"Idontgetit" Tales

Matheus Wonders if the Teacher Said Adam or Atom

"Adam, Adam, who is Adam?" moans Matheus.

"Adam Jones? Adam Mckee?" suggests Kaalyn.

"No! Adam, the Adam that matters... I mean the Adams in the matters. Oh, I don't know what I mean," Matheus puts his head down on his desk.

"I thought Ms. Jarvis wrote 'ATOM' with a T, didn't she?" adds Moses.

"I don't know. Where's Amy? She's good at science."

"Did I hear my name?" asks Amy.

"Do you know who Adam is? The Adam in matter?"

"Matheus, it's not A**d**am, it's a**t**om. Remember, I talked about it yesterday?"

"I don't know. Idontgetit!" Matheus barely gets his head back down on the desk before the vortex grabs them up and sweeps them out of their seats.

"Man, Matheus! You couldn't just let Amy explain?"

"I'm sorry! I forgot!" Matheus yells, but they can barely hear him over the roar of the swirl. They can't tell where they are going but everything seems to be getting bigger– or maybe they're getting smaller. Yep, that's it. They're getting smaller. They're getting tiny. They're getting... uh oh, atom-sized.

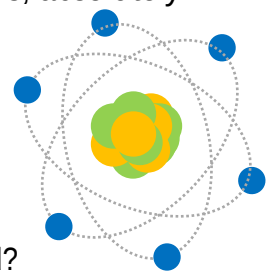
The colors of the swirl finally quiet down and they are all sitting on vibrating balls. When they look around, they can see that all of the balls are arranged like bricks in a wall, neatly stacked. But there is a little bit of space between all of them and the balls wiggle and vibrate. Matheus, Moses, Kaalyn, and Amy each straddle a ball, holding on tight and trying not to get wiggled right off. It's like sitting on a shaking beach ball made of jello!

"Ok, Amy, you're the science girl – where are we?"

"You're not going to believe it but I think we got sucked into the desk! These atoms look mostly like carbon[1], so we're not in chairs because they're made of plastic and metal and...."

"Hold up, hold up. How can you tell that these atoms are carbon... wait... how can you tell that these are atoms?"

"Well, they MUST be atoms. Everything is made of atoms, absolutely everything. So, if we know that they're atoms, all we have to do is figure out what kind of atoms..."



"Uh-hmm."

The kids look around. What's that sound?

"Um-hmm!"

The sound gets louder and the kids look around, wondering where it's coming from.

"Down here!" Matheus realizes that his ball is talking.

"I'm not a ball, Dude, I'm a nucleus – here, in the center of the atom that you're sitting on. If you want to know about atoms, I'm the one to tell you. I've been an atom forever."

Moses leans towards the talking atom, "Ok, if you're an atom, what's a nucleus? And what are these things flying around you?" Moses flings his arms around, swatting at tiny particles whirling like crazy around around the thing that is calling itself a nucleus.

"I'm the nucleus – which is the center of the atom. I contain the protons and the neutrons. Clearly, I'm the most important part of the atom[2]."

All of a sudden, all eight of the little whirly things start talking at once.

"Whoa! Hold up, there."

"Yeah! What are you talkin' about?"

"We're the ones that have the negative charge!"

"We're the ones that make electricity!"

"We're the most important!"

"You just sit in the middle and barely move."

"We get to whirl and whirl around you all the time!"

"We are the electrons!"

"Ok, ok, whatever," says the nucleus. "You guys are important too. Here's the thing, kids: All matter is made of atoms. And all atoms are made of two main parts. Me, the nucleus..."

"And US! The electrons! Don't forget about us," all of the electrons call out in unison.

"Yes, yes," says the nucleus. "I'm the big part, in the middle, with the protons, and those guys fly all around me."

Because she can never keep her mouth shut for long, Amy interrupts, "And, I know that you're a carbon atom because you have 8 protons – all carbon atoms have 8 protons."

"And they usually have 8 electrons too – not that you care about us!" shout the electrons, swirling away from Amy.

"Ok, I get it! I get it... can we get out of atom-land now?" Matheus shouts, he is afraid of falling off the atom and getting whirled to pieces by all of the electrons that are flying around.

"Well," said the nucleus, "Technically you're always in atom-land since everything – EVEN YOU! – is made of atoms..."

"I mean... I want to go back to normal size!"

"Ok, fine, get out of here."

And the atoms buck the kids off and all four of them get caught back into the vortex, twisting in a tornado of colors, and land back in their seats.

Matheus rubs his head, "Ok, now I know what atoms, with a T, are. But I sure do have to be careful what I say!"

Amy laughs, "Just make sure you don't say anything that will get you sucked into Plutonium-Land. Plutonium atoms have about 94 electrons! You'll never get them to stop swatting you in the head!"

Review Questions:

1. Based on the passage, what can you guess about Carbon?
    a. It's the main ingredient in plastic and metal.
    b. It's the main ingredient in wood.
    c. It never contains the same number of protons.
    d. It never contains the same number of electrons.

2. The nucleus is the center part of an atom. What particles does it contain?

3. The atoms in the desk are vibrating and wiggling. Why makes it impossible for them to be completely still (like bricks in a wall)?

4. Which of the following is not made of atoms?
    a. Desks.
    b. People.
    c. Chairs.
    d. None of the above.

5. In the passage, the kids learn the basics of atomic theory. What do you think atomic theory states?
    a. All matter is made of either protons or electrons.
    b. All matter is made of of tiny particles and some of those particles are atoms.
    c. All matter is made of atoms, which are the smallest unit anything can be broken into and still be that same kind of matter.
    d. Nonliving matter is broken down into atoms while living matter is broken down into different types of particles, like protons and electrons.

What do the following words mean *in the context of the passage*? (Words are underlined in the passage.)

6. Vibrating
    a. Shaking, wiggling
    b. Singing loudly
    c. Walking slowly
    d. Talking, chatting

7. Straddle
    a. Run along side.
    b. Something you use to sit on a horse.
    c. Hand stand.
    d. Sit so that one leg is on the side and one leg is on the other side.

8. Particles
    a. Short stories.
    b. Very small pieces.
    c. Walls in between rooms.
    d. Powerful atoms.

9. Nucleus
    a. Fist
    b. Core, center
    c. Purse or wallet
    d. A type of bomb

10. Electrons
    a. Negatively charged parts of the atom that are inside the nucleus.
    b. Negatively charged parts of the atom that never move.
    c. Negatively charged parts of the atom that are outside of the nucleus.
    d. Negatively charged part of the atom that move through the nucleus.

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[1] **Carbon** is the element that is most commonly found in living material. Although a wood desk is no longer living, it used to be a tree, so it contains a lot of carbon atoms.

[2] Atoms can be broken into particles called protons, neutrons, and electrons. **So, why do we say that atoms are the smallest unit of matter?** Atoms are the smallest unit that matter can be broken into and still have the properties of that type of matter. So, one atom of metal will still have the properties of that metal (e.g., be magnetic, be strong, melt at a certain temperature). All atoms of iron have the same number of protons. If you take just one atom of iron, you can still identify it as iron. However, it's the number protons and electrons and neutrons, together in one atom that give any specific type of matter its unique characteristics. Once you break it up into individual electrons (or protons or neutrons) it can no longer be identified as iron (or any other particular type of matter). So, atoms are the smallest units of matter in which the matter stills acts like what it is (and can be identified as what it is). (Note: Amy knew that the atom they were sitting on was carbon, because it had 8 protons. All carbon atoms have 8 protons – and only carbon atoms have 8 protons).