Science Grade 4 Physical Science: Sound (SO)					
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.
SO4.1 Explore natural and artificial sources of sound in the environment and how those sounds are detected by humans and animals.	**Explore natural and artificial sources of sound**	• **I can carry out simple processes** to identify some natural and artificial sources of sound in the environment.	• **I can carry out simple processes with some accuracy** to **identify some natural and artificial sources of sound** in the environment and how these sounds affect daily life.	• **I can carry out processes accurately** to differentiate between natural and artificial sounds in the environment.	• **I can design and carry out a process** to **make predictions about the importance of natural and artificial sound** in daily life.
	Explore how sounds are detected by humans	• **I can carry out simple processes** to explain how humans and animals detect sounds.	• **I can carry out simple processes with some accuracy to** explain how humans and animals detect sounds.	• **I can carry out processes accurately compare** how humans and animals detect sounds.	• **I can design and carry out a process** to **make predictions about how structural modifications** might affect hearing in people or animals, using the scientific process.
Comments					

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SO4.2 **Draw conclusions about the characteristics and physical properties of sound, including pitch and loudness, based on observation.**	• I can **make some generalizations about** characteristics of sound including pitch and loudness as learned through observation, **with help.** • I can **make generalizations about** the physical properties of sound including pitch and loudness as learned through observation, **with help.** • I can **carry out processes to** predict how sound reacts when traveling through or interacting with different substances.	• I can **make some generalizations about the characteristics of sound**, as learned through observation. • I can make **some** generalizations **about the physical properties** of sound as learned through observation. • I can **carry out processes with some accuracy to** predict how sound reacts when traveling through or interacting with different substances.	• I can make generalizations about the characteristics of sound, **including pitch and loudness**, as learned through observation. • **I can make generalizations about the physical properties** of sound including pitch and loudness as learned through observation. • I **carry out processes accurately** to predict how sound reacts when traveling through and interacting with different substances.	• I can **compare** my observations about the characteristics of sound, including pitch and loudness, **with that of scientific research**. • I can **compare my observations** about the physical properties of sound, including pitch and loudness, with that of scientific research. • I can **design and carry out an accurate investigation** to **compare** how sound reacts when traveling through and interacting with different substances.
Comments				

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SO4.3 **Assess personal, societal, and environmental impacts of sound-related technologies.**	**Personal impact**	• **With help**, I can identify some positive and negative impacts of sound-related technologies on people.	• I can **identify some positive and negative impacts** of sound-related technologies on people.	• I can **explain the positive and negative impacts of** sound-related technologies **on people.**	• **I can recommend a** sound-related technology for my own use, with examples and details for support.
	Societal impact	• **With help**, I can identify some positive and negative impacts of sound-related technologies on society.	• I can **identify some positive and negative impacts** of sound-related technologies on society.	• I can **explain** the positive and negative impacts of sound-related technologies **on society.**	• **I can recommend a** sound-related technology for use in society, with examples and details for support.
	Environmental Impact	• **With help**, I can **identify a few** positive and negative impacts of sound-related technologies on the environment.	• I can **identify some positive and negative impacts** of sound-related technologies on the environment.	• I can **explain** the positive and negative impacts of sound-related technologies **on the environment.**	• **I can recommend a** sound-related technology for use in the environment with minimal negative impact, with examples and details for support.
Comments					