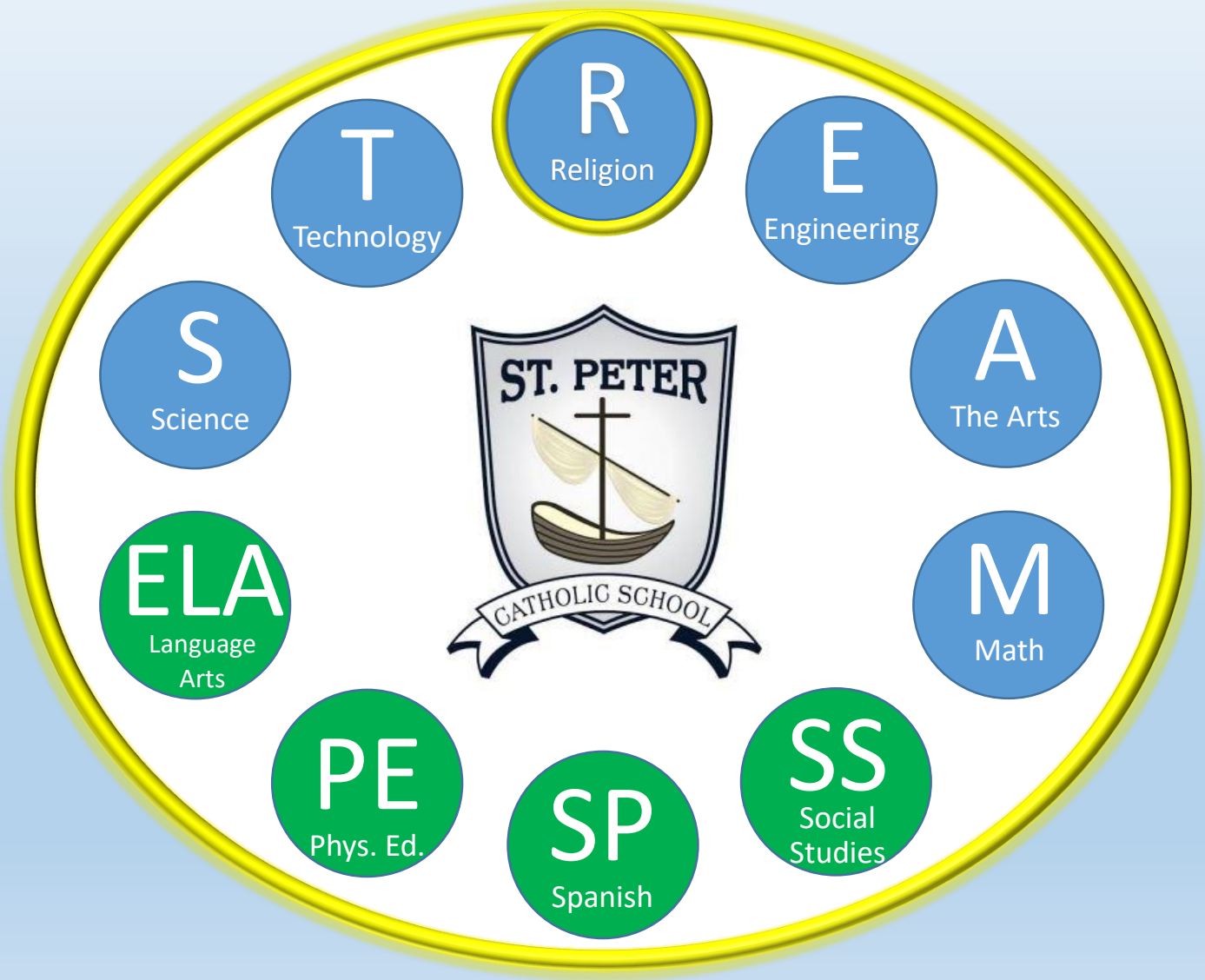
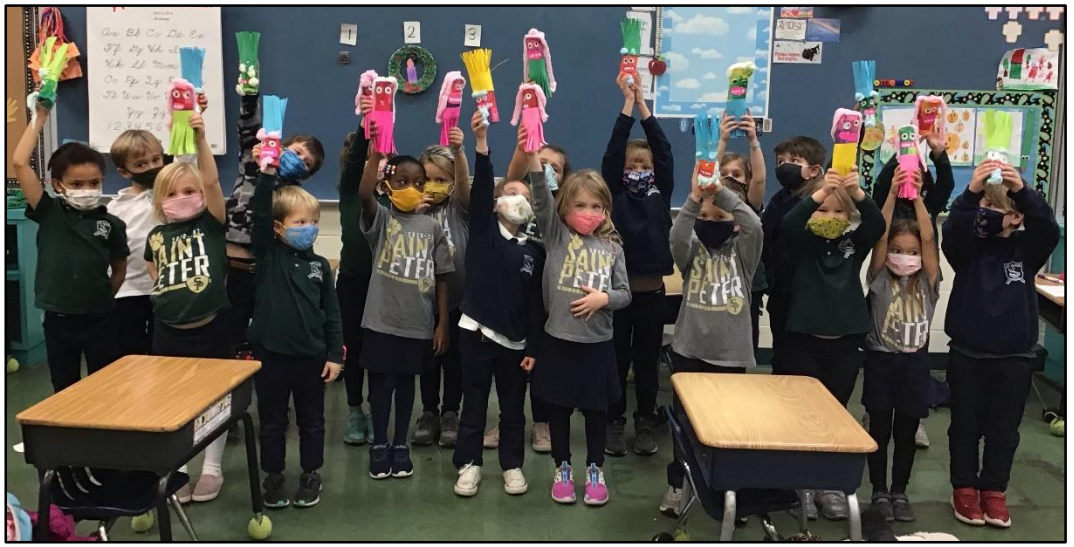
Saint Peter Catholic School Integrated STREAM Program



Kindergarten Art

Paper Maracas

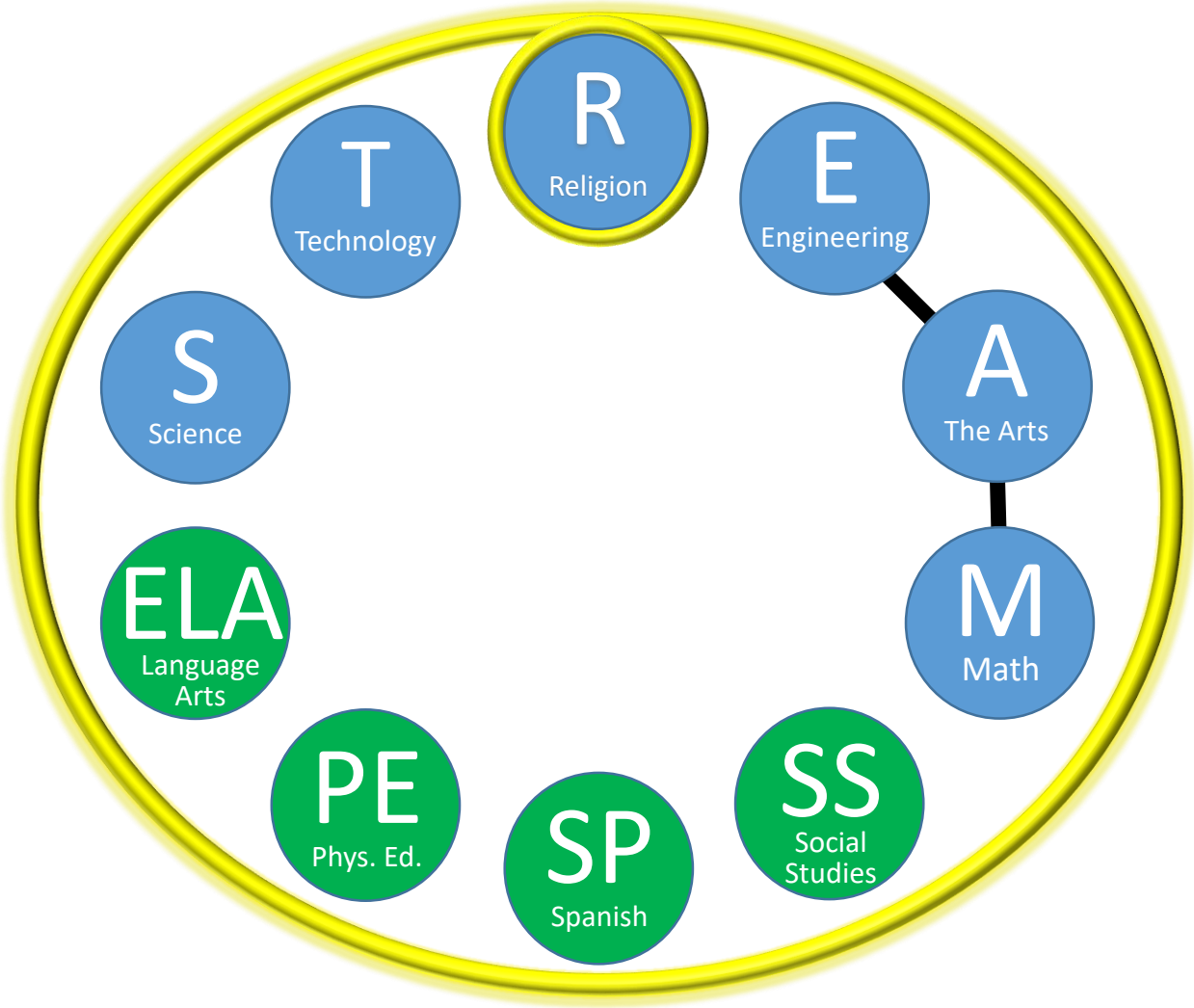
Students internalize the concept of the cylinder by making one with paper and tape. It serves as the body of these geometry-based sculptures.



Kindergarten Art

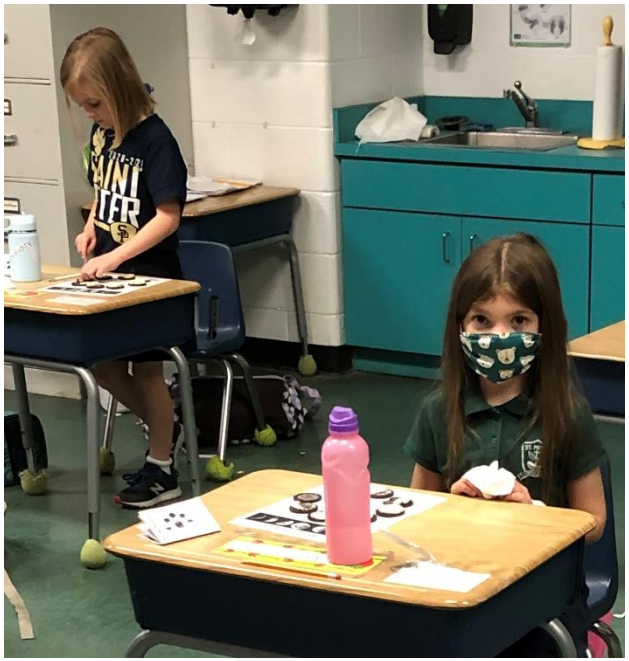
Paper Maracas

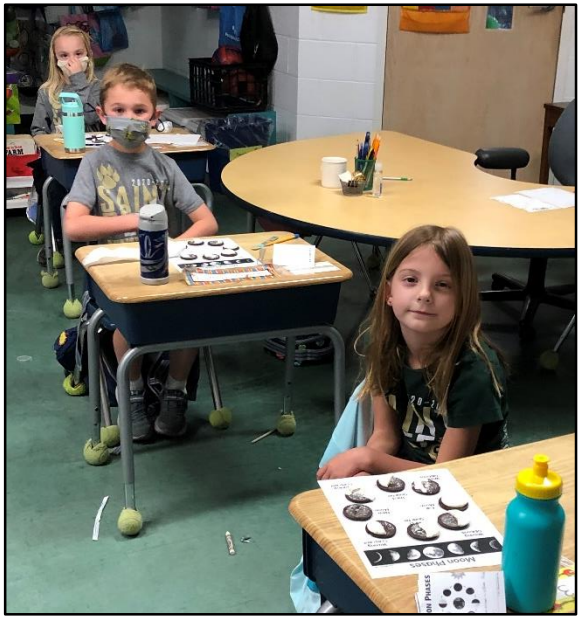
Creating the paper end caps of the cylinders so corn won't fall out is a structural engineering challenge.



1st Grade Science

Moon Phase Cookies

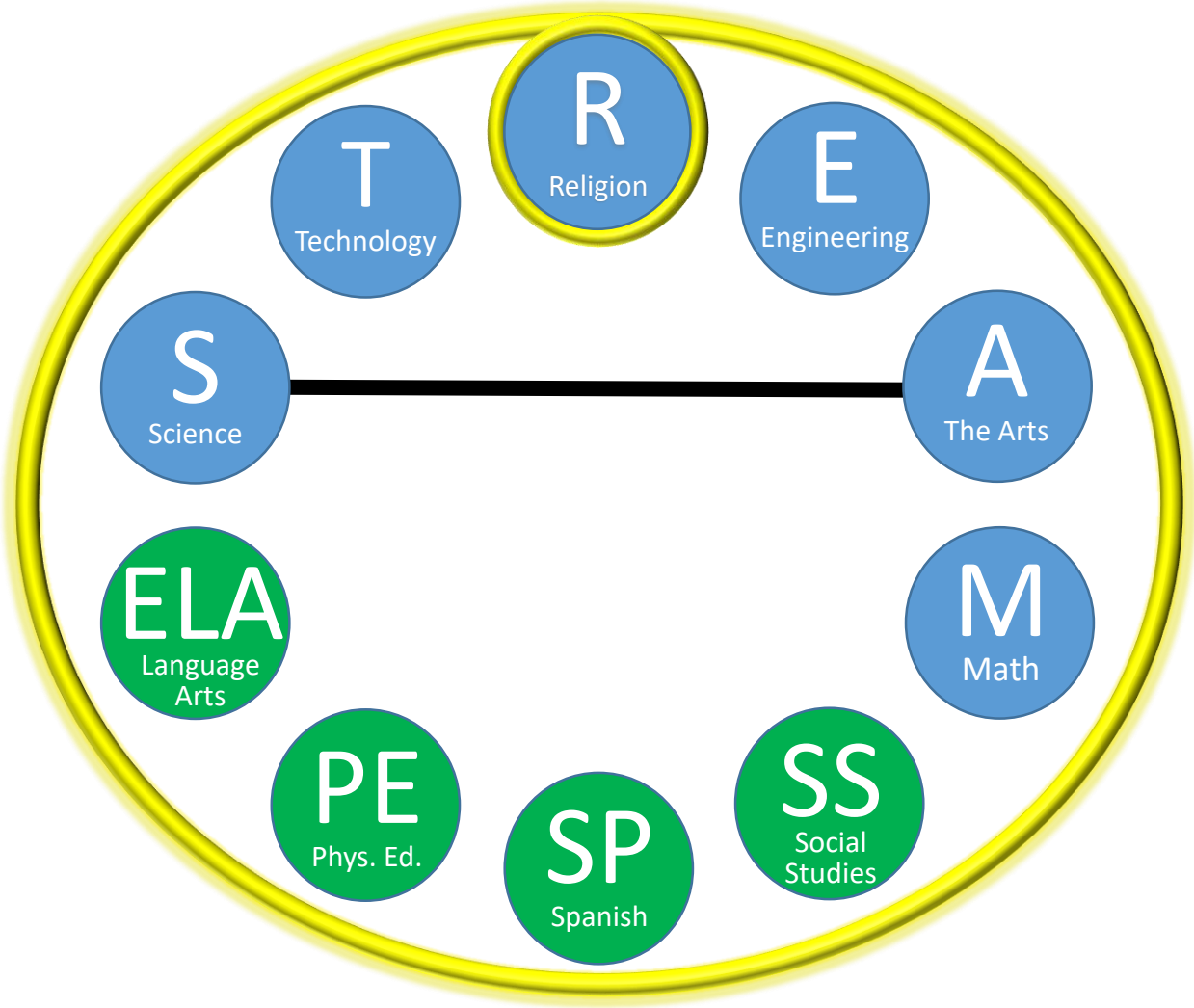




1st Grade Science

Moon Phase Cookies

First Grade learned about the Phases of the Moon. Children talked about any prior knowledge of the Moon, watched two videos about the Moon and it's phases, and then discussed a booklet about the Moon. They used Oreos cookies to create visual and edible representations of the Moons phases.



