

Valley View Charter Unit 3

Mission to Mars

GRADE LEVEL(S)

5

ARTISTIC DISCIPLINE

STEAM

INTEGRATED SUBJECT

Earth and Space

TEACHING ARTIST

Tam Helenske

UNIT

3

LESSON TITLE

Finding Water on Mars: Infrared Camera

CONTENT STANDARDS (VAPA + COMMON CORE)

1-6.VA:Cr1.1, 1-6.VA:Cr1.2, 1-6.VA:Cr2.1, 1-6.VA:Cr2.2, 1-6.VA:Cr2.3, 1-6.VA:Re7.1, 1-6.VA:Re7.2, 1-6.VA:Cn10

LEARNING OBJECTIVE

Students will be asked to take the knowledge they have attained about using color and temperature to find water underground as it would relate to searching for water on Mars. Taking notes on their discoveries ties together the connection between their own environment and how that can be used to discover if there is water on Mars.

MATERIALS NEEDED

Mission To Mars booklet for each student. (fold 3 pieces computer paper in 1/2 and stapled in the middle)

1 pencil each student

Thermal imagery camera (Artist provides)

WARM-UP AND MAIN ACTIVITY

Warm-up

Identify color temperature of random objects around designated campus areas. Students will have pencils and notebooks documenting the color and temperature of objects and surrounding area. Pictures can be drawn (colored later) to enhance documentation.

Main Activity

An area of the campus will be designated as a search area for identifying underground water.

Exploring school grounds:

Each student will have a chance to pick 1 spot to be photographed. Students will document in their notebooks why they chose that spot as a water source and what the surrounding objects represent. Notes can include (natural or made) objects color and temperature. Student's will be asked to compare the difference between earths and Mars surface.

I will let students know they can color in their booklets on their own before Unit 4, a week later. All notebooks will be displayed in final show.

ASSESSMENT

Students will present through camera imagery the understanding of the connection between color, color temperature with organic and non-organic objects and surfaces. The area they chose to photograph and document will show an understanding and connection between life on earth and possible life or survival on Mars.

TIMELINE UNIT 3

April 8th-11th

Thermal camera images are chosen for a vote. Each class will vote from their own class images.

May 5th, 2023:

30 minute set-up (Artist arrives 10:00 pm)

Class 1: 10:35-11:35 a.m.

Class 2: 11:35 a.m-12:35 p.m.

Class 3: 1:15-2:12 p.m.

30 minute clean-up (Artist)