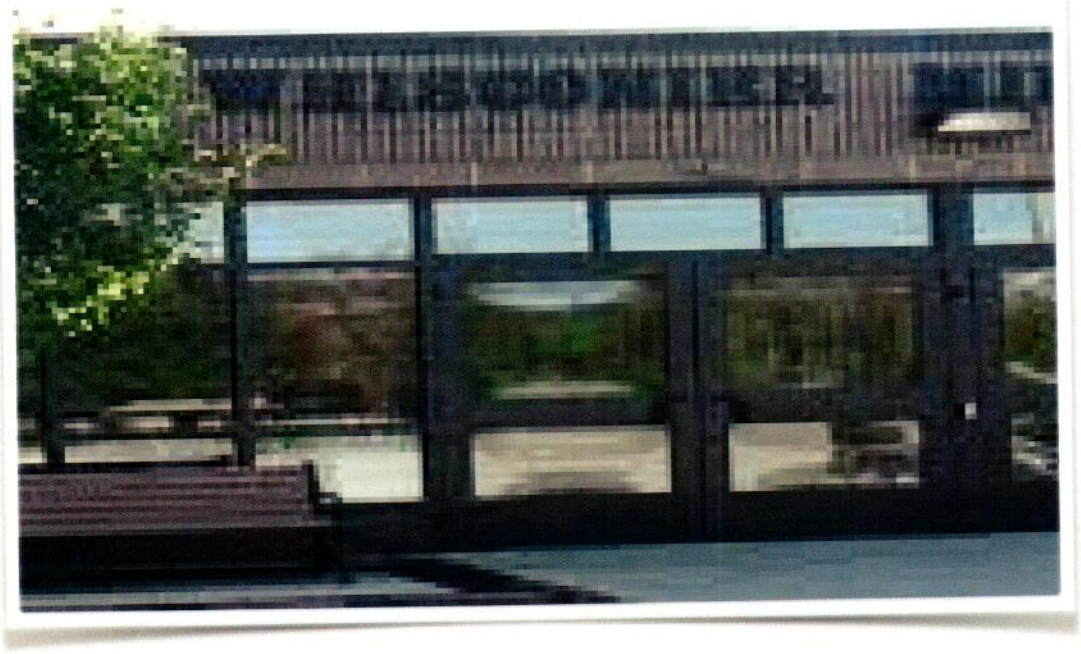
OCTOBER 16, 2017

# Whisconier Middle School

## Helpful Resources for Parents



## Further Reading on Assessment

Check out these websites to learn more about assessments administered at WMS:

Smarter Balanced- http://www.smarterbalanced.org/parents/

STAR Reading and Math- http://doc.renlearn.com/KMNet/R0054872491706A8.pdf

DIBELS: https://dibels.uoregon.edu/docs/dibelsparentguide.pdf

**1**

### LITERACY

Encourage questions. Take a hike, bring a snack and a book!

**2**

### MATHEMATICS

Plan a short day trip. Estimate the distance, time, and fuel needed.

**3**

### SCIENCE

Look up and find stars, planets and constellations.

**Mathematics**

**Literacy- Reading and Writing**

**Science**

# Help! What Should My Child Be Reading???

## Parents sometimes struggle with choosing books for their children. Here are some helpful ideas:

The first question that should be considered is, "What is your child interested in? Do you have an animal lover, sports fanatic, history buff, mystery solver, fantasy fan, food connoisseur, car expert, or a music groupie?"

Kids like to have choice. Kids will read a book that is more challenging because it is about a topic that fascinates him or her. Assessments reflect a small puzzle piece about each reader. Reading levels are elastic and move with kids' interests, motivation, and growing abilities.

Catchy titles, appealing covers and illustrations, familiar authors, and series all make very popular reads.

Once a choice is made, "test drive" the book. Have your child read a small section from the beginning and the middle. Can they say and understand about 85% of the words? Could your child retell or summarize what he/she read?