2nd Grade Social Studies

Landforms Re-creation

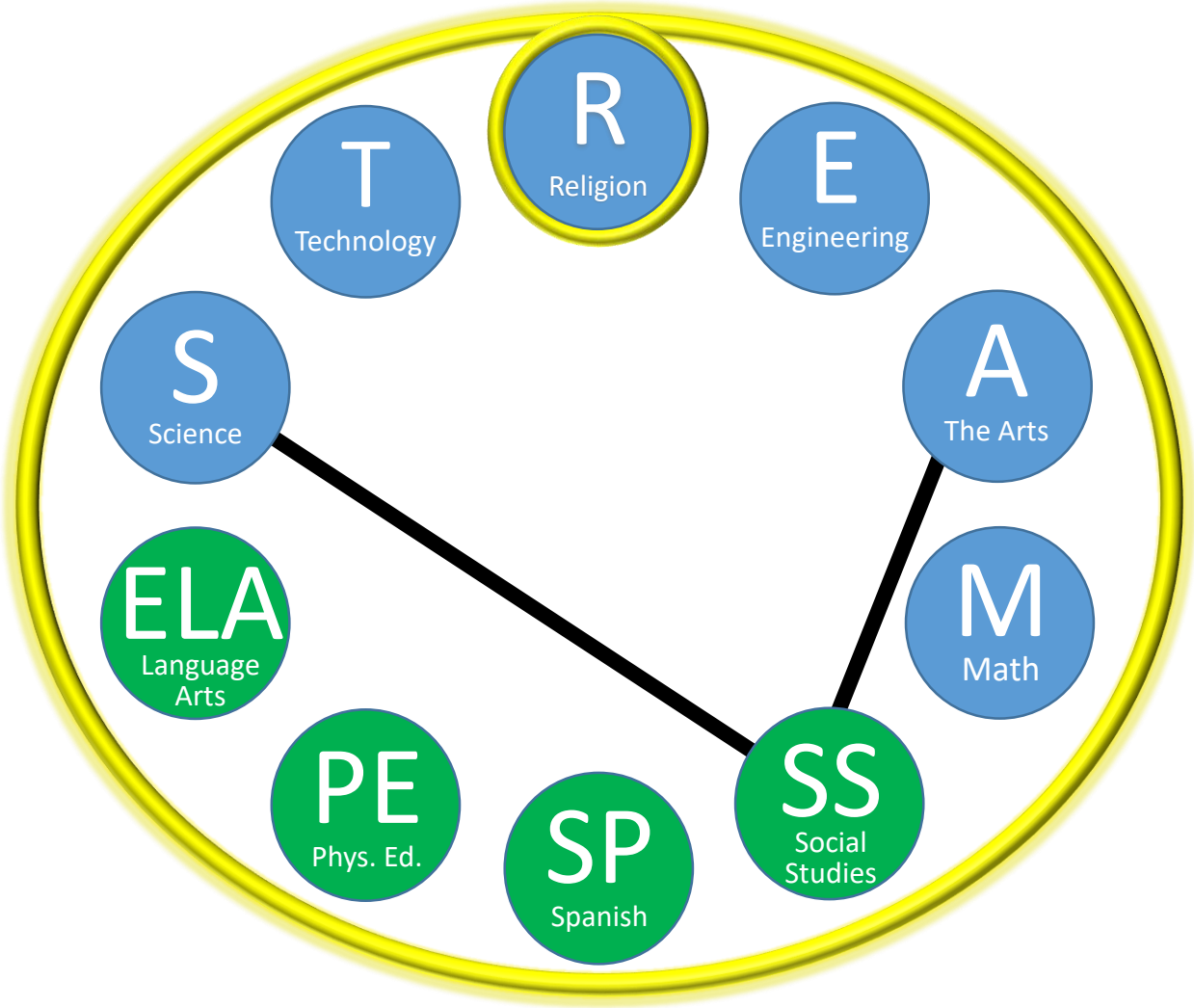
In our landforms unit, we learned about many types of landforms, what each landform looks like, and where those landforms may be located on Earth.

Then, we used playdough as an assessment tool in which the kids were asked to recreate each landform. Catherine shows how a river leads into the ocean. Ella shows a volcano with lava and ash overflowing. Kate B. shows an island surrounded by water on all sides.

2nd Grade Social Studies

Landforms Re-creation

This project combines social studies (as they learned about landforms) and the arts (as they molded playdough into each landform).

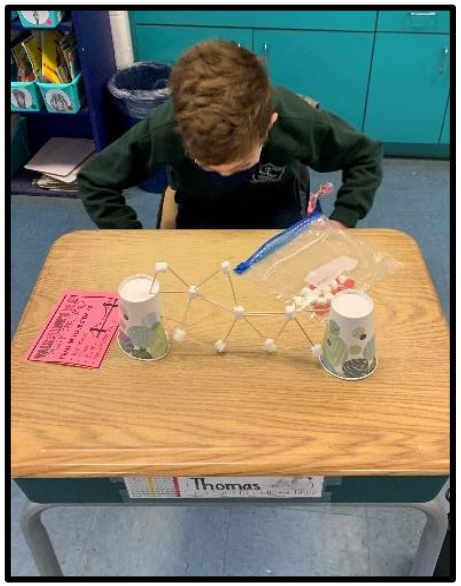


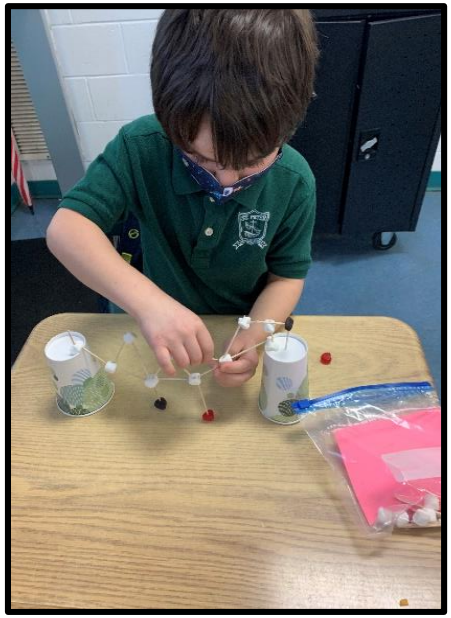
2nd Grade Math/Engineering

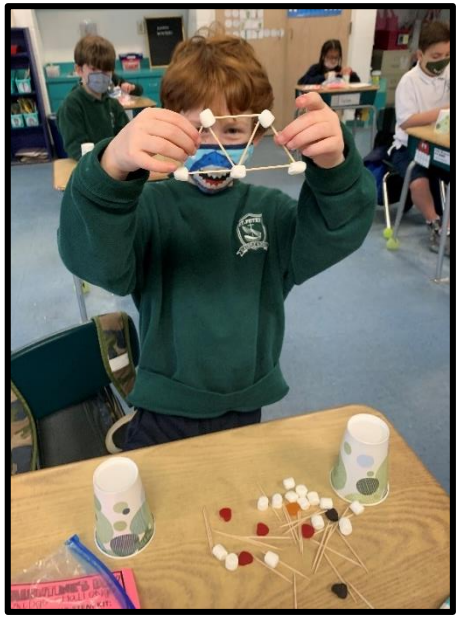
Valentine's Bridge Building

We discussed and learned about different bridges, like the truss bridge, suspension bridge, and the beam bridge. We found that one of the strongest structures engineers use for bridges is the triangle.

Students used marshmallows, toothpicks, and paper cups to apply what we learned to building their own bridges from cup to cup. We then used a ruler to measure in inches how long each of their bridges were.



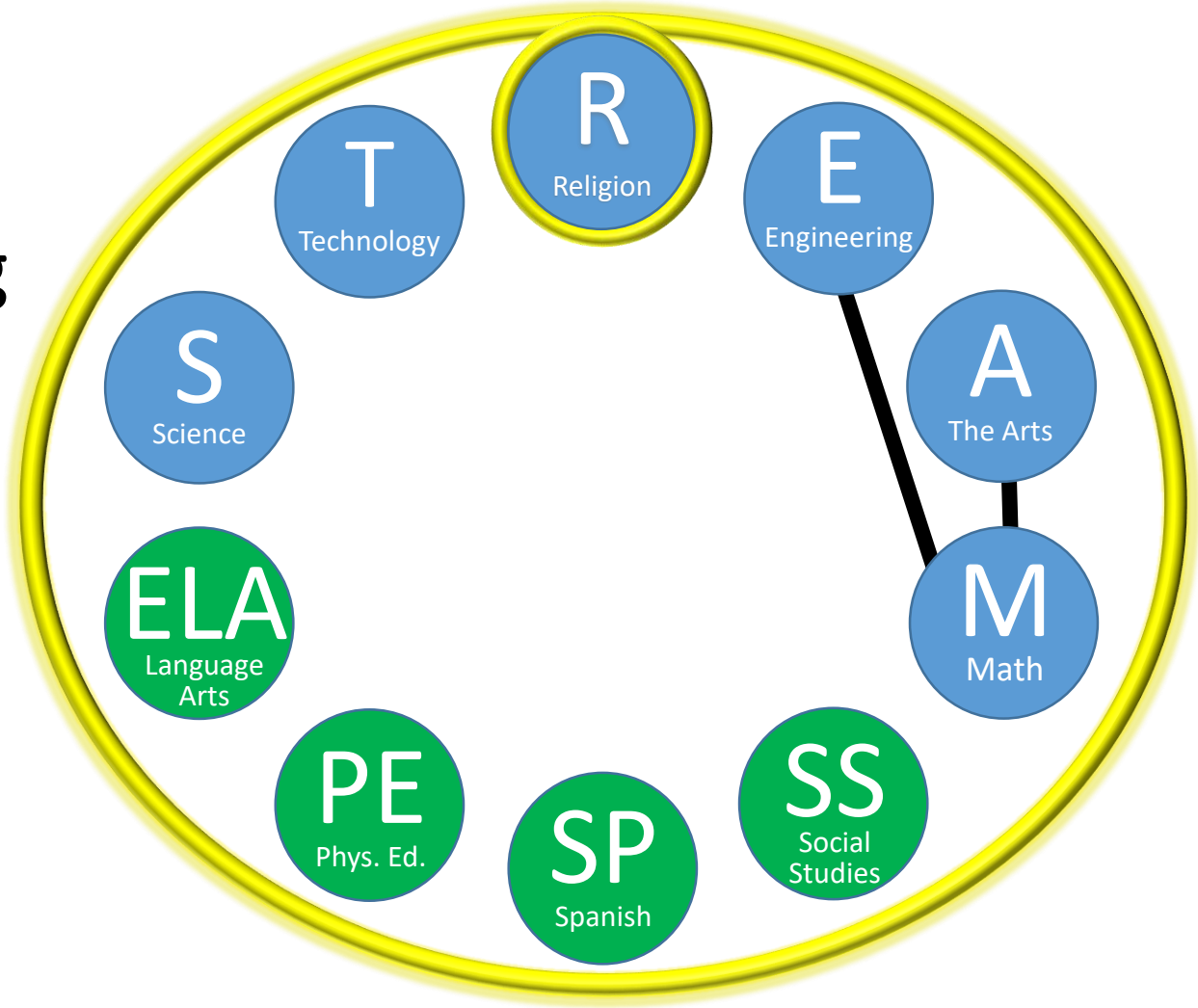




2nd Grade Math/Engineering

Valentine's Bridge Building

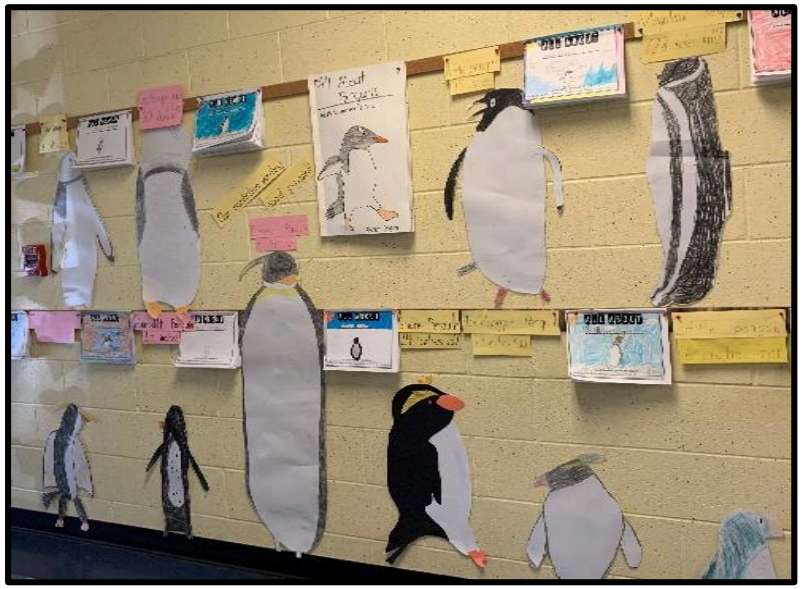
This project combines engineering (learning about building bridges) and math (building triangles out of toothpicks and measuring with rulers).

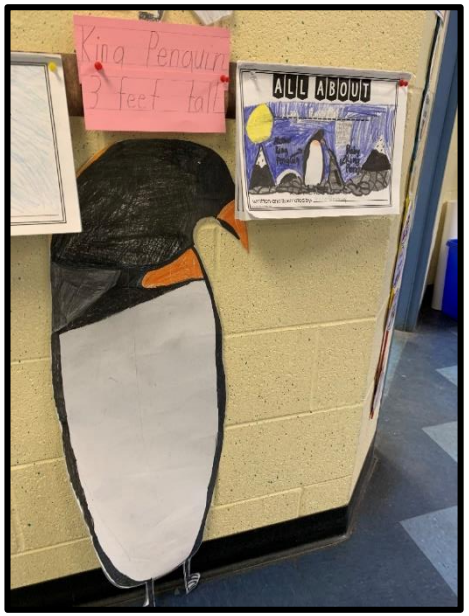


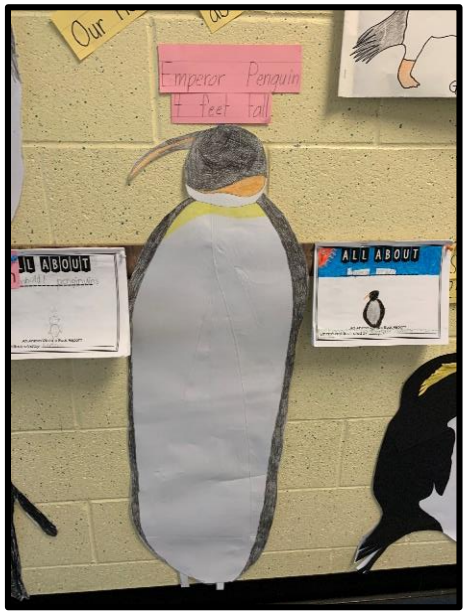
2nd Grade Writing/Reading

Nonfiction Penguin Writing

We completed our nonfiction unit by researching and writing about the different types of penguins. When finished, we used rulers to measure and create life-sized versions of our penguins.



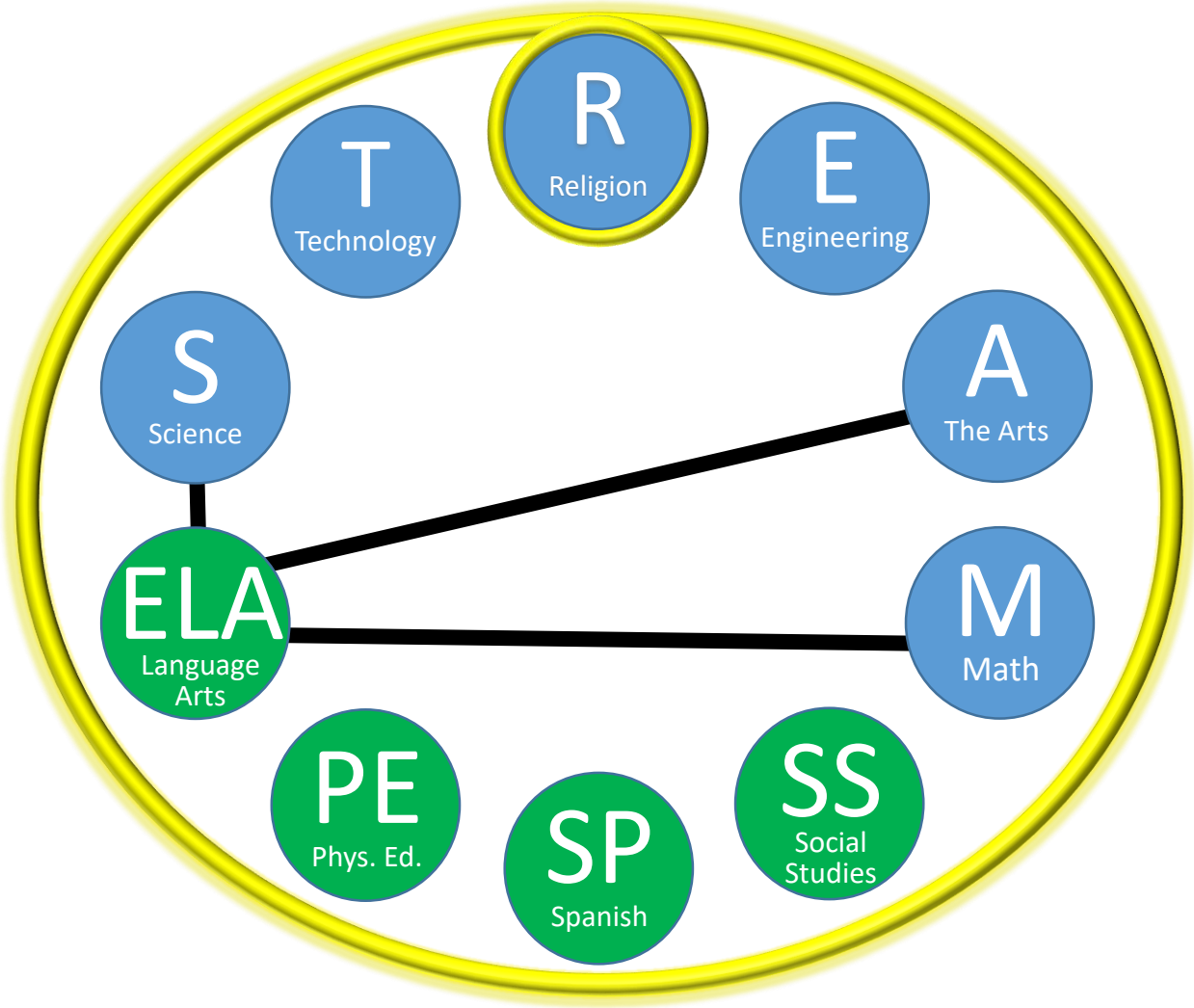




2nd Grade Writing/Reading

Nonfiction Penguin Writing

This combines nonfiction writing/reading, math (measuring in inches/feet), and the arts (applying what we have learned our penguin looks like and recreating it with paper/crayons).

