uri "http://sadl.org/ScientificConcepts3.sadl" alias **scicncpts3**.

Derivation is a class,
    described by **derivedFrom** with a single value of type **ScientificConcept**,
    described by **produces** with a single value of type **ScientificConcept**,
    described by **withRespectTo** with a single value of type class,
    described by **^order** with a single value of type int.

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**.
VelocityFromPosition is a type of **Derivation**.
derivedFrom of **VelocityFromPosition** has exactly 1 value of type **Position**.
produces of **VelocityFromPosition** has exactly 1 value of type **Velocity**.
withRespectTo of **VelocityFromPosition** always has value **^time**.
^order of **VelocityFromPosition** always has value 1.
velocity describes **PhysicalObject** with values of type **Velocity**.

Acceleration is a type of **UnittedQuantity**.
AccelerationFromVelocity is a type of **Derivation**.
derivedFrom of **AccelerationFromVelocity** has exactly 1 value of type **Velocity**.
produces of **AccelerationFromVelocity** has exactly 1 value of type **Acceleration**.
withRespectTo of **AccelerationFromVelocity** always has value **^time**.
^order of **AccelerationFromVelocity** always has value 1.
AccelerationFromPosition is a type of **Derivation**.
derivedFrom of **AccelerationFromPosition** has exactly 1 value of type **Position**.
produces of **AccelerationFromPosition** has exactly 1 value of type **Acceleration**.
withRespectTo of **AccelerationFromPosition** always has value **^time**.
^order of **AccelerationFromPosition** always has value 2.
acceleration describes **PhysicalObject** with values of type **Acceleration**.

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

Force is a type of **UnittedQuantity**.
ForceFromMomentum is a type of **Derivation**.
derivedFrom of **ForceFromMomentum** has exactly 1 value of type **Momentum**.
produces of **ForceFromMomentum** has exactly 1 value of type **Force**.

withRespectTo of **ForceFromMomentum** always has value **^time**.
^order of **ForceFromMomentum** always has value 1.
force describes **PhysicalObject** with values of type **Force**.

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