Science Grade 8
Physical Science: Forces, Fluids, and Density (FD)

Outcome		1 - Beginning The student is having difficulty demonstrating an understanding of the concept.	2 – Approaching The student is developing an understanding of the concept.	3 – Meeting The student consistently demonstrates an understanding of the concept or has achieved the concept.	4- Exemplary The student independently demonstrates an in-depth understanding of the concept, and consistently applies this knowledge to new situations.
FD8.1 **I can investigate and represent the density of solids, liquids, and gases based on the particle theory of matter.**	**Investigate**	• I can **carry out simple processes** to illustrate the relationship between mass, volume, and density of solids, liquids, and gases based on the particle theory of matter.	• I can **carry out simple processes with some accuracy** to illustrate the relationship between mass, volume, and density of solids, liquids, and gases based on the particle theory of matter.	• I can **carry out processes accurately** to illustrate the **relationship between mass, volume, and density** of solids, liquids, and gases based on the particle theory of matter.	• I can **design and carry out an accurate investigation** to illustrate the relationship between mass, volume, and density of solids, liquids, and gases based on the particle theory of matter.
	Represent	• **With developing accuracy**, and **with help**, I can **record and interpret data** related to the density of solids, liquids, and gases based on the particle theory of matter.	• **With developing accuracy**, I can **record and interpret data** related to the density of solids, liquids, and gases based on the particle theory of matter.	• I can **accurately record and interpret data** related to the density of solids, liquids, and gases based on the particle theory of matter.	• I can accurately record, interpret, and **evaluate** data related to the density of solids, liquids, and gases based on the particle theory of matter.
Comments					

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FD8.2 **I can examine the effects of forces in and on objects in fluids, including the buoyant force.**	• **With help**, I can **identify some** effects that forces have in **OR** on objects that are in fluids, including the force of buoyancy	• I can **identify some** effects that forces have in **OR** on objects that are in fluids, including the force of buoyancy.	• I can demonstrate the effects that forces have in **AND** on objects that are in fluids, **including the force of buoyancy.**	• I can **apply** my knowledge of the effects that forces have in **AND** on objects that are in fluids, including the force of buoyancy, **to real world situations**.
Comments				

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FD8.3 **I can investigate and describe physical properties of fluids (liquids and gases), including viscosity and compressibility.**	**Investigate**	• I can carry out **simple processes** that describe **a few physical properties of fluids**, including viscosity **OR** compressibility.	• I can carry out **simple processes with developing accuracy** that describe **a few physical properties of fluids**, including viscosity **OR** compressibility.	• I **can carry out processes accurately that describe the physical properties of fluids, including viscosity AND compressibility**.	• I **can design and carry out an accurate investigation** that describes the physical properties of fluids, including viscosity **AND** compressibility.
	Describe	• **With help** I can **describe a few of** the physical properties of fluids, including viscosity **OR** compressibility.	• I can **describe a few of** the physical properties of fluids, including viscosity **OR** compressibility.	• I can **describe in detail** the physical properties of fluids, **including viscosity AND compressibility.**	• I can **confidently** make connections between the physical properties of fluids, **including viscosity AND compressibility and** the particle theory of matter.
Comments					

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FD8.4 **I can identify and interpret the scientific principles underlying the functioning of natural and constructed fluid systems.**	**Identify**	• **With help,** I can identify some of the scientific principles behind the mechanics of natural and man-made fluid systems.	• I can **identify some of** the scientific principles behind the mechanics of natural and man-made fluid systems.	• I can **explain** with examples the scientific principles behind the mechanics of natural **AND** man-made fluid systems.	• I can compare natural **AND** man-made fluid systems using scientific principles.
	Interpret	• **With help**, I can model the effective functioning of natural and man-made fluid systems by designing and **explaining** a prototype, using **SOME** given criteria.	• I can model the effective functioning of natural and man-made fluid systems by designing and **describing** a prototype, using **MANY** given criteria.	• I can model the effective functioning of natural and man-made fluid systems **by designing and explaining a prototype, using ALMOST ALL given criteria.**	• I can model the effective functioning of natural and man-made fluid systems **by designing, constructing, testing and modifying a prototype, using ALL given criteria.**
Comments					