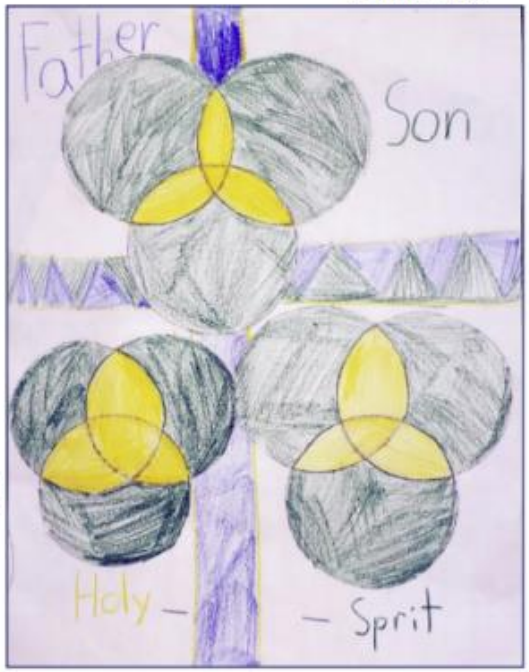


2nd-4th Grade Religion

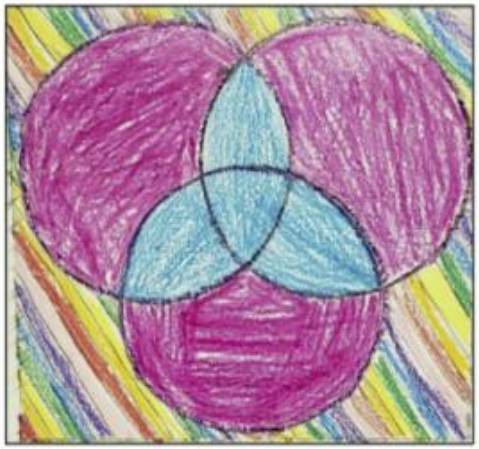
Celtic Art and The Holy Trinity

Ellie Grace G.

William O.



Jatin P.

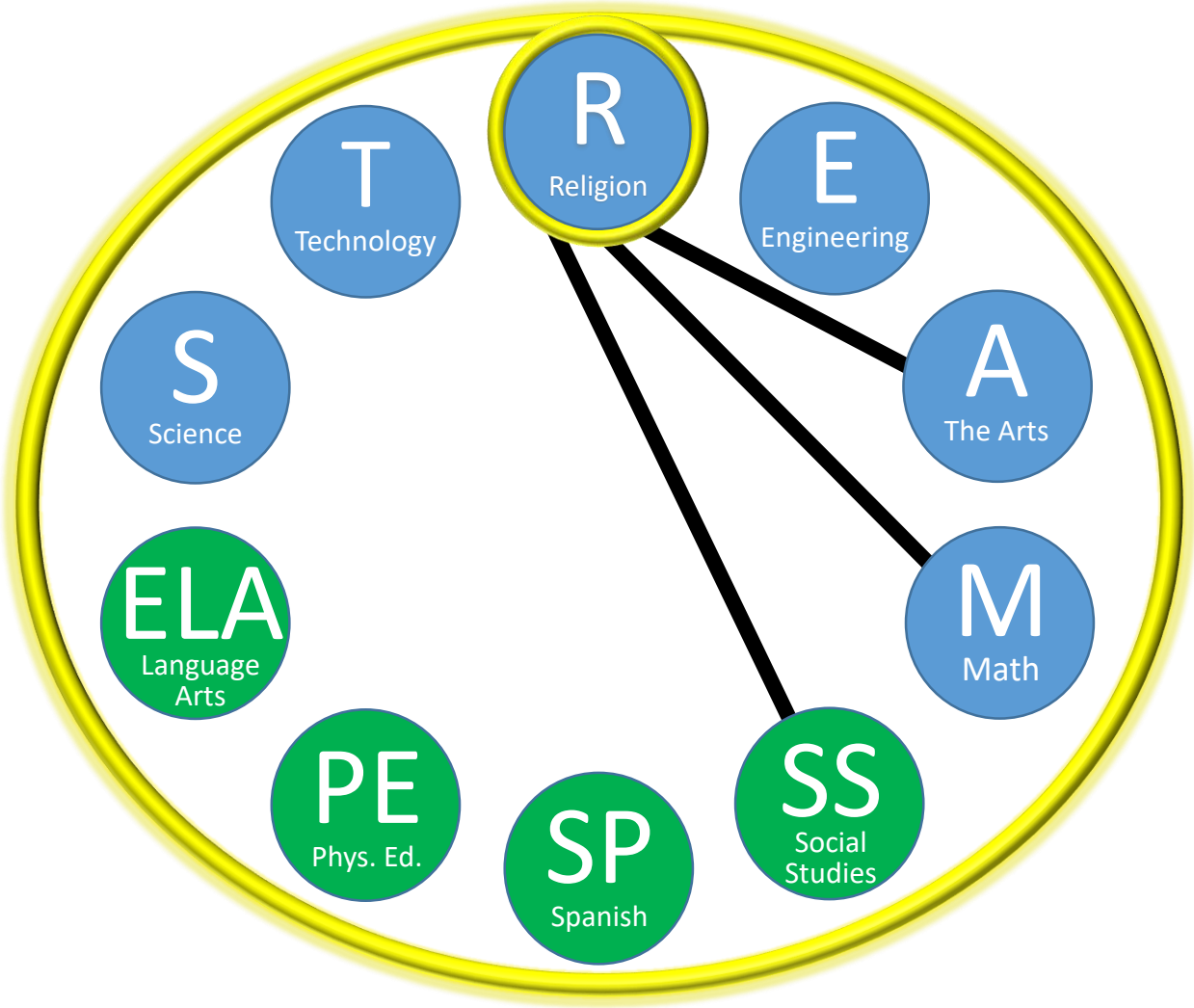


Madilyn D.

2nd-4th Grade Religion

Celtic Art and The Holy Trinity

Students explore Celtic art and symbols. Students use geometric shapes and patterns to create a triquetra or Trinity knot to illustrate the three-ness in oneness of God.



3rd Grade Science

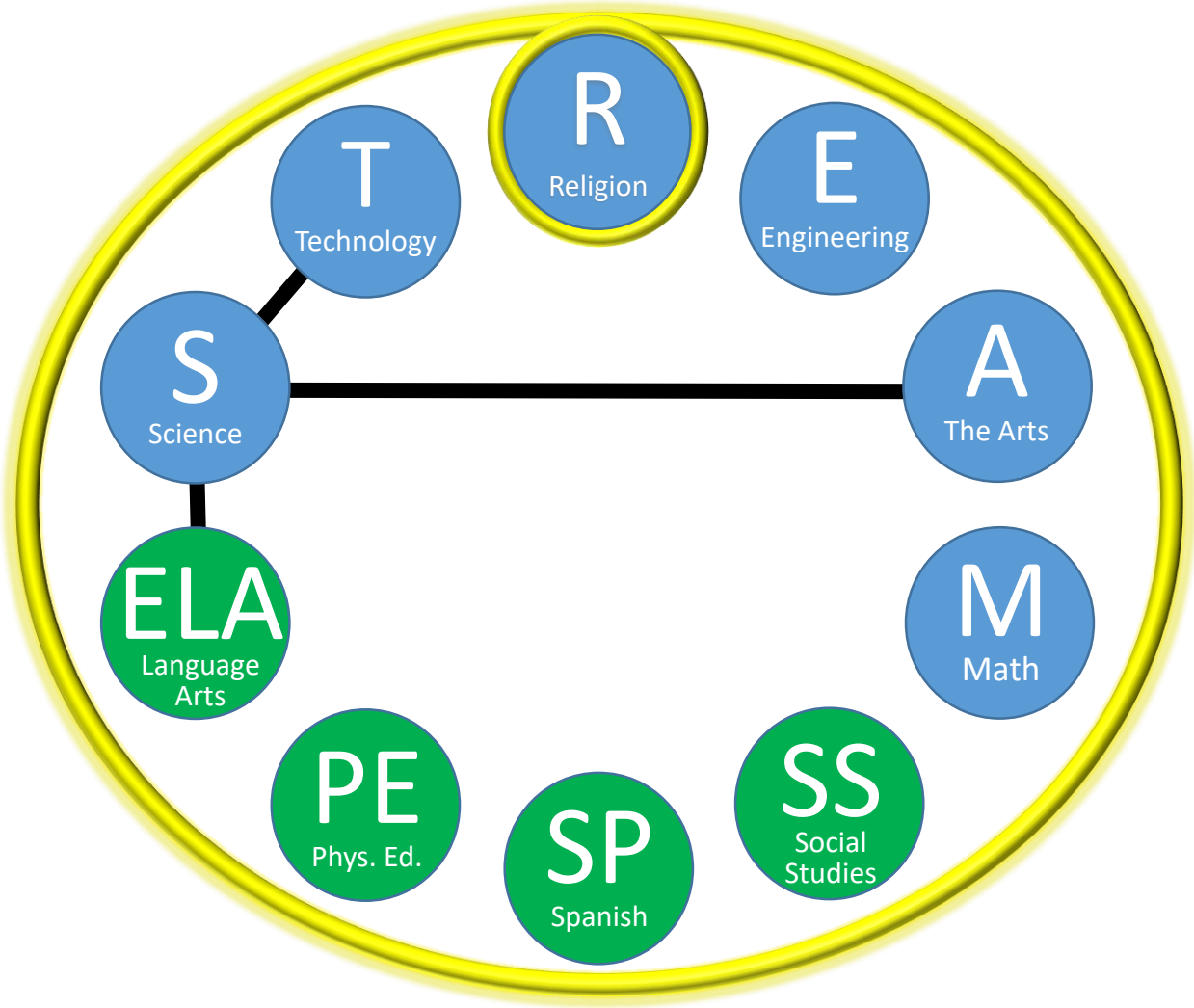
Life Cycles Project

Students demonstrate their knowledge of plant life cycles while comparing and contrasting conifers to flowering plants.

3rd Grade Science

Life Cycles Project

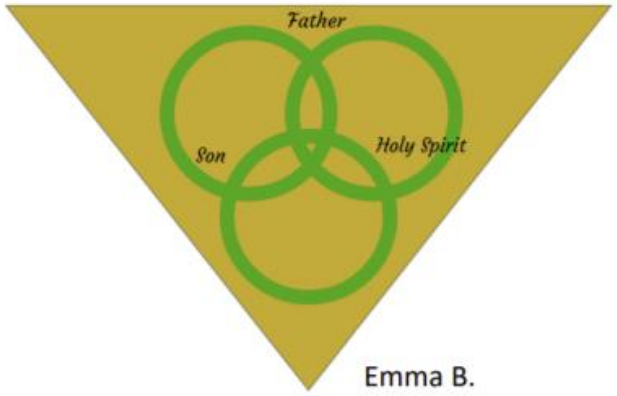
Students are given a choice menu to demonstrate their knowledge: make a model, write a song, Google Slides presentation, a report, poster, or comic strip.



5th Grade Religion

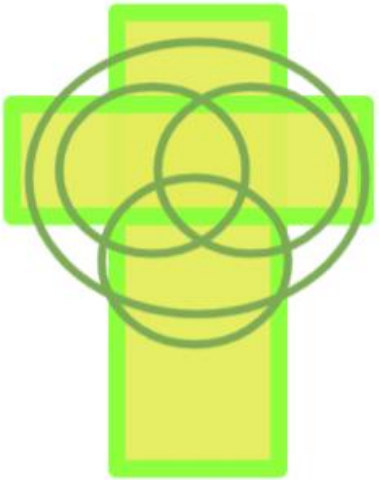
Celtic Art and The Holy Trinity

Student art created with the Google Slides app



Emma B.

Julia B.

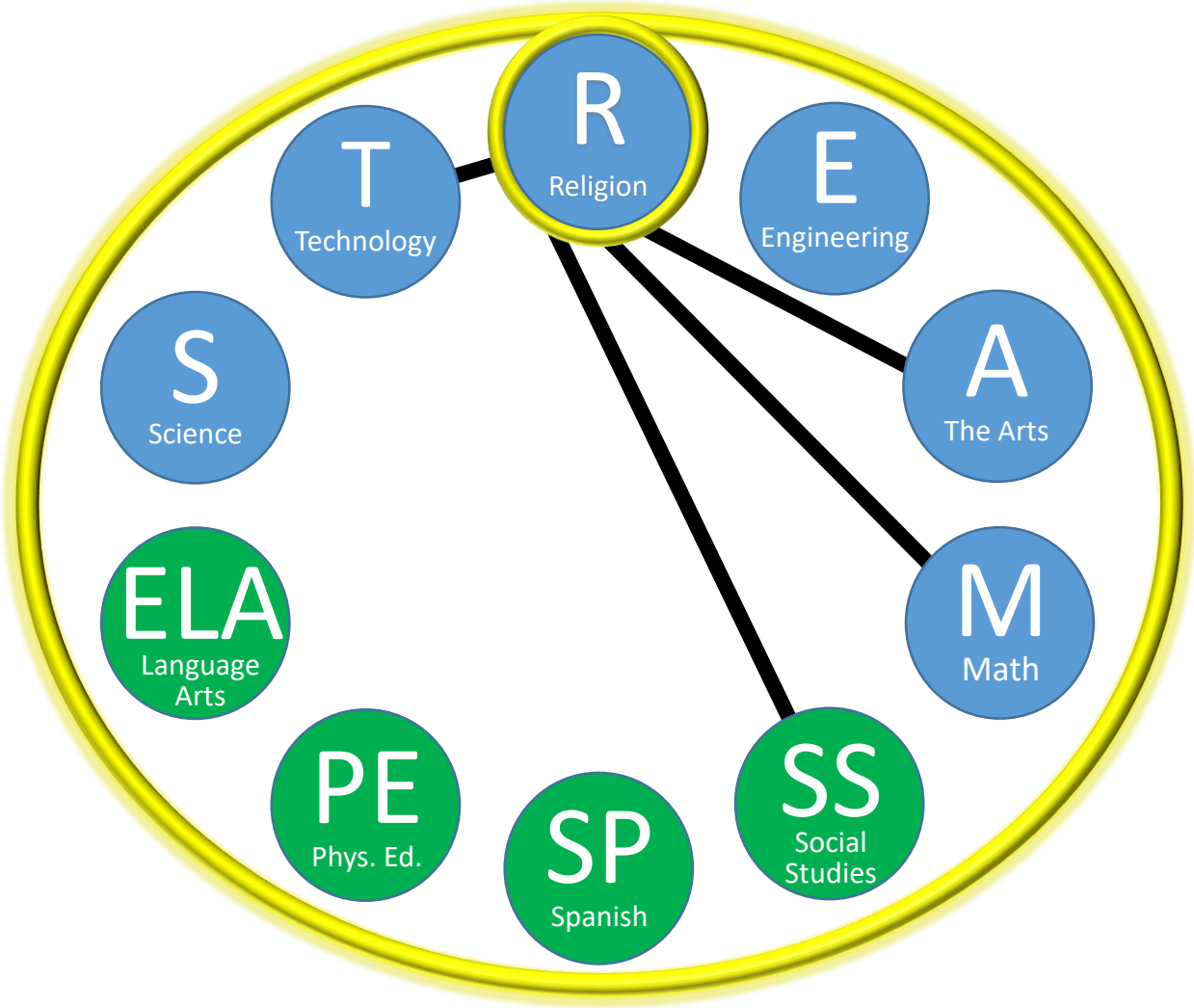


Jedrek G.

5th Grade Religion

Celtic Art and The Holy Trinity

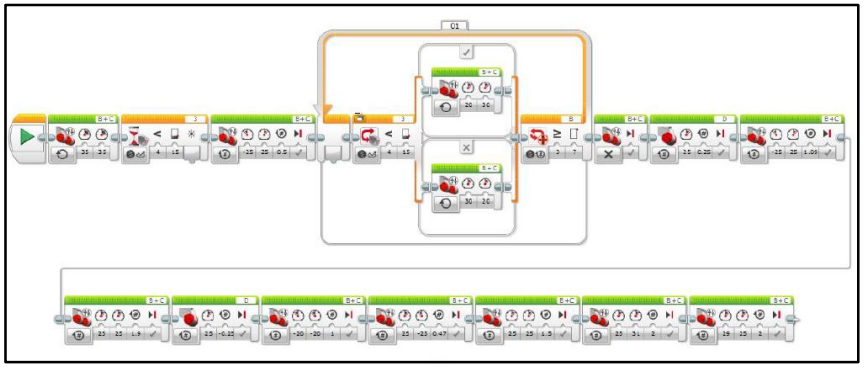
Students explore Celtic art on Chromebooks. Students design their own Trinity knot using geometric shapes and patterns in Google Slides to explore the three-ness and one-ness of God.



