



Properties (JSON keys) are described in **objects**

specification	key	values
data type	“type”	“string”, “number”, “boolean” “array”, “object
entry format	“format”	“date” “email” ...
mandatory properties	“required”	array of properties
controlled list / vocabulary	“enum”	array of values



Properties (JSON keys) are described in **objects**

specification	key	values
data type	"type"	"string", "number", "boolean", "array", "object", "null"
enum	"enum"	array of values
mandatory properties	"required"	array of properties
controlled list / vocabulary	"enum"	array of values



www.json-schema.org



Everyone documents
their metadata
differently!
It's not comparable!

We need to
harmonize the
metadata records.



Questions?



Meanwhile in your collaboration



JSON < >

```
{
  "experimentalConditions": {
    "ride": {
      "rideType": "roller coaster",
      "rideName": "Flight of the Bat",
      "location": "Gotham City, New Jersey"
    },
    "testPerson": {
      "sex": "male",
      "height": 180
    },
    "recording": {
      "testDevice": "iPhone X",
      "testDeviceFixture": "left upper arm",
      "testApp": "Physics Toolbox Suite by Vieyra Software"
    }
  }
}
```

Meanwhile in your collaboration



JSON < >

```
{
  "experimentalConditions": {
    "ride": {
      "rideType": "roller coaster",
      "rideName": "Flight of the Bat",
      "location": "Gotham City, New Jersey"
    },
    "testPerson": {
      "sex": "male",
      "height": 180
    },
    "recording": {
      "testDevice": "iPhone X",
      "testDeviceFixture": "left upper arm",
      "testApp": "Physics Toolbox Suite by Vieyra Software"
    }
  }
}
```

Let's distribute the schema definitions among us.

CHALLENGE 4:

JSON Schema

In the following code block you see the JSON schema draft for the experimental conditions. Your collaborators already modelled constraints and valid values for `ride` and `testPerson`.

Discuss and add constraints to `recording` property.

- `testDevice`, `testDeviceFixture` and `testApp` are **mandatory properties** for the `recording` object
- `testDevice` value must be one of:
 - `iPhone X`
 - `iPhone 6`
 - `iPhone 6s`
 - `other`
- `testApp` value must be one of:
 - `Physics Toolbox Suite by Vieyra Software`
 - `Bunny Rollercoaster Physics App`
- `testDeviceFixture` value must be one of:
 - `left upper arm`
 - `right upper arm`
 - `mouth fixture device`
 - `other`

CHALLENGE 5:

Form Input & Validation with JSON Schema

```
1  {  
2    "title": "Sample JSON schema title",  
3    "description": "Sample description. Schema validates a JSON object entry",  
4    "type": "object",  
5    "required": [  
6      "fileName",  
7      "abstract",  
8      "format",  
9      "creator",  
10     "date",  
11     "experimentalConditions",  
12     "columns"  
13   ],  
14   "properties": {  
15     "fileName": {  
16       "description": "Name of the described data file or set.",  
17       "type": "string",  
18       "minLength": 1  
19     },  
20     "abstract": {  
21       "description": "A free text abstract of the experimental setup.",  
22       "type": "string",  
23       "minLength": 24  
24     },  
25     "format": {  
26       "description": "The Internet Media Type of the resource, MIME Type.",  
27       "type": "string",  
28       "enum": [  
29         "text/csv",  
30         "video/mp4",  
31         "text/markdown",  
32         "image/png",  
33         "other"  
34       ]  
35     }  
36   }  
37 }
```



Sample JSON schema title

Sample description. Schema validates a JSON object entry for the DC shared universe repository.

fileName*
Name of the described data file or set.

abstract*
A free text abstract of the experimental setup.

format*
The Internet Media Type of the resource, MIME Type.

creator*
An array of people (1-n) primarily responsible for making the resource.

creatorName
The name of the creator, a person.

creatorAffiliation
The name of the institute the creator is working for.