Instructional Design Project

Life Skills Math

Project Based Lesson Plan Model

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Summer 2012 - EDTL 7100

Professor Haney

Unit 2: Money

Sub-Units:

Adding, Subtracting,

Multiplying, and Dividing Money

**Focus Question:** Are Problem-based learning activities an effective instructional strategy for teaching high school students with special needs to think critically, problem solve and transfer mathematical concepts from the classroom to real-life settings?

**Rationale**: If you have ever spent any amount of time with high school students you know that they commonly refer to “school as a prison!” One of my favorite student lines, of course, but also a point of concern. When did school stop being engaging/interesting? When did it start feeling like a waste of time? When I think back to my own education I think of how much I learned in elementary, how much I grew in middle school, and how much I to hated high school. What changed?

In elementary school every moment is a learning experience. You learn about new careers during career week, you take field trips to a restaurant to make pizza - the main focus is learning by doing. Still in middle school the curriculum is designed to build on the skills students have learned in the lower grades and apply them within real world context. Your desks are still in clusters and the comfort of the well-known center is present. Then suddenly you’re thrust into high school. Desks are in rows, your taking three pages of notes (without an outline), and hands-on activities have been replaced by a test that your graduation (the thing you want the most) is contingent upon. The main focus of high school should be career and college readiness not passing a test that is riddled with faults from its design to its implementation. The new research-based Common Core Standards in Mathematics reflects a change in ideology with a stronger focus on college and career readiness and project-based learning is a great instructional method to assure that these national goals are being met.

There is nothing better than a classroom filled with energy! When the students are excited and engaged in an activity the environment is electric; they are learning by doing.

Contextual Teaching and Learning as defined by The Ohio State University and Bowling Green State University (2000) is as follows:

*“Contextual teaching and learning is a conception of teaching and learning that helps teachers relate subject matter content to real world situations; and motivates students to make connections between knowledge and its applications to their lives as family members, citizens, and workers and engage in the hard work that learning requires.”*

Contextual Learning theorists, rooted in both behaviorist and constructivist ideologies, believe that learning takes place when the information makes sense to the learner within his or her own frame of reference. Our brains are constantly searching for connections to previous knowledge in order to build larger and larger schemes. Project-based learning activities relate concepts to real-life scenarios so transfer of the concept from school, to home, to work is more easily made. The more exposure students have to new situations, instructional strategies, assessments, etc. the more opportunities they have to build/make critical connections. Project-based instruction offers the most flexibility for Contextual Teaching and Learning and the best opportunity for students to prepare for life outside of high school.

Project-based learning is a collaborative, hands-on approach to teaching and learning, and an alternative to traditional methods. PBL encourages students to actively participate in their learning by exploring, communicating, and problem solving. The teacher is no longer the facilitator or the one in charge of relaying information. In PBL classrooms activities are student-centered and student driven. It is a valuable strategy to engage students and get them active in their own learning. In regard to research, “Overall, the research on Project-based Learning (PBL) reports positive outcomes related to student learning in the areas of content knowledge, collaborative skills, engagement and motivation, and critical thinking and problem-solving skills (Summary of Research on Project-based Learning, 2009).” It has also been found that students with special needs benefit greatly from the hands-on, real-life application of PBL. One report in Summary of Research on Project-based Learning reported that, “…special education students developed social skills such as patience and empathy (Belland, et al., 2006); and low-ability students *demonstrated initiative*, management, teamwork, and conscientiousness as they worked in groups (Horan, et al., 1996).”“In particular, one study of PBL showed a positive effect on low-ability students, who increased their use of critical-thinking skills including synthesizing, evaluating, predicting, and reflecting by 46% while high-ability students improved by 76% (Horan, et al., 1996).”

In my own classroom as a 7-12th grade Interventional Specialist I have seen Project-based learning teach students with special needs essential skills in all of the content areas, as well as daily living skills and communication skills. I even found when I completed Interest Inventories at the beginning of the school year that three-fourths of my students chose hands-on activities as their preferred learning styles. With a strong foundation of research supporting Problem-based learning I find it to be an effective teaching strategy and an invaluable tool for preparing students with all levels of needs for life after high school.

**Unit Learner Outcomes:**

**Life Skills Math Course**

*Students will understand the elements required to successfully apply Math to real life scenarios.*

**Unit Two: Money**

*Students will**demonstrate money skills by:*

**Knowledge**:

* Can you name and recognizing coins?
* Can you identify coin values—penny, nickel, dime, and quarter?
* Can you identifying the appropriate place values to one million?
* Can you add money with and without regrouping?
* Can you subtract money with and without regrouping?
* Can you multiply money with and without regrouping
* Divide money with and without regrouping
  + Can you name the addition, subtraction, multiplication, and division signs?
  + Can you name the coins (penny, nickel, dime, quarter)?
  + Can you identify the correct value of paper money (1,5,10,20)?

