

Math:

Multiplication War

Objectives

The student uses knowledge of multiplication facts to win in a modified version of the card game War.

Materials

-Decks of cards

-Assessment

-timer

Preparations

1. Open deck of cards, remove face cards. Play is only with Aces and number cards 2-10. Aces = 1, number cards are their value.
2. Prepare assessment for post-game

Lesson

Day One:

1. Shuffle and divide A-10 cards into two even piles.
2. Review rules of War. Each person flips one card, highest card wins. Play one round of regular War.
3. Re-shuffle and divide A-10 cards into two even piles.
4. Introduce modified rule: After the two cards are flipped, student must correctly multiply the two cards. If they are correct, they win the cards. If they are incorrect, they lose the cards. Timer is not used on Day One.
5. In case of War (matching cards) follow regular rules. Lay out 4 cards face down and the fifth face up. Modified rule: After student solves the fifth card multiplication problem (correctly or incorrectly) the first facedown card is flipped on both sides and they must solve that problem as well. This is repeated for the remaining three facedown cards, and then the original matching cards.
6. Once the game has been played twice, provide multiplication assessment. Score and save.

Day Two:

Play as on Day One. Two rounds of War and then provide assessment for performance.

Day three:

Introduce Timer. Set to 20 seconds for each problem. If not solved within 20 seconds, this is a loss of the cards.

Provide Assessment.

Day four and beyond:

1. As mastery is achieved, reduce time limit for each problem.
2. When student is able to solve all multiplication problems accurately within 5 seconds, reintroduce face cards as 11 (Jack) 12 (Queen) and 13 (King). Restart with no timer until comfortable, then follow pattern as above (20 seconds, 10 seconds, 5 seconds)

Play intermittently after mastery to reinforce multiplication facts.

Science:

Sound experiments

Sound wave experiment

Materials:

large rigid tumbler or plastic cup with wide mouth opening and a smooth rim around the top

sugar or salt

plastic wrap

cookie sheet or large plate

rubber band

science journal

Discuss: What is sound? How does it move from one place to another (mouth to ear, speaker to ear)

1. cover opening of tumbler or cup tightly with plastic wrap –use rubber band
2. Set on a cookie sheet or plate and sprinkle sugar/salt on plastic wrap
3. Record ideas/thoughts what will happen to salt sugar as sound passes around it.
4. Use various methods (yell, sing, bank items) near the top of the cup to get the sugar/salt to move/jump. Record what happens for each.
5. Use phone with music on loud near top of cup. Record what happens.
6. Remove plastic wrap
7. Put a cell phone in the cup – play music on loud
8. Replace plastic wrap and rubber band
9. Sprinkle salt/sugar on top
10. Record what happens.

Discuss – what was the difference between sound outside the cup and sound inside the cup that makes the sugar/salt act differently?

Candy experiment

Small shallow dish (petri dish) 4 oz

Water

Gobstoppers

M&M's

Experiment 1

Discussion – what covers an M&M? What is it made of and how do they make it? How do they get the chocolate inside the shell? Is the M printed? Attached? Made of Candy? Record thoughts in your journal.

1. Place 4 M&M's in the bottom of the small shallow plate – 4 oz. along the outside rim, with the M facing upwards.
2. Pour just enough water in to cover the candy.
3. Observe the changes as they happen. Record them in your journal.
4. Observe what happens to the M – why?
5. Record ideas in your journal

(the M is made from carnauba wax, is safe to eat, and won't dissolve in water)

Experiment 2

Discussion – what are gobstoppers covered in? Is it a different or the same type of candy as an M&M? Break some of each up and observe differences and similarities in the candy. Record in your journal.

1. Place 4 gobstoppers in the bottom of the 4 oz dish just as you did with M&M's.
2. Add enough water to cover the bottom half of the candy.
3. Observe what happens with the colors
4. Record your observations

(The colors don't mix – thanks again to...carnauba wax.)

Research – what is carnauba wax? What does it do and why is it used in candy?