Popular choices for WMS readers this year:

*What Are the Twin Towers?, One for the Murphys,*

*How They Croaked, The Night Gardener, Sunny Side Up*


### STEM- Science, Technology, Engineering and Math

**STEM involves reading as well! Students have to think critically and problem solve. It helps to share ideas with a partner and ask questions.**

**Here are three great sites to explore:**

http://kidsahead.com/

https://kidsenvirohealth.nlm.nih.gov/

https://sciencebob.com/

## BOOK RECOMMENDATION SITES WORTH CHECKING...

**Scholastic Book Wizard**- you can check several types of levels and find recommendations based on genre, level, etc..

**Lexile Levels**- The **lexile.org** site provides Lexile levels for books as well as allows you to search by level.

**PragmaticMom-** a blog with lots of book lists, STEM activities, and other helpful information.

**Nerdy Book Club**- a site with many reviews and lists by Donalynn Miller.

**ThisKidReviewsBooks-** Erik created this blog about six years ago and !t's still going strong.

# 9 REASONS TO READ MORE

Builds Knowledge

Improves Achievement

Increases Motivation

Increases Vocabulary

Improves Writing

Builds Background Knowledge

Improves Understanding of Text Structures

Develops Empathy

Develops Personal Identity

# Ways Parents Can Support Reading and Writing at Home

## Teachers College Reading and Writing Project

1. Let your children see you read for pleasure. Share vocabulary, quotes, characters, and the story with them. Compare similarities and differences between your book and the books your children are reading.
2. Talk to your children about how your parents read to you or told you stories.
3. Let your children see you write for pleasure. Send family letters to relatives or friends. Let everyone in the family contribute a part or an illustration.
4. When you're riding in the car, tell your children a story about when you were little or tell them a story about something that happened at work that day. Leave off the ending and let them provide an ending.
5. Have your children select three things they want to include in a story. Make up a story that includes those three things. For example, the selections might be a princess, a race car, and an ice cream cone. The children will love helping you find clever ways to include three things in the story.
6. When you look up at the sun/moon or pass a landmark/building, take turns making up a story to go with them. At night, point out the face in the moon and make up a story about the "man in the moon". Follow up these storytelling events with a trip to the library to explore legends about people and places from our own country and others countries.
7. Try different ambiances for reading a story aloud or storytelling. If it's a scary story, tell it in the dark or read it with flashlights. If it's a story about when your child was little, bring out an old toy and hold it as you tell the story. Try themes in your family literacy events. This works naturally with holidays. Find books about the First Thanksgiving and read them aloud. Find pictures of the Thanksgiving holiday and make a collage. Explore foods that go with the Thanksgiving holiday. Make some of these foods and let everyone help read the recipe and prepare the foods. Trade stories about Thanksgiving.
8. Make a family book that is a collection of stories: favorite stories retold generation after generation or stories of family events (first visit by the tooth fairy). Any time that stories are recorded, younger children can dictate to an older family member.
9. Help your child find a place in your home that is his/her favorite reading spot. A place where he/she can read comfortably with little distraction. Put a basket of books near the spot. Include pens, crayons, pencils, erasers and paper in the basket to encourage writing too. Every now and then, put a "literacy gift" in their basket to discover and explore.
10. Read aloud daily to your child. Talk about the pictures. Make predictions about a story and see if they come true. Read aloud a chapter-book before bed.
11. Help your child notice people reading and the writing all around them. Watch other people read. Count all the people on a bus, in a library or café reading. Read signs posted all around you.
12. Visit bookstores and libraries with your child. Window shop as you pass a bookstore, look at the books and imagine the storylines inside them. Then go in and see if your predictions came true.
13. Take books on trips with you. Read to your child on vacation or during a long wait at the doctor's office. Encourage the people you are visiting to read to your child aloud.

14. Leave notes for your child in his lunch box or school bag. Leave notes for him/her around the house. Ask your child to leave notes for you. Have your child create a to-do list. Have him/her turn it into a checklist to encourage self-monitoring.

15. Encourage friends and relatives to give books to your child as gifts. Markers, colored pencils, pads of paper make excellent birthday or holiday gifts.

16. Subscribe to a children's magazine and have the magazine sent directly to your child. Show interest when it arrives. "Show me your favorite article." "I love that picture of _____." Popular magazines include: Highlights, Click, Ranger Rick, Sports Illustrated for Students, and National Geographic Junior. Large bookstores have many magazines to choose from. Find your favorite magazine and take one of the subscription cards located inside it.