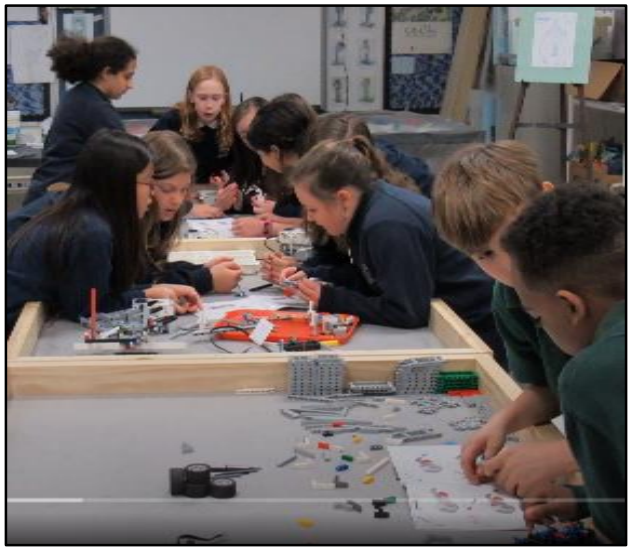
K-8th Grade Art

Programming EV3 Robots with Lego Mindstorms Software

Testing a program to solve a challenge



An example of students' programming

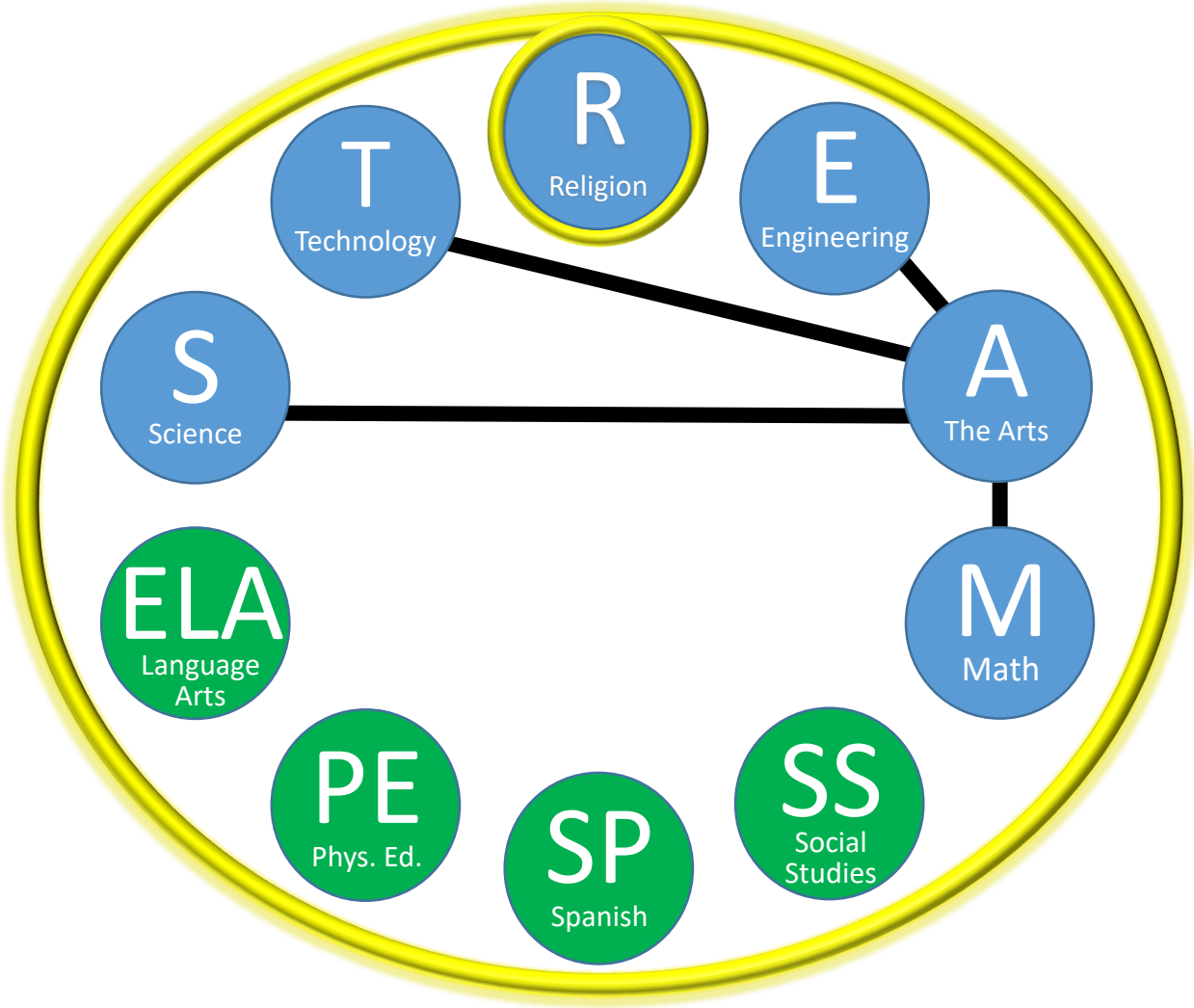


Building robots for use by all classes

K-8th Grade Art

Programming EV3 Robots with Lego Mindstorms Software

Students rotate duties as they work in groups to solve programming problems and manage their robots. Robots are built by 5th graders and 6th-8th grade volunteers prior to use with K-8 classes.



6th-8th Grade Social Studies

Country Project

Students research their topic, write a script for their presentation, figure out the method (technology) they would like to use to present their info, and teach us about the culture of different places.

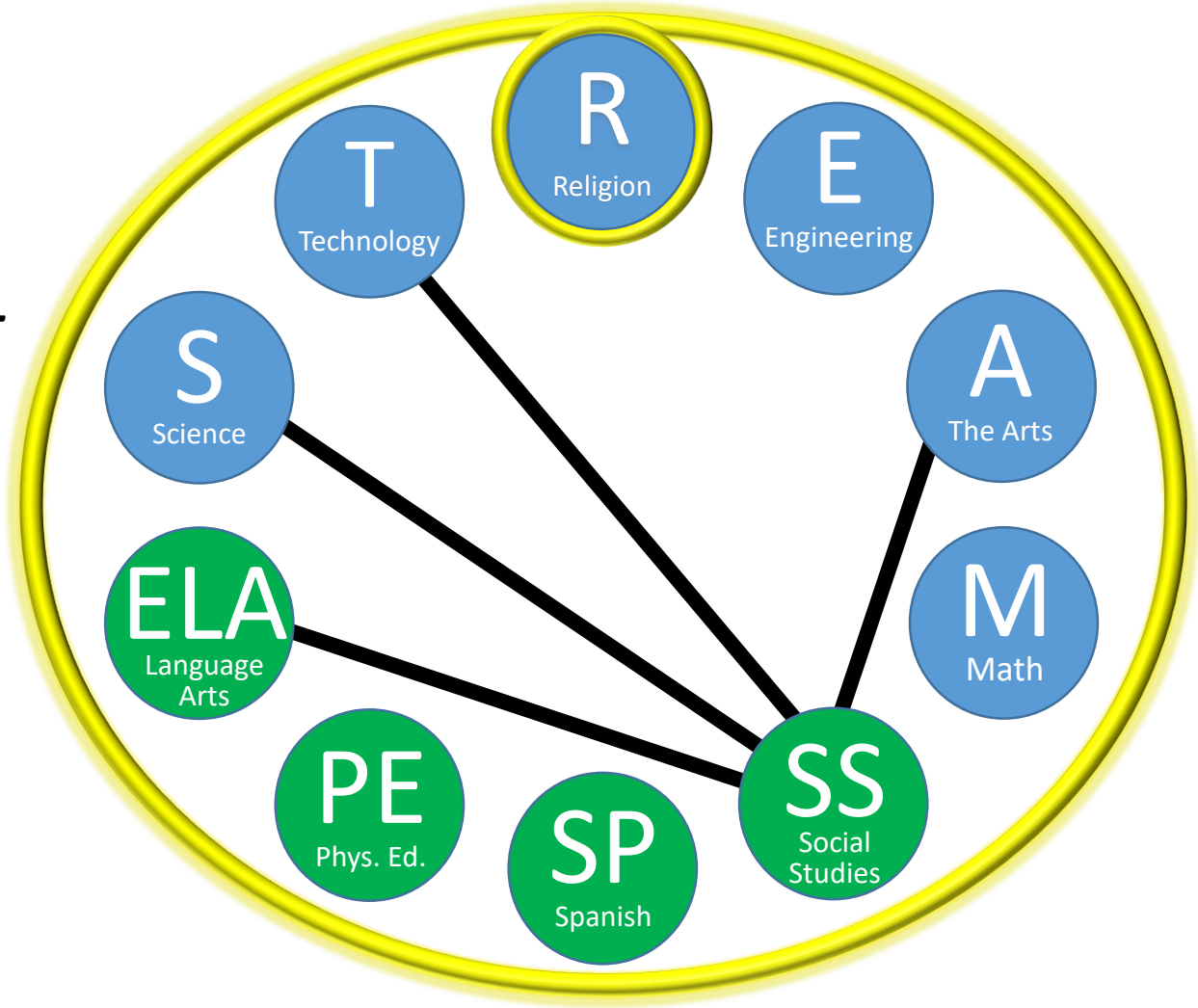
Photos from Student Videos

6th-8th Grade Social Studies

Country Project

Involves:

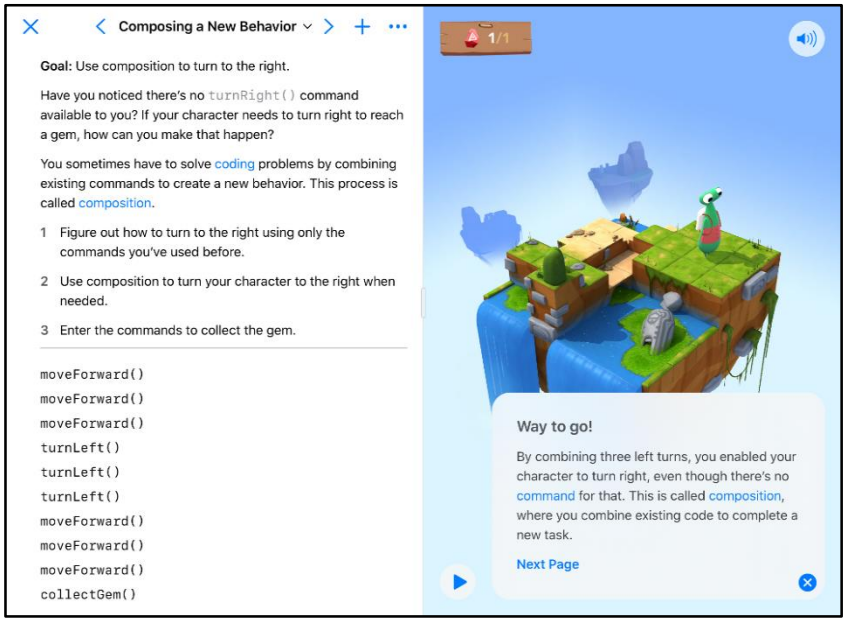
Research
Writing
Geography
Technology
Critical Thinking
Creativity
Presentation

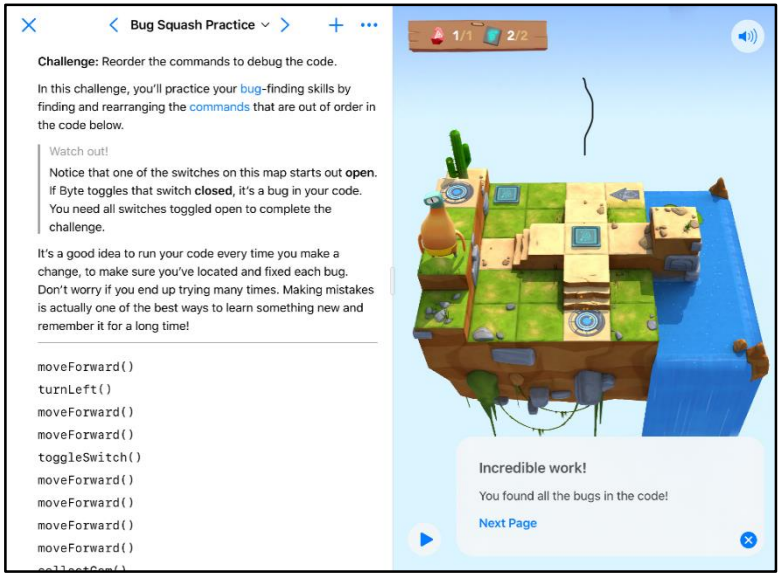


Middle School Computer Technology

Coding

Students use higher level thinking and problem solving skills while coding with Swift Playgrounds.

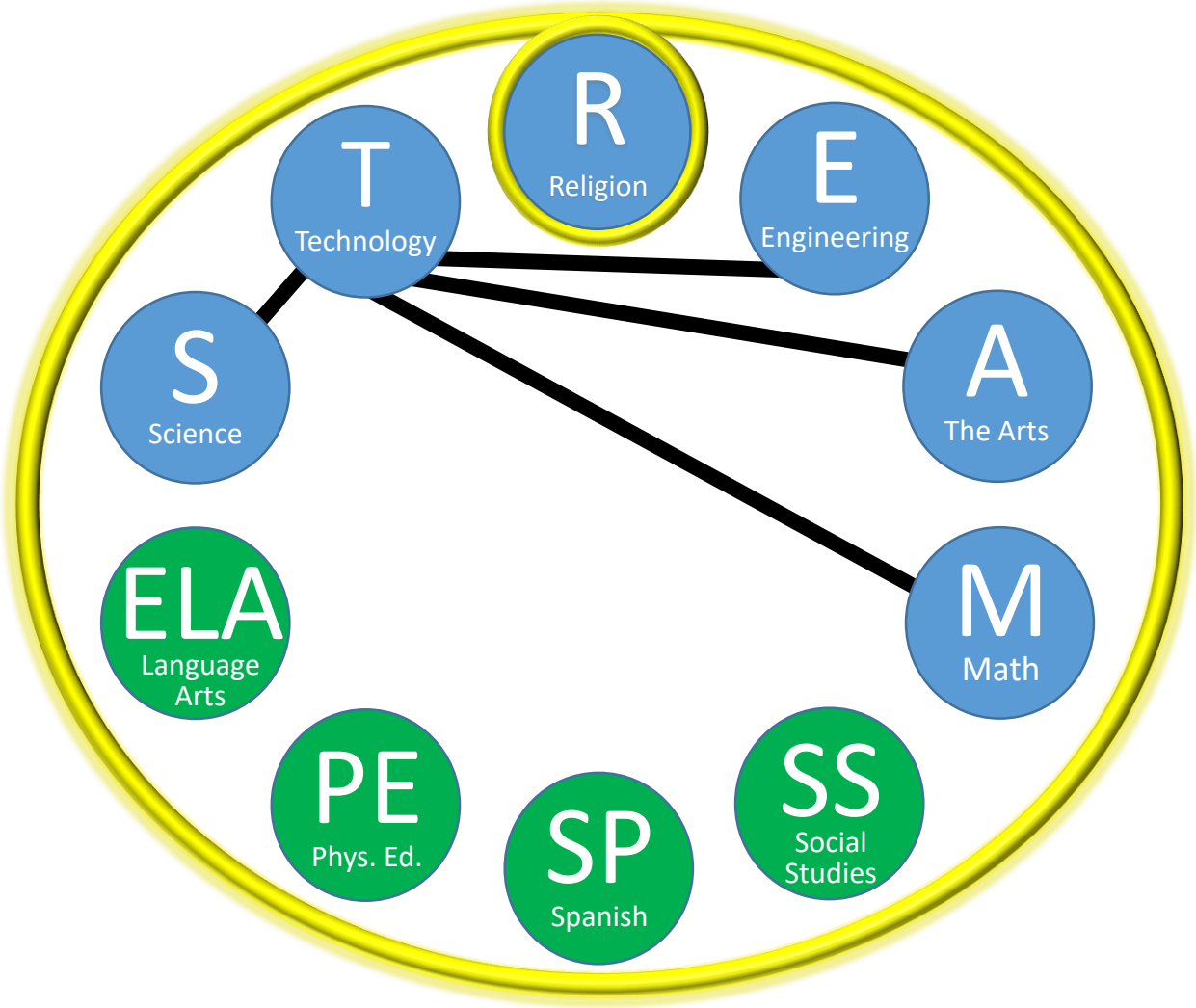




Middle School Computer Technology

Coding

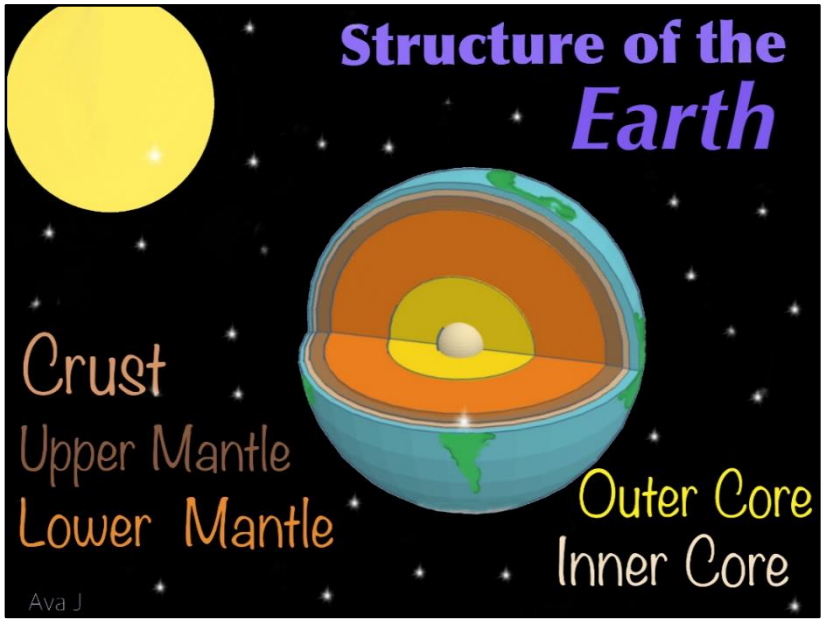
Coding is a foundational skill for engineering, which brings together science, technology, the arts, and math.