**Comprehension**:

* + What differences exist between subtraction and addition?
  + What differences exist between multiplication and division?
  + Can you provide an example of a real life scenario where you would have to make change?
  + Can you define addition and subtraction?
  + What differences exist between the coins/bills?
  + What similarities exist between the different operations?
  + How can I represent the same amount of money using different combinations of coins and bills?
  + How can I represent various amount of money using decimal notation and the symbols for cents or dollars?

**Application:**

* + What would happen if you gave the person $20 and your bill was only $13?
  + Would you have had enough money if you had a $20 and your bill was $18.89?
  + Do you know an instance where you would have to pay bills?
  + Can you apply the method used to some experience of your own . . .?

**Analysis:**

* Can you distinguish between a dime and a nickel?
* Can you distinguish between a quarter and a nickel?
* Can you explain what must have happened if the tag on the shoes said $19.99, but when it was time to check out the total cam to $22.50?
* Compare your equations to another students

**Synthesis:**

* If you had access to all resources how would you deal with . . .?
* What would happen if you did not pay your bills?
* How many ways could you make change?
* How can I model and solve problems by representing, adding and subtracting amounts of money?
* How can I create efficient ways for combining coins and making change?
* Can you create a budget using addition, subtraction, multiplication, and division?

**Evaluation:**

* Is there a better solution to your team’s vacation budget?
* Can you judge the value of the item?
* Decide if you should use coins or bills to complete a transaction.
* How effective is using a calculator?
* How would you have handled a situation where you did not have enough money?
* Judge the value of a service based on the price of surrounding, similar businesses?

**Does This Make “Cents?”**

**Pre-assessment: Adding, Subtracting, Multiplying, and Dividing Money**

**Name**: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Directions**: rate your level of confidence when it comes to completing the following skills. A ***5*** represents a high confidence level – you believe you can do this skill with ease. A ***3*** represent an average confidence level – you believe you can do this skill, but sometimes you forget steps. A ***1*** represents a low confidence level- you do not believe you accomplish this skill. While a ***4*** or ***2*** represents that your confidence level falls somewhere in-between the other bands.

I know how to line up the decimals properly when adding money 1 2 3 4 5

I know how to line up the decimals properly

when subtracting money 1 2 3 4 5

I can identify the value of each place value 1 2 3 4 5

I can read a money equation properly

($4.56 = four dollars and fifty six cents) 1 2 3 4 5

I can identify the values of all coins/currency 1 2 3 4 5

I can count by 5, 10, and 20 properly 1 2 3 4 5

I can represent the same amount of money using

different values of coins and bills 1 2 3 4 5

I know and can draw the symbol for dollar and cents 1 2 3 4 5

I can add money with regrouping 1 2 3 4 5

I can subtract money with regrouping 1 2 3 4 5

I can line up the decimals properly when multiplying money 1 2 3 4 5

I can line up the decimals properly when dividing money 1 2 3 4 5

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_/60

**The Cost of Family Time – Lesson Overview Handout**

**Lesson Overview**: As Winter Break approaches your parents are having a difficult time deciding where to go on vacation, so they have decided to give you and your brother/sister the opportunity to petition for the families’ next destination. You and your brother/sister must research and create a detailed proposal outlining where your family should take your next vacation. Your presentation must include a pamphlet highlighting the vacations location, cost, and activities (see rubric), as well as an outline of your budget.

Your parents have given you a budget of $2,000.00 and the freedom to plan a vacation anywhere within the United States. You must decide where you will take your family of four, for how long, where you will stay, the cost of travel, food, activities and lodging

**Lesson Objectives**:

* Within a real world scenario students will independently calculate the cost of a family vacation and practice exchanging money (adding and subtracting) based upon expenses.
* Students will utilize Microsoft Publisher to create a pamphlet highlighting the vacations location, cost, and activities. Pamphlets will be graded with a rubric designed for the project.
* Lastly, students will utilize graphic organizers to create a detailed outline of the vacation budget.

**Requirements:**

\_\_\_\_\_\_ Stay within the $2,000.00 budget

\_\_\_\_\_\_ Create a well-organized Pamphlet based on the Rubric

\_\_\_\_\_\_ Complete a Vacation Budget

\_\_\_\_\_\_ Complete a Vacation Schedule

\_\_\_\_\_\_Complete a Time Management Checklist: Self-Assessment

\_\_\_\_\_\_ Complete theGraphic Organizer: Where oh Where Should we Go?

\_\_\_\_\_\_ Collaborate with a partner

**LESSON PLANS:**

**The Cost of Family Time**

**Unit:** Money

**Sub-Unit:** Adding, Subtracting, Multiplying and Dividing Money

**Lesson Plan One**: Enrichment Activity - AAA Guest Speaker

**Grade**: 7-10 Cross-Categorical Special Education

**Time**: 55 minutes

**Lesson Outcomes:**

**Students will:**

* Use a graphic organizer to outline their thoughts
* Ask questions of the presenter that help deepen their understanding of the project
* Complete a preassessment to determine the amount of support they will need during this activity

**Key Questions:**

* How much support will each student need during this project?
* Did students complete the Preassessments honestly and efficiently?
* Did the AAA speaker help connect planning a vacation to a “real-life” scenario?
* Did students ask well thought out / thought provoking questions?