17. Play word games such as Scrabble Junior, Boggle, ABC Bingo, Word Concentration, etc. Tell jokes, riddles and limericks. See how many words rhyme with _____.

18. Encourage your child to read aloud to younger siblings, cousins, neighbors, even stuffed animals.

19. Talk about your own childhood memories. Share your own favorite children's books and authors. Share your successes and struggles in school.

20. Encourage your child to imagine or share stories from pictures in magazines, newspapers or family photographs.

21. Listen to your child's retellings and expand them. Encourage them to add more detail. Say, "That would make an amazing story." Then, imagine the story together." Say, "You should write about that." Say, "The way you said that sounds like a poem." Then, encourage him/her to write it down as a poem.

22. Tell lots of family stories. Ask lots of questions when your child tells you a story. Ask them to identify the beginning, middle, and end or climax of the story.

23. Look back over your child's writings with them. Notice and praise the growth your child is making as a writer.

24. Encourage your child to bring their writer's notebook whenever they go on family outings. Whether it's to grandma's house, a soccer game or restaurant, there will be plenty to notice, wonder and write about.

# Parents as Writing Partners

*Parents are eager to support their children's writing skills. Give them a tool kit that shows them how.*

**Mary Ehrenworth**

Every parent knows the feeling of looking at his or her kid's writing and wanting to fix it. This doesn't change as kids get older. I see my son write insightfully about Holden Caulfield while misspelling Holden's name throughout his essay (the name of *the main character*—it's repeated probably 100 times in the novel), and a bleakness enters my soul. I don't know whether to put him through the whole routine of "let's compare how you're spelling this famous character's name with how the author spells it—here, on this page, and this page, and oh look, on this page too," or simply remark that he's got it wrong and tell him to fix it, or retreat to another room and find a compelling beverage.

I don't know what to do, and I *teach writing*.

Parents want to help. But because we're at a loss, we overdo it, or we do nothing, or we do whatever we can come up with. It's hard to teach your own child. I know

that Peter Johnston's (2004) advice about using choice words to build up a child's sense of being an independent problem solver works beautifully for me as a teacher, but it's somehow beyond me as a parent.

So parents need practical tips about what they can do—not as teachers of writing, but as something else. Enter the parent as writing partner.

## School Leaders: Set the Stage

### *Communicate Your School's Vision*

Before you set out to enlist others in promoting your vision, it always makes sense to reflect on the beliefs and values that undergird your work. So start by explaining to parents how the vision you have for your students as writers shapes the way your school teaches writing. Here's one example of how a school leader might talk about writing:

> We believe that your children can learn to write well—that writing is a craft. To get better at writing, it's important that they write a lot. The more children write, the more fluent they are. So one thing you can do is be their cheerleader, helping them develop the stamina it takes to become a fast and fluent writer.
>
> We will teach your children to be writers of narratives, arguments, informational texts, and poetry. We believe in narrative because for your children's whole lives it will matter that they can tell their own stories well. Every job interview, every scholarship application, every college essay will be an opportunity for your children to tell their own stories with grace and power. We believe in argument because we want your children to be able to advocate for themselves and others.

## Parent Prompts to Help Kids Rehearse Their Writing

**BASIC PROMPTS**

- How will your (story/essay/article) go?
- Tell me about the parts.
- How will it start?
- Then what will come next?
- How do you think you want to end?
- What will be the most important moment in the piece?
- What will be the tricky part—where might it get confusing? Let me know when you're at that part, and we can talk it out if you want.

**MORE ADVANCED PROMPTS**

- Try out a couple of leads on me. Let's see which ones really get a reader interested.
- What are you thinking about pacing? How will you control tension?
- Do you want to tell everything at once, or let out the details bit by bit?
- What do you want your reader to know right away?
- What do you want your reader to wonder about?
- What are you saving for the ending?
- How are you going to tailor this piece to your audience?
- Do you have to explain any technical vocabulary?
- Is there a particular perspective or point of view you want to represent?
- Will you do anything to acknowledge other points of view in this piece?

to defend positions with logic and evidence; to become ever more persuasive, compelling, and ethical. We believe in informational writing because your children will learn a lot that they can teach others, now and in the future. We believe in poetry because there is poetry singing in your children's souls, and you want to hear it.

