Brick Abstraction

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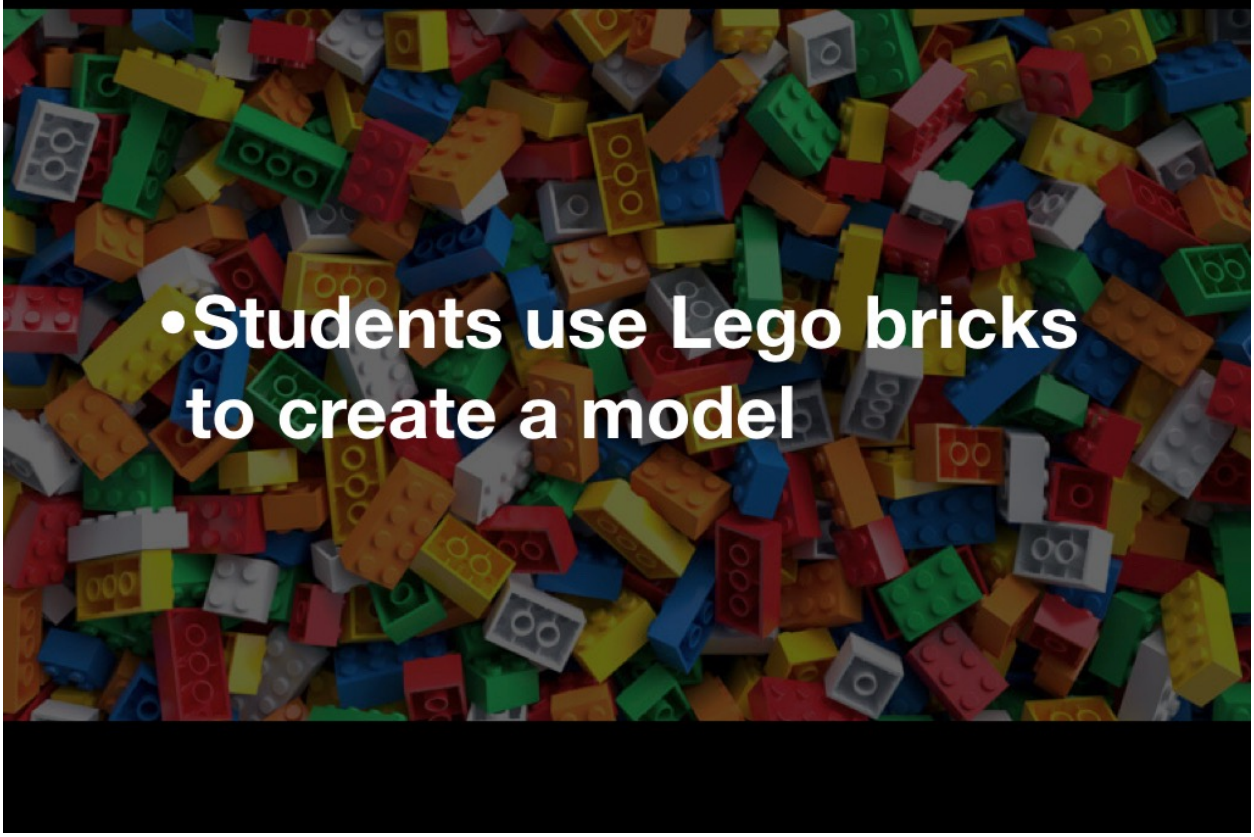
Brick Abstraction

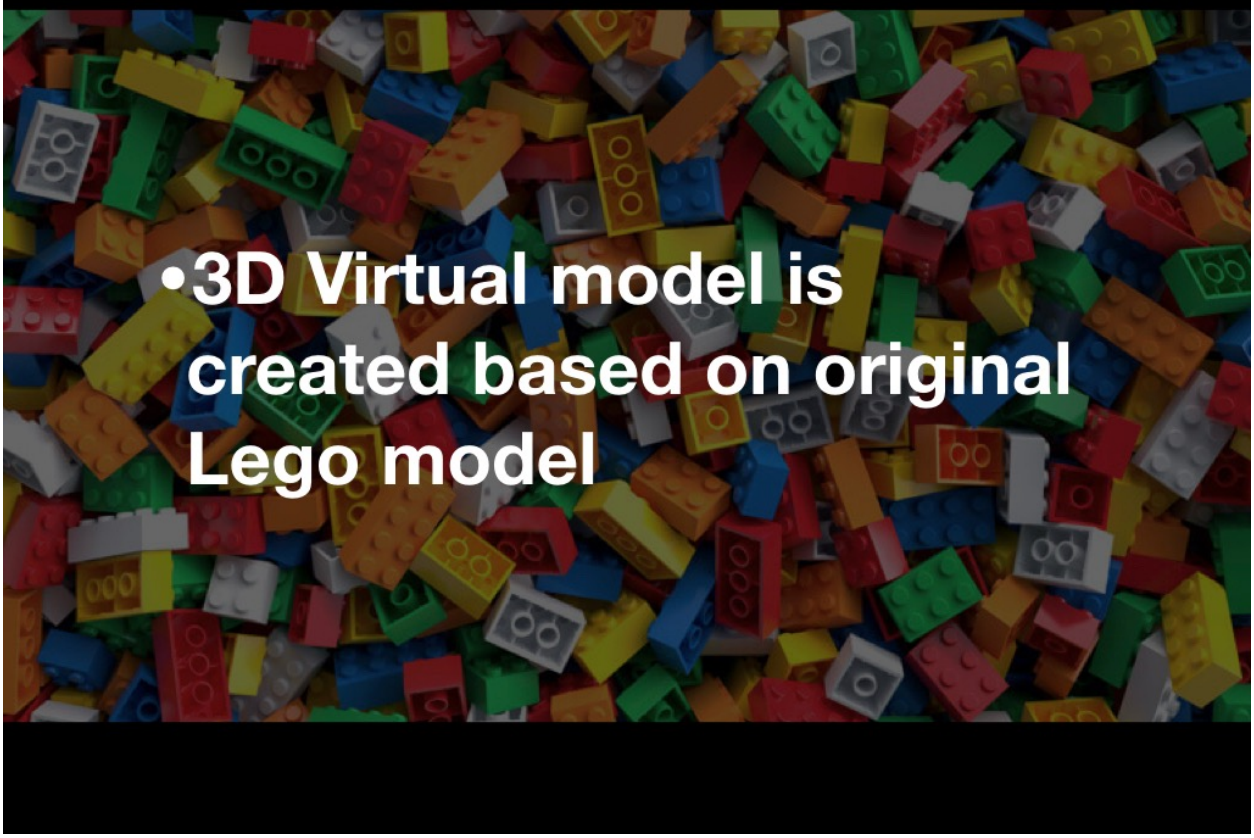
- Target audience: Grade levels 3 and up
- FULL STEAM ahead!
- Lego bricks, the foundation of a multi-phase STEAM project
- 3-phase project implementation
- Take Lego creating to a whole new level!