**Materials**:

* Preassessment: Does This Make ‘Cents?’
* Pencil
* Paper
* Calculator
* Travel Brochures

**Procedure:**

1. **Spark Interest**: Draw a large circle on the marker board. Within the circle write the question, “If you could go anywhere in the United States where would you go? Why?

2. **Think Time**: Then, ask the class to get out a piece of paper and draw the circle and question on their sheet. Instruct the students to then answer the question independently (**Duration**: 7 minutes)

* Students should be familiar with this format (WEB)
* Tell students to provide at least 3 reasons why they would like to go to that particular destination on the outer circles
* Observe progress by walking around the room

3. **Share Time**: Once all of the students have answered the question have them share their responses by coming up to the board and writing their desired destination, as well as one reason why, in a circle branching off of the main circle (example below). (**Duration**: 7 minutes)

NOTE: KEEP THE DIAGRAM ON THE BOARD FOR TOMORROW’S LESSON

4. Once the students have completed this activity inform the class that today they have the privilege of hosting a guest speaker from AAA (explain what AAA is for students who may not be familiar with the company). Go on to tell them that Mr./Mrs.\_\_\_\_ is going to be talking to the class about planning a vacation, because over the next few days they will have the opportunity to plan their own family vacation with a partner. Remind them that it is vital that they listen carefully and ask a lot of questions about cost, activities, and planning for other expenses so they can apply what they have learned to their own projects.

5. **Speaker**: While the AAA representative is talking students will be encouraged to take out a piece of paper and write down at least two questions to ask the speaker at the end of his/her presentation (**Duration**: 5 minutes)

6. The representative from AAA will provide brochures and valuable information to guide students through the upcoming project-based activity - planning a family vacation (**Duration**: 26 minutes)

* The last five minutes of the presentation will be for students to ask their questions

7. Once the speaker has completed his presentation and students have asked their questions they will be given a **Preassessment**:

* Before beginning this project-based activity students will be given a preassessment to assess their confidence level when it comes to adding and subtracting money. The preassessment will be utilized to determine what degree of support each student will need during this activity.
* Budget Outline **A** - received a confidence

score of 50-60: *Capable*

* Budget Outline **B** - received a confidence

score of 30-49: May need some scaffolding

* Budget Outline **C** – received a confidence

score of 29 – 0: Will need some one-on-one support

(**Duration**: 10 minutes)

5. When students have completed their preassessment they will be given an opportunity to look through the brochures provided by AAA and may begin brainstorming ideas.

**Closure**: Prior to the ringing of the bell students should be encouraged to clean up their areas, put the brochures back on the teacher’s desk – they will be available tomorrow for continued exploration.

**Evaluation**: The preassessment will be utilized to determine the level of support students will need during the project-based activity. The questions they asked may also be used to gauge their level of interest in the project.

**LESSON PLANS:**

**The Cost of Family Time**

**Unit:** Money

**Sub-Unit:** Adding, Subtracting, Multiplying and Dividing Money

**Lesson Plan Two**: Project Introduction

**Grade**: 7-10

Cross-Categorical Special Education

**Time**: 55 minutes

**Lesson Outcomes:**

**Students will:**

* Discuss/ask questions about the requirements for this project
* Use a graphic organizer to outline the details of their vacation
* Work collaboratively with a partner
* Utilize resources (technology, travel brochures, etc.) to gather information about their destination

**Key Questions:**

* How much support and what type of support will each student need during this project?
* Did students complete the Preassessments honestly and efficiently?
* Did the AAA speaker help connect planning a vacation to a “real-life” scenario?
* Do students seemed interested in the upcoming project?

**Materials**:

* Preassessment: Money Sense
* Teacher Observation Form
* Pencil
* Paper
* Marker/marker board
* Calculator
* Graphic Organizer: Where oh Where Should we Go?
* Access to the internet
* Travel brochures
* Lesson Packet
  + Lesson Overview/Requirements Handout
  + Pamphlet/Project Rubric
  + Time management Checklist – self assessment
  + Vacation Schedule
  + Student/Teacher Conference Sheet
  + The Cost of Family Time – Homework
  + Graphic Organizer: Oh Where oh Where Will We Go?
  + Vacation Budget Checklist

**Procedure**:

1. **Introduction**: remind students of the previous day’s speaker. Ask students what they found interesting about the presentation and what may have surprised them. Then, reference the diagram you created the previous day: “Where would you go if you could go anywhere in the United States? Why?” Once the discussion is over inform the class that they are going to apply what the learned the previous day to create their very own family vacation

(**Duration**: 10 minutes).

