



LUMA CENTRE
FINLAND

The Planetarium

Zarqa University Schools & KG

OMAR BASEM MOEEN SHAHEEN
TAMARA IBRAHIM SULIMAN ABU SOWAID
MARAH JEHAD ABDAL RAZAK ALSIFE
HIBA EHLAL MOHAMMAD BANI DOMI



رياض ومدارس جامعة الزرقا
Zarqa University Schools & KG



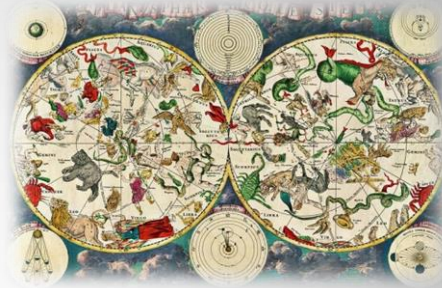
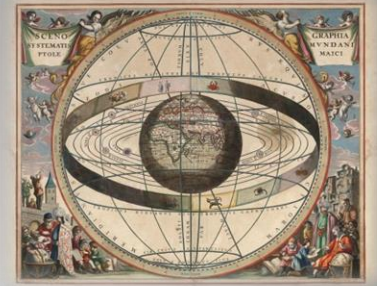
The Planetarium

Zarqa University Schools and KGs

القبة الفلكية ضمن معايير NGSS
(الممارسات العلمية والهندسية)

عمر باسم معين شاهين (جيولوجي وقيم مختبر)
تمارا ابراهيم ابو سويد (فيزياء)
مرح جهاد عبدالرزاق الصيفي (كيمياء)
هبة اهلل محمد بني دومي (علوم حياتية)

- Astronomy plays an important role in our everyday life. Mankind started studying astronomy thousands of years ago where people depended on certain signs and shapes of the stars in space to determine directions and navigation lines. With the development of sciences and technology, scientists began to study planets, galaxies, and stars.





- At any stage of study, science books always point out the importance of astronomy and galaxies and that's when our project began. Students often study astronomy in a pure theoretical way, so we decided to make astronomy more interesting and exciting to students through expanding students' imagination in a special room that shows planets, galaxies, and the science of astronomy. We call it 'the **planetarium**'.

- The planetarium was established in 2017 at the school's theatre. We designed this planetarium with the help of students and teachers of different science subjects such as chemistry, physics, biology, and geology.





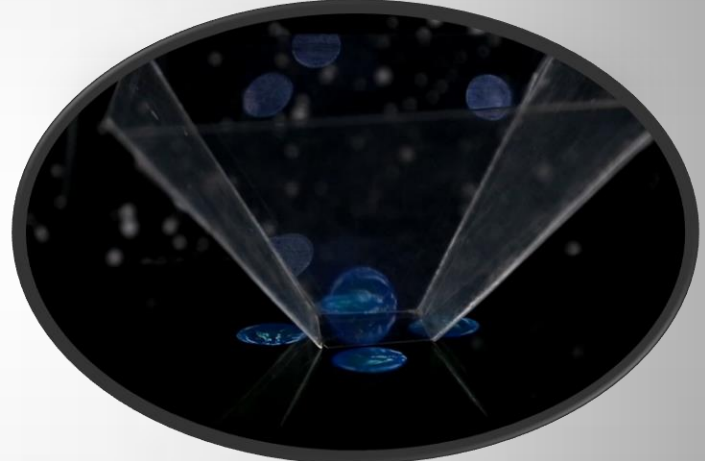
- It is worth mentioning that art teachers played a significant role in making this possible.
It truly was a great team effort.

- We even talked to the Jordanian Astronomical Society and they thought that it was a brilliant idea.
- The scientists there gave us all the advice and instructions needed



Virtual Reality (VR)

We have also added the newest technology to the planetarium where we connected it to virtual reality (VR) tools to expand students' imagination.

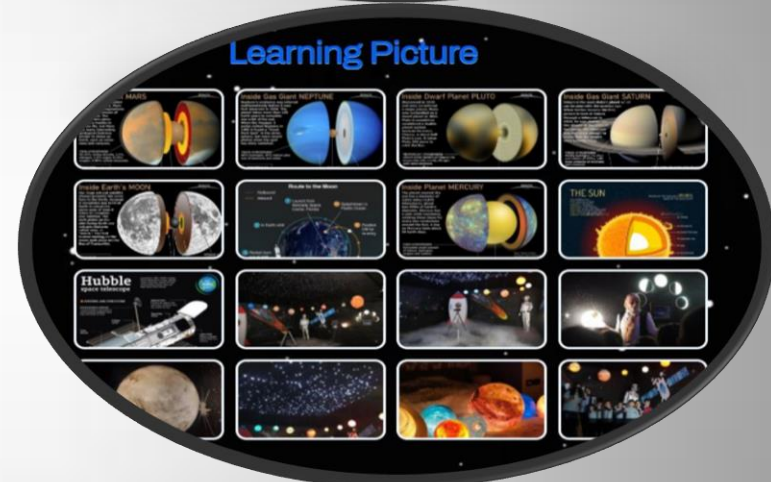


planetarium website



planetariumzuis.com

We have also made a website for the planetarium to keep those interested in constant update of new developments.