Phase 1- Baseline



- Students use Lego bricks to create a model

Phase 2- First level abstraction



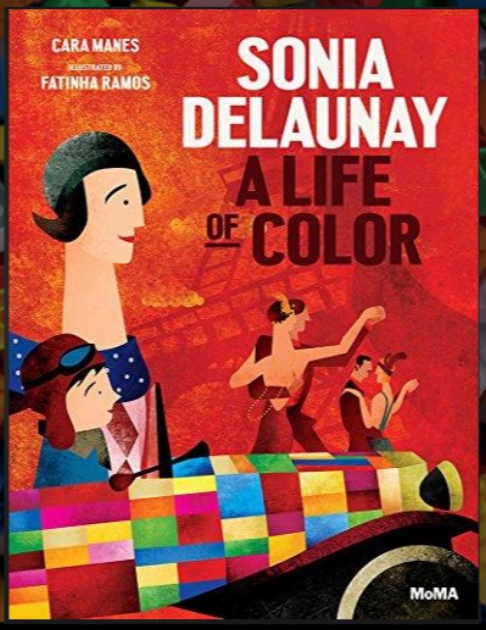
- 3D Virtual model is created based on original Lego model

Phase 3- Second level abstraction

- A painting is created based on the 3D virtual model representation

Background Information

- It all started with a children's book…
  A Life of Color



Sonia Delaunay

- It all started with a children's book…
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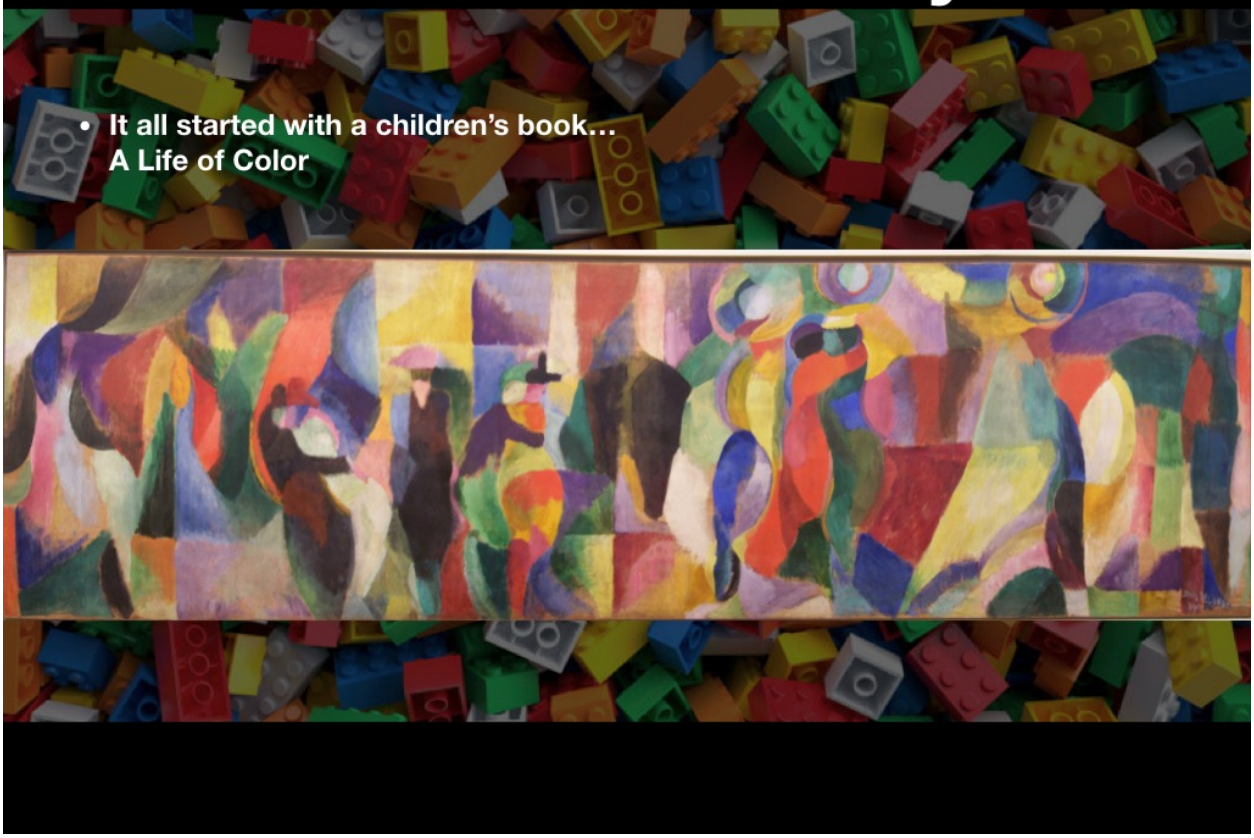
Sonia Delaunay



