 2016](#)

No.15



Rotator Pack

(Weights attached bar's both ends)

Material
Bar: Steel,
Ball: Plastic, Aluminum, Brass

Size
dia. 30 x L 267 [mm]

Mass
Plastic – Plastic : 52 [g]
Plastic – Aluminum: 73 [g]
Plastic – Brass : 151 [g]

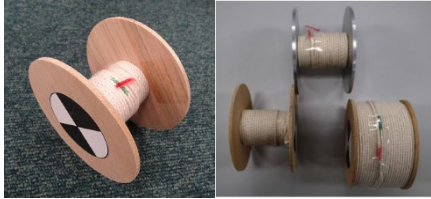
*Individual Mass
Bar : 14 [g]
Plastic Ball : 19 [g]
Aluminum Ball: 40 [g]
Brass Ball : 118 [g]

Quantity
3

Reference
• [Astronaut Wakata, 2022](#)

Attachment-2: Available Items (6/13)

No.16



Spool Pack (Spools)

Material

Wood, Aluminum, Cotton

Size

dia. 90 x L 56 [mm]

Mass

Wood : 45 [g]/123 [g] (thick roll)

Aluminum : 129 [g]

Quantity

3

No.17



Parachute Pack (Parachute, Weights)

Material

Parachute: Nylon

Weight: Wood and Brass

Size

Parachute : dia. 430 x L 430 [mm]

Wood Weight : dia. 30 x L 45 [mm]

Brass Weight : dia. 30 x L 45 [mm]

Mass

Parachute : 19 [g]

Wood Weight : 14 [g]

Brass Weight : 123 [g]

Quantity

1 set

No.18



Flapping Bird

Material

Plastic

Size

L 260 x W 160 x H 40 [mm]

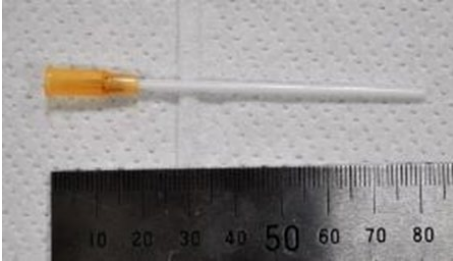


Mass

11 [g]




Quantity

1

Attachment-2: Available Items (7/13)

No.19	No.20	No.21
 <p style="text-align: center;">Syringe Adapter</p>	 <p style="text-align: center;">Wire Top (Type A, B, C)</p>	 <p style="text-align: center;">Acrylic Stick experiment kit</p>
<p><u>Material</u> Plastic</p> <p><u>Size</u> L 82 x W 8 x D 6 [mm]</p> <p><u>Mass</u> 0.4 [g]</p> <p><u>Quantity</u> 2</p>	<p><u>Material</u> Copper</p> <p><u>Size</u> Wire: 2 [mm] Type A: dia. 81 x H 2.1 [mm] Type B: dia. 81 x H 4.8 [mm] Type C: dia. 83 x H 3.8 [mm]</p> <p><u>Mass</u> Type A: 6.49 [g] Type B: 8.11 [g] Type C: 11.87 [g]</p> <p><u>Quantity</u> 1 set</p> <p><u>Reference</u> Astronaut Kanai, 2018</p>	<p><u>Material</u> Acrylic, Crude rubber</p> <p><u>Size</u> L 250 x W 250 x H 17 [mm]</p> <p><u>Mass</u> 17 [g]</p> <p><u>Reference</u> Astronaut Furukawa, 2023</p>

Attachment-2: Available Items (8/13)

No.22	No.23	No.24
		
<p>Acrylic stick</p>	<p>Crude rubber</p>	<p>Two ball string experiment kit</p>
<p><u>Material</u> Acrylic</p>	<p><u>Material</u> <u>Crude rubber</u></p>	<p><u>Material</u> Aluminum, Nomex</p>
<p><u>Size</u> L 250 x W 6 x H 6 [mm]</p>	<p><u>Size</u> L 50 x W 50 x H 2 [mm]</p>	<p><u>Size</u> L 20 x W 645 x H 20 [mm]</p>
<p><u>Mass</u> 8.5 [g]</p>	<p><u>Mass</u> 0.2 [g]</p>	<p><u>Mass</u> 24 [g]</p>
		<p><u>Reference</u> Astronaut Furukawa, 2023</p>

Attachment-2: Available Items (9/13)

No.25



Aluminum ball

Material
Aluminum

Size
L 20 x W 20 x H 20 [mm]

Mass
11 [g]

No.26



Nomex rope

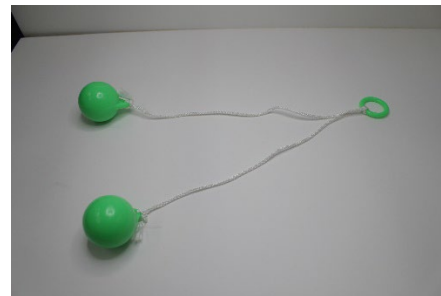
Material
Nomex

Size
L 1000 (As required) x W 3 x H 0.5 [mm]

Mass
1.5 [g]

Reference
[Astronaut Furukawa, 2023](#)

No.27



Rope clackers

Material
Plastic

Size
L 47 x W 549 x H 47 [mm]

Mass
60 [g]

Reference
[Astronaut Furukawa, 2023](#)