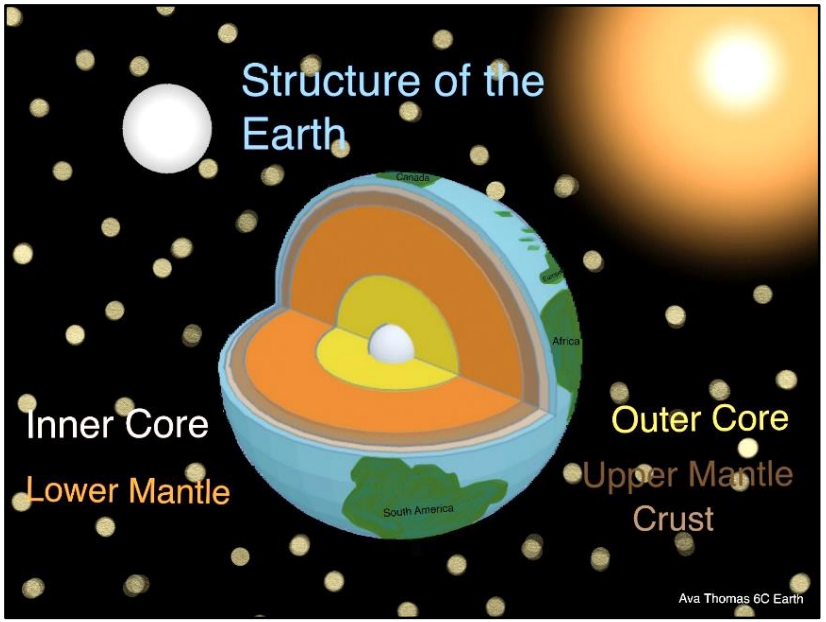
6th Grade Art and Science

Virtual Models of the Earth's Layers

with Tinkercad and Sketchbook apps



Ava J.

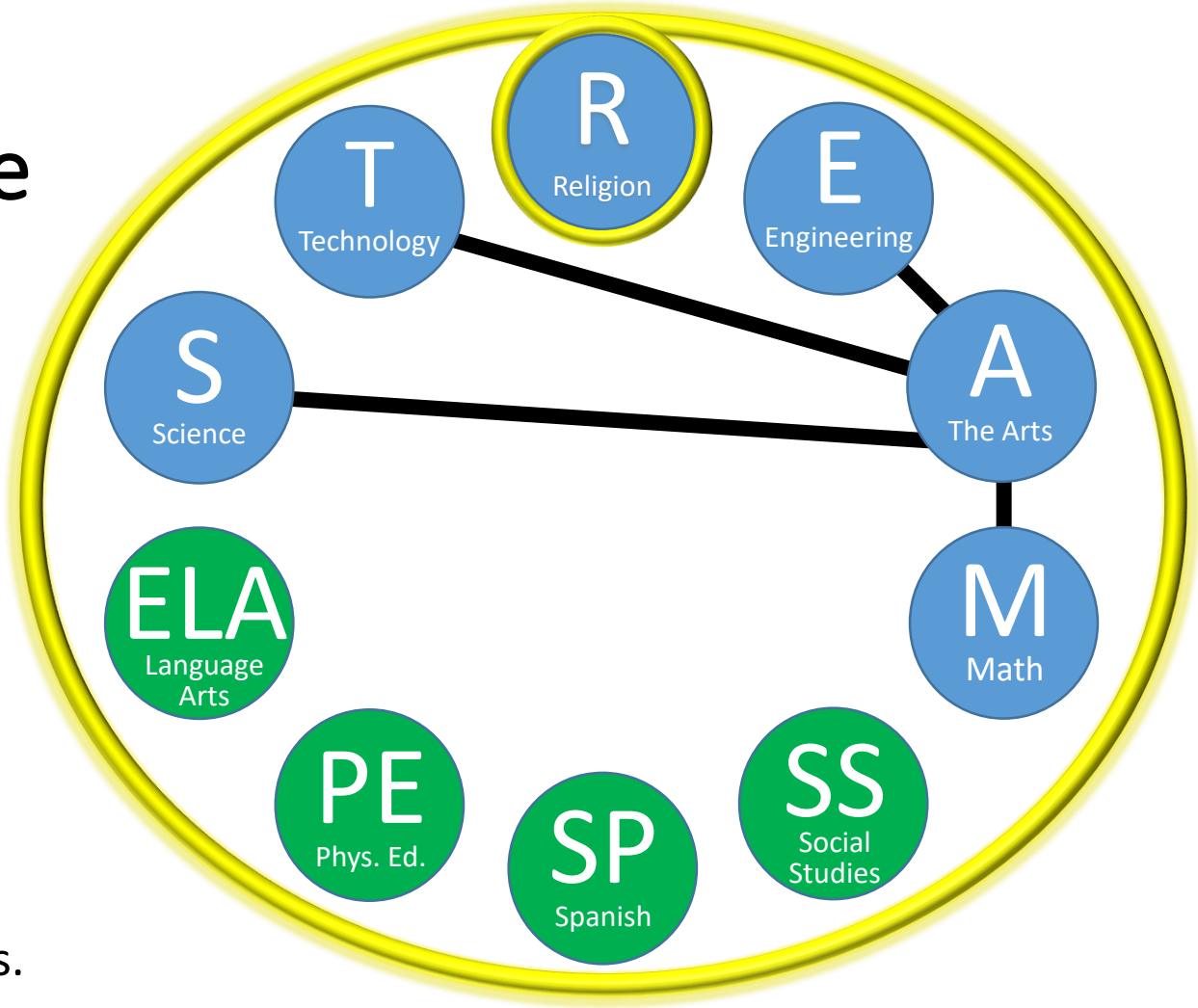


Ava T.

6th Grade Art and Science

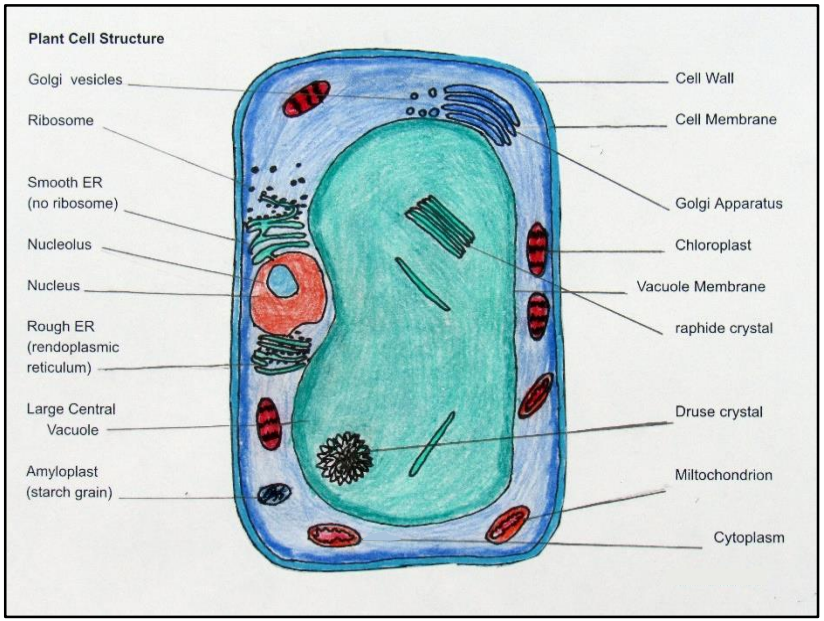
Virtual Models of the Earth's Layers

Students use Tinkercad and Sketchbook apps on iPads to create 3D models.



6th Grade Art and Science

Animal and Plant Cell Drawings and Pillows



Judi

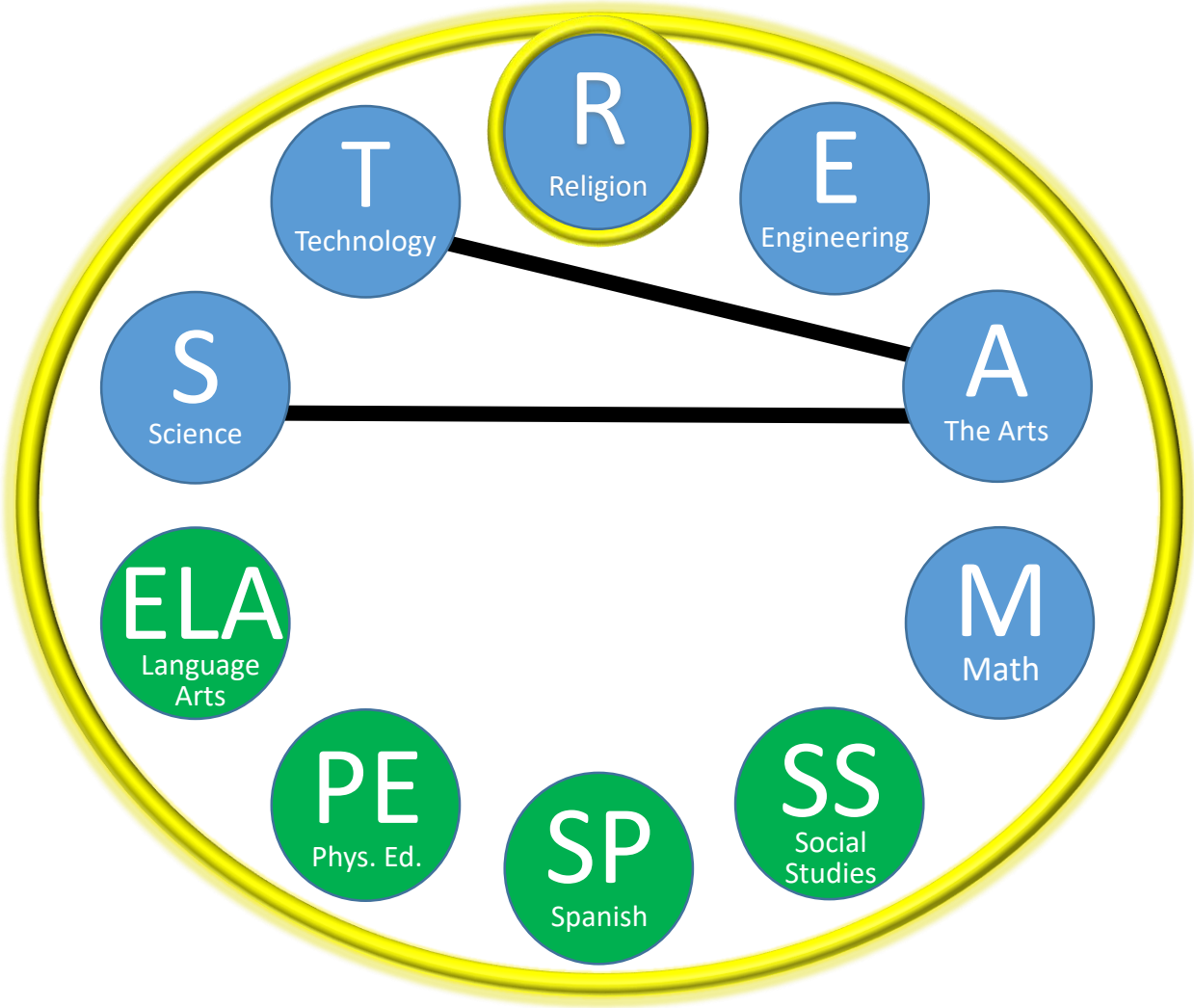
Kaylee

Juju

6th Grade Art and Science

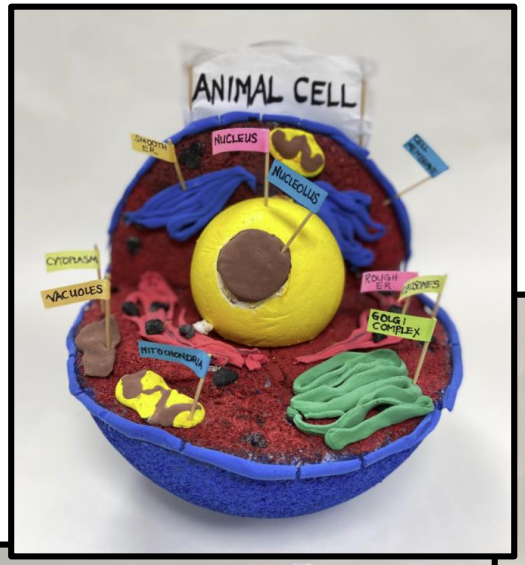
Animal and Plant Cell Drawings and Pillows

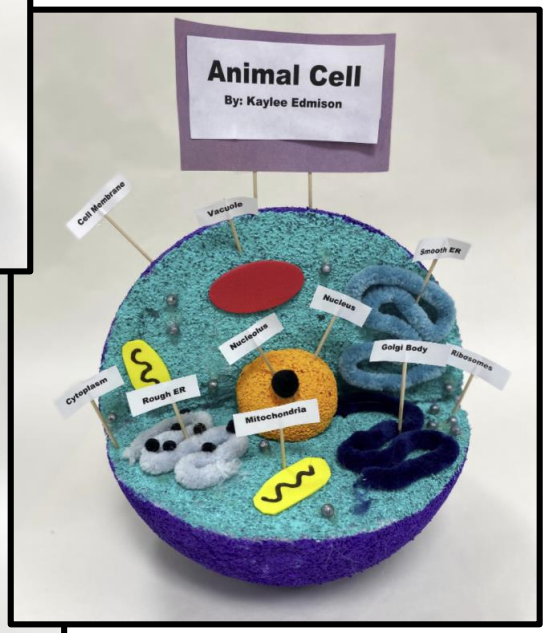
Students learn sewing skills while reinforcing science class content. They create and print text pages in the computer lab.