We believe that writers of all ages benefit from having a writing partner who will help them rehearse their writing and give them knowledgeable feedback along the way. Therefore, you can make an immense difference by being a "first reader" for your child. We can help you learn to do that.

Be sure to look hard at what teachers in your school are striving to accomplish with writing so that you can describe it. Clarify your vision so that when you articulate it to parents, the work you describe will match the experiences their kids are having in your classrooms.

### *Determine What They Are Doing, and Ask What They Need*

If step one in making parents into writing partners is to communicate a clear vision, step two is to find out what is happening already. Survey kids and parents about what "homework help" looks like now. Ask teachers what kind of support they would love parents to give. Ask students what kind of help they would love to get and what they need as writers. Take their responses seriously.

When asked what they struggle with as writers outside school, lots of kids say things like, "finding a quiet space to write" or "finding any time, ever." It makes you realize that kids need help getting the television turned off, clearing a table, and managing their jam-packed schedules even more than they need a specific checklist or rubric. Sometimes we don't talk about the most essential elements that enable kids to thrive academically because we

assume they're a given, but kids are leading ever-busier, more fragmented lives. So double-checking on the essentials can be transformative in and of itself.

## A Tool Kit of High-Leverage Strategies

My colleagues at the Reading and Writing Project and I work with parents across the United States and internationally. Everywhere we go, we see that parents want their children to succeed. The lesson is, never underestimate parents. Give them a tool kit of high-leverage, practical tips for coaching writers, and they will be the school's best resource. Here are some of the major tips for parents to become effective writing partners.

*Tip 1. Help writers rehearse their structure.*

A lot of parents jump in to help kids at the end of their writing. Lucy Calkins and her colleagues at the Reading and Writing Project (2013) suggest, though, that one of the biggest issues kids have is structuring their writing. To help with that, you want to help at the beginning of the process—while kids are figuring out how their writing will go. Talking helps kids sort and sequence and correlate. Deanna Kuhn (2011) has shown that this kind of rehearsal has a particularly significant effect on students' argument writing.

One question parents can ask *before* kids begin to write is, How will your (story/essay/article) go? Ask them to tell you about the parts. If it's a story, they'll often talk about the beginning, middle, and end. If it's an argument, they'll often talk about the claim, the reasons, and the evidence. If it's informational writing, they'll often talk about the topic, the subtopics, and the text features. If they don't talk about these parts, act curious about them.

Sometimes it helps to use your hands while repeating the parts, folding down your fingers or counting across them. Sometimes, as a child names the parts, it is helpful to jot them down and then ask whether one part is going to be more important than the others and, if so, star it. In a narrative, this helps a writer figure

out where the heart of the story lives. In an essay, it helps a writer figure out whether the introduction or conclusion will share the most important insight, or what particular piece of evidence will most strongly support the central argument. Just leave that slip of paper in front of your writer before you walk away—it's going to help him or her.

*Tip 2. Help writers elaborate.*

When you rehearse with a writer, you also set yourself up to be an expert partner later in the writing process. We often see kids who say a lot more than they write. Maybe they struggle with grapho-phonics or with keyboarding; maybe stamina is an issue; maybe too much time has passed between rehearsal and actually getting their ideas down on paper. When you rehearse with a writer, work on trying to remember what he or she has said so that you'll be prepared later to help with elaboration.

Jot down great phrases or ideas. Keep the notes so that later, if that thinking is not in the writing, you can say (casually), "There was one thing you said that was really cool. . . . It was . . . . Do you want to get that in here?" Other times, you can't really jot because it just doesn't feel right to whip out a clipboard in the middle of dinner or while you're driving. So work on your concentration and your memory skills. Don't listen with half a mind. Don't look at your phone or glance at your e-mail. Put your worries about your own work out of your head for these few minutes. You need to be able to compare your child's plan for the writing with what he or she actually writes. You need to ask yourself: What parts did my child mention earlier that aren't in here yet?

Transcribing—writing what a kid is saying while he or she is saying it—can also catapult a writer into elaboration. "Wait a second, say that again," you'll remark, and then you'll jot down or type every word, and hand it back with "definitely get that part in—that's great." It's really satisfying for kids who say more than they write to see their words appear as writing. Lots of writers need help sometimes to capture all their thinking.