2. Inform the students that they will be working in teams of two and may pick their partners.

3. At this time pass out the lesson packets.

4. **Review** the documents with the class. (**Duration**: 20 minutes)

* The Lesson Overview/Requirements Handout: details the requirements and expectations for this assignment. Read over the overview as well as the objectives for the assignment.
* The Graphic Organizer: “Oh Where oh Where Should We Go?” Should be used first to organize preliminary information including: where you would like to go, how you plan on getting there, where would you like to lodge, etc.
* Budget Outline: Students should complete the Budget outline after completing the Graphic Organizer. The budget outline is designed to help students organize the information they have collected thru a preliminary search of their destination and is the key component in assessing adding/subtracting money skills. The teacher must review the budget outline with the student throughout the process and it must be approved by the teacher before the student can move on to creating the pamphlet.
* Pamphlet/Project Rubric: The pamphlet rubric will be utilized to assess the process of this lesson. Students must create a detailed pamphlet (front and back, three-fold) that covers the cost of all expenses, where the family will be staying, and why the family should choose the aforementioned destination.
* Time Management Checklist (self-assessment): This checklist will be utilized by the student to monitor his/her own progress throughout the activity. This will be a part of the final project grade.
* Vacation Schedule: will be used to organize your families’ vacation – include daily activities, travel time/distances, where you will eat, etc.
* Student/Teacher Conference Sheet: will be used to guide a conference between the student and the teacher to check students’ progress. The conferences will be held over the first and second work days.
* The Cost of Living Homework Sheet: Is to be completed at home with support from parents. It asks students to talk to their families about the cost of a family vacation, and also to complete a scenario.
  + ALL MEMBERS OF THE GROUP NEED TO HAVE ALL THE WORKSHEETS COMPLETED FOR FULL CREDIT

5. **Collaborate**: After answering any questions students can begin to look through materials/travel brochures to help them brainstorm. They may also log on to the internet at this time to gather other valuable information.

6. When students are ready they may also start filling out the Graphic Organizer: “Where oh Where Should We Go?” (**Duration**: 25 minutes)

* Both members of the team need to fill out all worksheets
* Teacher should observe progress while utilizing the Observation Form
* Students may use the internet or , the brochures, or any other available resources to complete this activity

**Closure**: Prior to the ringing of the bell students should be encouraged to clean up their areas, put the brochures back on the teacher’s desk, and return their lesson packets/materials to their math binders.

*Students should also be informed that tomorrow:*

* They will have the opportunity to utilize the internet to research more information and will likely start on their budgets after completing the Graphic Organizer: “Where oh Where Should We Go?”
* We will be having student/teacher conferences to check progress / put a plan in place to get the activity done
* When the bell rings tomorrow they need to “get busy” we have a lot to accomplish.

**Evaluation**: The teacher will also use an observation checklist to assure students are on track throughout the process. Students will utilize a time management checklist (self-assessment) as well to keep a clear vision of what needs to be done.

**LESSON PLANS:**

**The Cost of Family Time**

**Unit:** Money

**Sub-Unit:** Adding, Subtracting, Multiplying and Dividing Money

**Lesson Plan Three**: Work Day One

NOTE: additional workdays may be necessary for students to complete this activity effectively.

**Grade**: 7-10

Cross-Categorical Special Education

**Time**: 55 minutes

**Lesson Outcomes:**

**Students will:**

* Use a graphic organizer to outline the details of their vacation
* Work collaboratively with a partner
* Utilize resources (technology, travel brochures, etc.) to gather information about their destination
* Meet as a group with the teacher to discuss progress/details of the project
* Complete a vacation scenario and interview their parents about a family vacation for homework

**Key Questions:**

* Did students utilize resources efficiently/effectively?
* Did student/teacher conferences achieve their goal to monitor progress?
* Did students collaborate during the pre-planning stages of this project?

**Materials**:

* Teacher Observation Form
* Homework Worksheet
* Pencil
* Calculator
* Graphic Organizer: Where oh Where Should we Go?
* Access to the internet
* Travel brochures
* Lesson Packet
  + Lesson Overview/Requirements Handout
  + Pamphlet/Project Rubric
  + Time management Checklist – self assessment
  + Vacation Schedule
  + Student/Teacher Conference Sheet
  + The Cost of Family Time – Homework
  + Graphic Organizer: Oh Where oh Where Will We Go?
  + Vacation Budget Checklist

**Procedure**:

1. **Introduction**: When students enter the classroom they should get to work online – researching information, finishing their graphic organizers, or starting on their Vacation Budget Outlines.

* Remind students that budget outlines must be approved by the teacher.

2. Make it a point to inform students that the class will start teacher/student conferences today.

* Start conferences 15-20 minutes after students begin working independently
* The teacher will use the Student/Teacher conference sheet to guide the conference

(**Duration**: 15-20 minutes)

3. **Work Collaboratively/Conference**: Students should work quietly/independently at their desks or on computers while the teacher conducts conferences until the end of the period.

* REMIND STUDENTS that they should be using their Time Management Checklist to self-monitor their progress.

(**Duration**: 25-30 minutes)

**Closure**: Prior to the ringing of the bell students should be encouraged to clean up their areas, put the brochures back on the teacher’s desk, and return their lesson packets/materials to their math binders. Students will also be given a homework assignment at this time – take a minute to review the directions.

* **HOMEWORK** Students will be required to interview their parents about a past family vacation then they will complete a short scenario.