- It all started with a children's book…
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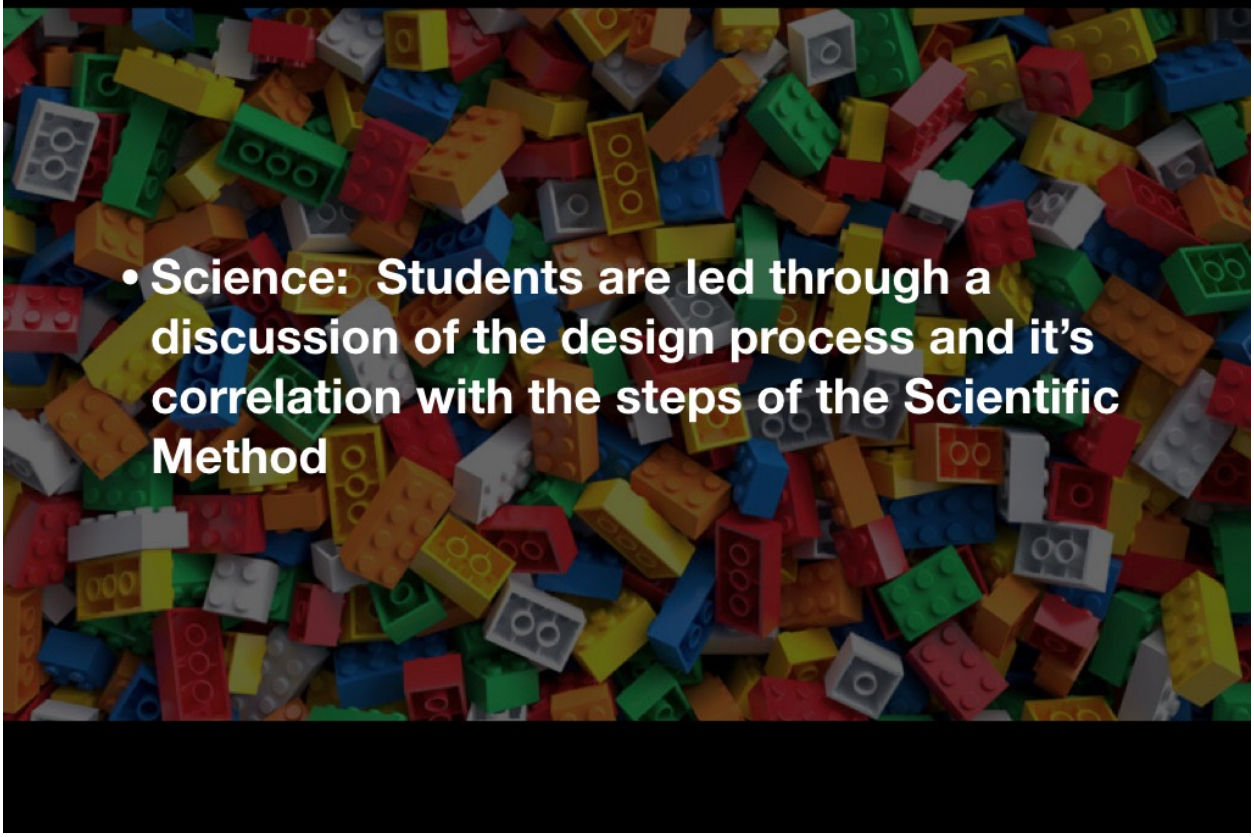
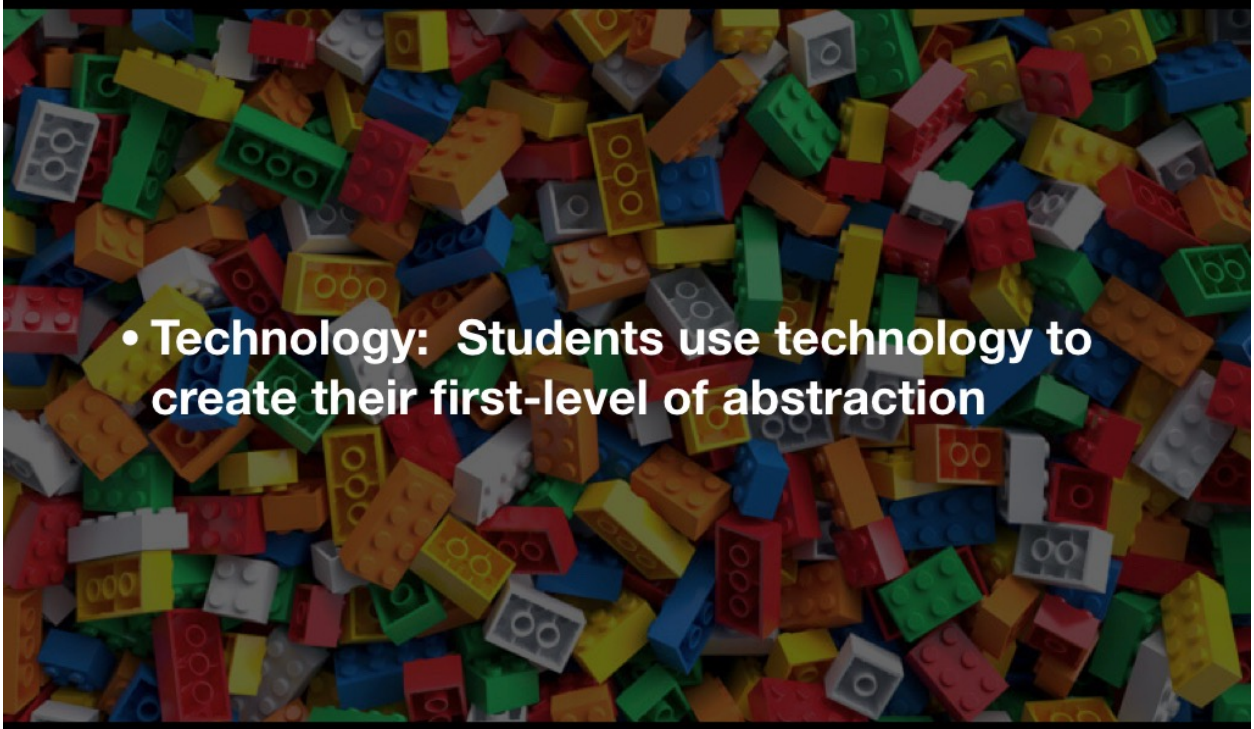
S-T-E-A-M



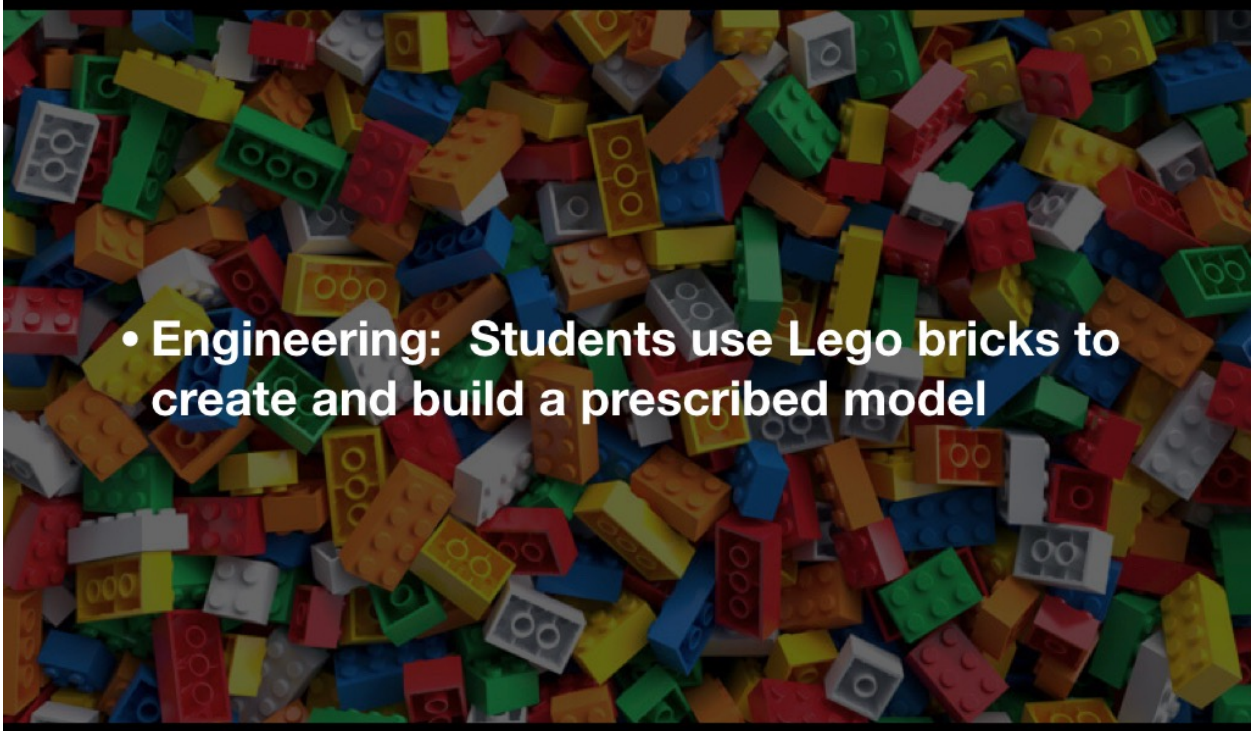
- Science: Students are led through a discussion of the design process and it's correlation with the steps of the Scientific Method