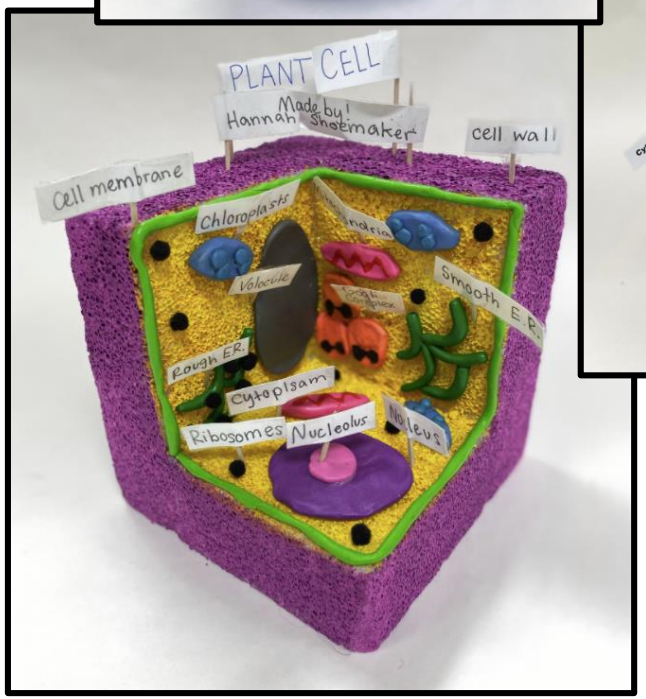


7th Grade Science

Animal and Plant Cell Models



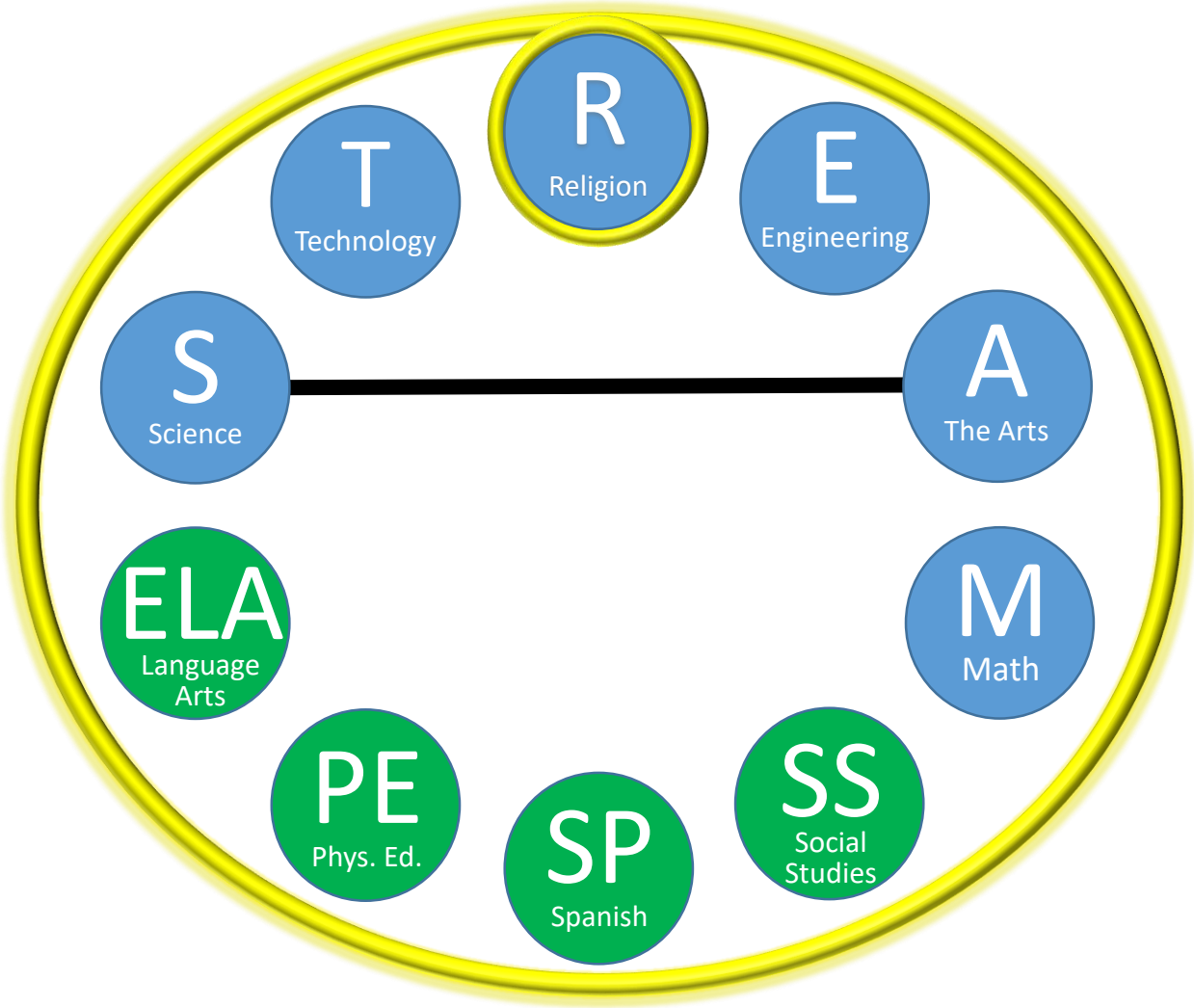




7th Grade Science

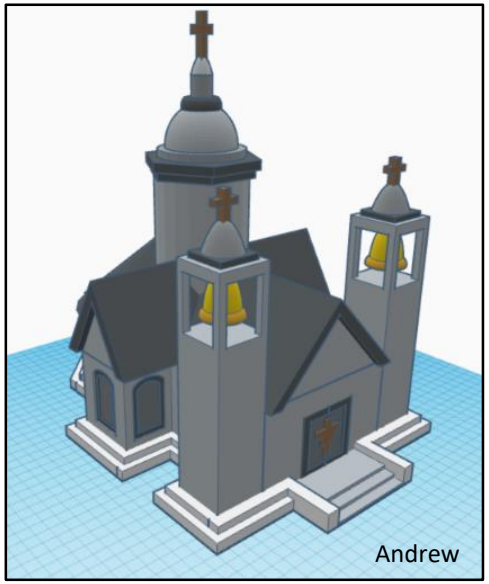
Animal and Plant Cell Models

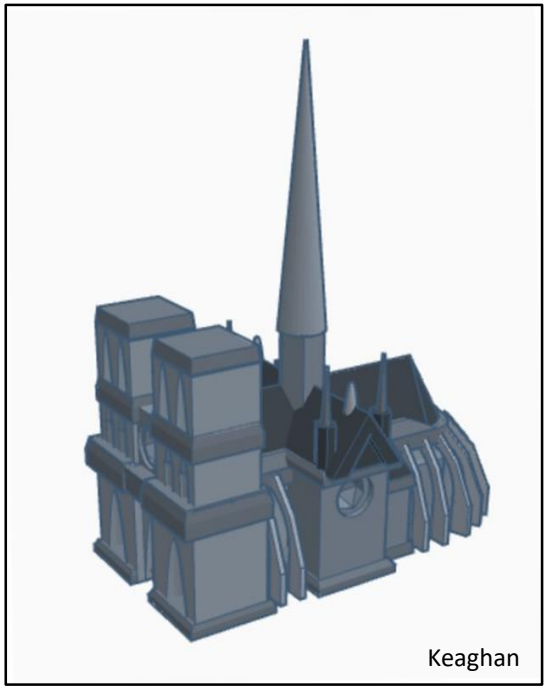
Students design and create physical models of cells with Styrofoam and a variety of other materials.

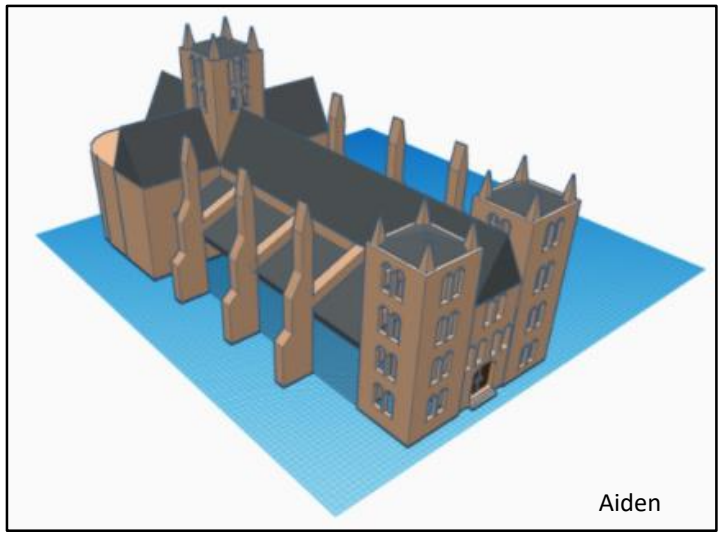


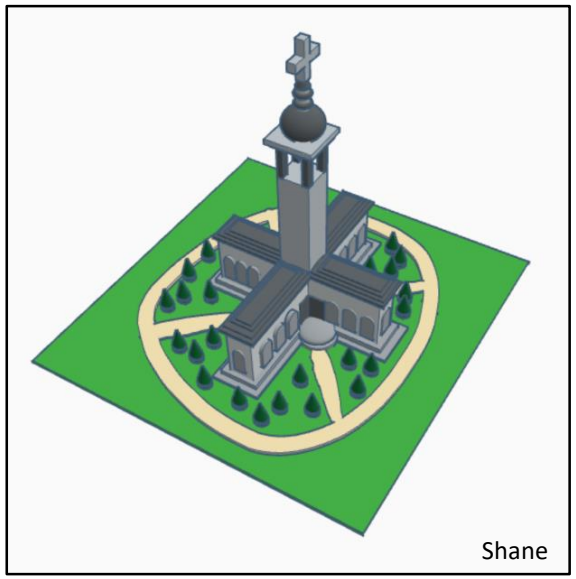
7th Grade Art

Church Design with Tinkercad





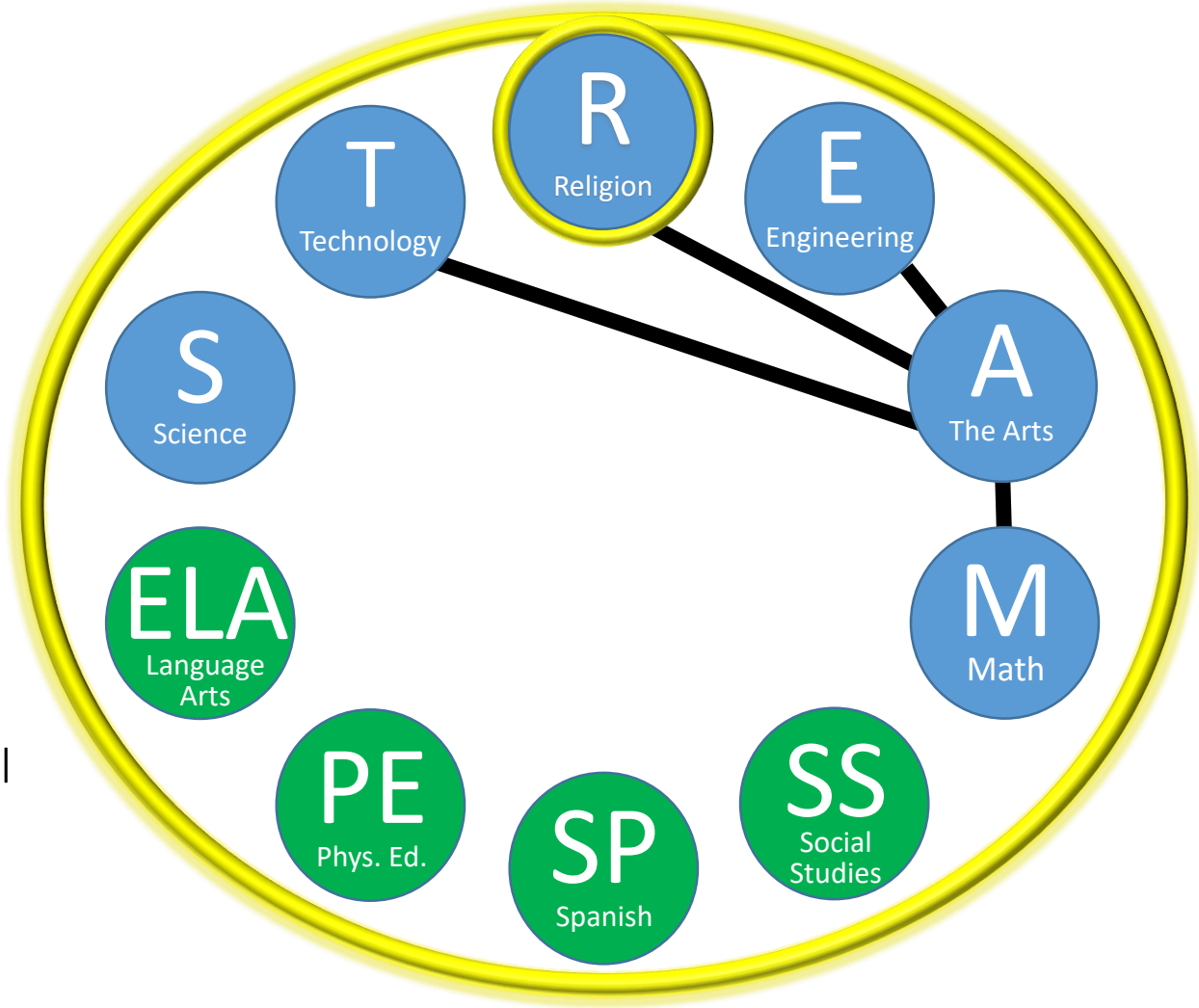




7th Grade Art

Church Design with Tinkercad

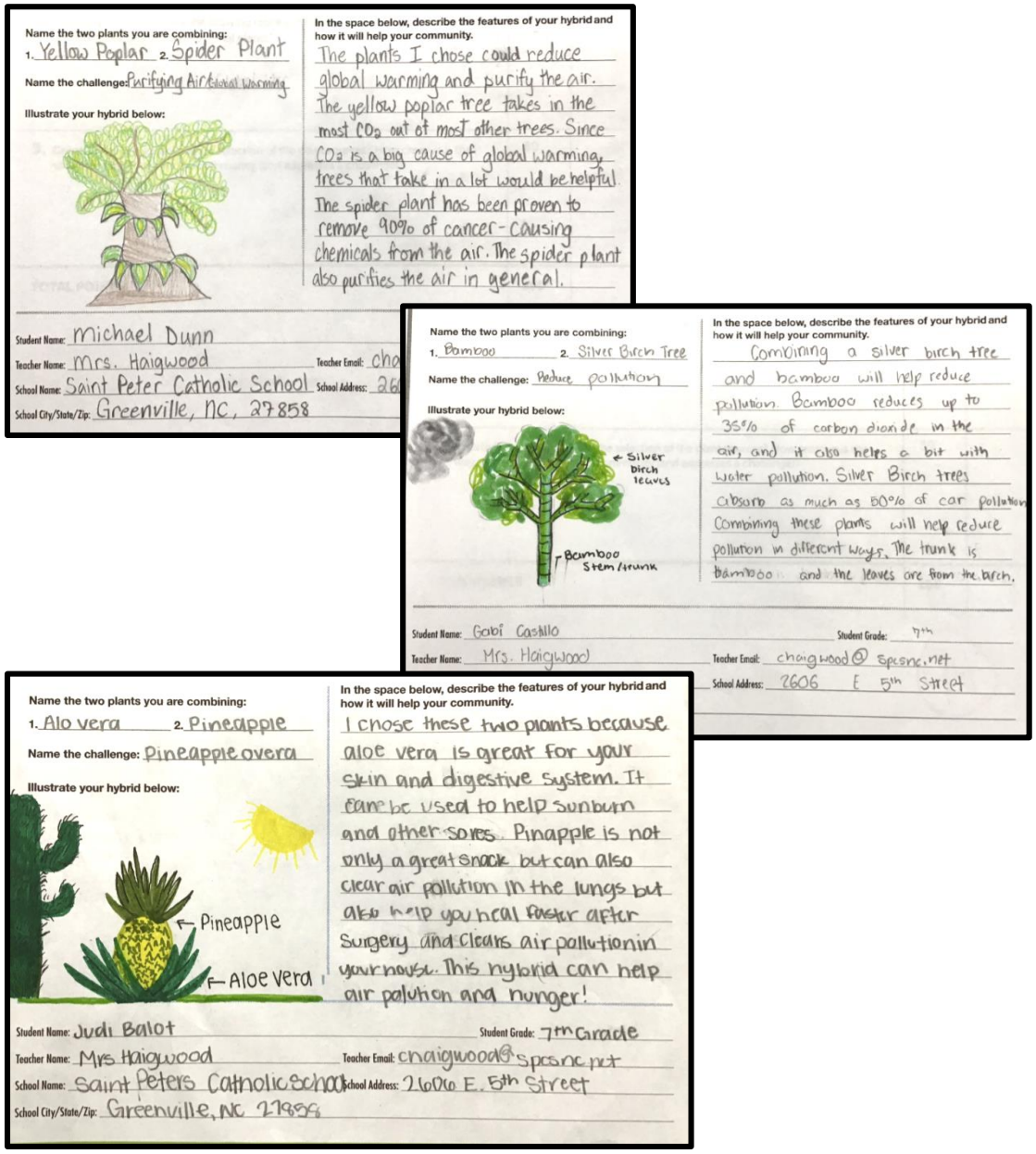
Students use Tinkercad Computer-aided Design software to create virtual churches with cruciform ground plans.



7th Grade Science

Plant "Mash-up"

Hybrid Plant Design



Name the two plants you are combining:
1. Yellow Poplar 2. Spider Plant
Name the challenge: Purifying Air/Global Warming
Illustrate your hybrid below:

In the space below, describe the features of your hybrid and how it will help your community.
The plants I chose could reduce global warming and purify the air. The yellow poplar tree takes in the most CO_2 out of most other trees. Since CO_2 is a big cause of global warming, trees that take in a lot would be helpful. The spider plant has been proven to remove 90% of cancer-causing chemicals from the air. The spider plant also purifies the air in general.

Student Name: Michael Dunn
Teacher Name: Mrs. Haigwood
School Name: Saint Peter Catholic School
School City/State/Zip: Greenville, NC, 27858

Name the two plants you are combining:
1. Bamboo 2. Silver Birch Tree
Name the challenge: Reduce pollution
Illustrate your hybrid below:
Silver Birch leaves
Bamboo Stem/trunk

In the space below, describe the features of your hybrid and how it will help your community.
Combining a silver birch tree and bamboo will help reduce pollution. Bamboo reduces up to 35% of carbon dioxide in the air, and it also helps a bit with water pollution. Silver Birch trees absorb as much as 50% of car pollution. Combining these plants will help reduce pollution in different ways. The trunk is bamboo and the leaves are from the birch.