*Students should also be informed that tomorrow:*

* They will have the opportunity to finish working on their budgets
* Those who have completed their budgets may begin working on their pamphlets.

**Evaluations**: The teacher will use the Student/Teacher conference sheet to guide the conference and assess/monitor student progress. The teacher observation form will also be used during the first 15 minutes of the lesson to document any misunderstandings.

**LESSON PLANS:**

**The Cost of Family Time**

**Unit:** Money

**Sub-Unit:** Adding, Subtracting, Multiplying and Dividing Money

**Lesson Plan Four**: Work Day Two

NOTE: May require an additional work day

**Grade**: 7-10

Cross-Categorical Special Education

**Time**: 55 minutes

**Lesson Outcomes:**

* Use a graphic organizer to outline the details of their vacation
* Work collaboratively with a partner
* Utilize resources (technology, travel brochures, etc.) to gather information about their destination
* Meet as a group with the teacher to discuss progress/details of the project
* Utilize a time management checklist to self-monitor progress

**Key Questions:**

* Are students using problem solving skills to complete their budget outlines?
* Are students struggling with the calculations involved?
* Did the homework assignment help transfer the material to “real-life?”
* Did student/teacher conferences achieve their goal to monitor progress?
* Did the class seem to have a good understanding of the projects requirements?
* Did students work efficiently/effectively in groups?
* Did student/teacher conferences achieve their goal of monitoring progress and understanding of the project?
* Are all calculations correct?

**Materials**:

* Teacher Observation Form
* Pencil
* Calculator
* Graphic Organizer: Where oh Where Should we Go?
* Access to the internet
* Travel brochures
* Lesson Packet
  + Lesson Overview/Requirements Handout
  + Pamphlet/Project Rubric
  + Time management Checklist – self assessment
  + Vacation Schedule
  + Student/Teacher Conference Sheet
  + The Cost of Family Time – Homework
  + Graphic Organizer: Oh Where oh Where Will We Go?
  + Vacation Budget Checklist

**Procedure**:

1. TURN IN HOMEWORK – DISCUSS (**Duration**: 5 minutes)

**2. Introduction**: When students enter the classroom they should get to work online – researching information, finishing their graphic organizers, or starting on their Vacation Budget Outlines.

* Remind students that budget outlines must be approved by the teacher.

3. Make it a point to inform students that the class will continue teacher/student conferences today.

* Start conferences immediately.
* The teacher will use the Student/Teacher conference sheet to guide the conference

3. **PAMPHLET EXEMPLAR**: show the students an example of a pamphlet and talk to them about how they will start their pamphlets.

* Students should have previous knowledge about how to manipulate Microsoft Publisher but refresh their memories on the SmartBoard on how to open a new document.

4. REMIND STUDENTS that they should be using their Time Management Checklist to self-monitor their progress.

(**Duration**: 15-20 minutes)

5. **Work Collaboratively/Conference**: Students should work quietly/independently at their desks, or on computers, while the teacher conducts conferences.

* NOTE: Make sure you complete the conferences 10-15 minutes prior to the bell ringing so you can check progress again.

(**Duration**: 25-30 minutes)

**Closure**: Prior to the ringing of the bell students should be encouraged to clean up their areas, put the brochures back on the teacher’s desk, and return their lesson packets/materials to their math binders.

*Students should also be informed that tomorrow:*

* They will need to work diligently tomorrow to complete their pamphlets
* They have been doing a good job of getting started when the bell rings and it is important to continue that good habit.
* What they do not get done tomorrow will be DUE MONDAY = HOMEWORK

**LESSON PLANS:**

**The Cost of Family Time**

**Unit:** Money

**Sub-Unit:** Adding, Subtracting, Multiplying and Dividing Money

**Lesson Plan Five**: Work Day Three

**Grade**: 7-10

Cross-Categorical Special Education

**Time**: 55 minutes

**Lesson Outcomes:**

* Use a graphic organizer to outline the details of their vacation
* Work collaboratively with a partner
* Utilize resources (technology, travel brochures, etc.) to gather information about their destination
* Utilize a time management checklist to self-monitor progress

**Key Questions:**

* Did students work efficiently/effectively in groups (stay on task)?
* Did the Time Management checklist seem to help guide students through the activity?
* Did students have enough time to complete this project in class? How many students brought work home for homework?

**Materials**:

* Teacher Observation Form
* Pencil
* Calculator
* Graphic Organizer: Where oh Where Should we Go?
* Access to the internet
* Travel brochures
* Lesson Packet
  + Lesson Overview/Requirements Handout
  + Pamphlet/Project Rubric
  + Time management Checklist – self assessment
  + Vacation Schedule
  + Student/Teacher Conference Sheet
  + The Cost of Family Time – Homework
  + Graphic Organizer: Oh Where oh Where Will We Go?
  + Vacation Budget Checklist

**Procedure**:

1. **Introduction**: When students enter the classroom they should get to work online – on their pamphlets.

* Remind students that budget outlines must be approved by the teacher.