Mostly, being this kind of writing partner means getting involved at a real partnership level—caring enough about the piece and the writer to give them authentic, deep attention even in the midst of our frantically busy lives.

*Tip 3. Work with checklists and exemplars.*
John Hattie (2008) has demonstrated that one way to accelerate achievement is for learners to have a crystal clear vision of what they are trying to achieve. Give a writer an exemplar that is just above the level at which he or she is writing now, and that writer can envision one path in which to grow. Add in a clear checklist that lists some of the qualities in the writing, and the writer will be better able to articulate and measure his or her goals.

When your child is writing something and you don't know what good writing would look like in that genre, at that age, ask the teacher for an exemplar—or better yet, coach your child to ask. Paul Tough (2003) reminds us to move children beyond compliance. Being innovative, reaching out for help, measuring themselves against high standards, persevering at hard things—that's what takes them far. Teach your children to ask for mentor texts and to either ask for or generate checklists. When they go off to college, they'll know how to say to their professors, "I'm wondering if I could see a strong example of this kind of writing" or to ask, "Could you perhaps clarify some of the qualities of this kind of writing?"

Teachers, you can provide parents with checklists and exemplars so that they will better understand what work their children are striving to accomplish. Often, kids and parents are working in a kind of void, without any clear notion of how to raise the level of writing. Parents, like kids, shouldn't have to intuit what makes for strong writing. They need accessible tools so they can work hand in hand with teachers.

Checklists and exemplars can be found in various places. The Common Core State Standards include annotated samples of student writing (National Governors Association Center for Best Practices & Council of Chief State School Officers, 2010). Student Achievement Partners has released an even more extensive collection of student exemplars on its website (www.achievethecore.org). Calkins and colleagues (2013) have published checklists and student pieces for grades K–8. And of course, schools can make their own tools.

In general, kids respond more to checklists that are in the first person—language that reminds a writer of important work "I" can do as "I" write. Here is a sample from a 5th grade checklist for opinion writing:

> I wrote an introduction that led to a claim or thesis and got my readers to care about my opinion. I got my readers to care by not only including a cool fact or jazzy question, but also figuring out what was significant in or around the topic and giving readers information about what was significant about the topic.
>
> I worked to find the precise right words to state my claim; I let readers know the reasons I would develop later. (Calkins & colleagues, 2013, p. 95)

Practicing working with exemplars and checklists would be a good topic for a parent workshop. The school might also send home some pieces of children's writing that have been annotated to highlight the skills teachers are teaching.

Parents will learn a lot about writing as the school shares checklists and exemplars. Giving families tools and tips democratizes the knowledge of writing. It puts assessment into the hands of children while they are writing and lets families be part of this important work.

*Tip 4. Show children how to work with study partners.*
We can also help our children turn their friends into study partners. When kids go off to high school and college, they'll do better if they can learn to study with their friends—especially if they can truly learn to push one another. Moreover, Pedro Noguera (2003) warns that when peer culture and academic culture divide, peer culture always wins out. A lot of kids have a peer culture that honors athletic prowess. It's important for them to build a peer culture that also honors academic prowess.

They'll need explicit help with this. Kids have no trouble giving one another advice in their personal lives. But they are often oddly reluctant to

## Parent Prompts to Help Kids Elaborate

- There was something you said before that struck me . . . you have to get that bit in here!
- When you were talking about this, I jotted down this one idea/phrase that was very cool. . . . Is this something you want to add?
- Say more about this one part . . . .
- Wait a second, I'm going to jot down what you're saying. . . . Now take this—see if it works anywhere.
- How did that part we starred [or that part you said was most important] turn out?
- You know, thinking about how strong this piece is, it might be worth thinking about the beginning [or the ending] a little more. . . .

engage one another about their academic goals.

Kids' skills in working with others will matter in their overall success, and you can use writing as a way to build those skills. You want to coach them in what Gladwell (2008) refers to as *practical intelligence*, or savvy—how to interact with others with some grace. Parents can help by orchestrating times for friends to write in the same space and watching how it goes. You can tuck in tips on how friends can help one another. "Did you try out your story on Amber?" "You might have Henry look over your essay with the lens of . . ."