Lunch Preparation:

Monday – Waffles and Bacon

Tuesday – Meatloaf of burgers

Wednesday – Cinnamon Swirl Bread

Thursday – Chicken tiki masala

Friday – Chicken and Broccoli

Student will begin by reviewing recipe, preparing to cook by first assembling all cooking items needed and then getting each food item needed. Cutting will be assisted, as will operation of any appliance including the stove.

Writing Journal:

This is never a willing task, but it is a necessary one and should be encouraged even if it need be assigned. Student should be given 2 or 3 sentences with poor grammar to re-write. The sentences should be interesting to the student and appropriate learning level.

A writing prompt is also necessary, unless the journal entry that day is topic specific, such as science or social studies. The prompt should be something that the student finds interesting. So if a child enjoys Fortnite, they should have a writing assignment about the video game.

It is CRITICALLY important that the student writes continuously – without stopping. If the student is stuck on a thought, then the student should continue to write the same word until the next occurs to them. For instance, if the topic is model trains, and they are writing about their train set, it might look like this:

For Christmas I got a new engine. It is shiny and read and much better than...than...than...than...than...the Tyco one my uncle gave me last year.

Here the student was stuck on remembering what the type of model train engine was that they were comparing to. Rather than stop and try to remember, then going off task and losing their “train” of thought, the student continues to repeat the same word over and over so as not to lose their place.

Project:

Jack has decided he wants to create an animated cartoon for broadcast on a youtube channel. While it sounds like a big ask, we just need to break it down into step by step projects and then focus on executing each step.

There are a ton of 'free' online animation software and a simple search will reveal it. However, that is about 20 steps down the road and we need to first focus on a script for Jack.

There are two initial tasks Jack needs to complete for his animation program:

- 1) Jack needs to create the story
- 2) Jack needs to figure out what art form to present his story

As Jack is doing a short program, he needs a short program formula to follow.

Assignment 1

Short Story/ Television Show Formula

- 1) Characters are in a zone of comfort
- 2) But they want something
- 3) They enter an unfamiliar situation
- 4) Adapt to it
- 5) Get what they wanted
- 6) Pay a heavy price
- 7) Return to their familiar situation
- 8) Having changed

This is handed to Jack to read, then we discuss television cartoons/shows he has seen and stories he has read. Each step is discussed in terms of media that Jack has already experienced. Jack then needs to come up with an 8 line story for his characters, once sentence, that matches each of the lines in the formula in his journal.

Assignment 2

Take and expand on each of the 8 points – how do you show what is happening visually. Write several more sentences that show, don't tell, the viewer what is happening. We are not working on dialogue at this time, but if something occurs to Jack then it should be written down.

Assignment 3

We now need to create art for each of the steps, showing what the characters and environment looks like. This will go on for several days, with new story ideas, dialogue, descriptions or events recorded in his journal as he works on the art.

By the end of the week Jack should have the basics for a script, panels of art, and a complete story to tell.

Outdoor exercises

Exactly what it sounds like, including hikes, playing catch, soccer, organized or not, just as long as there is fresh air involved.

Quiet reading

Exactly as it sounds, quiet reading – books, magazines, assembly directions, whatever, as long as it's reading and quiet.

Coding / Tech

There are a number of free coding courses and online apps available for kids to introduce them to coding and computers. Jack has an account with a couple and this would be his primary computer time.

In addition, jack has a typing tutor to help him with keyboarding so his touch typing improves, which will also improve his computer interaction.

Art:

This is Jack centric and dependent entirely on what he wants to create. Art supplies provided, his choice.

I have worked with him on his sketching. Showing him stick figures for proportion, upside down drawing to break pictures down into component parts rather than an entire image, head creation. We have multiple sketching books for humans, animals and cartoon characters that he can also use for practicing realistic and cartoon drawing.

Building/Construction

There's always something that needs fixing around the house and I have a constant list of things that need working on – just installed all new cabinets and countertops in the kitchen. The list is out in the open and the kids are always welcome to help me out with an item.