2. REMIND STUDENTS that they should be using their Time Management Checklist to self-monitor their progress.

3. ALSO REMIND STUDENTS that what they do not get done today is homework – the entire activity is DUE on MONDAY

(**Duration**: 15-20 minutes)

4. **Work Collaboratively**: Students should work quietly/independently at their desks, or on computers, while the teacher conducts conferences.

(**Duration**: 25-30 minutes)

**Closure**: Prior to the ringing of the bell students should be encouraged to clean up their areas, put the brochures back on the teacher’s desk, and return their lesson packets/materials to their math binders.

*Students should also be informed that tomorrow:*

* What they do not get done today will be DUE MONDAY = HOMEWORK

**LESSON PLANS:**

**The Cost of Family Time**

**Unit:** Money

**Sub-Unit:** Adding, Subtracting, Multiplying and Dividing Money

**Lesson Plan Six**: Presentation Day

**Grade**: 7-10

Cross-Categorical Special Education

**Time**: 55 minutes

**Lesson Outcomes:**

* Use a graphic organizer to outline the details of their vacation
* Work collaboratively with a partner
* Utilize resources (technology, travel brochures, etc.) to gather information about their destination
* Utilize a time management checklist to self-monitor progress
* Complete a Post-assessment in order to self-assess what they have learned throughout the project
* Present their pamphlets as a team in order to convince the class that they should pick their vacation to go on, rather than picking the opposing teams destination
* Turn in and discuss any misunderstandings about their homework

**Key Questions:**

* What areas do students still believe they are struggling in?
* How did presentations go? Where students well prepared?
* Did the students enjoy this assignment? Are there any resources, activities, etc. that may have been confusing?
* Are all calculations accurate?

**Materials**:

* Teacher Observation Form
* Pamphlets
* SmartBoard
* Pamphlet Rubric
* Popsicle stick names
* Adding and Subtracting Money Post -Assessment

**Procedure**:

1. Turn in **Homework** – Discuss (**Duration**: 5 minutes)

2. **Introduction**: When students enter the classroom they should prepare for pamphlet presentations.

* Students will be chosen at random by using the Popsicle stick method – all of the student’s names are written on Popsicle sticks, the teacher choses two sticks at random. Those two students will “compete” against each other to convenience their family (the class) that their vacation is the best destination for the family.

3. **Presentation**: Each student should give the teacher a copy of their Pamphlet Rubric before presenting their pamphlet

* Students will be assessed using the Pamphlet Rubric.

(**Duration**: 40 Minutes)

4. **Post-Assessment:** When all presentations are complete the students will complete the Adding and Subtracting Money Post-Assessment

(**Duration**: 10 minutes)

**Closure**: Prior to the ringing of the bell students should be encouraged to clean up their areas, put any brochures that they may have taken home back on the teacher’s desk, and turn in their brochures if they have not done so already in the bin.

**Does This Make “Cents?”**

**Post- Assessment – Adding, Subtracting, Multiplying, and Dividing Money**

**Name**: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Directions**: Now that we have completed our unit on Adding and Subtracting money rate your level of confidence when it comes to completing the following skills. A ***5*** represents a high confidence level – you believe you can do this skill with ease. A ***3*** represent an average confidence level – you believe you can do this skill, but sometimes you forget steps. A ***1*** represents a low confidence level- you do not believe you accomplish this skill. While a ***4*** or ***2*** represents that your confidence level falls somewhere in-between the other bands.

I know how to line up the decimals properly when adding money 1 2 3 4 5

I know how to line up the decimals properly when subtracting money 1 2 3 4 5

I can identify the value of each place value 1 2 3 4 5

I can read a money equation properly

($4.56 = four dollars and fifty six cents) 1 2 3 4 5

I can identify the values of all coins/currency 1 2 3 4 5

I can count by 5, 10, and 20 properly 1 2 3 4 5

I can represent the same amount of money using

different values of coins and bills 1 2 3 4 5

I know and can draw the symbol for dollar and cents 1 2 3 4 5

I can add money with regrouping 1 2 3 4 5

I can subtract money with regrouping 1 2 3 4 5

I can line up the decimals properly when multiplying money 1 2 3 4 5

I can line up the decimals properly when dividing money 1 2 3 4 5

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_/60

**Teacher Observation Form – Adding, Subtracting,**

**Multiplying and Dividing Money**

**Students Name:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_The student can line up the decimals properly when adding money

\_\_\_\_\_\_\_\_The student can line up the decimals properly when subtracting money

\_\_\_\_\_\_\_\_The student can line up the decimals properly when multiplying money

\_\_\_\_\_\_\_\_The student can line up the decimals properly when dividing money

\_\_\_\_\_\_\_\_The student can identify the value of each place value

\_\_\_\_\_\_\_\_The student can read a money equation properly ($4.56 = four dollars and fifty six cents)

\_\_\_\_\_\_\_\_The student can identify the values of all coins/currency

\_\_\_\_\_\_\_\_The student can count by 5, 10, and 20 properly

\_\_\_\_\_\_\_\_The student can represent the same amount of money using different values of coins and bills