Student Name: Gabi Castillo
Student Grade: 7th
Teacher Name: Mrs. Haigwood
Teacher Email: chaigwood@spcsnc.net
School Address: 2606 E 5th Street

Name the two plants you are combining:
1. Alo vera 2. Pineapple
Name the challenge: Pineapple overa
Illustrate your hybrid below:
Pineapple
Aloe Vera

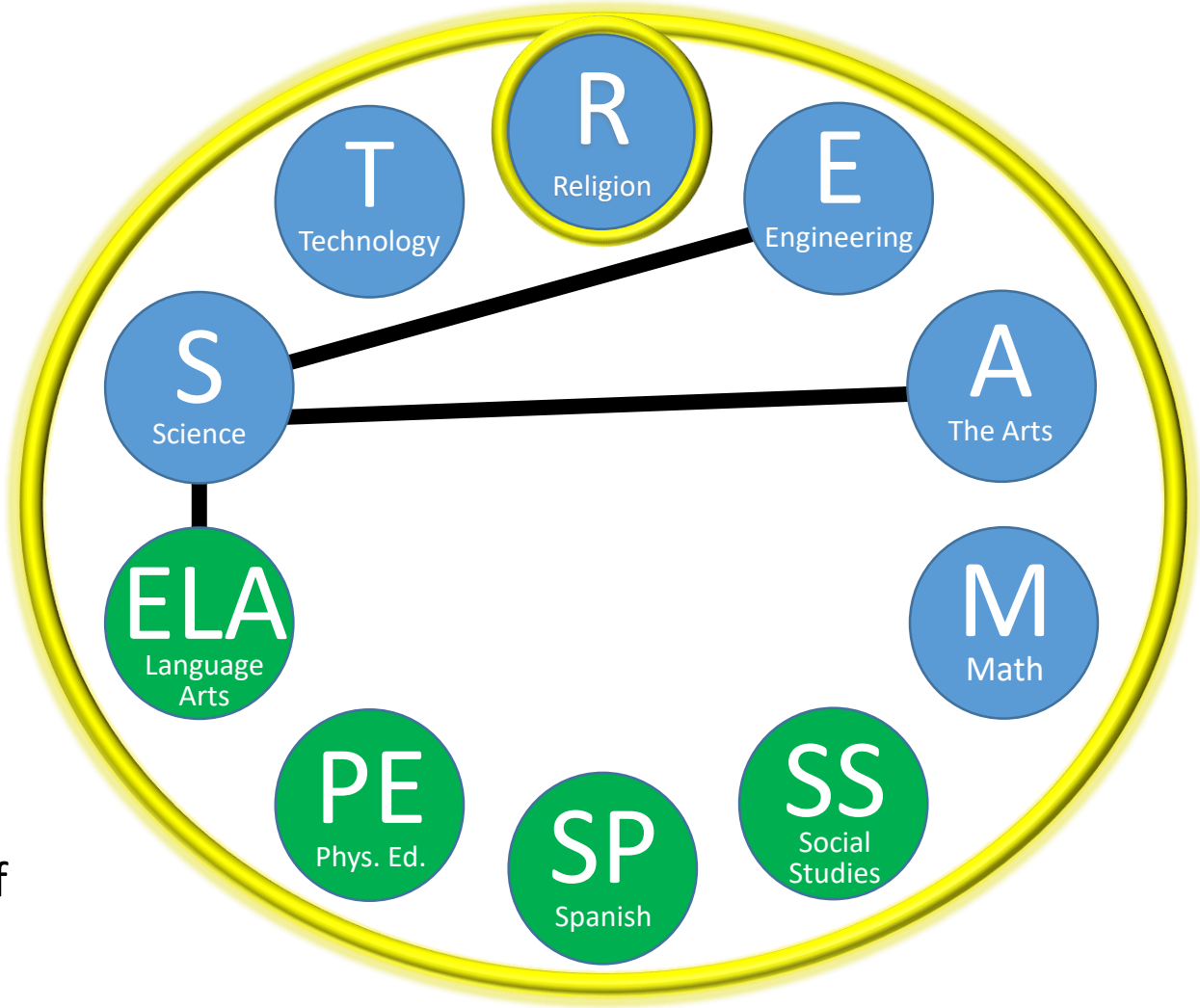
In the space below, describe the features of your hybrid and how it will help your community.
I chose these two plants because aloe vera is great for your skin and digestive system. It can be used to help sunburn and other sores. Pinapple is not only a great snack but can also clear air pollution in the lungs but also help you heal faster after surgery and clears air pollution in your house. This hybrid can help air pollution and hunger!

Student Name: Judi Balot
Student Grade: 7th Garade
Teacher Name: Mrs Haigwood
Teacher Email: chaigwood@spcsnc.net
School Name: Saint Peters Catholic School
School Address: 2606 E. 5th Street
School City/State/Zip: Greenville, NC 27858

7th Grade Science

Plant "Mash-up"

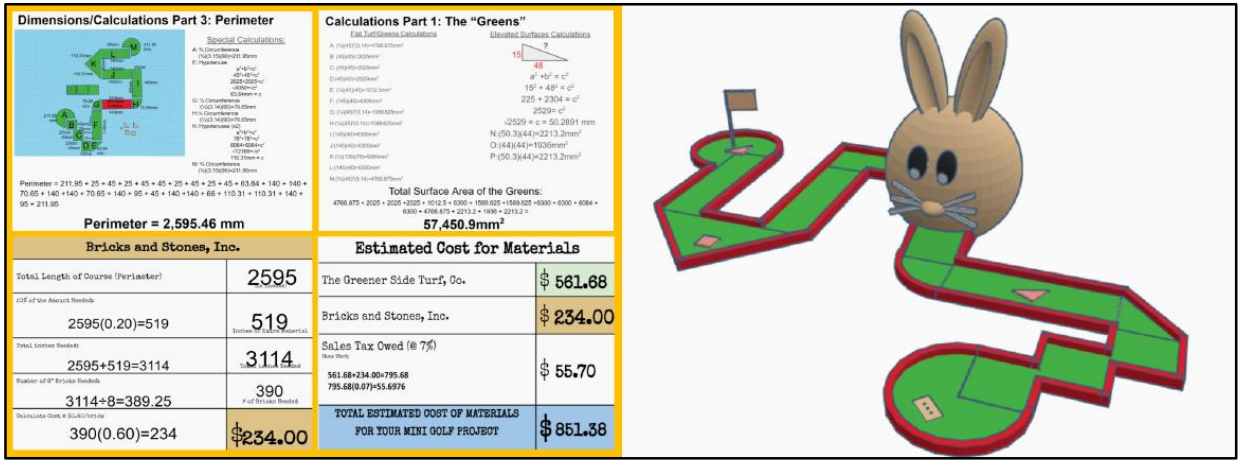
Hybrid Plant Design



Students research types of plants. Then, they design and describe the hybrid plants that they imagine.

7th Grade Math and Art

Mini-golf design with Tinkercad



Dimensions/Calculations Part 3: Perimeter

Special Calculations:

Perimeter = 211.95 + 25 + 45 + 25 + 45 + 45 + 25 + 45 + 25 + 45 + 63.64 + 140 + 140 + 70.65 + 140 +140 + 70.65 + 140 + 95 + 45 + 140 +140 + 66 + 110.31 + 110.31 + 140 + 95 + 211.95

Perimeter = 2,595.46 mm

Calculations Part 1: The "Greens"

Flat Turf/Greens Calculations

Elevated Surfaces Calculations

15 9 48

$a^2+b^2=c^2$

$15^2+48^2=c^2$

$225+2304=c^2$

$2529=c^2$

$\sqrt{2529}=c=50.2891$ mm

N:(50.3)(44)=2213.2mm²

O:(44)(44)=1936mm²

P:(50.3)(44)=2213.2mm²

Total Surface Area of the Greens:

4768.875 + 2025 + 2025 +2025 + 1012.5 + 6300 + 1589.625 +1589.625 +6300 + 6300 + 6084 + 6300 + 4768.875 + 2213.2 + 1936 + 2213.2 =

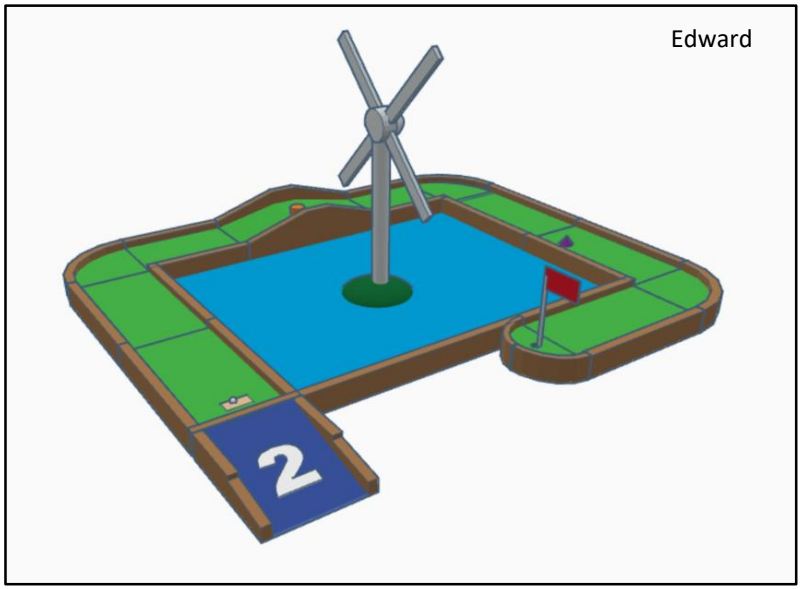
57,450.9mm²

Bricks and Stones, Inc.	
Total Length of Course (Perimeter)	2595
20% of the Amount Needed: 2595(0.20)=519	519
Total Inches Needed: 2595+519=3114	3114
Number of 8" Bricks Needed: 3114÷8=389.25	390
Calculate Cost @ $0.60/brick: 390(0.60)=234	$234.00

Estimated Cost for Materials	
The Greener Side Turf, Co.	$ 561.68
Bricks and Stones, Inc.	$ 234.00
Sales Tax Owed (@ 7%) Show Work: 561.68+234.00=795.68 795.68(0.07)=55.6976	$ 55.70
TOTAL ESTIMATED COST OF MATERIALS FOR YOUR MINI GOLF PROJECT	$ 851.38

Anthien

David

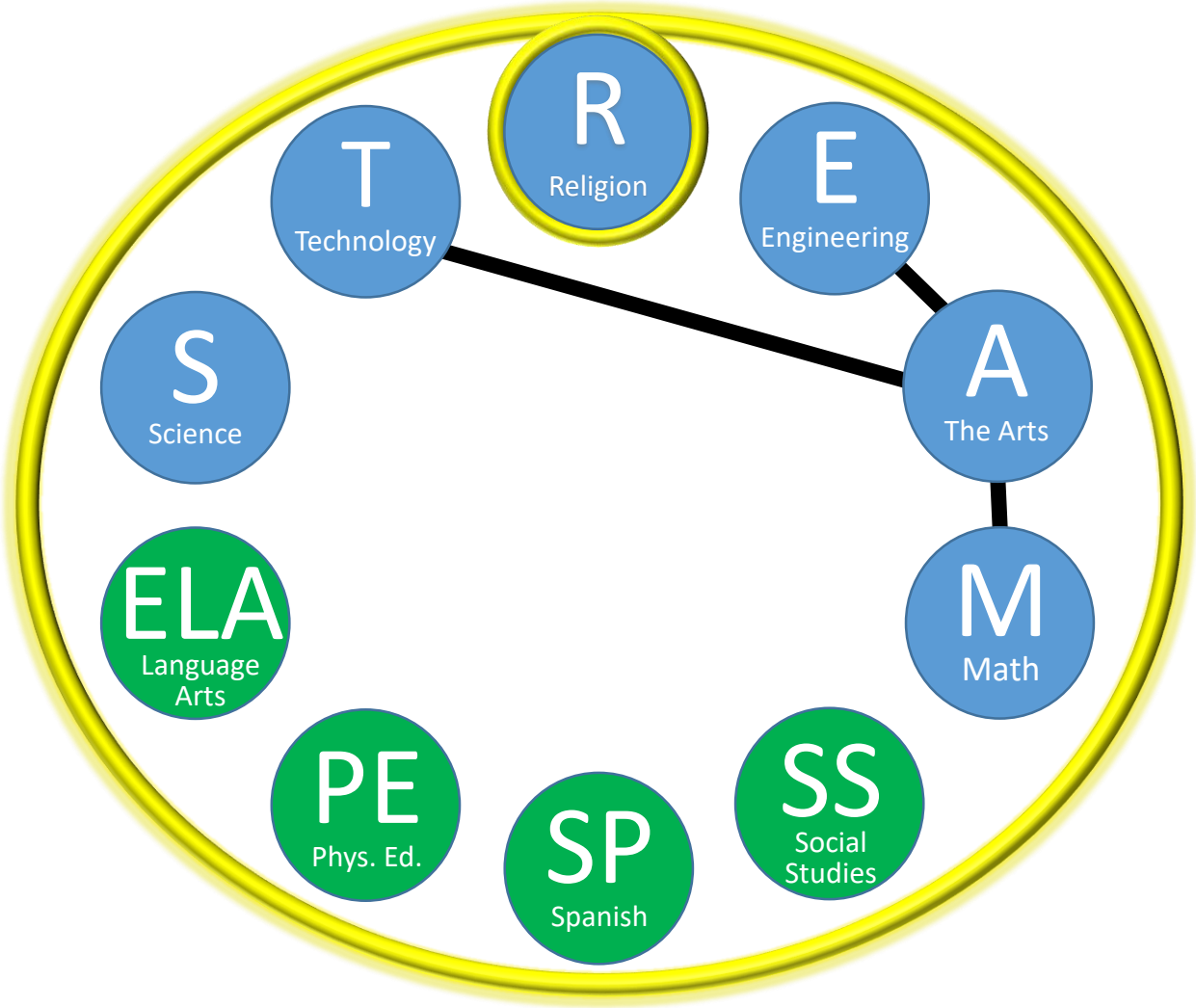


Edward

7th Grade Math and Art

Mini-golf design with Tinkercad

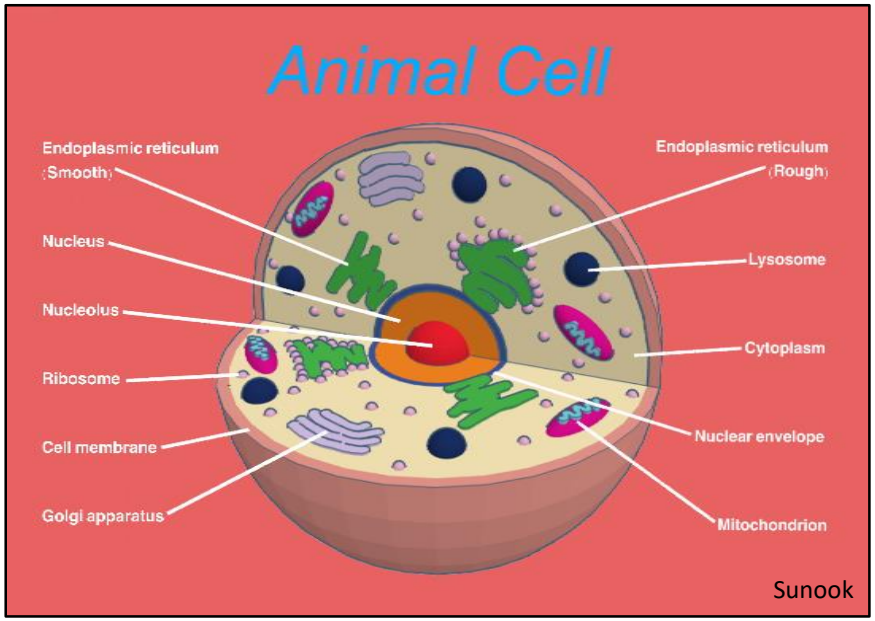
Students use Tinkercad Computer-aided Design software to design mini-golf lanes and make calculations of area and cost of materials.