Writing is interesting, though, because the actual moment of writing often requires solitude. Susan Cain (2012), looking at introversion, reminds us that kids often need opportunities to work alone before they work with others. When parents see how friends work together, they'll be better positioned to coach children on achieving a balance of working alone sometimes and helping one another at other times.

### Workshops Help Parents Implement the Tools

Workshops give parents opportunities to practice these tools for helping their children with writing. To get parents to attend, school leaders and parent leaders need to design these workshops together. Parent leaders will have important insights into effective incentives and parental needs. When can parents most easily spend an hour at school? Is it easier for them right after morning drop-off? Will that exclude too many working parents? Is it better to offer a workshop at night, perhaps right after work, so they don't have to leave the house again? If it's in the early evening, can you offer a story hour in the library or a movie in the cafeteria for young children, and a space somewhere for older children to do homework, while parents attend? Can you offer pizza, so parents don't have to worry about feeding themselves or their offspring that night? These are all things that parents worry about, and if you attend to these details, you'll make it more likely that the parents you most want to reach are there.

Everywhere we go, we see that **parents want their children to succeed**. The lesson is, **never underestimate parents**.

Think about a title for your workshop. Your first challenge is to persuade multitasking adults to get themselves to your building. A clever workshop title like *Help Your Children as Writers Now and They're More Likely to Get into a Top-Notch College Later* might pull them in. *Help Them Now or You May Never Be Turning Their Bedroom into That Guestroom* might also work. Or maybe send out just the date, with Harvard as a watermark in the background. Don't be afraid to be cheesy. You can give the best workshop in the world, and if parents aren't there, it won't matter.

So parent leaders and school leaders—get creative with thinking about when and where these learning opportunities can occur. A glitzy stand-alone evening workshop is often a big deal and a big draw. So is a mandatory orientation for incoming families. You could use curriculum night. You could create a tip sheet to be given out at parent-teacher conferences. You could offer seminars, or a series of repeated workshops, perhaps offered in different languages, until you have reached most of your parents.

It's worth it. Teaching parents to be effective writing partners can have a huge effect on student achievement.

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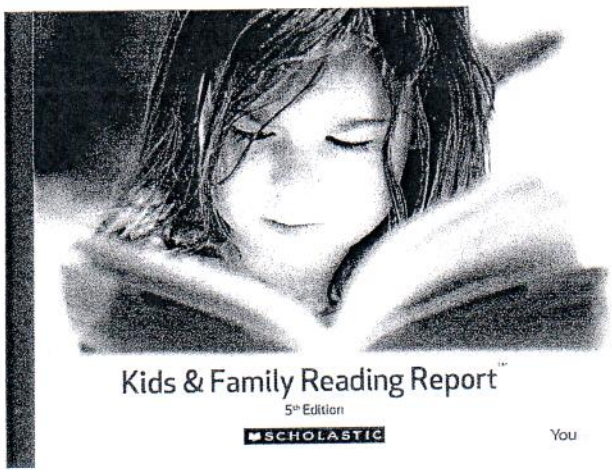


## Key Findings of
## *Scholastic's Kids & Family Reading Report:*
## *The National Survey on the State of Kids and Reading, 2015*

The study reports 86% of parents think reading books for fun is extremely or very important for their child, but only 46% of kids say the same. In addition, 75% of parents with kids ages 6-17 say, "I wish my child would read more for fun" and 71% of parents wish their "child would do more things that did not involve screen time."

Other key findings include:

1) What Makes a Frequent Reader?

- Frequent readers (a child who reads for fun 5-7 days a week) have, on average, 205 books in the home and infrequent readers (a child who reads for fun less than once a week) have 129 books in the home.
- Frequent readers ages 12-17,read an average of 39.6 books a year, while infrequent readers in this age group read an average of only 4.7 books a year.

There are three powerful factors that can predict whether a child (across ALL ages 6-17) will be a frequent reader including:

- Children's level of reading enjoyment
- Parents who are frequent readers
- A child's belief that reading for fun is important

But, we also found unique additional factors predicting reading frequency at different ages:

- Predictors for kids (ages 6-11) include: being read aloud to 5-7 days a week before Kindergarten, currently being read aloud to, and less online computer time.
- Predictors for kids (ages 12-17) include: having time for independent reading during the school day, reading more since starting to read ebooks, and having 150 or more print books in the home.