\_\_\_\_\_\_\_\_The student can draw the symbol for dollar and cents

\_\_\_\_\_\_\_\_The student can add money with regrouping

\_\_\_\_\_\_\_\_The student can subtract money with regrouping

**Comments:**

**Time Management Checklist: Self-Assessment**

**Name**: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

|  |  |
| --- | --- |
| **Task** | **Date Completed** |
| Pick a family car and research gas mileage and tank size.  <http://fuelcostcalculator.com> (This AAA website will help you determine the average price of fuel based on the location and the type of vehicle used for the weekend.) |  |
| Choose a Vacation destination that fits your family: [www.travelohio.com](http://www.travelohio.com)  [www.consumerdiscoverohio.com](http://www.consumerdiscoverohio.com) |  |
| Research how many miles, and how long it takes to get to the destination from Montpelier. [www.maps.yahoo.com](http://www.maps.yahoo.com) |  |
| Begin research on specific activities (time and cost). |  |
| Schedule travel time, activities, and meals on the Vacation Schedule. |  |
| Begin preparing your **Final Vacation Budget** |  |
| Think about how you will “sell” the vacation to your family (the class) using your pamphlet |  |
| Class Discussion: Reflect on what you learned mathematically with your group and your class. |  |
| Pat yourself on the back! You did a great job! |  |

**Adapted from**: http://wveis.k12.wv.us/teach21/public/project/Guide.cfm?upid=3509&tsele1=2&tsele2=104

**Vacation Schedule**

**Name**: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Directions**: Fill-in the chart below with the details of your vacation schedule.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Monday** | **Tuesday** | **Wednesday** | **Thursday** | **Friday** | **Saturday** | **Sunday** |
| **Where will you stay:** |  |  |  |  |  |  |  |
| **Activities**  **Choose two activities to do**  **On two separate days**  **The activities must be designed**  **Four people** |  |  |  |  |  |  |  |
| **Food**  **How much money do you**  **Have budgeted for each**  **Person each day for food?** |  |  |  |  |  |  |  |

**Vacation Budget Checklist**

**Student Name:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Travel**

\_\_\_\_\_I researched the mileage to the vacation destination.

\_\_\_\_\_I estimated how many miles we would travel on Saturday to/from activity sites.

\_\_\_\_\_I researched the mileage we would travel back home on Sunday.

\_\_\_\_\_I used math to find out how many tanks of gas the family would need for the weekend based on the vehicle’s average gas mileage, current gas prices, and estimated total miles the family is expected to travel.

\_\_\_\_\_I remembered to add extra fees for tolls, parking, or train/bus tickets if needed.

\_\_\_\_\_Our group checked for accuracy using more than one method when estimating the cost of travel for the weekend.

**Total cost for travel: \_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Meals**

\_\_\_\_\_I researched prices for breakfast, lunch, dinner and snacks every day in order to make a reasonable estimate for food expenditures.

\_\_\_\_\_I made restaurant choices my whole family could enjoy, but remembered to make wise choices in order to save money.

\_\_\_\_\_I used addition or multiplication to estimate the prices for all of our meals each day.

\_\_\_\_\_I subtracted the total estimated amount for our meals from the money budgeted for our vacation.

**Total cost for meals: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Lodging**

\_\_\_\_\_I researched prices for lodging and found the best deal available for my family.

\_\_\_\_\_I used addition or multiplication to determine the total cost of lodging.

**Total cost for lodging: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Activities**

\_\_\_\_\_I determined the price of one activity. It totaled \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

\_\_\_\_\_I determined the price of the second activity. Its total was \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

\_\_\_\_\_I found the total estimated price for all activities and compared my findings to at least 2 other group members to check for accuracy

**Total cost for activities: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Use the Final Budget Table to document estimated prices of all spending.**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Monday** | **Tuesday** | **Wednesday** | **Thursday** | **Friday** | **Saturday** | **Sunday** | **Total** |
| **Travel** |  |  |  |  |  |  |  |  |
| **Breakfast** |  |  |  |  |  |  |  |  |
| **Lunch** |  |  |  |  |  |  |  |  |
| **Dinner** |  |  |  |  |  |  |  |  |
| **Lodging** |  |  |  |  |  |  |  |  |
| **Activities** |  |  |  |  |  |  |  |  |
| **Extras** |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  | **Total\_\_\_\_\_\_\_\_\_\_** |

**QUESTIONS**:

Find the total amount you expect to spend. Is it within your budget?

How much money do you have left?

What can you eliminate if you are over your budget? Discuss these issues with your group in order to make the best decisions for the family’s vacation.

