1. What is our purpose/ overall goal? (UbD Stage 1)

To inquire into the following:

- Transdisciplinary theme: *How we Organize Ourselves*: an inquiry into the interconnectedness of human-made systems and communities; the structure and function of organizations; societal decision-making; economic activities and their impact on humankind and the environment.

- Central idea: *Economic development and the development of an area’s infrastructure have a reciprocal relationship*

2. Summative assessment task(s): (UbD Stage 2)

What should the students eventually be able to do as a result of this unit? What are the possible ways of assessing students’ understanding of the central idea? What evidence, including student-initiated actions, will we look for? How will students REFLECT and SELF-ASSESS their learning? Consider performance tasks and other evidence.

- Students will build on the Colorado map that they created with their group in the formative assessments. They will add a drawing explaining what they feel like Colorado will look like in the future. Accompanying the map, the students will create a written description of the economic growth that happened in Colorado between the present and the future, the resulting infrastructural changes, the reasons for the growth and other impacts on Colorado because of the growth. In this way, individual students will be able to demonstrate their application of the central idea.

- We will evaluate the above work by…

The students will make a brief oral presentation regarding their project so that the students can begin working on their presentation skills for the next planner. We won’t grade the presentation skills at this time.

Planning the inquiry

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3. How might we know what we have learned? (UbD Stage 2)

This column should be used in conjunction with “How best might we learn?”

What are the possible ways of assessing students’ prior knowledge and skills? What evidence will we look for?

What are the possible ways of assessing student learning in the context of the lines of inquiry? What evidence will we look for? (We will know students understand/know are able to do … by …)

We will provide student groups with a map of Colorado and a series of the same map on overhead transparencies. The students will work together to color the first map showing general resources in Colorado—mountains, rivers, known deposits of natural resources, etc. Then on each subsequent overlaying map a student will recreate where economic and infrastructure development took place in the state by certain time periods. This will help us see if groups and individuals are developing understandings of the central idea. This activity will lead to an independent portion that will be produced as each student’s summative assessment.

Research skills: we need to link something here to assess the research skills students should have by this point in time according to our new building scope and sequence for tech/research skills

Geography skills: let’s think about something here as we teach the unit next year—after we talk to 3rd grade about what they cover in their units

5. What resources need to be gathered? (UbD Stage 3)

What people, places, audio-visual materials, related literature, music, art, computer software, etc, will be available?

DPS Social Studies curriculum materials that address development within states (ch. 16), Mark Twain’s Mississippi.com— for maps of Mississippi River Basin county development; youtube videos on Erie Canal; the Colorado Reader, History of Colfax video; Teacher created website resource list of various time periods and economic stages in Colorado; Maslow’s Hierarchy of Needs; http://en.wikipedia.org/wiki/File:Wpdms_kansas_nebraska_utah_territories_1860_id x.png (compilation of online research resources for Colorado map project)

How will the classroom environment, local environment, and/or the community be used to facilitate the inquiry?

4. How best might we learn? (UbD Stage 3- Performance Tasks)

What are the learning experiences suggested by the teacher and/or students to encourage the students to engage with the inquiries and address the driving questions? (Consider the WHERE/TI prompting listed in box 10.)

- Lessons on how to use a computer (research pro) to research a particular topic—how to use key word searches and quotations to get exact links to their topics. This should build off of research lessons taught throughout the year—refer to building scope and sequence for research and tech skills
- Refer to Maslow’s Hierarchy of Needs to talk about priorities in what is necessary for people to survive
- Using the “river activity” from our Social Studies book as a basis, students will take part in a simulation of the development of the Colorado River basin (Could be modified to accommodate any river basin) to look at how economic activity developed over time in this area.
- Study ch. 16 of Social Studies Alive text to teach basic vocabulary and concepts of economics.
- Watch PBS program about development of the Panama Canal—reasons for building, impact on population, economic opportunities, who benefited, etc… Culminate in a class debate over the pros and cons of the canal and whether it was worth it.
- Share information on transcontinental railroad, Erie Canal and Great Lakes Shipping Lanes, Mississippi River and Ohio Valley.
- Bring in Junior Achievement program to use community volunteers to teach about resources in the US and the regions in which they are developed.
- Discuss future of the high speed rail—where happening in the world? New plans in the U.S.
- Take ideas international with the Suez Canal, the European waterway systems, current use of high speed rail in other countries, the Chunnel, Eurorail (how that has connected everyone in Europe together), the silk road
- Look at how the above link populations together. The students could form interest groups for the above topics, complete research on the topic they choose. They will “jigsaw” or share on their topic with the rest of the class to share the knowledge. Then they will repeat the process with an international structure.
- Read Huckleberry Finn as a class to look at how the economic development of that time was centered around the Mississippi River, this can be expanded out to other themes in the book that emphasize cultural development of the time.
- Simulate how a major societal change such as the end of slavery can change the economics of the region.
- Have the students brainstorm what resources they would need to start a hypothetical business.
- Junior Achievement presentations fits in really well at the beginning of this planner

What opportunities will occur for transdisciplinary skills development and for the development of the attributes of the learner profile? What key SKILLS will students acquire as a result of this unit?