2) Reading Aloud

- More than half of kids ages 0-5 are read aloud to 5-7 days a week, but the number dips to 1 in 3 among kids ages 6-8 and then 1 in 6 among kids ages 9-11; however, 40% of kids ages 6-11 whose parents stopped reading to them say they wish their parents had continued.
- More than 80% of kids ages 6-17 say they love(d) or like(d) a lot being read aloud to.

3) Reading in School

- Only one third of children ages 6-17 (33%) say their class has a designated time during the school day to read a book of their choice independently, but only 17% do this every or almost every school day.
- School plays a bigger role in reading books for fun for children in lower income homes. Sixty-one percent of children ages 6-17 who live in a home with an annual income of less than $35K read for fun mostly in school or the same amount at school and at home, while 32% of kids ages 6-17 who live in a home with an annual income of $100K or more say the same.

# Argument Talk Protocol

1. Name the Argument.

2. Listen and gather evidence for both sides of the argument.
   - You should be able to argue either way.
   - Be alert to juicy quotes and statistics.

3. Pick a side.

4. Caucus with your side:
   - What is your BEST evidence?
     - Sort through and weigh your evidence to find the strongest
   - Rehearse your argument.

5. Face off!
   - Meet your opponent and present your argument...and listen to theirs.
   - You will have one minute each to present your argument.

6. Repeat back to your opponent the BEST part of their argument.
   - What evidence was most compelling or persuasive?

7. Caucus with your side again to plan rebuttal.
   - What were the opposition's strongest arguments and how can your side rebut?
   - A rebuttal should not just be a restatement of your initial argument!

8. Rebuttal with opponent (1 minute).

9. Options:
   - Flashdraft.
   - Develop a more sophisticated Position C.
   - Chart powerful debate moves and strategies.

Read the text and answer questions 9–14.

**What Is a Spacesuit?**
by David Hitt

A spacesuit is much more than a set of clothes astronauts wear on spacewalks. A fully equipped spacesuit is really a one-person spacecraft. The formal name for the spacesuit used on the space shuttle and International Space Station is the Extravehicular Mobility Unit, or EMU. "Extravehicular" means outside of the vehicle or spacecraft. "Mobility" means that the astronaut can move around in the suit. The spacesuit protects the astronaut from the dangers of being outside in space.

## Why Do Astronauts Need Spacesuits?

Spacesuits help astronauts in several ways. Spacewalking astronauts face a wide variety of temperatures. In Earth's orbit, conditions can be as cold as minus 250 degrees Fahrenheit. In the sunlight, they can be as hot as 250 degrees. A spacesuit protects astronauts from those extreme temperatures.

Spacesuits also supply astronauts with oxygen to breathe while they are in the vacuum of space. They contain water to drink during spacewalks. They protect astronauts from being injured from impacts of small bits of space dust. Space dust may not sound very dangerous, but when even a tiny object is moving many times faster than a bullet, it can cause injury. Spacesuits also protect astronauts from radiation in space. The suits even have visors to protect astronauts' eyes from the bright sunlight.

## What Are the Parts of a Spacesuit?

The spacesuit consists of several pieces. The Hard Upper Torso covers the astronaut's chest. The arm assembly covers the arms and connects to the gloves. The helmet and Extravehicular Visor Assembly are designed to protect the astronaut's head while still allowing him or her to see as much as possible. The Lower Torso Assembly covers the astronaut's legs and feet. The flexible parts of the suit are made from

several layers of material. The layers perform different functions, from keeping oxygen within the spacesuit to protecting from space dust impacts.

Underneath the spacesuit, astronauts wear a Liquid Cooling and Ventilation Garment. Tubes are woven into this tight-fitting piece of clothing that covers the entire body except for the head, hands and feet. Water flows through these tubes to keep the astronaut cool during the spacewalk.

On the back of the spacesuit is a backpack called the Primary Life Support Subsystem. This backpack contains the oxygen that astronauts breathe during a spacewalk. It also removes carbon dioxide that astronauts exhale. The backpack also provides electricity for the suit. A fan moves the oxygen through the spacesuit and life support systems, and a water tank holds the cooling water that flows through the Liquid Cooling and Ventilation Garment.

