

**CODE/MOE/UOIT Makerspaces Project--Lesson Planning Template**

**School Board: GECDSB**

**Grade(s): 4**

**Subject(s): Social Studies**

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| **BIG IDEAS:**1. **By understanding the past, we can better understand the present.**
2. **The environment had a major impact on daily life in early societies.**
3. **Not all early societies were the same.**

**Curriculum Expectations:****OVERALL:** Inquiry: use the social studies inquiry process to investigate ways of life and relationships with the environment in two of more early societies (3000 BCE–1500 CE), with an emphasis on aspects of the interrelationship between the environment and life in those societies.**SPECIFIC:** 1. Formulate questions to guide investigations into ways of life and relationships with the environment in two or more early societies, with an emphasis on aspects of the interrelationship between the environment and life in those societies.
2. Gather and organize information on ways of life and relationships with the environment in early societies, using a variety of primary and secondary sources in both print and electronic formats.
3. Interpret and analyse information relevant to their investigations, using a variety of tools.
4. Evaluate evidence and draw conclusions about ways of life and relationships with the environment in early societies, with an emphasis on aspects of the interrelationship between the environment and life in those societies.
5. Communicate the results of their inquiries, using appropriate vocabulary.
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| **Learning Goals:**I will be able to demonstrate an understanding of an ancient civilization and design an invention that would have made daily life easier in my ancient civilization. | **Success Criteria:** - I used internet and print sources to research the areas of food, transportation, tools, environment, government, and roles of civilization members.**-** I organized my learning using a graphic organizer. - I identified a problem in my ancient civilization.- I brainstormed possible solutions to the problem.- I selected the best solution and created a plan.- I built a prototype of my solution.- I tested and improved my invention.- I shared my learning with my classmates using a form that best suits my interests and audience.  |
| **Lesson Overview:****Students research major areas of daily life in a chosen ancient civilization. After developing a greater understanding of the civilization, students identify a problem that could be solved using knowledge we have in our present day. Students design and build an invention that could have made life in their ancient civilization easier. They share their invention and learning with classmates using a variety of presentation formats.**  |
| **Materials and Technology:** * iPads
* Books from library
* Graphic organizers
* Assistive technology program on iPads to help ELL.
* Maker Space materials and tools
* Student creation apps for presentations
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| **Student Accommodations/Modifications:** * Assistive technology for ELL and students with other learning needs
* Small group instruction with teacher-librarian and homeroom teacher
* Reduction of areas for research
* Working in groups
 | **Lesson will be differentiated by:*** **Content, specifically:**
* Reduction of the number of content areas for inquiry research.
* **Process, specifically:**
* Assistive technology for language barriers or learning needs.
* Teacher assistance when needed.
* Working in groups.
* Chunking of process
* **Product, specifically:**
* Choice of presentation format. Can be shared in print, auditory or visual formats.
* **Environment, specifically:**
* Choice in working space.
* Availability of technology
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| **MINDS ON: Getting Started** |
| During this phase, the teacher may: • activate students’ prior knowledge; • engage students by posing thought-provoking questions; • gather diagnostic and/or formative assessment data through observation and questioning; • discuss and clarify the task(s).  | During this phase, students may: • participate in discussions; • propose strategies; • question the teacher and their classmates; • make connections to and reflect on prior learning.  |
| **Describe how you will introduce the learning activity to your students.** 1. Read Aloud: “The Magic Treehouse; Mummies in the Morning”

The classroom teacher reads this story to provide students with some background knowledge and help to activate their prior knowledge of ancient civilizations. 1. Brainstorm Ancient Civilizations: Students list ancient civilizations they are already aware of. Chart to be displayed in classroom.
2. Brainstorm different aspects of daily life. Chart to be displayed in classroom.
3. Introduce the task and co-create success criteria.

**What key questions will you ask?** 1. What do the words “ancient” and “civilization” mean?
2. What is an ancient civilization?
3. What do you know about ancient civilizations?
4. What areas of daily life do you think were important to people in ancient civilizations?
5. How will we know we have successfully designed an invention to help life in our chosen ancient civilization?
6. What are the different ways can we share our learning with others?

**How will you gather diagnostic or formative data about the students’ current levels of understanding?*** Anecdotal records of student conversations

**How will students be grouped? How will materials be distributed?** Students will choose their own groups. They can choose to work with a partner or in a trio or independently. |
| **ACTION: Working on it** |
| During this phase, the teacher may: • ask probing questions; • clarify misconceptions, as needed, by redirecting students through questioning; • answer students’ questions (but avoid providing a solution to the problem); • observe and assess; • encourage students to represent their thinking concretely and/or pictorially; • encourage students to clarify ideas and to pose questions to other students. | During this phase, students may: • represent their thinking (using numbers, pictures, words, manipulatives, actions, etc.); • participate actively in whole group, small group, or independent settings; • explain their thinking to the teacher and their classmates; • explore and develop strategies and concepts.  |
| **Describe the task(s) in which your students will be engaged.** Students will engage in research related to the ancient civilization of their choice. They will gather and analyse the data using graphic organizers. After learning about their civilization, students will identify a problem and engage in the design process to design a solution. Students will build a prototype of their design using Maker Space tools and materials. **What misconceptions or difficulties do you think they might experience?** 1. Difficulty analyzing the information gathered from their research.
2. Difficulty determining accurate sources of internet information.
3. Choosing the best tools and materials to successfully build their prototype.
4. Time management.

**How will they demonstrate their understanding of the concept?**Students will design and build a prototype that demonstrates an understanding of the challenges of ancient civilization daily life. In order to develop a relevant solution, they must have a strong understanding of the problem. Students will also share their learning in a media or text presentation. They must share their learning and how it helped them in the design process. **How will you gather your assessment data (e.g., checklist, anecdotal records)?**Design process checklistAnecdotal recordsPhotos and videosRubric of final presentation**What extension activities will you provide?** * Students can use the web-based program, “Tinkercad” to develop a 3D model of their design to be printed on the Makerbot Mini.
* Two groups can join to create a media presentation that share the similarities and differences between their research and the design process.
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| **CONSOLIDATION: Reflecting and Connecting** |
| During this phase, the teacher may: • bring students back together to share and analyse strategies; • encourage students to explain a variety of learning strategies; • ask students to defend their procedures and justify their answers; • clarify misunderstandings; • relate strategies and solutions to similar types of problems in order to help students generalize concepts; • summarize the discussion and emphasize key points or concepts.  | During this phase, students may: • share their findings; • use a variety of concrete, pictorial, and numerical representations to demonstrate their understandings; • justify and explain their thinking; • reflect on their learning. |
| **How will you select the individual students or groups of students who are to share their work with the class (i.e., to demonstrate a variety of strategies, to show different types of representations, to illustrate a key concept)?** All students will be given the opportunity to share their work. The sharing opportunity will take place in an “Ancient Civilizations Design Faire”. Students will take turns moving around the library learning about the work of their classmates. Students will generate possible questions for discussion before the culminating activity. **What key questions will you ask during the debriefing?** How were you successful during this project?What challenges did you encounter during this project?Did designing and building your prototype help you to better understand your ancient civilization? Why or why not?If you could change anything about this project, what would you change and why?What did you learn from your classmates’ presentations?  |