S-T-E-A-M



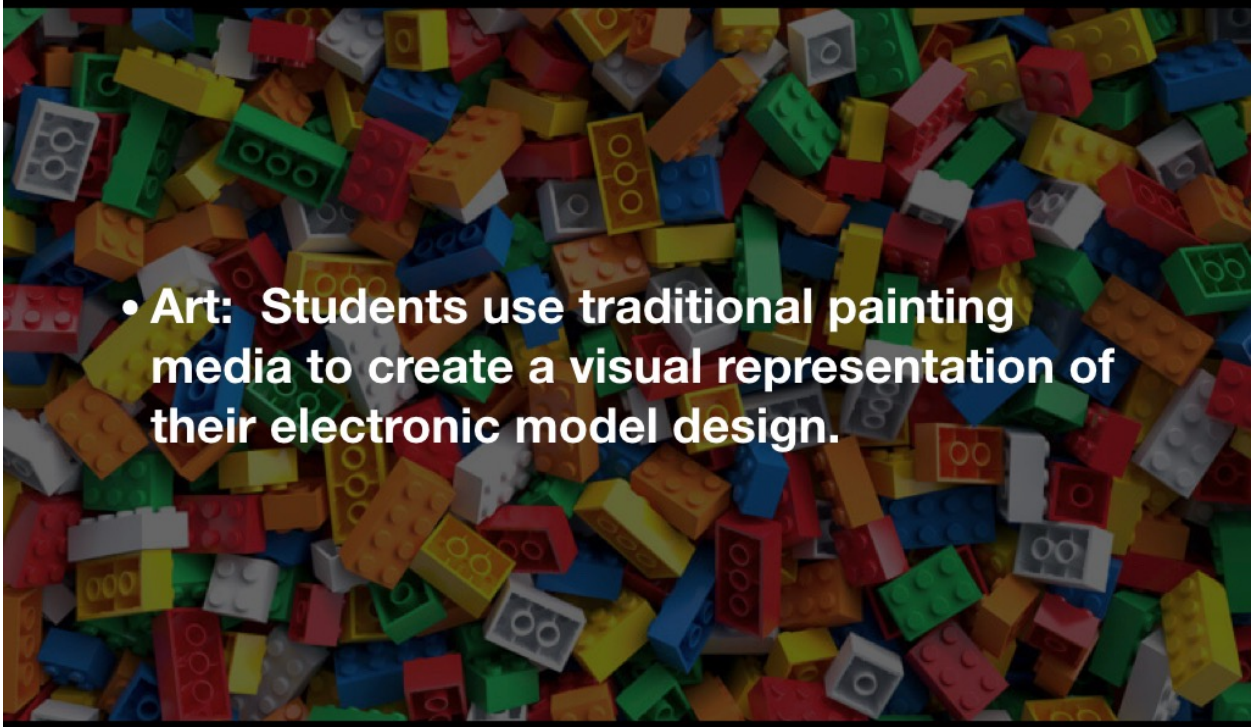
- Technology: Students use technology to create their first-level of abstraction

S-T-E-A-M



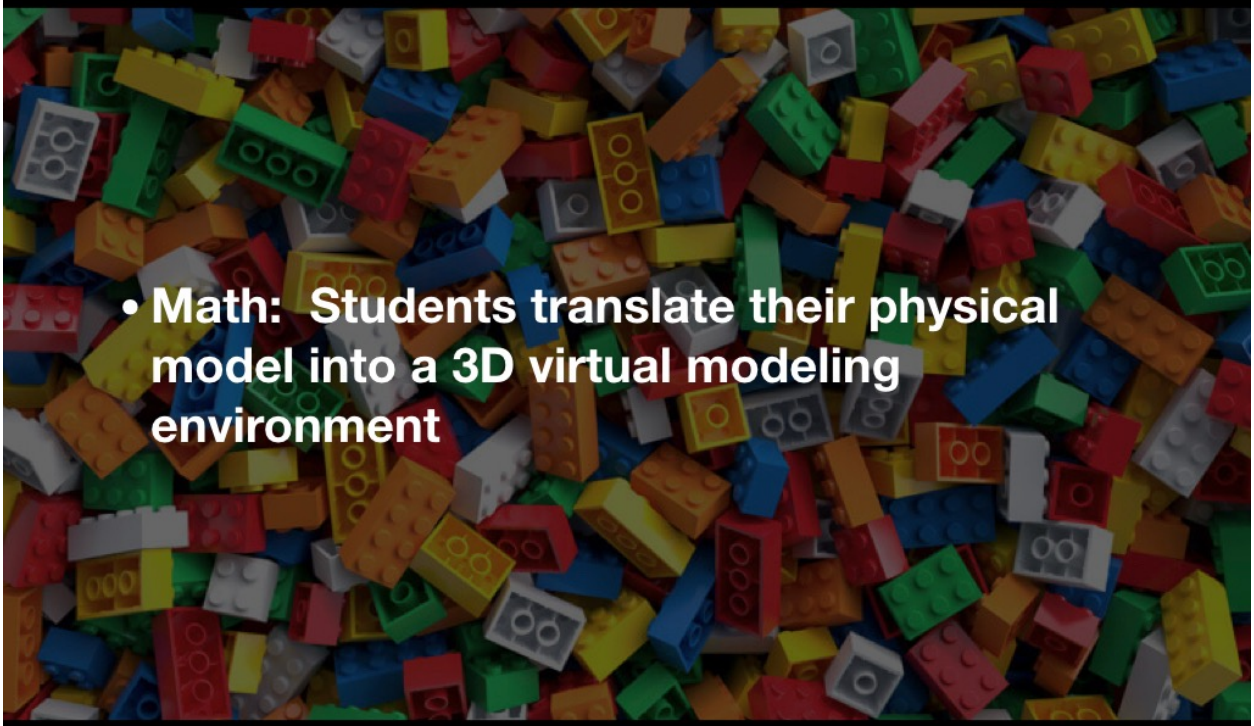
- Engineering: Students use Lego bricks to create and build a prescribed model

