Pyramid Project Scenario

Overview: Students will work in groups to design and build a pyramid for the pharaoh of ancient Egypt. They will create an architectural plan, a design for the interior of the tomb, a model of the pyramid, a newspaper reporting the events of the pyramid building, and a journal that records the daily events. They will then present their proposal to the pharaoh for his approval.

Scenario:

During the holidays, you may travel to visit relatives. While traveling, you may visit other cities and states. It is always interesting to notice the architecture of where you are visiting. Many of the structures you see will be the result of a group effort. One person cannot build a skyscraper alone; it requires a design, a plan and then the actual building of the structure. Without team work, we would not see the beautiful skyline of New York City, be able to drive over the bridges to get to Manhattan or enjoy the tranquility of Central Park in the middle of an urban area. Team work has also played a part in the ancient civilizations we study during our social studies class. Many of the artistic wonders of our world were the result of teamwork. The Pyramids of Ancient Egypt were no exception.

Egypt is joyous and the kingdom is celebrating. Peace has been restored to the empire. A new pharaoh has just been crowned. He will rule over the kingdom of Egypt. When he dies, he will become Ra, the sun god. In order for this to happen, his earthly body needs to be preserved to be a home for his Ka. He will be mumified and buried in a tomb. He has issued a challenge to his people to design a tomb that will protect his mummy for all eternity and serve as a monument to his greatness.

Building a grand tomb and monument for the pharaoh is noble work and will help to ensure your place in the Afterlife. Your team needs to create a design and submit it to the pharaoh for his approval. Your class will be divided into teams and you will use solution fluency to help you organize. (You will define what it is you need to do, discover how the Ancient Egyptians built their pyramids, dream of how your group will achieve its goal, design your plan, deliver your pyramid to the Pharaoh and the debrief as a group to see how you did.) As you will discover, the Egyptians used a division of labor. Everyone had jobs to do to build a successful pyramid.

You have limited materials available with which to create your design: cardboard, scissors, and glue. Within each team, you will choose a project leader, architect, design team, priests, journalist, writing team, labor leader, and laborers. When you build your model, it needs to be built to scale (the dimensions of the model need to match the dimensions of an actual pyramid). The length of the base of your model cannot exceed 14 inches, no block may be larger than 3 inches by 1.5 inches, and each pyramid must have at least 6 courses, or levels, of blocks.

The project leader will oversee the entire project. He/she needs to be sure that they keep the support of the people by treating them fairly and working at all times. It is the project leader’s job to ensure that all project requirements are completed. The architect and design team must make a drawing of the pyramid (on graph paper or using Google SketchUp) that your team will build. He/she must also see that the pyramid that is built is the pyramid that was drawn. The architectural plan must include the length and width of the base, height, number of blocks required for each level, total number of blocks, location of the pyramid with a map of Egypt attached, name of the pharaoh for whom the pyramid is being built, and the total weight of the pyramid. The journalist and writing team need to create a newspaper taking place during the building of the pyramid about the pharaoh and the construction of the pyramid with a bibliography of sources. You must also keep a daily journal summarizing the progress and challenges of the day. Your labor leader and laborers will be busy “quarrying” the 2.5 ton granite blocks at the mine and transporting them to the pyramid. They must also
make sure that the interior of the pyramid contains the proper writings and prayers for the pharaoh’s Ka to complete the journey to the Afterlife. After the pyramid is built, your team will present your design to the pharaoh. He will carefully consider each design and choose the one that he wants to protect his mummy and his Ka for eternity.

Define:

Students will divide into teams and choose a name for their teams that are relevant to ancient Egypt. They will choose a project leader, architect, design team, priests, journalist, writing team, labor leader, and laborers. They are required to design a scale pyramid and detail the designs that will decorate the burial chamber. They must keep a journal of their work. They should also plan their Egyptian newspaper to include items that would have been found in a newspaper and would be of interest to the people of ancient Egypt.

Prerequisites for Progression: Students have produced a clear idea of the task. Their definition should include: They need to design and build a scale model of a pyramid. They need to design a burial chamber with decorations that will help ensure the pharaoh’s Ka will journey to the Afterlife. They will keep a journal of their daily activities and “publish” a newspaper for the people living in ancient Egypt at the time that includes a bibliography. They will present their plan to the pharaoh at the end of the project.

Discover:

Students should learn how to use scale to build models. They should learn about how pyramids were built by the ancient Egyptians. They need to examine the geography of ancient Egypt in order to determine the best location for the pyramid. They need to research ancient Egyptian names and select one for their pharaoh. They should view examples of ancient Egyptian burial chambers and research the Book of the Dead to learn what prayers needed to be written on the interior walls of the chamber. They need to learn about the daily life of the ancient Egyptians so that they will be able to write articles for the newspaper that would be relevant to ancient Egypt. They need to examine the structure of newspapers and include the important pieces.

Prerequisite for Progression: Students need to record their discoveries and show them to the teacher.

Dream:

Students should synthesize what they have learned and begin to make decisions. They need to pick a spot for their pyramid and draw the map. They need to plan the sizes of their blocks and draw a diagram of their pyramid. They need to plan out the design of the interior of the burial chamber and draw a sketch. They should plan out their newspaper and draw a rough sketch of that.

Prerequisites for Progression: Students have created sketches of their map of Egypt, burial chamber, pyramid design, and newspaper.

Design:

Students begin to implement their plans. They begin designing their pyramids and burial chambers. They create articles for their newspapers and develop the layout of the paper. They begin building the model of the pyramid and creating the map of Egypt with the pyramid labeled.

Prerequisite for Progression: A final draft of the pyramid design has been completed. The map of Egypt is drawn with the location of the pyramid noted clearly on the map. The newspaper has been completed and edited. The journals have been compiled and edited. The model of the pyramid and the design of the burial chamber have been completed.

Deliver:

All pieces have been completed, edited, and polished. Students have prepared their presentations and have rehearsed them.

Prerequisite for Progression: The audience for the presentations has been confirmed and students have been made aware of the final presentation date.