STREAM Project Outline

Teacher: _____Sample Teacher_____

Grade: (Circle / highlight)	*PK3 PK4 K 1 2 3 4 5 6 7 8 9 10 11 12*
Content Domain (Subject(s)):	*Science*
Content Standards Addressed:	*SC.K.P.13.1 Observe that a push or a pull can change the way an object is moving.* *SC.K.N.1.1 Collaborate with a partner to collect information.* *SC.K.N.1.2 Make observations of the natural world and know that they are descriptors collected using the five senses.* *SC.K.L.14.1 Recognize the five senses and related body parts.*
Faith Integration Standard(s) Addressed:	*IS1SC.K6.IF.2.4 Give examples of the beauty evident in God's creation.* *IS1SC.K6.IF.2.3Explain how creation is an outward sign of God's love and goodness and, therefore, is ,"sacramental" in nature.*
Gifts of CHRIST Addressed: **Truth, Beauty, Goodness, Affability, Humility, Prudence, Fortitude**	*Goodness: I can see goodness of God's creations using my sense of taste, touch, sight, smell, and hearing.*
Project Leaning Outcomes (what are the big concepts you want students to understand after completing the project)	*Students will understand how to use their 5 senses to make observations of various properties and sort those items into like categories.* *Students will understand how to move objects using pushes and pulls*
2 or more Essential Questions/Driving Questions (at least one needs to have faith integration from faith standard or gift of CHRIST):	*What gifts did God give us to help us identify different objects?* *How can we use God's gifts organize items by different physical properties?*
End Product Expectation (What will students create or complete?):	*Students will create a "sorting" machine using pullies and pre-designed sorting containers.* *Students will work with a small group. Students will need to move items from one item of the room to another without physically moving out of their*

	predetermined locations (one student on one side with items to sort, and another student on the other side with bins to sort the items into once the items get to that student.
How can you tie in Science or Computer Science into your project? Is your project relevant to a real world problem or could be applied to a real-world situation? How so? How will technology be integrated into your project? What tier and what task? What faith integration concept and or gift of CHRIST will you integrate into the project? How? Will you use an engineering concept or the engineering design process? How can you tie in Science or Computer Science into your project? Is your project relevant to a real world problem or could be applied to a real-world situation? How so? How will technology be integrated into your project? What tier and what task? What faith integration concept and or gift of CHRIST will you integrate into the project? How? How will you allow for student artistic expression or choice in the project? Will you use an engineering concept or the engineering design process?	***S: Students will use their 5 senses to sort objects by various smells, tastes, textures, sounds, and other visual properties*** ***T: Students will use teacher generated digital sorting activity using the smart board and smart pen*** ***R: Students will focus on Goodness throughout the project. Students will specifically focus on the gifts that God has given us to make observations (senses) and why they are good*** ***E: Students will use the engineering design cycle to solve a problem*** ***A: Students will use artistic expression by creating a model to bring their designs to life*** ***M: Students will use perceptive reasoning to understand the distance in which objects will need to be pushed and pulled to get to the target area of sorting. Students will need to prepare string that will work for the length to make their design work properly***
Break down the project expectations into the Engineering Design Process: **Ask:** **Imagine:** **Plan:** **Create:** **Test (or present):** **Improve (reflection):**	***Ask: How can I build a sorting machine using classroom objects?*** ***Imagine: Imagine how I can move objects from one side of a space to another without physically moving the item myself?*** ***Plan: Work with a partner to draft out ideas as to how you will transport items from across the room to each other without physically moving from your spot*** ***Create: create your designed prototype*** ***Test (or present): test the prototype. Did it work? If not, why did it not work?*** ***Improve (reflection): Think of one way you can try to fix your design. Make the improvement and then test again.***

Breakdown of Knowledge (What do students need to know in order to answer the EQ and or DQ). This will also help you break down the project into digestible chunks or lessons leading up to the actual project.	• *What are senses* • *What body parts do we use for each sense* • *What does it mean to sort* • *What are different ways we can sort using each sense* • *What does it mean to observe* • *What is the Engineering Design Cycle* • *What is a diagram* • *What are supplies* • *How can you move something* • *What is a push* • *What is a pull* • *What can you use to pull something?* • *Can you push and pull something while remaining stationary?*

Diocese of Venice Catholic Schools

STREAM + ROBOTICS

Faith Integration/ Gifts of CHRIST By Subject Area

Teacher: _____Sample Teacher_____

Grade: Kinder **SUBJECT: Science**

	Gifts of CHRIST	**Student centered "I can" statement specific to the content area:**
TRUTH	**Truth**	*I can see truth in the way I take observation notes with accurate colors, and descriptors.*
BEAUTY	**Beauty**	*I can see the beauty in all of God's creations using my 5 senses.*

	**Goodness**	*I can see goodness of God's creations using my sense of taste, touch, sight, smell, and hearing.*
	**Fortitude**	*I can trust in God that I will grow in my knowledge as a scientist, and even when things seem difficult, I know God will be by my side and help me to not give up.*
	**Affability**	*I can use my manners when I disagree with an observation my friend makes.*
	**Humility**	*I know that I do not know everything, and I can learn from my teacher and I can also teach those around me.*
	**Prudence**	*I can learn from the scientists who are older and wiser than me, and I can help others understand the importance of research as well.*

Technology Integration
Classroom Examples

Use the Technology Integration documents to help create a bullet list of examples in YOUR classroom of how you can integrate technology in the following tiers: passive (T1), active (T2), and Transformative (T3).

Grade: **K** **Subject:** **All** **School:** **Example**

Passive (Tier 1)	• *Watching a movie* • *Reading a digital story* • *Watching the teacher present slides*
Active (Tier 2)	• *Manipulating the smart board* • *Manipulating an iPad using an app or game*
Transformative (Tier 3)	• *Recording observations with an iPad video or camera* • *Participating in a VR Simulation of sorting items* • *Creating art or digital media (original student work) using a digital device*