Adapted from: http://wveis.k12.wv.us/teach21/public/project/Guide.cfm?upid=3509&tsele1=2&tsele2=104**Pamphlet/Project Rubric**

**Name**: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Requirements**:

\_\_\_\_\_Write a description of your destination – must be a minimum of 1 paragraph long **- 15 points**

\_\_\_\_\_ Include how far your destination is from your home in miles. **– 5 points**

\_\_\_\_\_Include how you will get to your destination (drive, fly, train) **– 5 points**

\_\_\_\_\_Estimate gas cost **- 5 points**

\_\_\_\_\_Estimate food costs – where will you eat? **– 5 points**

\_\_\_\_\_Include 2 Activities for the family to enjoy with critical details including: location, distance from hotel, cost, etc.) **– 10 points**

\_\_\_\_\_Write a paragraph describing why the family should choose your vacation**– 15 points**

\_\_\_\_\_Include at least two images **– 5 points**

\_\_\_\_\_Describe where you will lodge, as well as the cost of lodging for the entire week – **10 points**

\_\_\_\_\_Cite all of your sources in APA format on the back cover of your pamphlet – **5 points**

**NOTE**: You will present your pamphlet in front of the class. Two names will be chosen at random –Each team will have the opportunity to try and convince the class that their vacation destination is the best choice.

\_\_\_\_\_The presenter clearly lobbied for his vacation/destination – **10 Points (2 points each)**

* + Spoke in an appropriate tone
  + Did not distract the audience with a lot of movement
  + Did not say “umm…” or “hmmm…” in excess
  + Did not read directly from his/her pamphlet
  + Made eye contact with the audience

**\_\_\_\_\_Include the following worksheets (2 Points each)**

* + Student/Teacher Conference Sheet
  + Vacation Schedule
  + Time Management Checklist
  + Budget Outline
  + Graphic Organizer: “Where oh Where Should we Go?”

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_/100 Points**

**Comments:**

**Teacher / Student Conference Sheet**

**Name**: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Date**: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Questions**:

* How do you feel about your progress so far?
* Do you think you have enough time to complete this project?
* Are there any requirements you are confused about?
* Do you need any more support to get this project done on time?
* Do you feel like you have learned how to add and subtract money more effectively through this assignment?

I agree to continue doing my best and working to complete this assignment on time.

Student Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

I agree to be available for any support necessary to help you reach the objectives of this assignment.

Teacher Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Graphic Organizer: Where, Oh Where Will We Go?**

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Directions: Answer the following questions to organize your vacation plan.

1. Where are you planning on going? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

* List three facts about your destination:
  + .
  + .

2. Why would you like to go there? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

* List three reasons why you would like to go there:
  + .
  + .

3. How are you going to get there? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

4. Where are you going to stay once you get there? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

5. What two activities would you like to do on your vacation? (Price for 4 people)

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

6. How long are you going to stay? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

7. What is your food budget – per person – each day? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

8. How far is your destination from your house? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Document your sources here:**

Document your sources here:

**The Cost of Family Time - Scenario**

**Homework**

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Interview your parents:**

When was the last vacation we planned as a family? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

How much did you budget for gas? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

How much did you budget for food? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

How much did you budget for lodging? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Was there any unexpected expenses? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Complete the scenario:**

Oliver wanted to take his family (his wife, son, and himself) to Disneyland but didn’t know if he could afford it. He had saved $3,000.00, his hotel was going to be $125 a night, he averaged $30.00 per person for food for a **week**, and his family would be driving there so he needed to figure out how much money to budget for gas.

The trip was 250 miles from his home.

Gas was $3.75 a gallon.

His car got 30 miles to the gallon and could hold 20 gallons of gas at one filling.

1. How much was his hotel for the week? $875.00

2. How much would food cost for everyone for the week? $630.00

3. How much was gas going to be to drive to Disneyland (round-up)? $675.00

4. Did Oliver have enough money to take his family to Disneyland? Show your work.

Yes – All expenses totaled: $2,180.00, he saved $3,000.00, so he had $820.00 left

**References**

Angela Worley, Teach21 Project Based Learning Family Time-What’s It Cost? Mathematics

Fourth Grade View, 2009, June, 14, 2012, <http://wveis.k12.wv.us/teach21/public/project/Guide.cfm?upid=3509&tsele1=2&tsele2=104>.

Belland, B. R., Ertmer, P. A., & Simons, K. D. (2006). Perceptions of the value of problem-based learning among students with special needs and their teachers. *The Interdisciplinary Journal of Problem-based Learing, 1*(2), 1-18.

Chris McCallum. 150+ Essential Questions for Math. July 13, 2011. Retrieved from: <http://www.derry.k12.nh.us/dvs/staff/cmccallum/curricmap_essential.htm>.

Contextual Teaching and Learning: Preparing Students for the New Economy, Robert G. Berns and Patricia M. Erickson, 2001, June 14, 2012, <http://www.cord.org/uploadedfiles/NCCTE_Highlight05-ContextualTeachingLearning.pdf>

Horan, C., Lavaroni, C., & Beldon, P. (1996). *Observation of the Tinker Tech Program students for critical thinking and social participation behaviors.* Novato, CA: Buck Institute for Education.

Perceptions of the Value of Problem-based Learning among Students with Special Needs

and their Teachers, June 14, 2012, <http://www.edci.purdue.edu/ijpbl/sample/sample_manuscript.pdf>.

Summary of Research on Project-based Learning, June 2009, June14, 2012, <http://cell.uindy.edu/docs/PBL%20research%20summary.pdf>