S-T-E-A-M



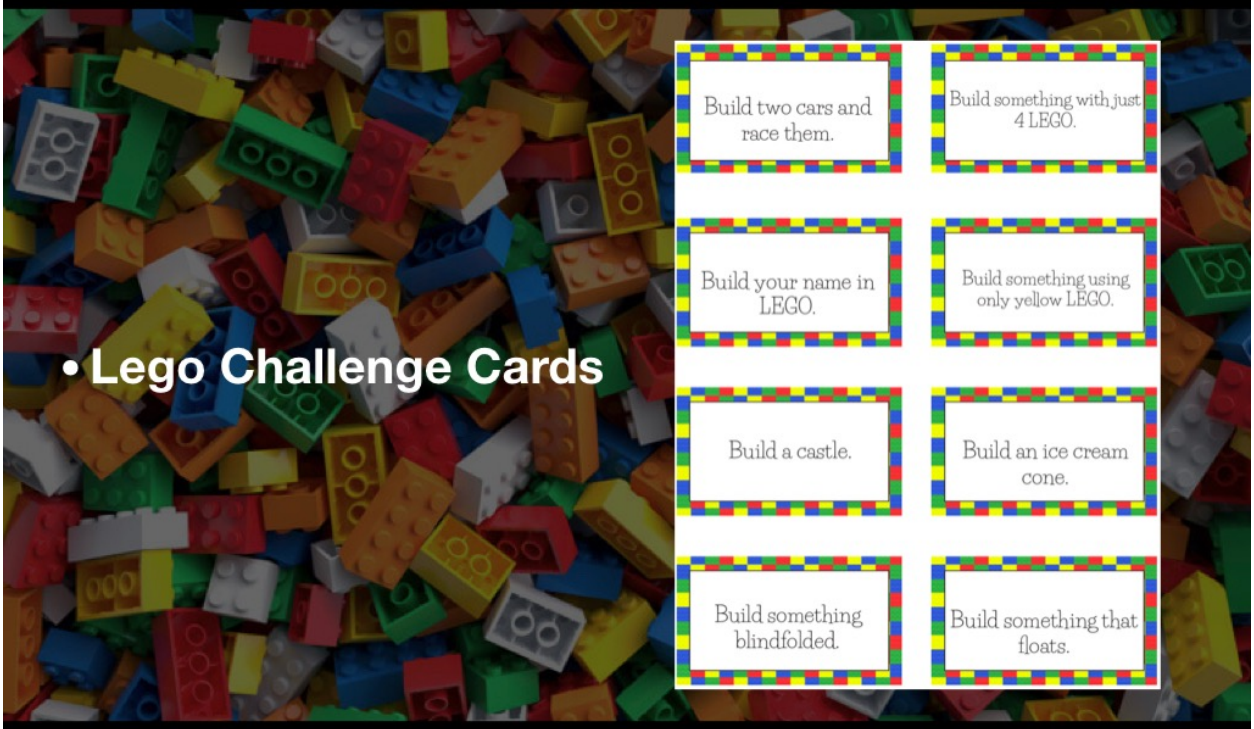
- Art: Students use traditional painting media to create a visual representation of their electronic model design.

S-T-E-A-M



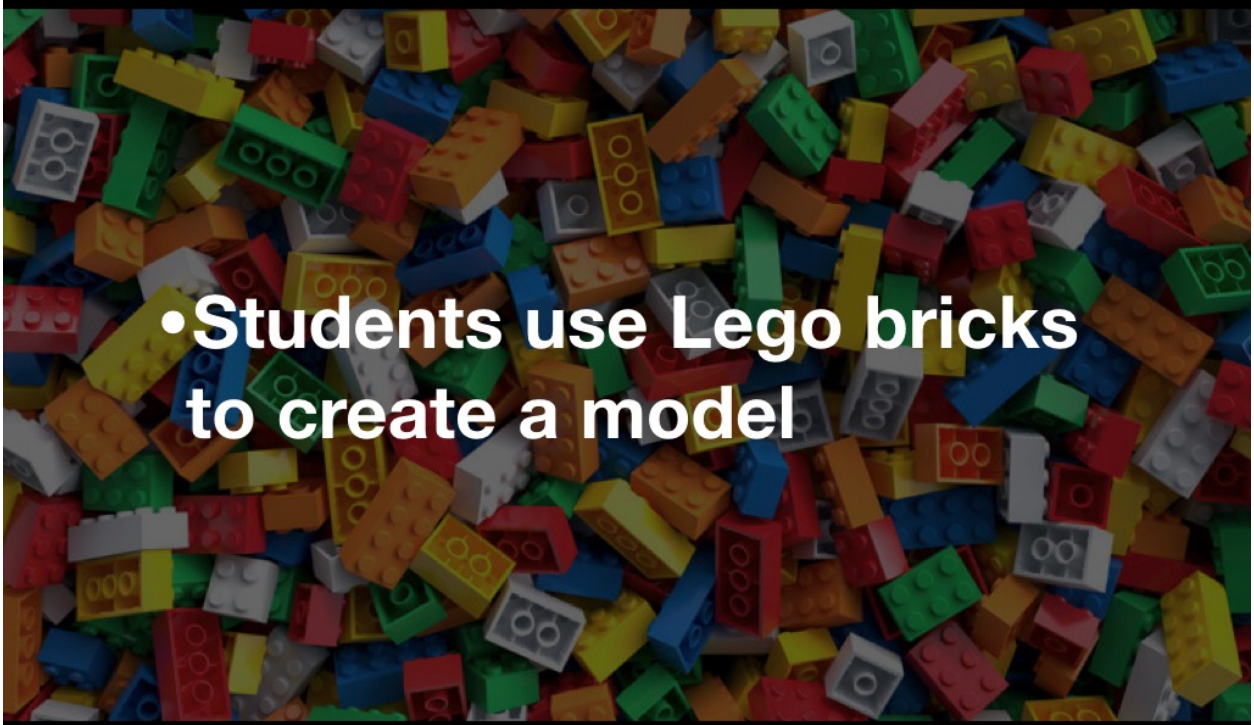
- Math: Students translate their physical model into a 3D virtual modeling environment