Transdisciplinary Skills:
- Research Skills: through the development of the maps, organizing the information they find, collecting the data
- Self-management Skills: Organization skills as they relate to research

Learner Profile:
- Thinkers: making connections between Colorado History and other areas of the world
- Knowledgeable: about Colorado History

Attitudes:
- Empathy—students develop empathy for the way different groups were treated throughout the economic development of Colorado and apply this to other regions of the world
Reflecting on the inquiry

6. To what extent did we achieve our purpose?

Refer back to Box 1 to answer these questions.

Assess the outcome of the inquiry by providing evidence of students’ understanding of the central idea. The reflections of all teachers involved in the planning and teaching of the inquiry should be included.

The provocation (movie) made a huge impression on the students. This really peaked their interest in the concepts and topics. The students understanding in relation to Colorado seems really strong - understanding it is the way it is because of the history of economic development. They were really inundated with this message but also shared their understanding of the economic explosion in Colorado being based on the discovery of gold and silver and when the resources ran out - we ended up with ghost towns. We need economic support to sustain civilization. The more we looked at examples, the more students could provide the explanations as to why this is. They have started recognizing geographic features related to Colorado everywhere they see it. This is definite progress in their geographic understanding. In the final assessment, we saw evidence of the students incorporating different types of transportation into their projects to support the proposed economic development. We are hoping the background knowledge students come in with regarding Colorado history is stronger from 3rd and we can focus more broadly when we select geographic influences.

How you could improve on the assessment task(s) so that you would have a more accurate picture of each student’s understanding of the central idea.

It was difficult to get into the computer lab because of Exhibitron, so we had a hard time finishing the assessments. Next year the schedule has been adjusted so this may not be such an issue. This year we had to extend the time frame on the unit so that they could finish the projects. It really helped when we made a resource list for students with information from the internet for the students to compile research from. (Added to resources). The other reflection is to continue to focus building wide on research skills. The student ability to research effectively - especially using electronic resources is too limited.

What opportunities were there for student self-assessment/reflection?

When students had to look at their maps objectively and redo things, there was a great deal of self-assessment when they compared their work to resources. The reflection journals were most used in this unit. We brought in a lot of analytical writing, but it helped the students reflect on the processes they were involved in as well as their thinking in relation to topics that relate to the central idea. We loved this.

What was the evidence that connections were made between the central idea and the transdisciplinary theme?

There was a lot of higher level thinking based on connections students were making between their personal environmental experiences of where their lives are organized and why-classroom discussion based on teacher questioning strategies. The student completed maps also showed evidence of connection between the concepts and “How we organize ourselves”

7. To what extent did we include the elements of the PYP?

What were the learning experiences that enabled students to:

- develop an understanding of the concepts identified in “What do we want to learn?”
- demonstrate the learning and application of particular transdisciplinary skills?

Transdisciplinary Skills:
- Research Skills: through the development of the maps, organizing the information they find, collecting the data
- Self-management Skills: Organization skills as they relate to research

Learner Profile:
- Thinkers: making connections between Colorado History and other areas of the world
- Knowledgeable: about Colorado History

Attitudes:
- Empathy- students develop empathy for the way different groups were treated throughout the economic development of Colorado and apply this to other regions of the world
- 
- develop particular attributes of the learner profile and/or attitudes?

In each case, explain your selection.
8. What student-initiated inquiries arose from the learning?

Record a range of student-initiated inquiries and student questions and highlight any that were incorporated into the teaching and learning.

Lots of questions came up regarding how to find the information they needed electronically.

Once students discussed the Panama Canal, they went to their Social Studies books and began looking at areas in the US where we have locks, and other similarities. This led to a lot of other questions about our country and how this relates to others around the world.

At this point teachers should go back to box 2 "What do we want to learn?" and highlight the teacher questions/provocations that were most effective in driving the inquiries.

What student-initiated actions arose from the learning?

Record student-initiated actions taken by individuals or groups showing their ability to reflect, to choose and to act. How did the students show their transfer of understanding?

The students made a lot of personal connections between the Junior Achievement lessons and class work. The transfer of learning was really strong.

Once students discussed the Panama Canal, they went to their Social Studies books and began looking at areas in the US where we have locks, and other similarities. This led to a lot of other questions about our country and how this relates to others around the world.

Students who originate from Mexico were also drawing a lot of parallels to their experiences coming from that country.

9. Teacher notes (To do list before teaching this unit again):

Make sure we have Junior Achievement come in a week or so before we start this planner. The timing and background knowledge was perfect!

Can we bring in a community planner or developer to talk about infrastructure issues they must deal with?

Set up Junior Achievement for the beginning of this planner.

Content standards addressed through this inquiry:

**Social Studies:** Interpret maps, globes, and other geographic tools; describe the major natural and constructed features of the Northeast; Evaluate effects of population density on the urban and rural-dwelling northeasterners’ lives; Explore some major natural and constructed features of the Southeast; Describe the effects of geography on life in the Southeast; Describe major natural and constructed features of the Midwest; Understand the importance of farming and industry in the Midwest; Describe major natural and manufactured features of the Southwest; Understand the importance of conserving water from the Colorado River; Explain reasons why people are attracted to the West; Learn about the geography, history, people and economy of seven major cities in the West.

**Reading/Writing:** Research and report writing;
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**Language function:**

**Sentence frames:**

**Grammar/Syntax:**

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