Science Grade 8
Physical Science: Optics and Vision (OP)

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.
OP8.1 **I can identify and describe, through experimentation, sources and properties of visible light including:** ○ **rectilinear propagation** ○ **reflection** ○ **refraction**	• I can identify natural and artificial sources of light**, with help.**	• I can **identify** natural and artificial sources of light.	• I can **identify and describ**e natural and artificial sources of light.	• I can **compare** natural and artificial sources of light using **detailed examples of each.**
	• I can **identify some properties of light**, including rectilinear propagation, reflection, **OR** refraction, using the results of my experimentation, **with help.**	• I can **identify some properties of light**, including rectilinear propagation, reflection, **OR** refraction, using the results of my experimentation.	• I can **identify and describe properties of light**, including **rectilinear propagation, reflection**, **AND refraction**, using the results of my experimentation.	• I can **identify and describe properties of light**, including rectilinear propagation, reflection, AND refraction, using the results of my experimentation, **AND explain their use in everyday life.**
Comments				

Science Grade 8
Physical Science: Optics and Vision (OP)

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.
OP8.2 **I can explore properties and applications of optics-related technologies, including concave and convex mirrors and lenses.**	**Properties**	• I can **identify** properties of optics-related technologies, including concave **OR** convex mirrors and lenses, based on evidence I have gathered, with help.	• I can **identify a few** properties of optics-related technologies, including concave **OR** convex mirrors and lenses, based on evidence I have gathered.	• I can **identify and describe many properties** of optics-related technologies, **including concave AND convex mirrors and lenses, based on convincing evidence I have gathered**.	• I can **compare the properties** of optics-related technologies, including concave **AND** convex mirrors and lenses**,** based **on extensive** evidence I have gathered.
	Applications	• I can list some uses of optics-related technologies, **with help.**	• I can **list some uses** of optics-related technologies.	• I can **explain** how the properties of optics-related technologies, including concave and convex mirrors and lenses, **allow them to be of practical use.**	• I can **demonstrate many practical applications** of optics-related technologies, including concave and convex mirrors and lenses.
Comments					

Science Grade 8 Physical Science: Optics and Vision (OP)				
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.
OP8.3 **I can compare the nature and properties of human vision with optical devices and vision in other living organisms.**	• I can **list some similarities and differences** between the nature and properties of human vision and vision in **a few** other living organisms, **with help**.	• I can **list some similarities and differences** between the nature and properties of human vision and vision in **a few** other living organisms.	• **I can describe the similarities and differences between the nature and properties of human vision and vision in other living organisms.**	• I can use my understanding of the similarities and differences between the nature and properties of human vision and vision in other living organisms to **propose solutions to a few practical challenges**.
	• I can **list some similarities and differences** between the nature and properties of human vision and **optical devices**, **with help**.	• I can **list some similarities and differences** between the nature and properties of human vision and **optical devices**.	• **I can describe the similarities and differences between the nature and properties of human vision and optical devices.**	• I can use my understanding of the similarities and differences between the nature and properties of human vision and **optical devices** to **propose solutions to a few practical challenges**.
Comments				

Science Grade 8 Physical Science: Optics and Vision (OP)					
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.
OP8.4 **I can evaluate the impact of electromagnetic radiation-based technologies on self and community.**	**Self**	• I can **list some** positive and negative impacts of electromagnetic radiation-based technologies on me, **with help.**	• I can **list some** positive and negative impacts of electromagnetic radiation-based technologies on me.	• I can **explain many positive and negative impacts of electromagnetic radiation**-based technologies on me.	• I can **make and defend judgments about the impacts** of electromagnetic radiation-based technologies on me.
	Community	• I can list some positive and negative impacts of electromagnetic radiation-based technologies on communities, **with help**.	• I can **list some** positive and negative impacts of electromagnetic radiation-based technologies on communities	• I can **explain many positive and negative impacts** of electromagnetic radiation-based technologies on communities.	• I can **make and defend judgments about the impacts** of electromagnetic radiation-based technologies on communities.
Comments					