

## 5<sup>th</sup> GRADE GT SYLLABUS Fall 2018

- **Designing Spaces**

In this task, students study how mathematics applies to architecture and the creation of designed environments. Students explore how various designs relate to human needs and functions by observing their environments, drawing, graphing, and taking measurements. Students research a period of architecture, a particular style, or a famous architect of their choosing and analyze the way the architect uses geometric forms and mathematical patterns in his/her works. In small groups, students work together to design and build a variety of architectural spaces within the classroom using simple materials such as dowel rods and fabric. Finally, students present their works to an audience by leading guided tours through their structures during an event called the “Designer’s Showcase.”

- **Goals**

Students will meet these goals in their explorations:

- Become familiar with mathematical patterns found in nature and used in the design of everyday objects such as the Fibonacci Sequence and Golden Mean
- Gain awareness of the field of architecture HIGH SCHOOL/EXIT TASKS Texas Performance Standards Project INTERMEDIATE TASKS Designing Spaces (Grade 5) Texas Performance Standards Project © 2013 Texas Education Agency
- Research styles of architecture and famous architects
- Design and build an original space using mathematical patterns
- Consider the impacts of architectural spaces on the surrounding areas
- Develop the essential skills of communicating, creative problem solving, and logical thinking

- **Schedule:**

Aug 27 – Aug 31	
Mon/Wed:	Review G/T procedures and expectations.
Tue/Thur:	Science-Extended Learning.
Friday:	Pass out Designing Spaces packet

Sep 03 – Sep 07 (LABOR DAY MONDAY 3 <sup>rd</sup> –NO SCHOOL)	
Mon/Wed:	Monday no school Math-Extended Learning.
Tue/Thur:	Science-Extended Learning.
Friday:	Designing Spaces: Begin discussing past inventions.

Sep 10 – Sep 14	
Mon/Wed:	Math-Extended Learning.
Tue/Thur:	Science-Extended Learning
Friday:	Designing Spaces: Break into groups and share ideas.

Sep 17 – Sep 21 (MONDAY 17 <sup>th</sup> STUDENT HOLIDAY)	
Mon/Wed:	No school Monday Math-Extended Learning.
Tue/Thur:	Science-Extended Learning
Friday:	Designing Spaces. Creating a research proposal. Working in groups, students brainstorm and create drawings for the structure on graph paper

Sep 24 – Sep 28	
Mon/Wed:	Math-Extended Learning.
Tue/Thur:	Science-Extended Learning
Friday:	Designing Spaces. Design proposal due.

Oct 01 – Oct 05	
Mon/Wed:	(Monday Oct 9 Columbus Day No School) Math-Extended Learning
Tue/Thur:	Science-Extended Learning
Friday:	Friday Early Release for students Designing Spaces. Students will identify materials needed that are not in the classroom.

Oct 08 – Oct 12	
Mon/Wed:	Math-Extended Learning.
Tue/Thur:	Science-Extended Learning
Friday:	Bring materials identified. Students will build the structure they designed using simple materials.

Oct 12 – Oct 19	
Mon/Wed:	Math-Extended Learning.
Tue/Thur:	Science-Extended Learning
Friday:	Designing Spaces. Students will continue working with the structure.

Oct 22 – Oct 26	
Mon/Wed:	Math-Extended Learning
Tue/Thur:	Science-Extended Learning
Friday:	Designing Spaces. Discuss any changes needed.

Oct 29 – Nov 02 (MONDAY 29 <sup>th</sup> STUDENT HOLIDAY)	
Mon/Wed:	Monday no school. Math-Extended Learning Study Island Program
Tue/Thur:	Science-Extended Learning
Friday:	Designing Spaces. Work on project

Nov 05 - 09	
Mon/Wed:	Math-Extended Learning Study Island Program
Tue/Thur:	Science-Extended Learning
Friday:	Designing Spaces. Work on project

Dec 03 – Dec 07	
Mon/Wed:	Math-Extended Learning Study Island Program
Tue/Thur:	Science-Extended Learning.
Friday:	(Friday Dec 22 Early Release)

Nov 12 – Nov 16 (MONDAY 12th VETERANS DAY NO SCHOOL)	
Mon/Wed:	Monday no school. Math-Extended Learning Study Island Program
Tue/Thur:	Science-Extended Learning
Friday:	Designing Spaces: Peer Review

Nov 19 – 23 (THANKSGIVING BREAK)	
Mon/Wed:	Happy Thanksgiving
Tue/Thur:	Happy Thanksgiving
Friday:	Happy Thanksgiving

Nov 26 – Nov 30	
Mon/Wed:	Math-Extended Learning Study Island Program
Tue/Thur:	Science-Extended Learning
Friday:	Designing Spaces. Peer Reviews

Dec 10 – Dec 14	
Mon/Wed:	Math-Extended Learning Study Island Program
Tue/Thur:	Science-Extended Learning.
Friday:	Designing Spaces: Project check. Mini Conference

Dec 17 – 21 (EARLY RELEASE THURSDAY 20 <sup>th</sup> , NO SCHOOL FRIDAY 21 <sup>st</sup> )	
Mon/Wed:	Math-Extended Learning Study Island Program
Tue/Thur:	Science Extended Learning. Designing Spaces Project Due This Week. THURS EARLY RELEASE
Friday:	NO SCHOOL

Dec 24 – Jan 07 (CHRISTMAS BREAK)	
	END OF FALL SEMESTER