- Now, astronomy lessons are given in the planetarium. We have noticed a tremendous results on students' achievements.

STEM Teaching

- **We use the planetarium to implement different strategies according to (STEM) for subjects like:**
 - Chemistry
 - Physics
 - Biology
 - Mathematics
 - Arts and music
 - Vocational studies
 - geology



Math lesson plan in the Planetarium

Lesson Plan

Semester Plan No ()

Page No ()

Class/Level: 8th grade

Unit Title: Shaping and building

Number of classes: 1

Date: From To

Lesson Title: Technical configurations of modals

Previous Learning: The modal , raw materials

Vertical Integration : Grades 1-7

Horizontal integration : Math's : measuring shapes

NO	Specific Outcomes	Material / Resources	Instructional Strategy	Assessment		Procedures	Duration
				Strategy	Tool		
1	To show the importance of introducing Technical configurations of raw materials consumed to achieve balance	Videos and pictures	Direct Teaching	Observation	Rating scale	Warming up the students by showing them the goals of the lesson	
2	To shape modals from Raw materials	School supplies	Questions and answers			-Showing them some pictures and drawings	
3	To use the materials and the tools in correct ways	Colored pencils	Learning based performance			-Explaining the importance of interoducing Technical configurations of raw materials consumed to achieve balance	
4	To improve the group work	Cans , and cardboards				-Presenting some modals from Planetarium room to watch the modals that made of wood , cardboard and cement . also to shape a modal from the students' choice	
		Planetarium					

Vocational studies lesson plan in the Planetarium (electric circuit parts lesson)

Lesson Plan

Semester Plan No ()

Page No ()

Class/Level: 9th grade

Unit Title: Electrical wiring

Number of classes: 2

Date: From

To

Lesson Title: Electrical circuit parts

Previous Learning: electrical circuit parts

Vertical Integration : vocational education 8TH

Horizontal integration :

NO	Specific Outcomes	Material / Resources	Instructional Strategy	Assessment		Procedures	Duration
				Strategy	Tool		
1	To identify Schematic diagram and detailed diagram of the electrical circuit	Student book	Direct Teaching	Observation	Rating scale	-Warming up the students by reviewing the electrical circuit parts by using the School's operator and its tools	1
2	To Replaces some electrical circuit components	School's operator and its tools	Questions and answers			-Identifying Schematic diagram and detailed diagram of the electrical circuit by showing some pictures using P.p	
3	To Install electrical switches and lamps on the walls	Planetarium	Learning based performance Group work			-dividing the students into groups and giving them some tools to do the activity at p.46 -ding a practical apply on the skills that the students learnt to Install electrical switches and lamps on the constellation's modals at the Planetarium room	

Geology lesson plan in the Planetarium

Lesson Plan

Semester Plan No ()

Page No ()

Class/Level: [9th grade]

Unit Title: [Solar System]

Number of classes: [1]

Date: From [] To []

Lesson Title: [Solar System and its parts]

Previous Learning: [Sun , galaxy]

Vertical Integration : [Mentioned at 4th grade]

Horizontal integration : []


NO	Specific Outcomes	Material / Resources	Instructional Strategy	Assessment		Procedures	Duration
				Strategy	Tool		
[1 2]	[To identify the meaning of galaxy and solar system To compare between the planets of the solar system from their physical properties]	[Student book Smart board Planetarium]	[Direct Teaching Learning based performance Problem solving method]	[Observation]	[Rating scale]	[Warming up the students by reviewing the meaning of the galaxy and asking the following questions : how many are the constellations? what is the name of the planet that is related to ? -Giving thee students some drawings to study them and answering some questions in the student book -Visiting the Planetarium room and asking some questions such as : what are the planets that you are watching them now ? -Ordering the planets by which one is far from the sun - Ordering the planets by the size to realize the physical properties for the solar system planets .	[]



- Many students from neighboring schools visit us to check out this huge accomplishment.

Last but not least, our school is looking forward to **expanding** this project and making it mobile so other schools from remote areas can benefit from it. We have always been keen to encourage students to learn more about the field of astronomy because **learning is a never ending journey.**



A group of approximately ten children, mostly of Hispanic descent, are posed in a row. They are wearing light grey school uniforms with 'ZUIS' printed on the front. Most of the children are making heart shapes with their hands. The background is dark with many small, bright white stars and a few larger, stylized starburst decorations. The overall mood is festive and celebratory.

Thank you 😊