Brick Abstraction



- Lego Challenge Cards

Phase 1- Baseline



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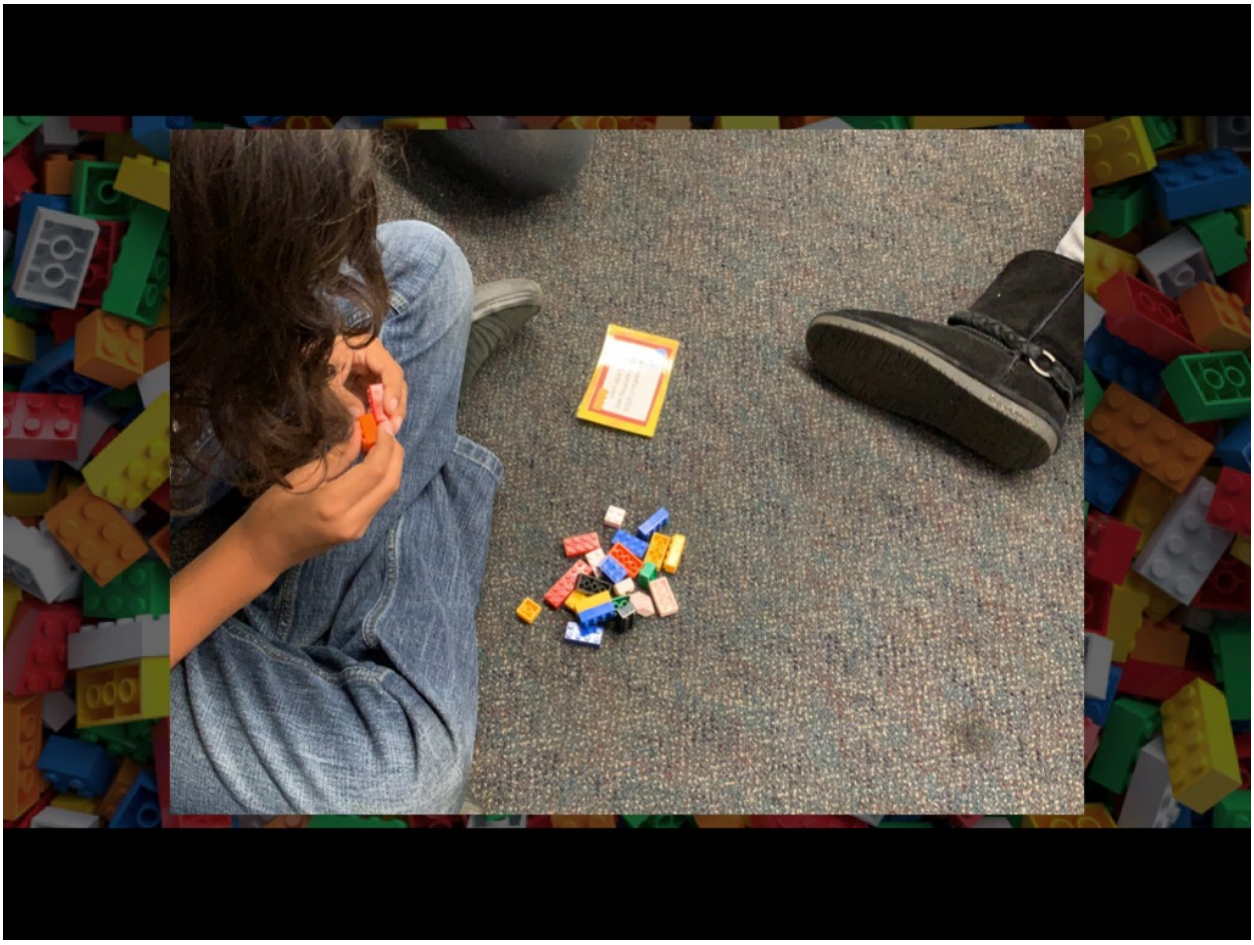