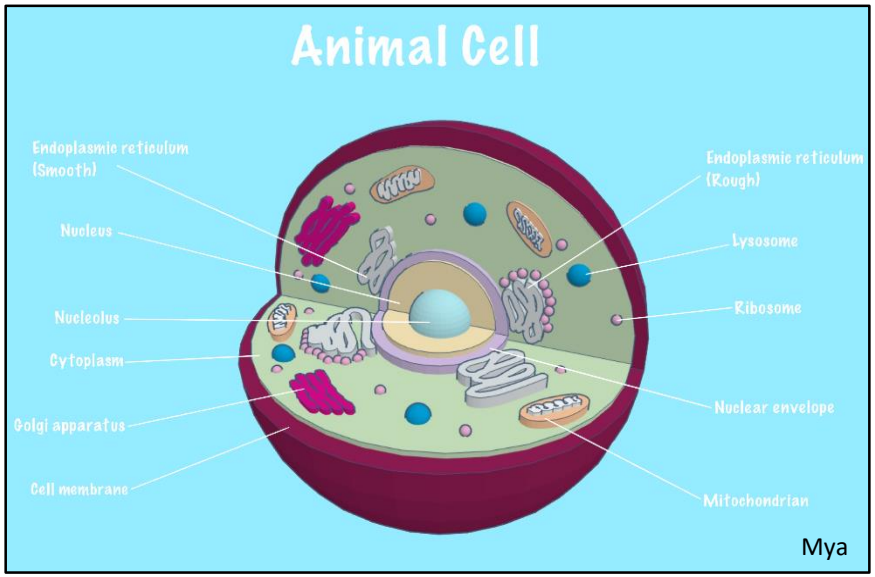


7th and 8th Grade Art and Science

Virtual Animal Cell Models

with Tinkercad and Sketchbook apps

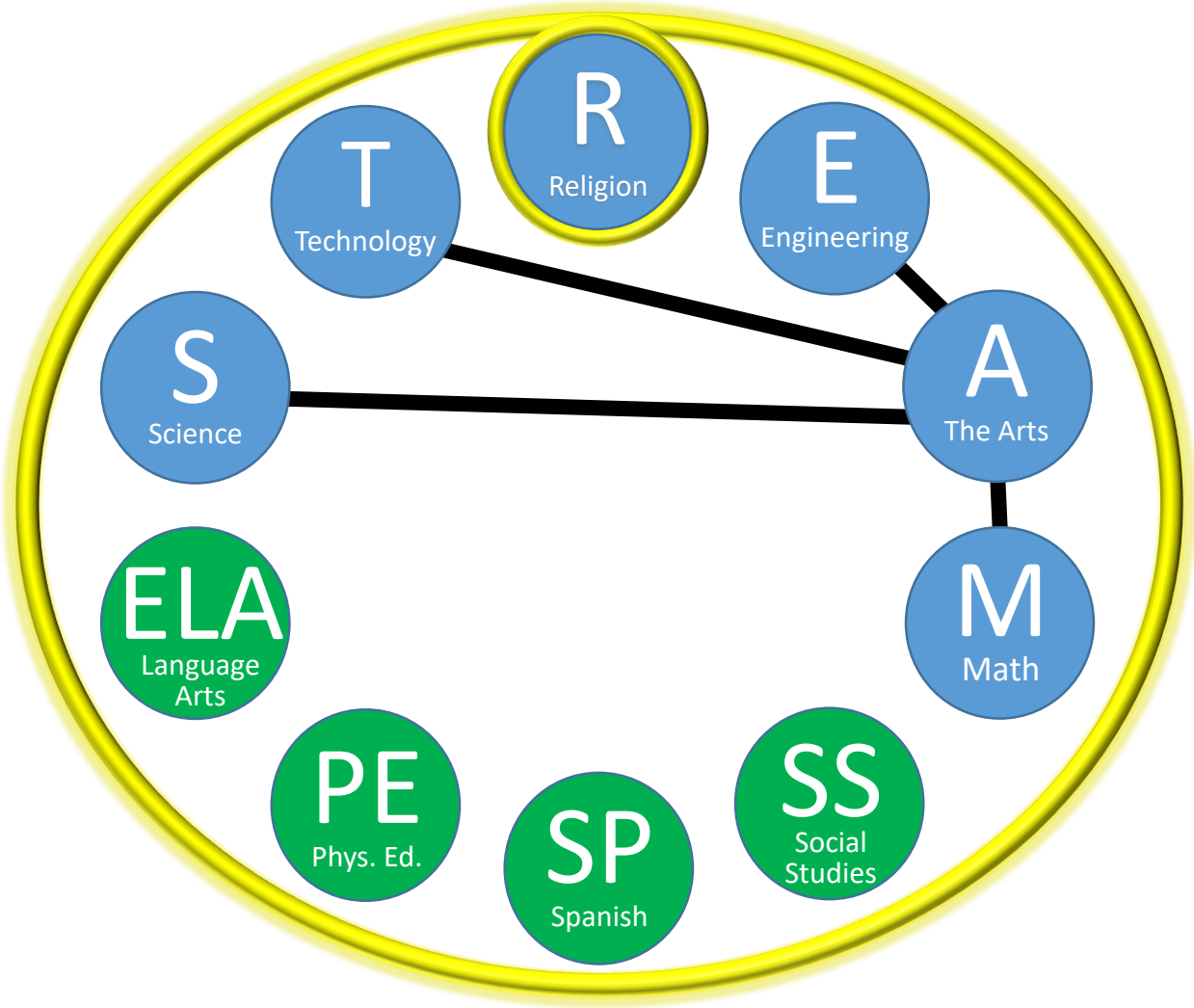




7th and 8th Grade Art and Science

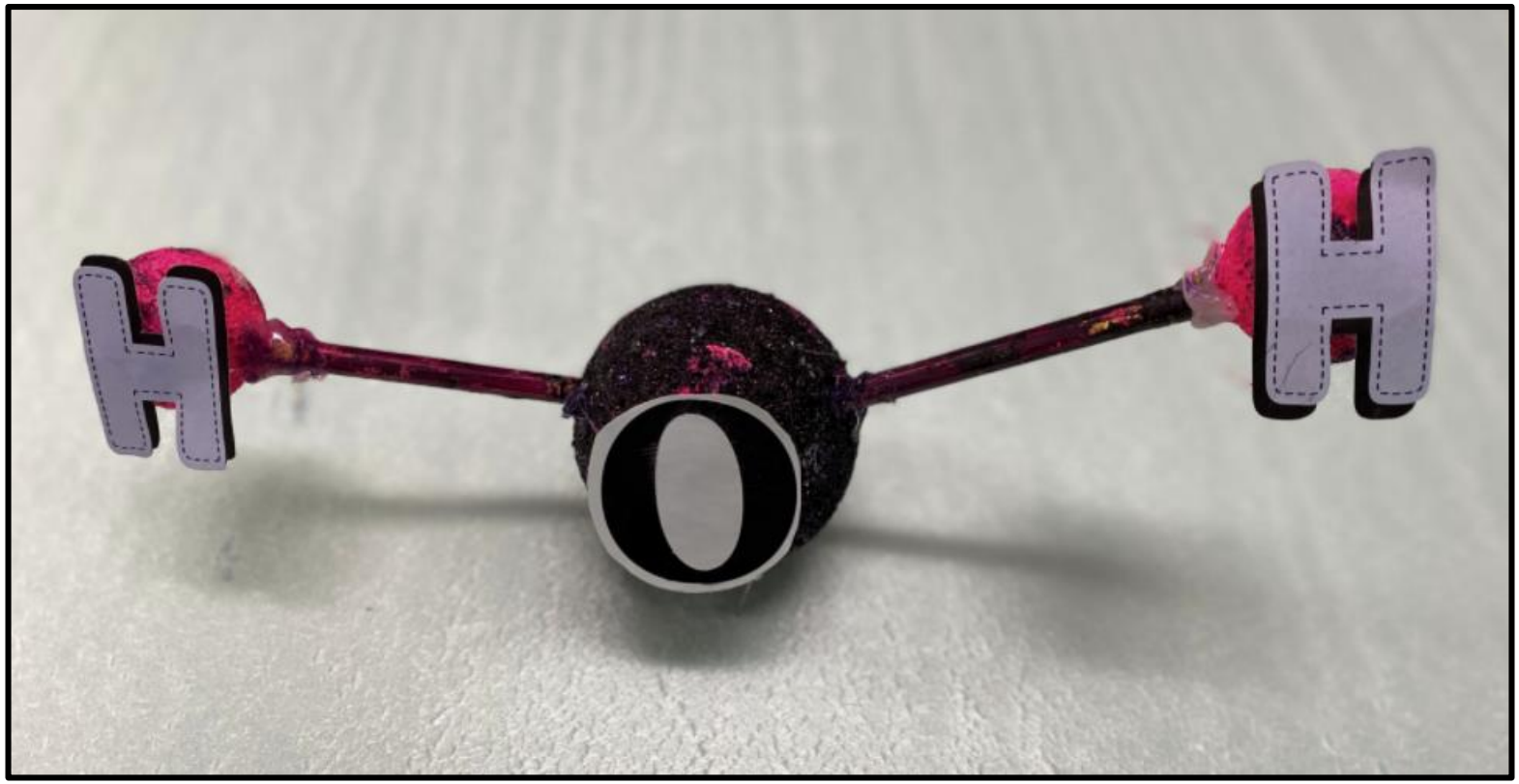
Virtual Animal Cell Models

Students use Tinkercad and Sketchbook apps on iPads to create 3D models.



8th Grade Science

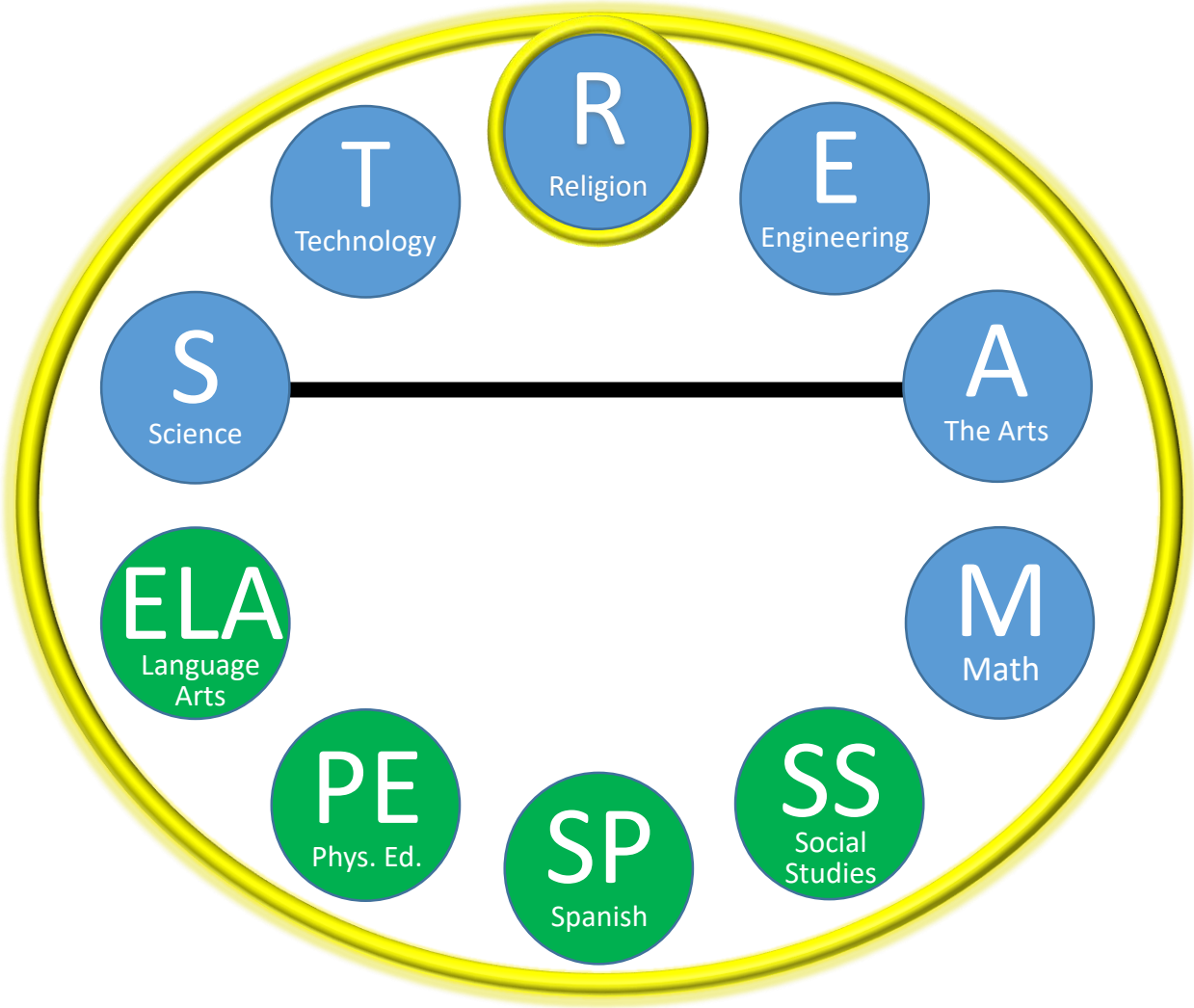
Molecular Models



8th Grade Science

Molecular Models

Students design and create physical models of molecules with Styrofoam and a variety of other materials.



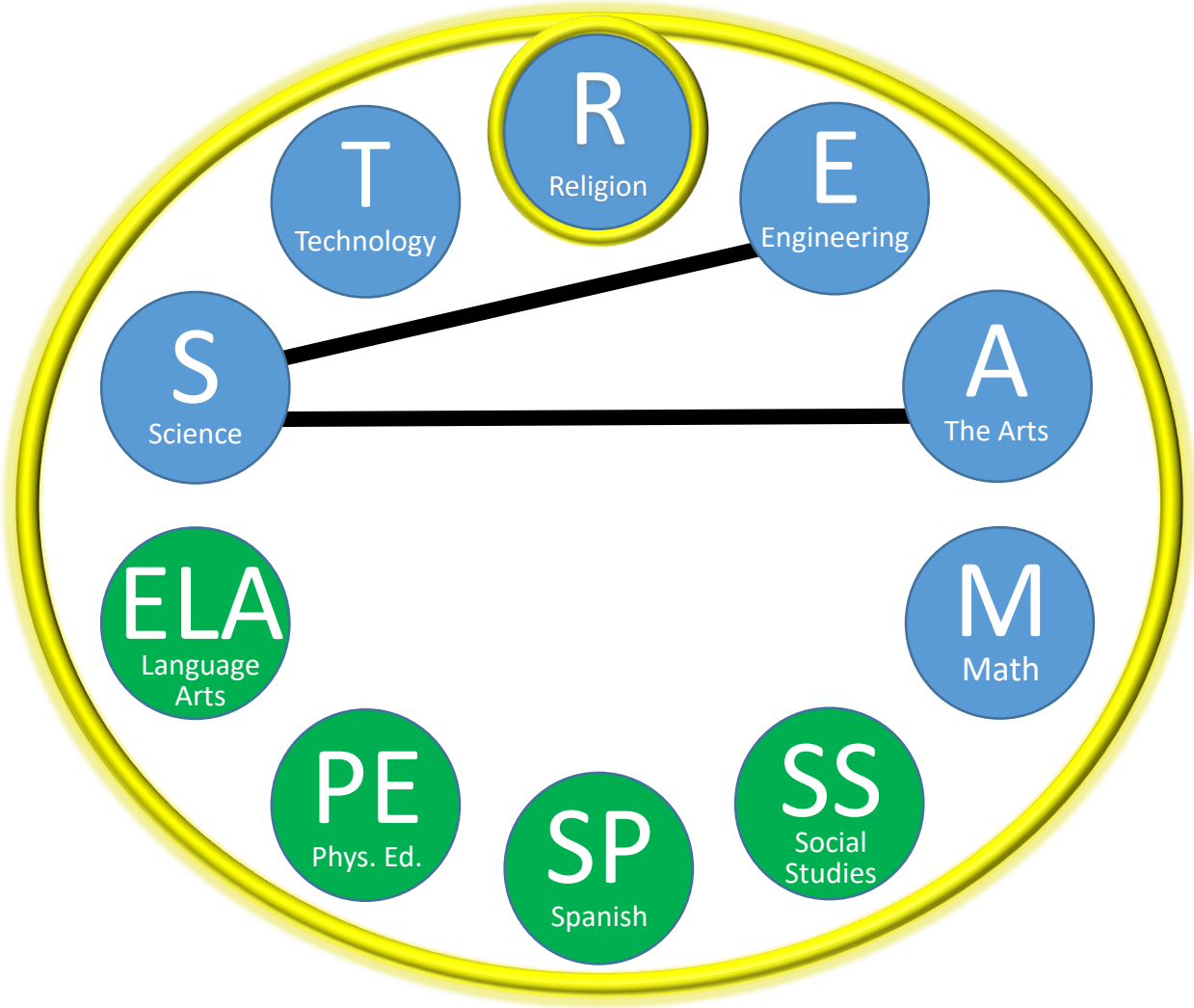
8th Grade Science

Roller Coaster Design and Construction

8th Grade Science

Roller Coaster Design and Construction

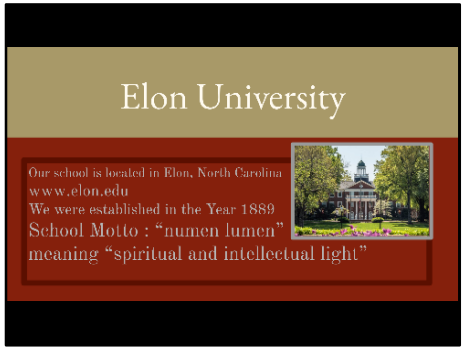
Students design and create structures with cardboard and a variety of other materials. A ball must be able to successfully transit the coaster.

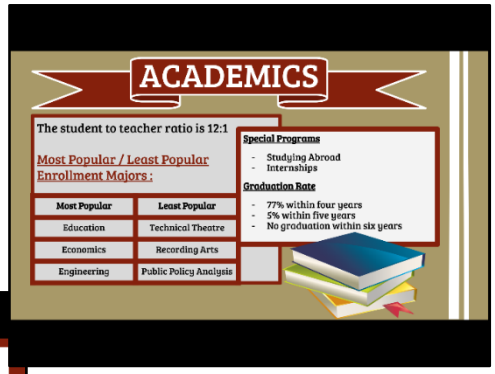


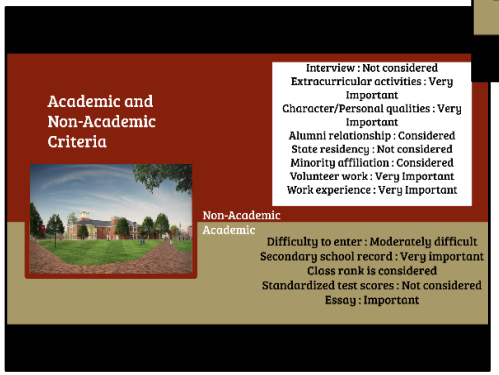
8th Grade Computer Technology

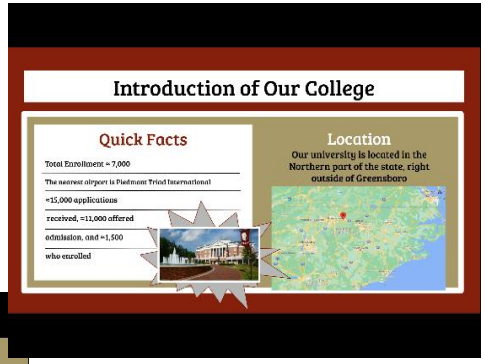
College Ambassador Project

Students became ambassadors for a 4-year North Carolina college and researched facts about the college. They created a Google Slides presentation and presented it to the class.









Photos from a Student Presentation

8th Grade Computer Technology

College Ambassador Project

Involves:

Research
Writing
Geography
Technology
Critical Thinking
Creativity
Presentation