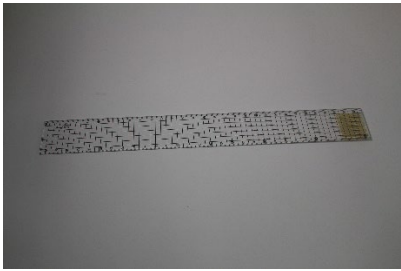


Attachment-2: Available Items (10/13)

No.28	No.29	No.30
		
<p>Stick clackers</p>	<p>Magnet</p>	<p>Magnus Glider experiment kit (cup)</p>
<p><u>Material</u> Plastic</p>	<p><u>Material</u> Magnet</p>	<p><u>Material</u> Paper</p>
<p><u>Size</u> L 180 x W 550 x H 25 [mm]</p>	<p><u>Size</u> L 50 x W 9 x H 9 [mm]</p>	<p><u>Size</u> L 80 x W 240 x H 80 [mm]</p>
<p><u>Mass</u> 24 [g]</p>	<p><u>Mass</u> 24 [g]</p>	<p><u>Mass</u> 17 [g]</p>
<p><u>Reference</u> Astronaut Furukawa, 2023</p>	<p><u>Reference</u> Astronaut Furukawa, 2023</p>	<p><u>Reference</u> Astronaut Furukawa, 2023</p>

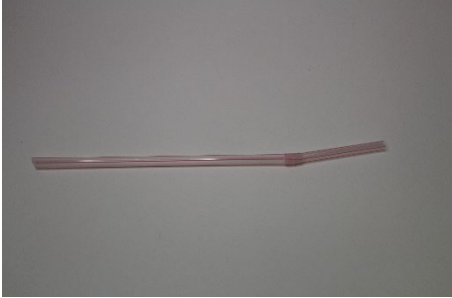

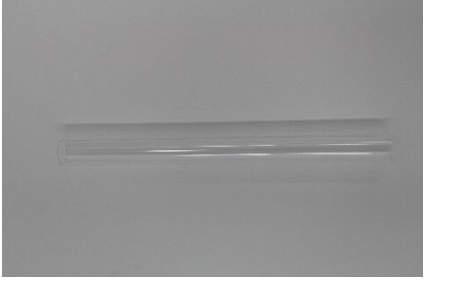
Attachment-2: Available Items (11/13)

No.31	No.32	No.33
 <p data-bbox="108 616 491 678">Magnus Glider experiment kit (Crude rubber)</p> <p data-bbox="73 710 236 768"><u>Material</u> Crude rubber</p> <p data-bbox="73 801 357 860"><u>Size</u> L 1 x W 225 x H 2 [mm]</p> <p data-bbox="73 893 153 952"><u>Mass</u> 0.5 [g]</p> <p data-bbox="73 985 392 1043"><u>Reference</u> Astronaut Furukawa, 2023</p>	 <p data-bbox="751 622 810 656">Cup</p> <p data-bbox="544 687 646 745"><u>Material</u> Paper</p> <p data-bbox="544 779 858 837"><u>Size</u> L 80 x W 120 x H 80 [mm]</p> <p data-bbox="544 871 614 929"><u>Mass</u> 8 [g]</p>	 <p data-bbox="1161 734 1401 768">Colored water bag</p> <p data-bbox="1037 799 1139 857"><u>Material</u> PVC</p> <p data-bbox="1037 891 1353 949"><u>Size</u> L 250 x W 130 x H 2 [mm]</p> <p data-bbox="1037 983 1123 1041"><u>Mass</u> 237 [g]</p> <p data-bbox="1037 1075 1356 1133"><u>Reference</u> Astronaut Furukawa, 2023</p>

Attachment-2: Available Items (12/13)

No.34	No.35	No.36
		
Ruler	Lint free wipe	Colored Water Container
<u>Material</u>	<u>Material</u>	<u>Material</u>
Acrylic	Paper	Polyethylene, colored water
<u>Size</u>	<u>Size</u>	<u>Size</u>
L 35 x W 311 x H 4 [mm]	L 325 x W 385 x H 1 [mm]	L 50 x W 50 x H 60 [mm]
<u>Mass</u>	<u>Mass</u>	<u>Mass</u>
27 [g]	9.3 [g]	91 [g]
<u>Reference</u>	<u>Reference</u>	<u>Reference</u>
Astronaut Furukawa, 2023	Astronaut Furukawa, 2023	Astronaut Furukawa, 2023
Astronaut Furukawa, 2023	Astronaut Furukawa, 2023	Astronaut Furukawa, 2023

Attachment-2: Available Items (13/13)

No.37	No.38	No.39
		
Straw	3 cm pipe	1 cm pipe
<u>Material</u> Plastic	<u>Material</u> Acrylic	<u>Material</u> Acrylic
<u>Size</u> L 50 x W 50 x H 60 [mm]	<u>Size</u> L 150 x W 32 x H 32 [mm]	<u>Size</u> L 150 x W 12 x H 12 [mm]
<u>Mass</u> 0.3 [g]	<u>Mass</u> 19 [g]	<u>Mass</u> 7 [g]
<u>Reference</u> Astronaut Furukawa, 2023	<u>Reference</u> Astronaut Furukawa, 2023	<u>Reference</u> Astronaut Furukawa, 2023