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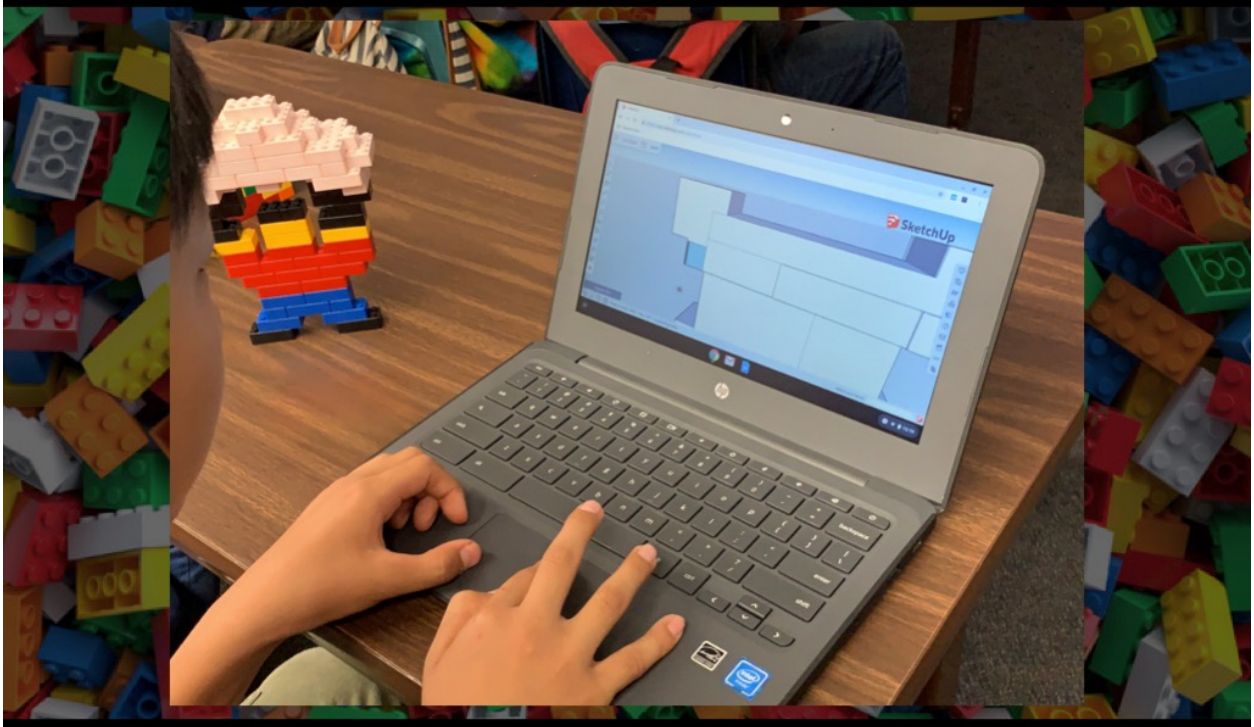
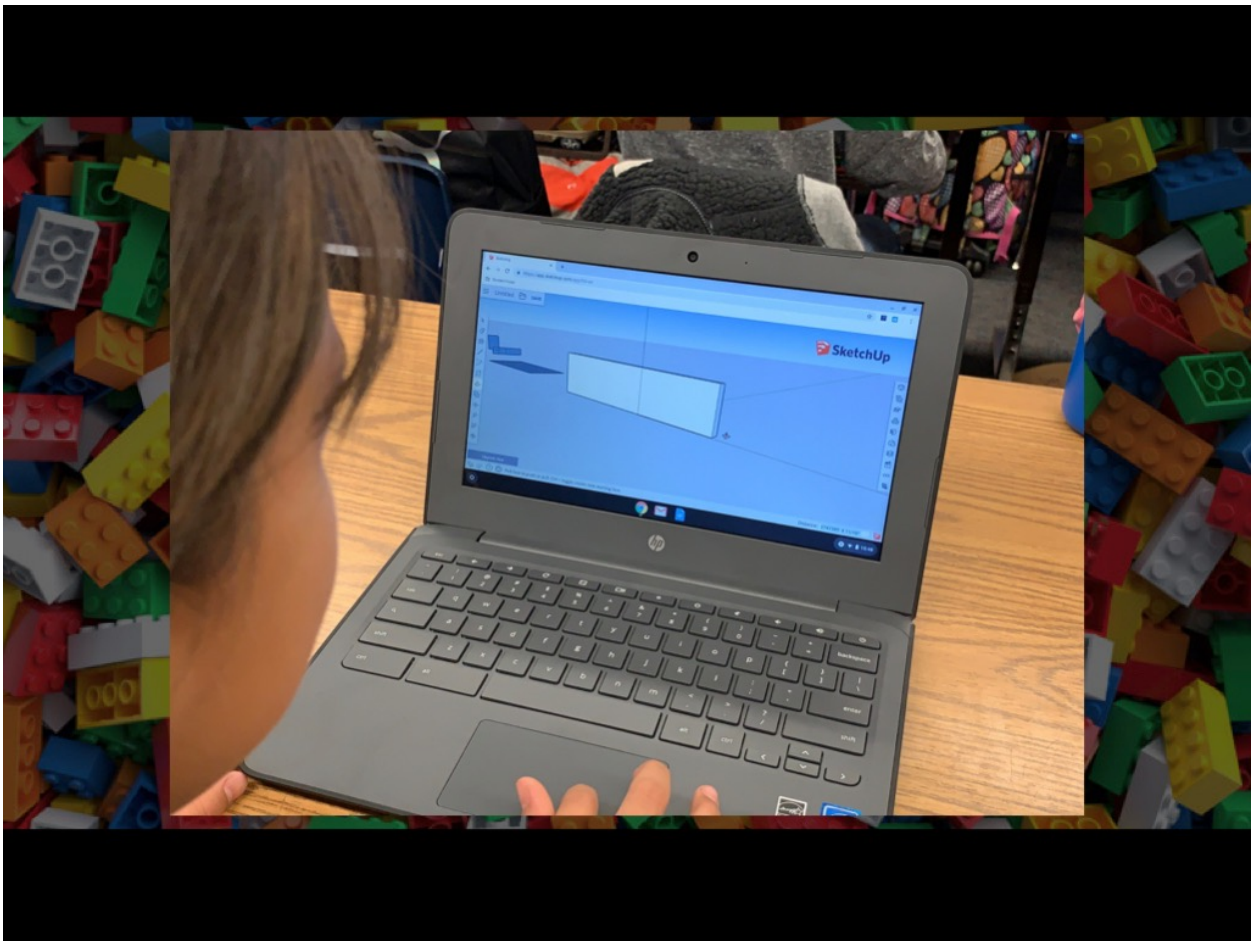
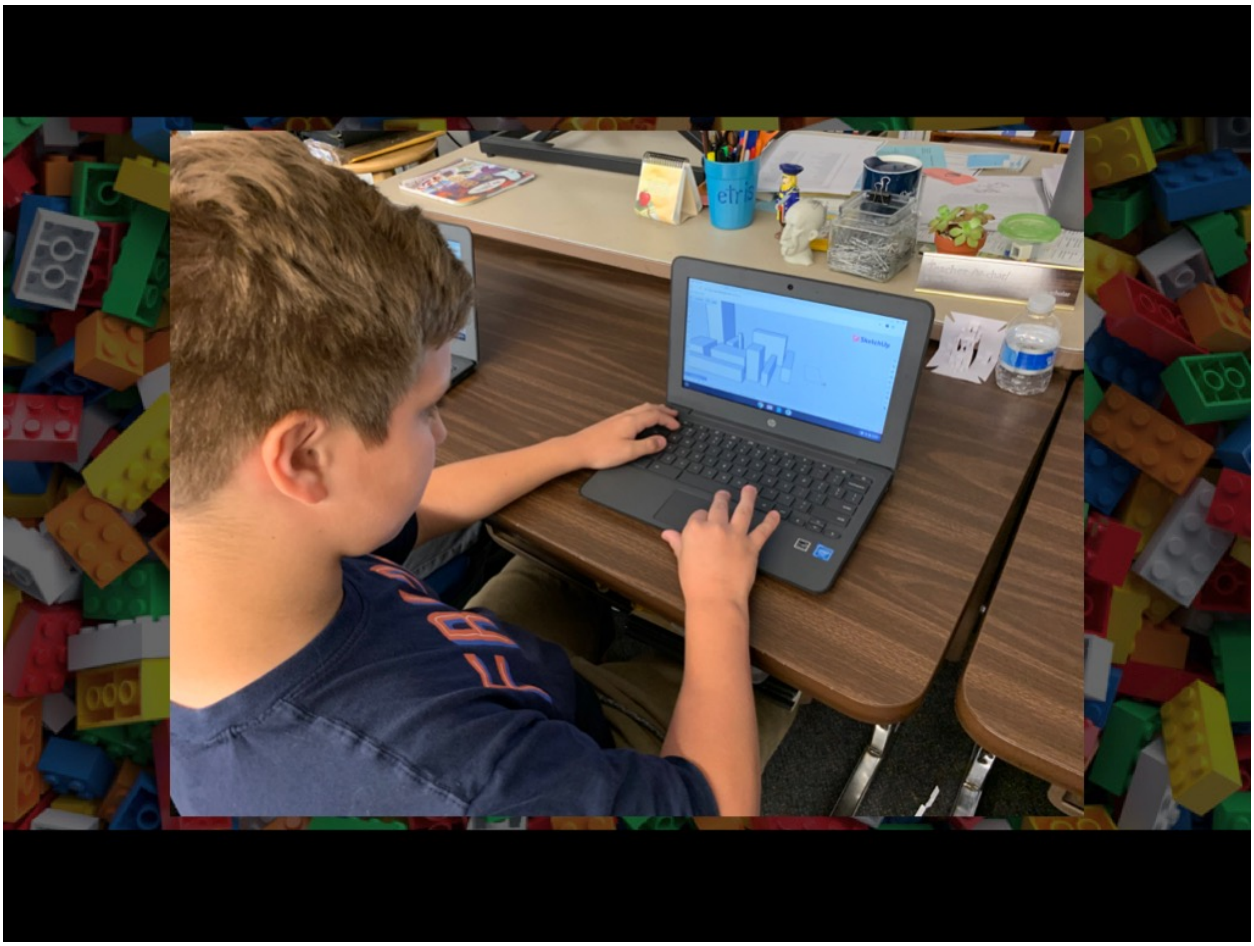



