

uri "<http://sabl.org/ScientificConcepts2.sabl>" alias **scicncpts2**.

Derivative is a type of **ScientificConcept**,
described by **derivativeOf** with a single value of type **ScientificConcept**,
described by **withRespectTo** with a single value of type class.

Time is a type of **UnittedQuantity**.

Length is a type of **UnittedQuantity**.

Position is a type of **UnittedQuantity**,
described by **x-coordinate** with values of type **Length**,
described by **y-coordinate** with values of type **Length**,
described by **z-coordinate** with values of type **Length**,
described by **^time** with values of type **Time**.

Mass is a type of **UnittedQuantity**.

PhysicalObject is a class,
described by **mass** with values of type **Mass**,
described by **position** with values of type **Position**.

Velocity is a type of {**UnittedQuantity** and **Derivative**}.
derivativeOf of **Velocity** only has values of type **Position**.
withRespectTo of **Velocity** always has value ^time.
velocity describes **PhysicalObject** with values of type **Velocity**.

Acceleration is a type of {**UnittedQuantity** and **Derivative**}.
derivativeOf of **Acceleration** only has values of type **Velocity**.
withRespectTo of **Acceleration** always has value ^time.
acceleration describes **PhysicalObject** with values of type **Acceleration**.

Momentum is a type of {**UnittedQuantity** and **Derivative**}.
momentum describes **Mass** with values of type **Momentum**.
Rule **momentumOfPhysicalObject**:
if **o** is a **PhysicalObject** with **velocity v** and
p is a **Momentum** with ^value (^value of mass of o * ^value of
velocity of o),
with **unit unitResolver**("*", unit of mass of o, unit of
velocity of o)
then **momentum** of **o** is **p**.

Force is a type of {**UnittedQuantity** and **Derivative**}.
derivativeOf of **Force** only has values of type **Momentum**.
withRespectTo of **Force** always has value ^time.
force describes **Mass** with values of type **Force**.

External **unitResolver**(string **operation**, string **u**, ...)
returns string: "<http://sabl.org/unitSelector>".