Also attached to the back of the suit is a device called the Simplified Aid for Extravehicular Activity Rescue, or SAFER. SAFER has several small thruster jets. If an astronaut became separated from the space station, he or she could use SAFER to fly back.

**What Other Spacesuits Have Astronauts Worn?**

NASA's first spacesuits were developed for the Mercury program. Mercury was the first time NASA astronauts flew into space. These simple suits were based on pressure suits worn by U.S. Navy pilots. Astronauts did not go on spacewalks then. The Mercury suits were worn only inside the spacecraft.

NASA's first spacewalks took place during the Gemini program. The suits used for Gemini were more advanced than the Mercury suits. But the Gemini suits were simpler than today's spacesuits. These suits did not contain their own life support. Instead, they connected to life support systems on the Gemini spacecraft with a cord called the umbilical.

Spacesuits designed for the Apollo program had to do things the first suits did not. These spacesuits had to protect astronauts walking on the moon. Unlike the other suits, the Apollo suits had boots made to

walk on a rocky surface. The Apollo suits also contained a life support system, similar to the Portable Life Support Subsystem on the current suit. Having a life support system on the spacesuit allowed the astronauts to explore away from the lunar lander. Spacesuits similar to the Apollo suits were used on the Skylab space station. Like the Gemini suits, the Skylab suits connected to life support systems on the spacecraft via an umbilical.

## What Spacesuits Are Worn Today?

In addition to the EMU, NASA astronauts wear other suits today. The Advanced Crew Escape Suit is the orange suit that astronauts wear during launch and landing of the space shuttle. This suit cannot be worn during spacewalks. Sometimes, NASA astronauts will wear the Russian Orlan spacesuit. This suit is the Russian version of the EMU and is used for spacewalks. Another Russian suit is the Sokol. Like the Advanced Crew Escape Suit, the Sokol is designed only to be used inside a spacecraft. It is used on the Russian Soyuz spacecraft.

"What is a Spacesuit?" by David Hitt, from nasa.gov. © 2008 by NASA Education. In the public domain.

Smarter Balanced Assessment Consortium

## Sample Grade 6 Questions

This question has two parts. First, answer part A. Then, answer part B.

**Part A**

What is **most likely** the author's intent by mentioning "A spacesuit is much more than a set of clothes astronauts wear on spacewalks" at the beginning of the text?

A. The author wants to inform the reader that astronauts regularly walk in space.
B. The author wants to describe to the reader the importance of astronauts walking in space.
C. The author wants to explain to the reader that astronauts wear spacesuits during flights in space.
D. The author wants to convince the reader that spacesuits are more important to astronauts than most people think.

**Part B**

Which sentence from the text **best** illustrates the conclusion made in part A?

A. "The spacesuit protects the astronaut from the dangers of being outside in space."
B. "The spacesuit consists of several pieces."
C. "The Mercury suits were worn only inside the spacecraft."
D. "This suit cannot be worn during spacewalks."

Read the paragraph from the text and the directions that follow.

Spacesuits also supply astronauts with oxygen to breathe while they are in the vacuum of space. They contain water to drink during spacewalks. They protect astronauts from being injured from impacts of small bits of space dust. Space dust may not sound very dangerous, but when even a tiny object is moving many times faster than a bullet, it can cause injury. Spacesuits also protect astronauts from radiation in space. The suits even have visors to protect astronauts' eyes from the bright sunlight.

What is the author's central idea in this paragraph? Use evidence from the text to support your answer.

Select the **two** sentences from the text that **best** support the inference that extra-vehicular space exploration would not have been possible without spacesuits.

- ☐ "A spacesuit is much more than a set of clothes astronauts wear on spacewalks."
- ☐ "Spacesuits also supply astronauts with oxygen to breathe while they are in the vacuum of space."
- ☐ "The layers perform different functions, from keeping oxygen within the spacesuit to protecting from space dust impacts."
- ☐ "These simple suits were based on pressure suits worn by U.S. Navy pilots."
- ☐ "The Advanced Crew Escape Suit is the orange suit that astronauts wear during launch and landing of the space shuttle."