SketchUp

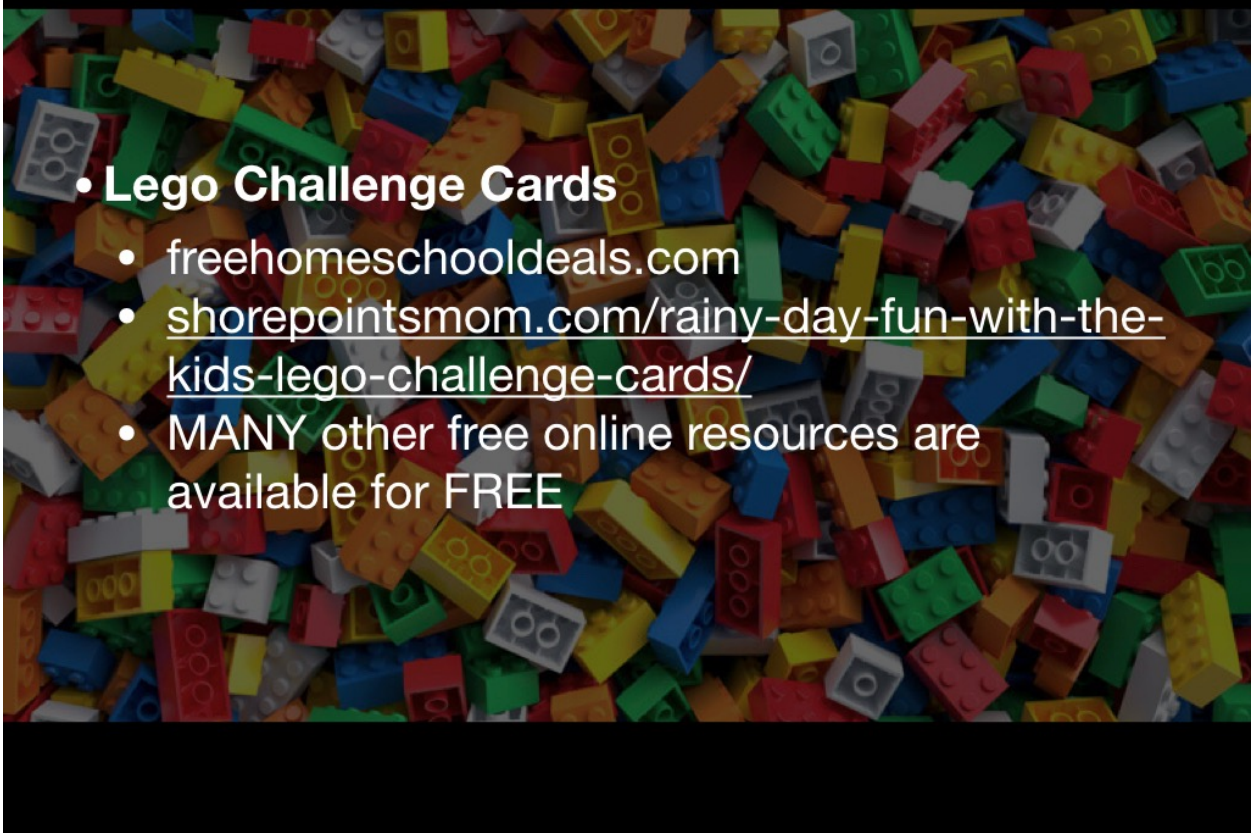


Phase 3- Second level abstraction

- A painting is created based on the 3D virtual model representation

Raise Its Game
Tech Spending
Plan B fo
IN BIRMINGHAM,

Brick Abstraction



- **Lego Challenge Cards**
  - freehomeschooldeals.com
  - shorepointsmom.com/rainy-day-fun-with-the-kids-lego-challenge-cards/
  - MANY other free online resources are available for FREE

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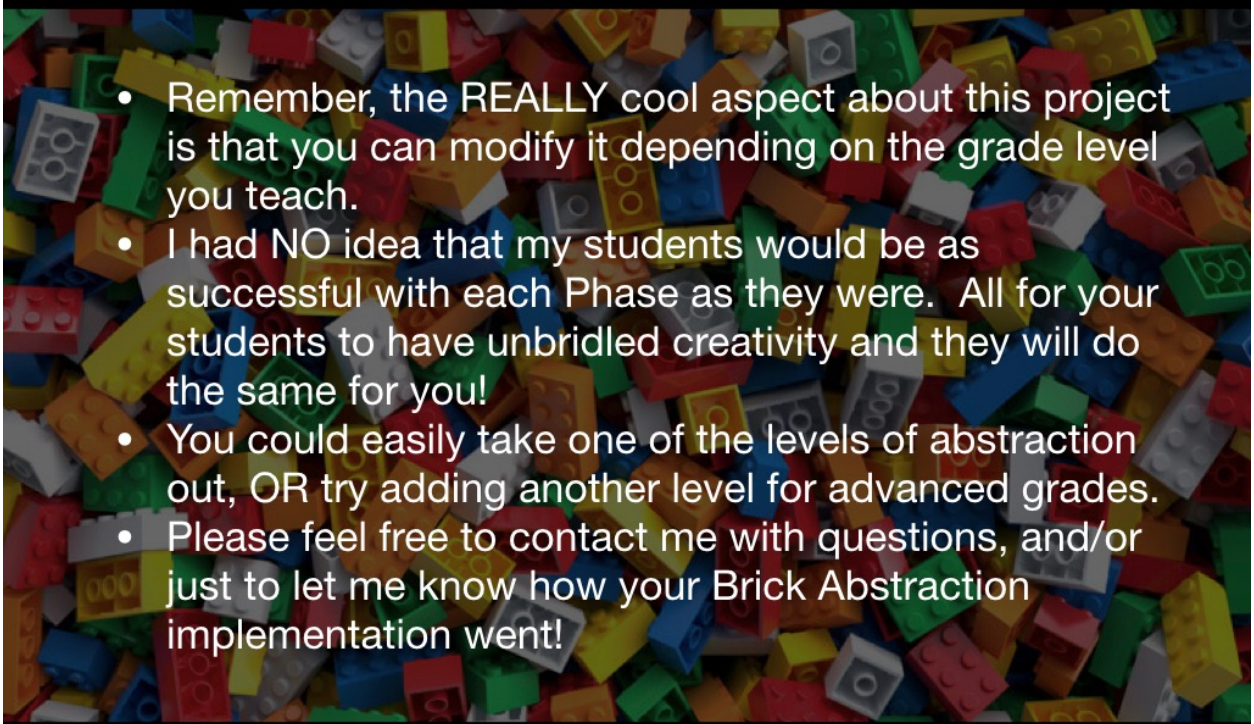

- Remember, the REALLY cool aspect about this project is that you can modify it depending on the grade level you teach.
- I had NO idea that my students would be as successful with each Phase as they were. All for your students to have unbridled creativity and they will do the same for you!
- You could easily take one of the levels of abstraction out, OR try adding another level for advanced grades.
- Please feel free to contact me with questions, and/or just to let me know how your Brick Abstraction implementation went!

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